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Date: July 26, 2012 Signature: /Stephanie Dominguez/
Printed Name: Stephanie Dominguez

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Ex Parte Reexamination of:

U.S. Patent No.: 5,684,863

Issue Date: November 4, 1997

Application No. 08/476,662

Filing Date: June 7, 1995

For: TELEPHONIC-INTERFACE STATISTICAL ANALYSIS SYSTEM

Control Number: Not Yet Assigned

Mail Stop Ex Parte REEXAM
Central Reexamination Unit
P.O. Box 1450
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REQUEST FOR EX PARTE REEXAMINATION

Sir/Madam:

Pursuant to 35 U.S.C. §§ 302-307, 37 C.F.R. § 1.510, and MPEP § 2295, GEICO Corporation, GEICO Casualty Company, GEICO General Insurance Company, GEICO Indemnity Company and Government Employees Insurance Company (collectively, "GEICO") (herein after "Requester") hereby respectfully request reexamination of Claims 31, 32, 39, 42, 43, 49 and 116 of U.S. Patent No. 5,684,863 ("the '863 patent"), issued November 4, 1997 to Ronald A. Katz Technology Licensing L.P.

Pursuant to 37 C.F.R. § 1.510, this request includes the following:

1. Pursuant to 37 C.F.R. § 1.510(a), the $2,520 fee for requesting ex parte reexamination set forth in 37 C.F.R. § 1.20(c)(1) is submitted with this request.

2. Pursuant to 37 C.F.R. § 1.510(b)(1), this Request includes a statement pointing out each substantial new question of patentability based on prior patents and printed publications, discussed in detail below in Section IV.

3. Pursuant to 37 C.F.R. § 1.510(b)(2), reexamination is requested for claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent. This Request also includes, pursuant to 37 C.F.R. § 1.510(b)(2), a detailed explanation of the pertinence and manner of applying the cited prior art to every claim for which reexamination is requested, discussed in detail below in Sections VI.

4. Pursuant to 37 C.F.R. § 1.510(b)(3), a copy of every patent or printed publication relied upon is submitted as Exhibits PA-A through PA-G.

5. An Information Disclosure Statement citing the references in paragraph 4 is included.

6. Pursuant to MPEP § 2214, the cited prior art from paragraph 4 above is listed on the attached PTO/SB/08 form.

7. Exhibits CC-A through CC-H are claim charts showing specific analyses of each substantial new question of patentability.

8. Pursuant to 37 C.F.R. § 1,510(b)(4), a copy of the '863 patent is submitted as Exhibit PAT-A. The copy includes the front face, drawings, and specification/claims (in double column format), with each page of the patent printed on only one side of a sheet of paper.

9. The '863 patent is involved in the following currently pending litigation:

- *In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008);
- Requester understands that claim 31 of the '863 patent is being asserted against Ameren and Fifth Third Bank;
- Requester understands that claim 32 of the '863 patent is being asserted against GEICO, AOL, and Fifth Third Bank;
- Requester understands that claim 42 of the '863 patent is being asserted against General Motors;

- Requester understands that claim 43 of the '863 patent is being asserted against GEICO, AOL, American Airlines, Federal Express, Cox Cable, General Motors, U.S. Bancorp, Fifth Third Bank, and Macy's
- Requester understands that claim 49 of the '863 patent is being asserted against Cox Cable and U.S. Bancorp; and
- Requester understands that claim 116 of the '863 patent is being asserted against GEICO.

10. The undersigned hereby informs the Office that the '863 patent has been involved in numerous other litigations, including at least the following litigations:

- *Katz et al. v. AT&T Corp. et al.*, 63 F. Supp. 2d 583 (E.D. Pa. 1999);
- *Verizon California Inc. v. Ronald A. Katz Technology Licensing, L.P.,* Case No. 01-CV-09871 RGK (CACD November 16, 2001).

11. Pursuant to 37 C.F.R. § 1.510(b)(5), the signature on this Request certifies that a copy of the Request has been served in its entirety on the patent owner's representative at the address provided for in 37 C.F.R. § 1.33(c) by depositing the Request in an envelope in an official U.S. Postal Service repository, on the date set forth below.

I. INTRODUCTION

This Request for *Ex Parte* Reexamination of the '863 patent raises substantial new questions of patentability with respect to the prior art references discussed below in relation to the identified claims of the '863 patent. In particular, the following combinations of the prior art references, including references that were not before the U.S. Patent Office during prosecution of the '863 patent or reexamination proceedings involving the '863 patent, render claims 31, 32, 39, 42, 43, 49 and 116 obvious pursuant to 35 U.S.C. § 103.

Claims 31, 32, 39, and 49:

1. Barger in combination with NDC and Student Registration.
2. Barger in combination with NDC, VCT '86, and Student Registration.

Claims 42 and 43:

3. Barger in combination with NDC, Student Registration, and Taylor.
4. Barger in combination with NDC, VCT '86, Student Registration, and Taylor.
5. Barger in combination with NDC, Student Registration, Oliphant, and Taylor.
6. Barger in combination with NDC, VCT '86, Student Registration, Oliphant and Taylor.

Claims 116:

7. Barger in combination with NDC, Student Registration, VCT '87, and Taylor.
8. Barger in combination with NDC, VCT '86, VCT '87, Student Registration, and Taylor.

The '863 patent is the subject of several currently pending *Ex Parte* Reexaminations, including at least Control No. 90/008,095 addressing Claim 27; Control No. 90/011,457 merged with Control No. 90/011,515 addressing Claims 31, 42, 43 and 49; and Control No. 90/012,062 merged with Control No. 90/012,071 addressing claims 32, 39, 96, 98 and 99. Claim 27 is an independent claim. Claims 31, 32, 39 and 49 depend directly from independent claim 27. Claim 43 depends from dependent claim 42, which depends from independent claim 27. Claim 116 is an independent claim.

II. OVERVIEW OF THE '863 PATENT

A. Generally

The '863 patent is entitled "Telephonic-Interface Statistical Analysis System" and issued to Ronald A. Katz on November 4, 1997 from application Serial No. 08/476,662 filed June 7, 1995. The '863 patent resulted from a series of benefit applications to which the '863 patent claims priority under 35 U.S.C. § 120. The '863 patent issued from a continuation application of Serial No. 07/335,923, filed April 10, 1989 and issued as U.S. 6,016,344, which is a continuation application of Serial No. 07/194,258, filed May 16, 1988 and issued as U.S. 4,845,739, which is

a continuation-in-part application of Serial No. 07/018,244, filed February 24, 1987 and issued as U.S. 4,792,968, which is a continuation-in-part application of Serial No. 06/753,299, filed July 10, 1985 and now abandoned.

Application Serial No. 06/753,299 provides the earliest filing date to which the '863 patent may claim priority. However, certain limitations of Claims 27, 31, 32, 39, 42, 43, 49 and 116 of the '863 patent were not disclosed in the '299 application and have support only in the specifications of certain benefit applications filed after July 10, 1985. Therefore, claims including such limitations cannot receive the benefit of the filing date of the '299 application. In particular, the '863 patent may only claim priority to application Serial No. 07/194,258, filed May 16, 1988 and issued as U.S. 4,845,739 with respect to limitations of claims that are directed to "called number identification signals (DNIS)" and "called number identification data" provided by a communication facility, such as Claims 27, 31, 32, 39, 42, 43, 49 and 116. The specification of the '258 application is the first disclosure that provides support for these limitations. The parent application Serial No. 06/753,299, filed July 10, 1985 and now abandoned, provides no disclosure and therefore no support for DNIS claim limitations. In addition, the claim limitations directed to "calling number identification data" provided by a communication facility find support for the first time in the specification of Serial No. 07/018,244, filed February 24, 1987, and issued as U.S. 4,792,968.

In general, the '863 patent is directed to a statistical analysis control system for interfacing multiple remote terminals, such as conventional telephones. The remote terminals interface with multiple processing systems, through a communication facility, such as a comprehensive public telephone system. This interface enables analog (voice) and digital communication between telephone callers and multiple processors of the processing systems.

('863 patent, Fig. 1; and col. 3, lines 5-13 and 53-60; col. 4, lines 12-14; and col. 5, lines 6-8). Each processor includes memory cells for caller data, and the data is developed and compiled in the memory cells according to various operating formats. ('863 patent, col. 5, lines 13-16).

As shown in Fig. 1, the processing systems are coupled to the remote terminals at the communication facility, through a series of automatic call distributors. Each of the call distributors accommodates multiple telephones and queues multiple telephone calls. ('863 patent, Fig. 1; and col. 4, lines 15-20). The automatic call distributors connect telephone lines to the individual data processing systems through an interface and a switch ('863 patent, col. 4, lines 25-27).

In addition to voice interface capability, the automatic call distributor interface incorporates modems, tone decoders, switching mechanisms, and DNIS (or dialed number identification service) and ANI (or automatic number identification service) capability via a call data analyzer. ('863 patent, col. 4, lines 49-52). The interface is capable of providing analog (voice) signals to prompt callers. ('863 patent, col. 4, lines 65-67). In addition, the interface uses digital data or signals provided by the communication facility through its DNIS capability and ANI capability that indicate called telephone numbers and calling telephone numbers, respectively. ('863 patent, col. 4, lines 56-62).

The voice generator in the interface formulates speech, providing prompts and instructions to callers to provide certain data in accordance with cues provided by the processor. ('863 patent, col. 6, lines 42-44 and lines 49-54). A caller responds to the prompts and instructions by using the push buttons of their telephone to enter the appropriate data, such as the caller's telephone number or some other data, e.g., name, address, etc., that the voice generator cues the caller to provide. ('863 patent, col. 6, lines 55-60 and col. 10, lines 52-54). In other

embodiments, the caller may be asked to provide a "one-time" key number to qualify the caller. ('863 patent, col. 7, lines 33-36). The resulting data signals are communicated from the interface to the processor for testing with respect to proper format, validity and/or entitlement. ('863 patent, col. 6, lines 61-65). If the caller response is valid, the caller's response is recorded in a specific memory cell identified with the caller. In these cases, the caller is qualified and, once qualified, the caller is cued by the voice generator of the interface for further information including identification data and answer data. ('863 patent, col. 7, lines 43-49). Proper responses are registered in the storage cell. The cycle of obtaining digital information from the caller is repeated to obtain answer data, e.g., specific health data including the caller's age, weight, pulse rate, etc., that the caller provides in response to the prompts or cues the voice generator provides to the caller. ('863 patent, col. 7, lines 55-60). In addition, in other embodiments, the processor may verify identification data, e.g., a credit card number or a personal identification number, which a caller provides in order to restrict caller participation or access to an operating format, such as, for instance, restricting callers to those who are purchasers of a specific medical apparatus. ('863 patent, col. 9, lines 34-44). Further, the processor can cue the voice generator in the interface to provide information to the caller. ('863 patent, col. 8, lines 42-44). Data cells are thereby developed with specific information that may serve as a statistical sampling of a population, and may be used to generate subsets of individuals relative to a particular disease.

In other embodiments, such as a mail order facility disclosed with reference to Figs. 1, 4 and 5, caller information is stored in a block format register and a qualification unit, operating under the control of a processing unit. The processing unit checks such data for proper format and validity, as well as checks whether such data, e.g., a credit card number, is active and not

cancelled. Such information may be previously stored for a caller in the block format register, and subsequent orders from the caller are processed as a result of the qualification unit checking the caller-provided data against the stored caller information. ('863 patent, col. 11, lines 6-8 and lines 19-36). Once callers have been qualified, the voice generator in the interface prompts callers through a series of exchanges that load the block format register with a merchandise order. The data is then transferred to the select memory cells. ('863 patent, col. 11, lines 46-50). The processor isolates data from the memory cells to facilitate the mail order process. ('863 patent, col. 11, lines 61-63).

With reference to FIG. 9, the '863 patent discloses that the components of the system may be spaced apart geographically using dedicated lines or other techniques. ('863 patent, col. 21, lines 27-30). With further reference to FIG. 9, the '863 patent discloses that the call distributors may be at different geographic locations and may include associated interface units. ('863 patent, col. 21, lines 31-36).

The '863 patent discloses a mail order interface format that allows a caller to interact with automated and non-automated aspects of the telephone system. As described in reference to the mail order format, if a caller wishes to interact with an operator, he may do so by pushing the asterisk button. ('863 patent, col. 10, lines 45-52). The call is then transferred to the interface terminal. If a caller has not been identified with automated portions of the system, the operation may proceed manually through the interface terminal. ('863 patent, col. 11, lines 8-12). The '863 patent also discloses that the caller may be asked to provide detailed information which is recorded for later processing. ('863 patent, col. 10, lines 52-54). Despite these disclosures, the '863 patent does not explicitly disclose the online entry of caller data, including caller customer data and personal identification data, which is stored in a record structure for subsequent use.

A. Claim 27

Claim 27 is directed to an analysis control system for use with a communication facility including remote terminals for individual callers. The system of claim 27 comprises an interface structure, a record structure, a qualification structure, and a switching structure. The interface structure includes a means to receive DNIS to identify a called number associated with a select format. The record structure is connected to receive caller data signals for accessing a file and storing certain of data developed by the remote terminals for individual callers. The qualification structure qualifies access to the select format based on at least two forms of distinct identification including caller customer number data and personal identification data provided by the individual caller. The switching structure switches certain individual callers to any one of a plurality of live operators.

B. Claims 31, 32, 39, and 49

Claims 31, 32, 39, and 49 depend on claim 27. Claim 31 further provides that the caller customer number data is tested to determine if caller status is unacceptable or cancelled. Claim 32 further provides that the qualification structure qualifies the individual caller to provide access to at least a portion of the system. Claim 39 further provides that at least one of the two forms of distinct identification includes social security number data. Claim 49 further provides that the caller customer number is verified against a record of qualified customer numbers and the personal identification data is provided on-line by the individual callers and stored in the record structure for subsequent use.

C. Claims 42 and 43

Claim 42 depends on claim 27. Claim 43 depends on claim 42. Claim 42 further provides that the DNIS is received by one of a plurality of call distributors. Claim 43 further provides that the plurality of call distributors are at different geographic locations.

D. Claims 116

Like claim 27, claim 116 is directed to an analysis control system for use with a communication facility including remote terminals for individual callers. The system of claim 116 includes multiple automatic call distributors at geographically distinct locations, an interface structure, a voice generator structure, a record testing structure, and an analysis structure. The interface structure includes a means to receive DNIS to identify a called number associated with a select format. The voice generator structure provides vocal operating instructions in accordance with the select format to prompt the individual callers to enter data. The record testing structure receives and tests caller data signals including ANI and personal identification data against previously stored data. The analysis structure receives and processes the caller data signals.

III. SUMMARY OF PRIOR ART RELIED UPON TO PRESENT A SUBSTANTIAL NEW QUESTION OF PATENTABILITY

As previously discussed, with respect to claims that include the limitations of called number identification signals or (DNIS), the '863 patent may claim priority only to benefit application Serial No. 07/194,258, which was filed on May 16, 1988 and issued as U.S. Patent No. 4,845,739 ("the '739 patent"). The '739 patent specification is thus the earliest benefit application that provides disclosure of called number identification signals or DNIS automatically provided by a public telephone company or system. Claims 27, 31, 32, 39, 42, 43, 49 and 116 recite called number identification signals or DNIS. Thus, with respect to Claims

31, 32, 39, 42, 43, 49 and 116 - the only claims for which reexamination is being requested - the earliest priority date that Katz may claim is May 16, 1988.

The following six references are prior art with respect to Claims 27, 31, 32, 39, 42, 43, 49 and 116 of the '863 patent and expressly or inherently disclose or otherwise suggest the subject matter of Claims 27, 31, 32, 39, 42, 43, 49 and 116. As noted herein, each of the references was prior art as of May 16, 1988.

A. Barger

U.S. Patent No. 4,071,698 ("Barger") is entitled "Telephone System For Audio Demonstration and Marketing of Goods or Services," and was issued to Barger, Jr. et al. on January 31, 1978 from an application filed on January 10, 1977. Barger is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(b). A copy of the Barger patent is attached to this Request as PA-A.

Barger is directed to a telephonic system and method of marketing merchandise or services by telephone to prospective customers, and of receiving and processing data received from caller telephones to fulfill customer requests and orders. In general, the system and method is disclosed in terms of marketing merchandise, such as music recordings, via audio demonstrations played to telephone callers. In addition, the disclosed system and method are configured for processing merchandise orders that callers place using their telephones. In this context, the Barger system and method performs an interface format with telephone callers to process data acquired from callers to accomplish the functional formats of a merchandising operation and an order processing transaction that are similar to an interface format as claimed in the '863 patent.

The Barger system and method implement three service modes to interface caller telephones with the system. (Barger, col. 2, lines 16-33). A first mode includes an operator-attended service mode. In this mode a caller dials a distinct telephone number for connection to a live customer service operator, who interfaces with the system on behalf of the caller. The operator-attended mode requires an operator to provide relevant information to the system's data processor to initiate and implement marketing and/or order processing transactions. The second and third modes are automated. The second mode includes a push button service mode that is fully or partially automated whereby a caller keys into their telephone keypad, e.g., a Touch Tone® keypad, a distinct telephone number to connect to and to interface with the system through direct communication with a system data processor. The third mode includes an automatic telephone service provided to customers of licensed retailers. (Barger, col. 3, lines 8-11.)

Barger thereby contemplated in 1977 a telephone system for interfacing conventional telephones with a system data processor through lines of a public telephone system to conduct transactions. Transactions can include marketing merchandise to callers and taking orders from callers via customer service operators and/or through a fully or partially automated format. More specifically, Barger disclosed an interface structure coupled to a communication facility to interface caller telephones with the system's customer service operators and/or with its data processor. The interface structure includes structure to provide caller data signals representative of data from callers and the caller's remote terminals. Barger also discloses data processors and other structures that are capable of providing automated signals to callers to prompt callers to enter data through their remote terminals. Barger also discloses a switching structure that can switch a caller from the automated portion of the system to live operators. In an alternative

mode, Barger discloses a system that interfaces callers with live operators, wherein the live operators may enter data relating to the caller. Barger's system contains processors that receive data from the live operators, wherein said data is related to the caller. The data may be stored for subsequent use by the system.

Barger also explicitly teaches call routing based on the telephone number called. In Barger, the telephone number dialed by the caller is directly wired to an interface unit running a particular application. (Barger, col. 3, lines 3-7). But Barger clearly teaches routing calls based on the dialed telephone number. Although Barger discloses only one technical way in which to accomplish routing, alternative routing techniques, such as those that involve signals that represent the called number (DNIS), multiplexed operations involving PBXs, and other basic routing concepts are either inherently disclosed in Barger or would have been obvious variations to those skilled in the art. To the extent that Barger does not inherently disclose call routing based on DNIS signals, the non-patent references VCT '86 or VCT '87 teaches or suggests means for receiving DNIS data or signals as will be discussed in more detail below.

Further, Barger discloses structure that is used to access files and store data provided by callers. For example, Barger discloses a system that maintains a record of a call, including transactional records, historical call data, and customer profiles. In Barger's system, customer information and caller records are stored in a file in a database. The data processor and live operators of Barger's system may retrieve the customer information and caller records from the database.

In addition, Barger discloses an operation of the system whereby callers are qualified for access to the system or parts thereof. For example, Barger discloses qualifying callers before callers may place an order for merchandise. In this context, the system performs qualification of

callers by performing a credit verification process. During the credit verification process, callers must provide certain information, including caller's name, address, credit card number, and possibly other information that is then verified before a caller may place an order using the caller's credit card.

Barger's system also discloses structure for switching callers to live operators. In such a scenario, callers may be switched to live operators who then help callers with their purchases. When interacting with live operators, callers provide caller information to operators, including for example, a caller's account number, password, credit card information, and other caller information. The operators then interact with the system's processor and database to access additional information, such as record caller data, and the operators may confirm caller data to such record caller data. Barger also discloses callers providing customer number data, i.e. account number, when interacting with the automated system to qualify callers. (Barger, col. 11, lines 18-25). Thus, Barger discloses an analysis control system where a caller's customer number is verified against a record of qualified customers. Barger further discloses callers providing personal identification data online, which is stored in the record structure for subsequent use. For example, if the caller is a "free loader" (i.e., a caller that attempts to use the free aspects of the system too many times) or if the caller encounters delivery problems, the caller is transferred to an operator. Operator attended functionalities may also include, as discussed above, entry of personal information and credit card information for storage and subsequent retrieval. (Barger, col. 3, lines 57-60, col. 4, lines 64-66; and col. 5, lines 29-41 and lines 46-49).

B. VCT '86

The VCT Quarterly Newsletter published in Winter 1986 ("VCT '86"). ("American Express Implements Voice Response Credit Authorization," *The Voice, The VCT Quarterly Newsletter,* Volume 1, No. 2, Winter 1986). VCT '86 is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(b). A copy of VCT '86 is attached to this Request as PA-B.

VCT '86 was published by Voice Computer Technologies Corporation of Norcross, Georgia, which manufactured and marketed, at least as early as 1986, voice response systems using digital signal processing techniques to permit caller access to database information from Touch Tone® telephones, computers and handheld terminals. VCT had developed and installed a number of customized systems in various industries including wholesale/distribution, manufacturing, insurance, banking, credit unions, education, retail, transportation, communication and consumer services. (VCT '86, page 2, left column; second para.).

Among other things, VCT '86 discloses a voice response system that uses DNIS identifiers for interfacing caller telephones with a system processor or controller. In one example, VCT '86 discusses the system and method used by American Express to provide credit authorization services via telephone to subscribing merchants. At the center of the VCT '86 system is a voice response unit. The schematic diagram included on page 5 of the VCT '86 reference illustrates the voice response unit ("Series 2016") that receives multiple telephone calls through multiple 800 numbers to interface caller telephones with the voice response unit CPU and host controllers to provide online credit authorizations. (VCT '86, page 5). The VCT '86 voice response unit recognizes the 800 telephone numbers called and determines how to handle a call based on the specific 800 telephone number it identifies.

> The voice response unit receives the call and directs it according to the 800 number. These numbers designate how the voice response unit should handle the

> call. In one method, the call is directed by the voice response unit to operators called Relayers. The Relayer asks for and keys in the card number, merchant number and amount of purchase. This information is then sent to the host and the Relayer is available to handle the next call. If the host approves the transaction, an authorization code is sent to the voice response unit to be spoken back to the merchant. (page 1, right column, second full para.; and page 5, left column, first para.).
>
> In a second method, specific 800 numbers are handled entirely by the voice response unit. Merchants interact with voice prompts to enter their merchant number, card number and amount of purchase by pressing appropriate keys on their Touch Tone® phones. The voice response unit bypasses the Relayers to communicate directly to the host. If the purchase amount is approved, the host sends the authorization code to the voice response unit to be spoken back to the caller.

(VCT '86, page 5, left column, first full para. to page 5, right column, first para.).

VCT '86 also describes that the VCT voice response unit uses "DNIS identifiers" to recognize and to direct telephone calls based on the 800 telephone number it identifies.

> In order to implement the system it was crucial that we be able to recognize and direct specific 800 numbers according to the DNIS identifiers. The memory capacity and Digital Signal Processing capabilities of VCT's equipment provided the method for doing this.

(VCT '86, page 5, right column, first full para.).

As described above, the unit disclosed in VCT '86 recognizes the 800 telephone number called and determines how to handle the call based on the called number it identifies – either connecting the call to a Relayer or handling the call entirely through voice prompts. DNIS, or "dialed number identification service," is an identifier provided by a public telephone company or system. The DNIS data or signals are provided to and received by the customer or subscriber equipment. Using DNIS identifiers provided by a public telephone company or system, the VCT voice response unit described in VCT '86 identifies the called 800 telephone number and routes the call accordingly.

C. VCT '87

Voice Computer Technologies Corporation also published The VCT Quarterly Newsletter in Winter 1987 ("VCT '87"), which discloses a voice response system that employs multiple 800 telephone numbers to access various customer services. ("1-800-Customer Service," *The Voice, The VCT Quarterly Newsletter,* Volume 2, No. 3, Winter 1987). VCT '87 is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(a). A copy of the VCT '87 reference is attached to this Request as PA-C.

VCT '87 discloses "the VCT Advantage" voice response system for use with telephone systems or networks to fully or partially automate customer services in order to increase service center productivity. The VCT Advantage system is used with T1 services provided by a public telephone system or network that accommodate a high volume of telephone calls. The VCT Advantage system can provide special services including immediate identification of certain service applications.

> . . . the VCT Advantage system can support T1 service. For departments with very high call volumes, a service such as T1 can provide substantial savings in telephone charges. Equipped with a T1 interface the VCT Advantage system can not only support T1 but can also provide some special services such as *immediate identification for particular applications.*

(VCT '87, page 1, right column, fourth full para.)(emphasis added).

In addition, the VCT Advantage voice response system receives "DNIS codes" provided by the public telephone network and uses such codes to identify a particular application.

> In one VCT application, several 800 numbers enter the service department over many T1 spans. These calls are received by the VCT Advantage before going to an ACD [automatic call distributor]. DNIS codes received with each call allow the voice response system to identify the application before even speaking with the customer. 800 numbers . . . are provided to customers for credit card authorization, point of sale terminals and corporate accounts. The DNIS codes associated with each 800 number are identified by the voice system and directed to the appropriate department before the call is even answered. The result is an efficient *interface* with existing telephone service that enhances the economic benefits of T1

(VCT '87, page 1, right column, last para. and page 5, left column, first para.)(emphasis added).

The VCT Advantage system disclosed in VCT '87 can thereby receive multiple 800 telephone numbers whereby the DNIS associated with each 800 telephone number allows access to a different application, including credit card authorization, point of sale terminals and corporate accounts.

D. NDC

The article by Linda Driscoll and Joseph Levinson is entitled "NDC – Where Telemarketing And Technology Meet" ("NDC"). The article was published in November 1985 in Telemarketing. NDC is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(b). A copy of NDC is attached to this Request as PA-D.

NDC is directed to a telephone communications system for receiving inbound calls to be processed by agent operators on behalf of a variety of advertising customers. In general the system and method disclosed provide computer-generated and formatted messages to operator agents according to a stored script based on the called number associated with a caller.

One aspect of the NDC system includes switching the telephone caller to a live operator who can gather information from the telephone caller and input the information into the system at a terminal for processing and achieving the desired caller functionality.

With respect to routing calls, NDC disclose the use of DNIS to determine call routing to select the format and that the same DNIS can be displayed to an operator for automating the receipt of caller information. NDC discloses that a caller can provide data to live operators during a caller's interaction with the system. Finally, NDC discloses that caller data provided to the live operators may be stored in a database.

NDC discloses a switching structure that switches callers to live operators. Callers may provide data to the operators, who enter the data into the system. The data is stored for subsequent use.

NDC also discloses a system that is comprised of various regional network nodes. Each node is at a spaced-apart location from the other nodes and houses a full complement of call distributors and data couplers. Operators may access a local database or a database over a local or wide area network.

E. Student Registration

The article, *Automated Student Registration Using Touch-Tone Telephone/Voice Response, An Application Note,* 1986 ("Student Registration" or "SR"), is directed to automated student registration through a touch-tone telephone. Student Registration was published in 1986. Student Registration is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(b). A copy of the Student Registration reference is attached to this Request as PA-E.

Student Registration describes the system as follows:

> Automated student registration through Touch-Tone telephone/voice response is the most exciting innovation since the computerization of the registration process. All pre-authorized students are given the ability to choose, add or drop courses from any Touch-Tone telephone – anywhere! Each transaction is automatically prompted and confirmed by computer controlled spoken messages. An interface between your existing computer system and the telephone network is provided by a Voice Response System and appropriate software. This technique is compatible with both on-line and batch systems, as shown in Figure 1-1.

(Student Registration at 1-1). Student Registration discloses that the caller provides identification data including a student identification number, a personal access code, and a social security number.

F. Taylor

U.S. Patent No. 4,400,587 ("Taylor") is entitled "Overflow and Diversion to a Foreign Switch". The patent was issued on August 23, 1983 from an application that was filed on August 25, 1981. Taylor is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(b). A copy of the Taylor patent is attached to this Request as PA-F.

Taylor is directed to routing of telephone calls using automatic call distributors, and more particularly the re-routing of calls from a particular gate (i.e. a group of operators) to other gates when there is overflow or some other need to divert a call. Taylor discloses routing calls from one automatic call distributor ("ACD") to another ACD when necessary or desired. Taylor includes disclosure of routing calls between ACDs that are spaced apart geographically. For example and with reference to Fig. 1, Taylor discloses that a call may be routed from one ACD over the public switch telephone network to another ACD, which may be in a different time-zone.

G. Oliphant

Rockwell Telecommunications, Inc. published the article "An ACD and VRU Can Provide Mutual Benefits" in *Proceedings '87 Voice I/O Systems Applications Conference* held on October 6-8, 1987 (AVIOS) by Jean R. Oliphant (the "Oliphant" reference). Oliphant is therefore prior art with respect to Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent under 35 U.S.C. § 102(a). A copy of the Oliphant reference is attached to this Request as PA-G.

Oliphant discloses the system integration of an ACD, VRU and operators for interacting with callers via telephone. Oliphant discloses the advantages of this integration.

> A stand-alone VRU requires its own trunking. In small applications this may be fine. However, when the call traffic could just as legitimately arrive by tieline, MEGACOM, foreign exchange as well as in-WATS, then trunking can be a problem when port limitations on the VRU must be considered. …
>
> Again consider a stand-alone VRU and how it would handle call loads during peak and busy hour and during those times when the VRU has out-of-service conditions. The most typical approach is to let the calls get blocked at the central office, or to provide no answer at the VRU. However, this doesn't help overall, it simply results in very poor service conditions. Again, a device is needed which can queue calls and overflow them to agents for handling if the delay while waiting for an available VRU port becomes too long. Reasonable service can then be provided with these capabilities.
>
> The device which can provide all the desirable capabilities just described is an automatic call distributor (ACD) system. An ACD is designed to accept high volumes of inbound calls from a variety of sources and to react favorably under call load conditions. The original ACD systems distributed calls only to human agents, but current systems can incorporate VRUs just as easily. In fact, the hardware and call processing functions can be integrated so well that the two units complement and benefit each other.

(Oliphant at 226).

Oliphant discloses two configurations for a system having a voice response unit and operators. In a first configuration (Figure 1), termed "stand-along VRU", the "fronting" VRU receives incoming calls and the ACD remains "behind" the VRU for switching calls from the VRU to agents. (Oliphant at 225). In the second configuration (Figure 2), the "fronting" ACD receives incoming calls with the VRU "behind" the ACD. (Oliphant at 227).

IV. THE PENDING '863 REEXAMINATIONS AND CLAIM CONSTRUCTIONS

A. Summary of Concurrently Pending Reexaminations of the '863 patent

The below table summarizes reexamination requests, prior art and involved claims.

Claims	References	Status
'095 Reexamination – Control No. 90/008,095		
27	Barger + VCT '86 + Yoshizawa	Rejection affirmed by BPAI; Request for Reconsideration filed
93	Barger + VCT '87	Rejection affirmed by BPAI; Request for Reconsideration filed
181, 183, 185	Yoshizawa	Rejection affirmed by BPAI; Request for Reconsideration filed
First Merged Proceedings – Control Nos. 90/011,515 and 90/011,457		
31	Barger + VCT '86 Barger + VCT '87 Barger + VCT '86 + Yoshizawa Barger + VCT '86 + SR	Final Rejection; on appeal to BPAI
31	Barger + VCT '86 + Taylor + Yoshizawa Barger + VCT '86 + Taylor + SR	Withdrawn by Examiner (Taylor superfluous to other rejections)
42, 43	Barger + Taylor + VCT '86 Barger + VCT '86 + Taylor + Yoshizawa Barger + VCT '86 + Taylor + SR	Withdrawn; claims confirmed
42, 43	Von Meister + VCT '86 Von Meister + VCT '87 Von Meister + VCT '86 + SR	Withdrawn; claims confirmed
49	Von Meister + VCT '86 Von Meister + VCT '87 Von Meister + VCT '86 + SR	Final Rejection; on appeal to BPAI
Second Merged Proceedings – Control Nos. 90/012,062 and 90/012,071		
32, 39, 96, 98, 99	Barger + VCT '86 + Yoshizawa	Non-Final Rejection; response filed
32, 96, 98, 99	Barger + VCT '87 + Yoshizawa	Non-Final Rejection; response filed
39	Barger + VCT '87 + Yoshizawa + VCT '86	Non-Final Rejection; response filed
32, 39, 96, 98, 99	Von Meister + VCT '86	Non-Final Rejection; response filed
32, 96, 98, 99	Von Meister + VCT '87	Non-Final Rejection; response filed
39	Von Meister + VCT '86 + VCT '87	Non-Final Rejection; response filed
96, 98, 99	Moosemiller + Yoshizawa	Non-Final Rejection; response filed
39	Moosemiller + Yoshizawa + VCT '86	Non-Final Rejection; response filed

1. Control No. 90/008,095 filed 7-14-06 (on appeal)

On July 14, 2006, a third party requester filed a Request for Ex Parte Reexamination of the '863 patent as obvious over Barger in view of VCT '87. The following abbreviated summary relates to the reexamination of claim 27[1] and primarily focuses on the positions taken by the Patent Office and Patent Owner as they relate to the use of DNIS to route calls and to the claim term "personal identification data." The Requester's current Request for Ex Parte Reexamination relies on the Patent Office's findings and determinations in the concurrently pending reexamination as it relates to the limitations of claim 27 (claims 31, 32, 39, 42, 43 and 49 depend, directly and indirectly, from claim 27), although Requester describes additional disclosures in Barger that disclose certain limitations in claim 27.

On September 22, 2006, the Patent Office granted the reexamination request finding that a substantial new question of patentability existed for, among other claims, claim 27. More particularly, the Patent Office found that Barger and VCT '86 disclosed each and every limitation of claim 27 and that "there is a substantial likelihood that a reasonable examiner would consider the combination of teachings presented in Barger and VCT '86 important in deciding whether or not '863 claim 27 is patentable . . ." (Reexamination Request 90/008,095 at p. 6).

Specifically, in the '095 proceeding, the Examiner determined that:

[1] The currently pending reexamination of the '863 patent found independent claims 27 and 93 invalid as obvious. Also, both Claims 43 and 49 depend, either directly or indirectly, from Claim 27.

> In the application, 08/476,662, (the '662 application, hereafter) that became the '863 patent, Examiner found claim 56 (renumbered as claim 27 in the '863 patent) allowable for "reasons advanced by Applicant" (Office action filed 26 November 1996, p. 4, ¶ 7). The reasons distinguishing claim 56 from the art of record forwarded by Patent Owner in the previously submitted Amendment state,
>
> > Independent claim 56 [renumbered as claim 27 in the issued '863 patent] recites the combination of elements of claim 33 (allowed) of the parent application, with a **further limitation** whereby the interface structure includes "means to automatically receive called number identification signals (DNIS) to identify a select one of a plurality of different called numbers." Claims 57-96 ultimately depend on claim 56 and recite further limitations previously submitted in the parent application. (Amendment filed 12 September 1996, p. 5)
>
> Accordingly, at least the limitation of DNIS was found to make the claims allowable over the applied art, and the examiner did not apply a reference teaching DNIS to reject claim 56 (renumbered as claim 27).

(Reexamination Request 90/008,095 Determination Order of 09-22-2006 at 2).

On June 30, 2008, the Patent Office issued an office action rejecting claim 27 (among other claims) under 35 U.S.C. 103(a) as being unpatentable over Barger in view of VCT '86 and Yoshizawa. In rejecting claim 27, the Patent Office found that Barger disclosed each and every limitation of claim 27, with the exception of (a) DNIS and (b) *possibly* the use of "personal identification data" to qualify callers.[2] (p. 19). The Patent Office found that the combination of Barger and VCT '86 (which discloses the use of DNIS in automated telephone systems) and Yoshizawa (which discloses the use of personal identification data for qualification) rendered claim 27 unpatentable under 35 U.S.C. § 103.

On September 8, 2008, the Patent Owner filed a response to the office action. In its response, the Patent Owner argued in relation to claim 27, among other things, that the password or PIN disclosed by Yoshizawa was not "personal identification data."

[2] With respect to person identification data, requester's position is that Barger does indeed disclose personal identification data as required by claim 27. Nonetheless, as described in more detail below, requester sets forth alternative prior art combinations that disclose the use of personal identification data separate and apart from the personal identification data disclosed in Barger.

On March 20, 2009, the Patent Office issued its final rejection of claim 27, maintaining its finding that Yoshizawa disclosed "personal identification data" via its description of a PIN to access automated functionalities of Yoshizawa's telephone betting system.

On July 1, 2007, the Patent Owner filed a response to the final Office Action arguing, among other things, that VCT '86 does not disclose a plurality of formats, that one of skill in the art would not have combined Barger and VCT '86, and that the password disclosed in Yoshizawa is not personal identification number. (Reexamination Request 90/008,095 at pp. 56-63).

On July 20, 2009, the Patent Owner filed a Notice of Appeal and on September 21, 2009 the Patent Owner filed its Appeal Brief. On November 23, 2009, the Examiner filed an Examiner's Answer to the Patent Owner's Appeal Brief. In the Examiner's Answer, the Examiner maintained his rejection of claim 27 as obvious over Barger in view of VCT '86 and Yoshizawa.

On January 25, 2010, Patent Owner filed a Reply Brief, although it was not entered in the record because the Reply Brief failed to comply with 37 C.F.R. 41.33(d)(2). (See Advisory Action of February 26, 2010). Although Patent Owner filed a Corrected Reply Brief on March 10, 2010, the Patent Office did not enter the Corrected Reply Brief because it was not timely filed. (See Advisory Action of March 18, 2010).

On December 20, 2010, the BPAI affirmed the Examiner's rejection of claim 27. On February 22, 2011, the patentee requested rehearing to the BPAI. The request for rehearing remains pending.

2. The First Merged Proceedings

A second request for *ex parte* reexamination of the '863 patent was filed on January 25, 2011 and requested reexamination of claims 43 and 49. This third request was assigned Control No. 90/011,457 ("the '457 reexamination").

A third request for *ex parte* reexamination of the '863 patent was filed on February 28, 2011 and requested reexamination of claim 31. This third request was assigned Control No. 90/011,515 ("the '515 reexamination").

On July 13, 2011 the Office issued a Decision *Sua Sponte* Merging Proceedings of the '457 reexamination and the '515 reexamination (the "First Merged Proceedings"). On July 27, 2011 a non-final office action issued rejecting claims 31, 42, 43 and 49 in the First Merged Proceedings. Patent Owner filed a response to the office action on October 3, 2011. On December 17, 2011, a final office action issued, maintaining the rejections of claims 31 and 49, but also withdrawing the rejections of claims 42 and 43. On February 17, 2012 Patent Owner filed a response to the final office action. Patent Owner filed a Notice of Appeal on March 16, 2012 and an Appeal Brief was filed on May 16, 2012. The First Merged Proceedings remains pending on appeal.

3. The Second Merged Proceedings

A fourth request for *ex parte* reexamination of the '863 patent was filed on December 19, 2011 and requested reexamination of claims 32 and 39. This fourth request was assigned Control No. 90/012,062 ("the '062 reexamination"). Reexamination was ordered for claims 32 and 39 on February 2, 2012.

A fifth request for *ex parte* reexamination of the '863 patent was filed on December 23, 2011 and requested reexamination of claims 96, 98 and 99. This fifth request was assigned

Control No. 90/012,071 ("the '071 reexamination"). Reexamination was ordered for claims 96, 98 and 99 on February 23, 2012.

On April 23, 2012 Patent Owner filed *Petition Under 37 C.F.R. § 1.181 To Vacate Order Granting Ex Parte Reexamination* for the '071 reexamination, essentially arguing that the '863 patent had expired in 2005, and that pursuant to 35 U.S.C. § 286, the reexamination request was untimely because the request was not filed "during the period of enforceability of a patent" pursuant to 37 C.F.R. § 1.1510(a). The petition was denied on June 22, 2012.

On May 1, 2012 the Office issued a Decision *Sua Sponte* Merging Proceedings of the '062 reexamination and the '071 reexamination (the "Second Merged Proceedings"). On May 2, 2012 a non-final office action issued rejecting claims 32, 39, 96, 98 and 99 in the Second Merged Proceedings. Patent Owner filed a response to the office action on July 2, 2012. The Second Merged Proceedings remain pending.

B. Prior Claim Constructions

The following claim constructions are provided for guidance only and are not controlling on the Patent Office. In this request, Requester has adopted the determinations made by the Examiner relating to Claim 27 in the concurrently pending '863 reexamination, determinations reached by the Board of Patent Appeals and Interferences ("BPAI") in the '707 reexamination (see merged reexamination proceedings for 90/006,978 and 90/007,074, BPAI decision filed 2/26/2009, pp. 13-16), and claim construction by certain district courts. The information below highlights certain of the district court's claim constructions in *MCI Telecommunications Corp. v. AT&T Corp.*, 63 F. Supp. 2d 583 (E.D. Pa. 1999) (the "AT&T Court") and *In Re: Katz Interactive Call Processing Patent Litigation*, No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) (the "MDL Court"), each attached hereto as Exhibits OTH-A and OTH-B.

1. Communication facility

The '863 patent indicates that a "comprehensive public telephone system" is an example of a communication facility, stating,

> In the disclosed embodiment, the remote terminals T1 through Tn represent the multitude of conventional telephone terminals that are coupled to a communication facility C which may take the form of a comprehensive public telephone system for interconnecting any associated terminals T1- Tn.

(the '863 patent, col. 3, lines 5-10; emphasis added)

Similarly, the AT&T Court construed "communication facility" to mean,

> ...that part of the telephone network that enables a caller to connect to the Katz system.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 598)

2. Interface structure

The AT&T Court construed the term "interface structure" to mean,

> ...the hardware and software required to connect the processors upon which the Katz system is running to the communication facility such that information from the communication facility and the remote terminals may be provided to and received by the Katz system.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 601)

3. Record structure, including memory and control means

The AT&T Court construed the term "record structure" to mean,

> ...computer hardware and software required to receive data signals, update files, and store information.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 604)

The claim limitations reviewed by the AT&T Court included additional language directed to "memory", such as "record structure, including memory and control means, connected to receive said caller data signals". The AT&T Court construed the term "memory"

> ...according to its plain meaning as: computer hardware that stores information, such as disks, RAM, or tapes.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 603)

The AT&T Court also construed the term "control means" corresponds to a processor or microprocessor (ibid). Accordingly, a control means may be any processing unit.

The MDL Court construed the term "record memory including memory and control means" to mean,

> . . . computer hardware and software required to receive data signals, update a file, and store information.

(*In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) at p. 38.)

4. <u>Accessing</u>

The AT&T Court construed the term "accessing" in the context of "record structure, including memory and control means...for accessing" to mean,

> ...gaining or obtaining the ability to enter or make use of files.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 604)

The AT&T Court...

> further concludes that the term "accessing" in the context of the Katz patents does not delineate or restrict the types of functions that may be performed on the files once they are accessed, such as updating files, creating new files, or deleting files.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 604)

The MDL Court construed the term "qualifying . . . access" to mean,

> . . . determining whether a caller may enter or use.

(*In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) at p. 28.)

5. Qualification structure

The AT&T Court determined that the function performed by a "qualification structure" is

...controlling access to the Katz system by individual callers.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 605)

Accordingly, a "qualification structure" is that hardware and software that perform the function of controlling access to the Katz system by individual callers.

The MDL Court construed the term "qualification structure" to be written in means-plus-function language and that the recited function performed by the "qualification structure" is,

> qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data provided by a respective one of said individual callers.

(*In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) at p. 32.)

The MDL Court further found that the structure required to perform the recited function was,

> . . . processor 92 and qualification unit 93 [but not look-up table 99 or use rate calculator 100].

(*In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) at p. 33.)

6. Personal Identification Data

The AT&T Court construed the term "personal identification data" to mean,

> . . . data that identifies a caller as an individual which is distinct from customer number data.

(*Ronald A. Katz, Technology Licensing, LP and MCI Telecommunications Corp. v. AT&T Corp*, 63 F. Supp. 2d 583, 606)

The AT&T Court further noted that "[n]othing in the claim language instructs that this second piece of identification cannot be a personal identification number (PIN) or an expiration data from a credit card as long as the data identifies the individual." (*Id.*)

The MDL Court construed the term "personal identification data" to mean,

> . . . data that is personal or specific to a caller that permanently identifies the caller to the world at large and is distinct from caller customer number data, a password, and PIN numbers. Examples of personal identification data may include a name, address, telephone number or initials.

(*In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) at p. 11.)

In reaching its decision, the MDL Court cited to the Patent Owner's statements during the reexamination of the '707 patent.[3] During the reexamination of the '707 patent, Katz attempted to distinguish Yoshizawa by arguing that a PIN or password number is frequently changed, not personal to the caller, and thus not "personal identification data." This is the same argument that the patent owner has made during concurrently pending reexaminations of the '863 patent. In the concurrently pending '095 reexamination, the Examiner did not allow Katz to narrow the scope of the claim term "personal identification data" through argument, but rather, the Examiner found that the patent and the relevant disclosures supported a construction of "personal identification data" that included PIN and passwords.

7. <u>Format and plurality of formats</u>

The AT&T Court construed the term "format" to mean,

> ...a computer program that sets forth the content and sequence of steps to gather information from and convey information to callers through prerecorded voice prompts and messages.

(*Ronald A. Katz Licensing, L.P. and MCI Telecommunications Corp. v. AT&T Corp.*, 63 F.Supp.2d at 583, 613.)

[3] The '707 patent shares the same specification as the '863 patent.

The AT&T Court also found the terminology "plurality of formats" to mean more than one format exclusive of subroutines within a format (*ibid*, pp. 613-614).

The MDL Court construed the term "format" to mean,

> A call processing flow implemented by at least one computer program that sets forth the content and sequence of steps to gather information from and convey information to callers through pre-recorded prompts and messages. Selection of, or branching to, a module or subroutine within a computer program does not constitute selection of a separate format. Selection of (or branching to), a second computer program by a first computer program, that together implement a call process flow application also does not constitute selection of a separate format.

(*In Re: Katz Interactive Call Processing Patent Litigation*, Ca. No. 07-ml-01816-B-RGK (FFMx) (CACD February 21, 2008) at p. 12.)

V. STATEMENT OF SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

Requester seeks reexamination of claims 31, 32, 39, 42, 43, 49 and 116. Claims 31, 32, 39, 42, 43 and 49 are each dependent claims. Claims 31, 32, 39 and 49 depend from independent Claim 27. Claim 43 depends from dependent Claim 42, which depends from independent Claim 27. Claim 116 is an independent claim. As mentioned, the Patent Office has rejected Claim 27 as obvious over Barger in view of VCT '86 and Yoshizawa. (See App. No. 90/008,095). The current Ex Parte reexamination request adopts the Examiner's findings in the '095 reexamination, adds additional bases for rejection of Claim 27, and asserts substantial new questions of patentability for claims 31, 32, 39, 42, 43, 49 and 116.

Below is a listing of the substantial new questions of patentability in light of the previously disclosed prior art references, and a brief overview of the applicability of the prior art to the claims for which reexamination is requested. This Request provides a detailed and specific analysis of each substantial new question of patentability as discussed further below.

Requester notes that NDC and Oliphant were not considered by the Office with respect to claims 31, 32, 39, 42, 43, 49 and 116 in the underlying prosecution of the '863 patent, or during the '095 reexamination, the First Merged Proceedings and the Second Merged Proceedings.

The following substantial new questions of patentability are raised by the above-noted prior art included in this Request with respect to claims 31, 32, 39 and 49:

1. Barger, in combination with NDC and Student Registration, raises substantial new questions of patentability with respect to claims 31, 32, 39 and 49.
2. Barger, in combination with NDC, VCT '86 and Student Registration, raises substantial new questions of patentability with respect to claims 31, 32, 39 and 49.

The following substantial new questions of patentability are raised by the above-noted prior art included in this Request with respect to claims 42 and 43:

1. Barger, in combination with NDC, Student Registration and Taylor, raises substantial new questions of patentability with respect to claims 42 and 43.
2. Barger, in combination with NDC, VCT '86, Student Registration and Taylor, raises substantial new questions of patentability with respect to claims 42 and 43.
3. Barger, in combination with NDC, Student Registration, Oliphant and Taylor, raises substantial new questions of patentability with respect to claims 42 and 43.
4. Barger, in combination with NDC, VCT '86, Student Registration, Oliphant and Taylor, raises substantial new questions of patentability with respect to claims 42 and 43.

The following substantial new questions of patentability are raised by the above-noted prior art included in this Request with respect to claim 116:

1. Barger, in combination with NDC, Student Registration, VCT '87 and Taylor, raises substantial new questions of patentability with respect to claim 116.

2. Barger, in combination with NDC, VCT '86, VCT '87, Student Registration and Taylor, raises substantial new questions of patentability with respect to claim 116.

The disclosures of these prior art references raise substantial new questions of patentability for Claims 31, 32, 39, 42, 43, 49 and 116 at least as detailed below because they teach elements and combinations that were absent from the art before the Office during the initial examination of the '863 patent.

General Pertinence of NDC to the Substantial New Questions of Patentability

NDC has specific pertinence to the ultimate issue of non-patentability of Claims 31, 32, 39, 42, 43, 49 and 116 for at least two reasons. First, NDC provides additional insight and teachings as to how a person of ordinary skill in the art would understand the functionality of the operator mode of Barger when implementing DNIS in relation to the recited "format" feature. Second, NDC provides additional insight and teachings as to how a person of ordinary skill in the art would understand the functionality of DNIS with respect to an automatic call distributor (ACD) in relation to the recited feature of receiving DNIS by a call distributor (claims 42 and 43).

As to NDC and the recited "format" feature, in the various reexamination proceedings, the BPAI and the Examiner have concluded that Barger discloses multiple formats based on Barger's teachings directed to a first, second, and third operating modes. Patent Owner disputes this conclusion arguing that the operator attended mode "involves spoken interactions between a caller and a live operator", and therefore the Barger operator attended mode does not satisfy the automation characteristics of a format. Second Merged Proceedings, Patent Owner Response filed July 2, 2012 at 16.

NDC provides specific teachings directed to the purported deficiency of Barger as identified by Patent Owner. First, NDC explicitly describes than the interaction between a caller and an operator in the operator attended mode involves automation, as already understood to be disclosed by Barger. NDC, in combination with Barger, presents Barger in a new light whereby NDC discloses, among other features, that "as the agent greets the caller, the entire format for handling that client's business comes up on the CRT screen, while the DNI greeting is erased at the bottom." (NDC at 71-72). A person of skill in the art would understand that the combined teachings of NDC and Barger explicitly disclose how the called number, received by a system, is used to select a format for at least the caller/operator interaction, and how that interaction includes a "computer program" having a "content and sequence of steps to gather information." The remaining distinctions directed to "format" raised by Patent Owner for Barger in the context of the Second Merged Proceedings collapse in light of the additional disclosure of NDC. NDC specifically confirms how a person of ordinary skill in the art would understand the operator attended mode of Barger in a DNIS environment. The combination of Barger and NDC discloses at least an automated format using voice response and an operator format as displayed on the CRT of an operator.

As to NDC and the recited feature of receiving DNIS by a call distributor (claims 42 and 43), in the final office action in the First Merged Proceedings, the Examiner withdrew rejections directed to claims 42 and 43 for lack of explicit disclosure in the combinations that an ACD received DNIS. The withdrawn rejections for claims 42 and 43 involved the following combinations:

- Barger in view of Taylor and VCT '86;
- Barger in view of VCT '86 and either of Yoshizawa or Periphonics;

- Von Meister in view of either VCT '86 and VCT '87; and
- Von Meister in view of either of VCT '86 and Periphonics.

See Final Rejection, Second Merged Proceedings, Control Nos. 90/011,515 and 90/011,457, dated 12-17-11 at 67-69, 72-74. Specifically, the Examiner, in withdrawing the rejections based on Barger as the primary reference, stated:

> Claim 42 requires that the DNIS are received by one of a plurality of call distributors. Requester's proposed rejection relies on VCT '86 for the receiving of DNIS signals and for the call distributor, (i.e. the "Galaxy ACD" shown in the figure on page 5 of VCT). (See the rejection in the Office action dated 7/27/2011, pp. 30-32, citing the '11457 Request, pp. 43-46.) However, it is unclear if the DNIS signals are ever received by the Galaxy ACD in the VCT Advantage system:
> * * * *
> Based on the foregoing, none of Barger, VCT '86, or Taylor teach that the DNIS are received by the ACD; therefore, there is no *prima facie* case of obviousness for claims 42 or 43. Accordingly, the rejections are withdrawn.

Final Rejection, Second Merged Proceedings, Control Nos. 90/011,515 and 90/011,457, dated 12-17-11 at 68-69. Further, the Examiner, in withdrawing the rejections based on Von Meister as the primary reference, stated:

> At the outset, Examiner does not agree with all of Patentee's arguments. Examiner respectfully maintains that Von Meister discloses ACDs. However, it is agreed that the combination of Von Meister with either of VCT '86 and VCT '87 **fails** to **explicitly** disclose DNIS signals received by the ACD, as required by claims 42 and 43, as argued by Patentee (Remarks, p. 54, 2nd full ¶). The Request fails to provide support for an ACD receiving the DNIS signal or that Von Meister, modified by either of VCT '86 and VCT '87 would have such a configuration. In this regard, as explained above in § V(D), discussing why the rejection of claims 42 and 43 over Barger in view of Taylor and VCT '86 was withdrawn, VCT '87 indicates that the DNIS signals enters the VRU **before** passing to the ACD, and VCT '86 shows that the calls enter the "Galaxy ACD" **after** passing through the VCT Series 2016 which detects the DNIS signals. There is no **explicit** indication that the "Galaxy ACD" receives the DNIS signals. So, even though Von Meister implicitly discloses ACDs, there is no support that if the Von Meister system is modified according to VCT '86 to include the DNIS signals, that the DNIS signals would be received by the ACD.

Final Rejection, Second Merged Proceedings, Control Nos. 90/011,515 and 90/011,457, dated 12-17-11 at 72-73. Finally, the Examiner provided, as a statement of reasons for confirmation of claims 42 and 43 of the '863 patent, that "the prior art used to reject the claims does not show that the *DNIS signals are received by one of the plurality of automatic call distributors*, as required by claims 42 and 43. Final Rejection, Second Merged Proceedings, Control Nos. 90/011,515 and 90/011,457, dated 12-17-11 at 77.

NDC provides specific teachings directed to the purported deficiency of the combinations supporting the rejections of claims 42 and 43. Specifically, NDC describes how dialed number signals are received by an ACD, communicated to CRT controllers, whereby the CRT controllers select the format to be used by operators. NDC discloses:

> "These two processors are the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor."

(NDC at 70-71). And NDC discloses that the call records from the ACD to the CRT processors to pre-prompt the CRT screens, include dialed number identification data. (NDC at 71-72) (with "Dialed Number Identification" … "the entire format for handling that client's business comes up on the CRT screen, while the DNI greeting is erased at the bottom"). NDC specifically confirms that a person of ordinary skill in the art would understand that the combination of Barger and NDC discloses dialed number identification signals being received by an ACD.

General Pertinence of Oliphant to the Substantial New Questions of Patentability

Oliphant provides specific teachings directed to the purported deficiency of the combinations directed to claims 42 and 43. First, Oliphant explicitly describes two conventional arrangements of ACD and VRU components, as already understood to be disclosed by Barger,

NDC and VCT '86. Oliphant therefore presents at least Barger and VCT '86 in a new light whereby Oliphant discloses, among other features, that an ACD can be placed in front or behind a VRU (Oliphant at 225, 227).

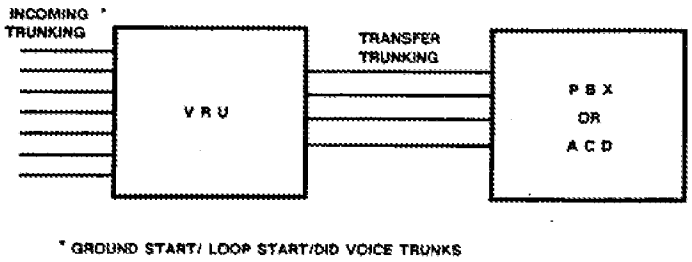


Figure 1 Stand Alone VRU Installation

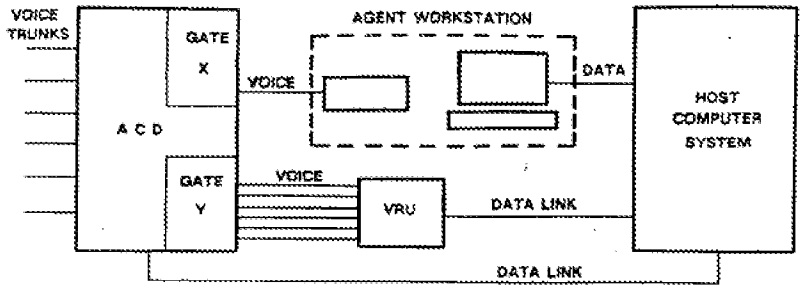


Figure 2 Integrated ACD and VRU Installation

A person of skill in the art would understand that Oliphant describes different, yet conventional arrangements of ACD and VRU components, and further discloses the desirability of placing the ACD in front of the VRU to achieve the additional benefit of a non-call blocking architecture. Because at least NDC and VCT '86 disclose receiving dialed number identification signals by the system, the Oliphant ACD fronting arrangement necessarily requires that the ACD receive dialed number identification signals as recited in claim 42 of the '863 patent (a feature determined to be lacking from the combinations presented in the First Merged Proceedings).

A. Claims 31, 32, 39 and 49 – Barger in combination with NDC and Student Registration Raise Substantial New Questions of Patentability.

Barger is a U.S. Patent, filed on January 10, 1977 and issued on January 31, 1978. Accordingly, Barger constitutes effective prior art under 35 U.S.C § 102(b). Furthermore, NDC is a journal article that was published in *Telemarketing* in November 1985. Accordingly, NDC constitutes effective prior art under 35 U.S.C. § 102(b). Additionally, Student Registration is an article that was published by Periphonics in April 1986. Accordingly, Student Registration constitutes effective prior art under 35 U.S.C. § 102(b). The Office did not cite or apply Barger, NDC or Student Registration during the prosecution of the '863 patent.[4] The combination meets all the claim limitations for the claims listed in the above heading and is not cumulative of any art previously of record. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability.

As discussed above in the summary of the prosecution of the '863 patent, the Examiner found that the '863 patent appeared patentable during original prosecution in part because the art before the original examiner did not disclose or render obvious at least the limitation of DNIS. In the '095 reexamination, an SNQ was found to exist based on the recited DNIS feature. (Reexamination Request 90/008,095 for Determination Order of 09-22-2006 at 2). Barger was also applied to support rejections in the First Merged Proceedings and the Second Merged

[4] Although Barger was of record during the prosecution of the related application Serial No. 07/335,923, which resulted in U.S. Patent No. 6,016,344 ("the '344 patent") and to which the '863 patent claimed priority, the Examiner of the '344 patent did not apply Barger alone or in combination with any other prior art references as a basis for rejection during prosecution of the '344 patent. Additionally, applications to which the '863 also claim priority, including applications that issued as U.S. Patent No. 4,845,739 and U.S. Patent No. 4,792,968, do not list Barger or any of NDC or Student Registration as being of record during prosecution of the respective patent applications. Regardless, citation of a prior art reference in a related patent or the patent for which reexamination is sought does not necessarily preclude a substantial new question of patentability. (See MPEP § 2242 (II.A.) [R-7]).

Proceedings. Further, as discussed herein, the combination of Barger, NDC and Student Registration teaches these same limitations.

The primary reference identified in this Request – Barger– discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication. Moreover, the primary reference discloses (a) an interface structure for coupling callers to the communication facility, (b) a plurality of different formats, (c) record structure that includes means to develop, store, and retrieve caller data, (d) qualification structure that qualifies access based on two forms of identification data, and (e) switching structure that can transfer calls to live operators. A reasonable examiner would therefore consider the teachings of this primary reference important to determining the patentability of claims 31, 32, 39 and 49. As set forth in more detail below, the primary reference, alone and in combination with the various references, raises a substantial new question of patentability as to claims 31, 32, 39 and 49.

Claim 27 recites:

> 27. An [1] analysis control system for use with [2] a communication facility including [3] remote terminals for individual callers, wherein said [4] remote terminals may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing data, said analysis control system comprising:

Figures 1 and 2 of Barger disclose the recited [1] analysis control system (Interactive Voice Response system or IVR system). (Barger, Figs. 1, 2, Abstract). Barger further discloses the recited [2] communication facility (Public Telephone System 12) and [3] remote terminals (devices 14, 24 and 25). (Barger, Figs. 1, 2). Barger discloses the [4] remote terminals (push button phones 25). (Barger, Fig. 2).

Claim 27 further recites:

> [1] interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication, and [2] including means to provide caller data signals representative of data relating to said individual callers developed by said remote terminals and [3] including means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats;

Barger discloses that the recited [1] interface structure has a matching feature that includes telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31, automatic answer 27 , pushbutton interface 45, and touch-tone signal interface 39 of Figure 2. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the recited [2] means to provide caller data signals necessarily includes this caller data signals "means" because the data processor responds to push-button codes entered by a caller. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62). Although Barger does not explicitly disclose [3] means to receive DNIS, Barger does disclose distinct called numbers are dialed for operator assistance (Barger, 3:3-8) and push-button mode (Barger, Figs. 1, 2; 3:61-65). NDC discloses the use of DNIS "to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message …. Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information

being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. … Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats"). The Barger system would benefit economically by being modified to include the DNI technology for selection of particular formats (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 27 further recites:

> record structure, including memory and control means, said record structure connected to receive said caller data signals from said interface structure for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers;

Barger discloses that the recited record structure having a memory (RAM 23, magnetic disc pack (MDP) 41, magnetic tape unit (MTU) 43) and control means (CPU 21). (Barger, Fig. 2). Barger also discloses an exemplary credit verification function (CVF) 45 which the CPU accesses under control of a programmed subroutine for credit verification, that is accessed by account or credit card number and maintained current on a day-to-day basis. (Barger, 8:60-65). Further, Barger discloses the recited caller data signals (account number) are keyed in by the caller and used by the control means (CPU) to access the caller's established account for the purposes of credit verification, for calling up the caller's transaction history, and for storing transactions. (Barger, 9:36-45; 2:5-12; 5:30-38; 11:37-42).

Claim 27 further recites:

> qualification structure coupled to said record structure for qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data provided by a respective one of said individual callers; and

Barger discloses the recited qualification structure because Barger teaches that new customers are required to provide name, address and account or credit card number for credit verification purposes. (Barger, 4:61-67). Student Registration also discloses the recited forms of identification provided by a caller including a student identification number and a personal access code. (Student Registration at C-1).

Claim 27 further recites:

> switching structure coupled to said interface structure for switching certain select ones of said individual callers at said remote terminals to any one of a plurality of live operators wherein said live operators can enter at least a portion of said caller data relating to said select ones of said individual callers through interface terminals, which is stored in said record structure.

Barger discloses the recited switching structure because Barger teaches that the caller can switch to operator-assisted mode by dialing "0", and that the operator can enter data for the caller (Barger, Fig. 6; 8:1-17; 9:36-45). Exemplary data that can be entered for the caller include a specified demonstration to be played or entry of an order. (Barger, Figs. 3a, 3b; 9:29-45).

Claim 31 recites:

> An analysis control system according to claim 27, wherein said caller customer number data is tested to determine if caller status is unacceptable or cancelled.

Barger discloses the recited testing to determine caller status. In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger

further discloses determining a caller status. (Barger, col. 5, lines 58-64) ("If the customer does not have an acceptable account or credit card number ….").

Claim 32 recites:

> An analysis control system according to claim 27, wherein said qualification structure qualifies said individual callers to provide access to at least a portion of said system.

Barger discloses the recited qualifying for access to a portion of the system. As above, Barger discloses that the system performs qualification of callers for accessing at least a portion of the system by performing a credit verification process. During the credit verification process, callers must provide certain information, including the caller's name, address, credit card number, and other information (such as the Student Registration social security number and personal access code) before a caller may place an order. As further noted by the BPAI, "the customer cannot access the automatic telephone service without first having the credit card number verified or qualified" (BPAI at 31).

Claim 39 recites:

> An analysis control system according to claim 27, wherein at least one of said at least two forms of distinct identification includes social security number data.

Barger discloses the recited social security number data. As above, Barger discloses that the system performs qualification of callers for accessing the system by performing a credit verification process. Barger further discloses that access to the record marketing system is based on at least two forms of distinct identification data. Barger discloses that the caller would enter "an established account number having a code reserved for push-button telephone customers," in addition to a credit card number or personal identification data, in order to verify that the caller is eligible for credit purchases and access at least a portion of

the system (col. 2, lines 33-39 and lines 49-57; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 6 to col. 9, line 4; col. 9, lines 36-45). Using multiple forms of identification, such as a customer account number, a social security number and a personal access code, the Barger system, as modified by Student Registration, qualifies access to the system based upon caller customer number data and social security number data. (Student Registration at C-1) ("social security number").

Claim 49 recites:

> An analysis control system according to claim 27, wherein said caller customer number is verified against a record of qualified customer numbers and said personal identification data is provided on-line by said individual callers and stored in said record structure for subsequent use.

Barger discloses the recited verification against a record of qualified customer numbers and personal identification data stored for subsequent use. As above, Barger discloses that the system performs qualification of callers for accessing the system by performing a credit verification process. As discussed previously, the system checks customer records stored in the system to determine if the caller has an account. (Barger, col. 2, lines 53-57, col. 4, lines 61-67, col. 5, lines 46-57, col. 6, lines 35-43, col. 8, line 48-col. 9, line 4, col. 9, lines 36-45). Accordingly, Barger discloses verifying customer number data as recited by claim 49.

Barger further discloses a scenario in which the caller is asked by the operator for his or her name and account number. The caller's record is located, and in doing so, Barger discloses verification of qualified customer numbers. Barger also discloses operators taking caller personal identification data, such as name or address, and entering such data through the operator terminals, which Barger discloses may be stored for subsequent use. (See, e.g. Barger, col. 2, lines 33-39 (". . . data are entered into a customer record block in the data processing system through operator terminal means."), col. 4, lines 61-67 and col. 6, lines 35-43). The combination

of Barger and Student Registration includes the additional personal identification data including social security number and personal access code. The operators could also collect this personal identification data, which Barger discloses may be stored for subsequent use.

As described in the preceding section and detailed in Section VI(A), the Requester has established that each and every limitation of claims 27, 31, 32, 39 and 49 is taught by the combination. Accordingly, the Requester has shown a substantial new question of patentability for these claims. In light of the foregoing, the Office would consider Barger in view of NDC and further in view of Student Registration, as described above, pertinent in deciding the question of patentability as the combination presented herein teaches each limitation of these claims. The combination teaches each of the limitations of the claims that the Office considered absent in the prior art and deemed important during the prosecution of the '863 patent. Accordingly, reexamination should be ordered, and the above-listed claims should be rendered null, void, and otherwise unenforceable in light of this reexamination request.

B. Claims 31, 32, 39 and 49 – Barger in combination with NDC, VCT '86 and Student Registration Raise Substantial New Questions of Patentability.

As above in Section V(A), Barger, NDC and Student Registration are effective prior art under 35 U.S.C. § 102(b) and the Office did not cite or apply Barger, NDC or Student Registration during the prosecution of the '863 patent. Furthermore, VCT '86 is an article that was published by VCT in Winter 1986 as *The Voice Quarterly Newsletter*, vol. 1, no. 2. Accordingly, VCT '86 constitutes effective prior art under 35 U.S.C. § 102(b). The combination meets all the claim limitations for the claims listed in the above heading and is not cumulative of any art previously of record. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format,

DNIS and the operator attended mode of Barger. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability.

As discussed in Section V(A) above, as part of the '095 proceeding, the Examiner found that the '863 patent appeared to be patentable during original prosecution, in part, because the previous art did not disclose or render obvious at least the limitation of DNIS. An SNQ was found to exist based on the recited DNIS feature in the '095 proceeding, as well as other related proceedings. (Reexamination Request 90/008,095 for Determination Order of 09-22-2006 at 2). Barger was also applied to support rejections in the First Merged Proceedings and the Second Merged Proceedings. However, as discussed herein, the combination of Barger, NDC, VCT '86 and Student Registration teaches these very limitations.

The primary reference identified in this Request – Barger– discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication. Moreover, the primary reference disclose (a) an interface structure for coupling callers to the communication facility, (b) a plurality of different formats, (c) record structure that includes means to develop, store, and retrieve caller data, (d) qualification structure that qualifies access based on two forms of identification data, and (e) switching structure that can transfer calls to live operators. A reasonable examiner would therefore consider the teachings of this primary reference important to determining the patentability of claims 31, 32, 39 and 49. As set forth in more detail below, the primary reference, alone and in combination with the various references, raises a substantial new question of patentability as to claims 31, 32, 39 and 49.

Claim 27 recites:

> 27. An [1] analysis control system for use with [2] a communication facility including [3] remote terminals for individual callers, wherein said [4] remote

> terminals may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing data, said analysis control system comprising:

Figures 1 and 2 of Barger disclose the recited [1] analysis control system (Interactive Voice Response system or IVR system). (Barger, Figs. 1, 2, Abstract). Barger further discloses the recited [2] communication facility (Public Telephone System 12) and [3] remote terminals (devices 14, 24 and 25). (Barger, Figs. 1, 2). Barger discloses the [4] remote terminals (push button phones 25). (Barger, Fig. 2).

Claim 27 further recites:

> [1] interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication, and [2] including means to provide caller data signals representative of data relating to said individual callers developed by said remote terminals and [3] including means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats;

Barger discloses that the recited [1] interface structure has a matching feature that includes telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31, automatic answer 27 , pushbutton interface 45, and touch-tone signal interface 39 of Figure 2. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the recited [2] means to provide caller data signals necessarily includes this caller data signals "means" because the data processor responds to push-button codes entered by a caller. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62). Although Barger does not explicitly disclose [3] means to receive DNIS, Barger does disclose distinct called numbers are dialed for operator assistance (Barger, 3:3-8) and push-button mode (Barger, Figs. 1, 2; 3:61-65). NDC discloses the use of DNIS "to identify a select one of a plurality of different called numbers associated with a select format of a

plurality of different formats." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message .... Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and **the format appearing on the screen** is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. ... Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats"). (NDC at 70-71 ("data link that Rockwell supplies us, with the call records, interfaces through this processor to **pre-prompt the CRT screens on the telemarketing floor**.")))

VCT '86 also discloses the use of DNIS "to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats." Specifically, VCT discloses a voice response unit that includes capabilities to receive calls via multiple 800 telephone numbers and to recognize and direct calls for different service formats according to the "DNIS identifiers" that are provided by the public telephone system. The voice response unit directs calls from a specific 800 number to live operators, and handles calls from a different 800

number itself through voice prompts to callers. (VCT '86 at 1, col. 2, second full para; at 5, col. 1, first full para; at 5, Fig. 5).

The Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '86 (for voice response applications) for selection of particular formats (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC and VCT '86, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 27 further recites:

> record structure, including memory and control means, said record structure connected to receive said caller data signals from said interface structure for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers;

Barger discloses that the recited record structure having a memory (RAM 23, magnetic disc pack (MDP) 41, magnetic tape unit (MTU) 43) and control means (CPU 21). (Barger, Fig. 2). Barger also discloses an exemplary credit verification function (CVF) 45 which the CPU accesses under control of a programmed subroutine for credit verification, that is accessed by account or credit card number and maintained current on a day-to-day basis. (Barger, 8:60-65). Further, Barger discloses the recited caller data signals (account number) are keyed in by the caller and used by the control means (CPU) to access the caller's established account for the purposes of credit verification, for calling up the caller's transaction history, and for storing transactions. (Barger, 9:36-45; 2:5-12; 5:30-38; 11:37-42).

Claim 27 further recites:

> qualification structure coupled to said record structure for qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct

> identification data element consisting of personal identification data provided by a respective one of said individual callers; and

Barger discloses that the recited qualification structure because Barger teaches that new customers are required to provide name, address and account or credit card number for credit verification purposes. (Barger, 4:61-67). Student Registration also discloses the recited identification data provided by a caller including a student identification number and a personal access code. (Student Registration at C-1).

Claim 27 further recites:

> switching structure coupled to said interface structure for switching certain select ones of said individual callers at said remote terminals to any one of a plurality of live operators wherein said live operators can enter at least a portion of said caller data relating to said select ones of said individual callers through interface terminals, which is stored in said record structure.

Barger discloses the recited switching structure because Barger teaches that the caller can switch to operator-assisted mode by dialing "0", and that the operator can enter data for the caller (Barger, Fig. 6; 8:1-17; 9:36-45). Exemplary data that can be entered for the call includes a specified demonstration to be played or entry of an order. (Barger, Figs. 3a, 3b; 9:29-45).

Claim 31 recites:

> An analysis control system according to claim 27, wherein said caller customer number data is tested to determine if caller status is unacceptable or cancelled.

Barger discloses the recited testing to determine caller status. In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger further discloses determining a caller status. (Barger, col. 5, lines 58-64) ("If the customer does not have an acceptable account or credit card number ….").

Claim 32 recites:

> An analysis control system according to claim 27, wherein said qualification structure qualifies said individual callers to provide access to at least a portion of said system.

Barger discloses the recited qualifying for access to a portion of the system. As above, Barger discloses that the system performs qualification of callers for accessing at least a portion of the system by performing a credit verification process. During the credit verification process, callers must provide certain information, including the caller's name, address, credit card number, and other information (such as the Student Registration social security number and personal access code) before a caller may place an order. As further noted by the BPAI, "the customer cannot access the automatic telephone service without first having the credit card number verified or qualified" (BPAI at 31).

Claim 39 recites:

> An analysis control system according to claim 27, wherein at least one of said at least two forms of distinct identification includes social security number data.

Barger discloses the recited social security number data. As above, Barger discloses that the system performs qualification of callers for accessing the system by performing a credit verification process. Barger further discloses that access to the record marketing system is based on at least two forms of distinct identification data. Barger discloses that the caller would enter "an established account number having a code reserved for push-button telephone customers," in addition to a credit card number or personal identification data, in order to verify that the caller is eligible for credit purchases and access at least a portion of the system (col. 2, lines 33-39 and lines 49-57; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 6 to col. 9, line 4; col. 9, lines 36-45). Using multiple forms of identification, such as a

customer account number, a social security number and a personal access code, the Barger system, as modified by Student Registration, qualifies access to the system based upon caller customer number data and social security number data. (Student Registration at C-1) ("social security number").

Claim 49 recites:

> An analysis control system according to claim 27, wherein said caller customer number is verified against a record of qualified customer numbers and said personal identification data is provided on-line by said individual callers and stored in said record structure for subsequent use.

Barger discloses the recited verified against a record of qualified customer numbers and personal identification data stored for subsequent use. As above, Barger discloses that the system performs qualification of callers for accessing the system by performing a credit verification process. As discussed previously, the system checks customer records stored in the system to determine if the caller has an account. (Barger, col. 2, lines 53-57, col. 4, lines 61-67, col. 5, lines 46-57, col. 6, lines 35-43, col. 8, line 48-col. 9, line 4, col. 9, lines 36-45). Accordingly, Barger discloses verifying customer number data as recited by claim 49.

Barger further discloses a scenario in which the caller is asked by the operator for his or her name and account number. The caller's record is located, and in doing so, Barger discloses verification of qualified customer numbers. Barger also discloses operators taking caller personal identification data, such as name or address, and entering such data through the operator terminals, which Barger discloses may be stored for subsequent use. (See, e.g. Barger, col. 2, lines 33-39 (". . . data are entered into a customer record block in the data processing system through operator terminal means."), col. 4, lines 61-67 and col. 6, lines 35-43). The combination of Barger and Student Registration includes the additional personal identification data including

social security number and personal access code. The operators would also collect this personal identification data, which Barger discloses may be stored for subsequent use.

As described in the preceding section and detailed in Section VI(A), the Requester has established that each and every limitation of claims 27, 31, 32, 39 and 49 is taught by the combination. Accordingly, the Requester has shown a substantial new question of patentability for these claims. In light of the foregoing, the Office would consider Barger in view of NDC and further in view of VCT '86 and Student Registration, as described above, pertinent in deciding the question of patentability as the combination presented herein teaches each limitation of these claims. The combination teaches each of the limitations of the claims that the Office considered absent in the prior art and deemed important during the prosecution of the '863 patent. Accordingly, reexamination should be ordered, and the above-listed claims should be rendered null, void, and otherwise unenforceable in light of this reexamination request.

C. Claims 42 and 43 – Barger in combination with NDC, Student Registration and Taylor Raise Substantial New Questions of Patentability.

As above in Section V(A), the combination of Barger, NDC and Student Registration raise an SNQ with respect to independent claim 27 (through claims 31, 32, 39 and 49). Claims 42 and 43 depend directly and indirectly from independent claim 27. For this reason, the analyses presented in Section V(A) above will not be repeated below, but is incorporated herein as if repeated below.

U.S. Patent No. 4,400,587 ("Taylor") was issued on August 23, 1983 and filed on August 25, 1981. Taylor is therefore effective prior art under 35 U.S.C § 102(b). The combination of Barger, NDC, Student Registration and Taylor meets all the claim limitations for claims 42 and

43 and is not cumulative of any art previously of record. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability. Because this combination with the exception of Taylor raises an SNQ with respect to independent claim 27, this combination with the addition of Taylor, also raises an SNQ with respect to claims 42 and 43. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. A reasonable examiner would therefore consider the teachings of this combination important to determining the patentability of claims 42 and 43. As set forth in more detail below, the primary reference, alone and in combination with the various references, raises a substantial new question of patentability as to claims 42 and 43.

Claim 42 recites:

> 42. An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors.

Although Barger does not expressly disclose the recited plurality of call distributors, but rather a switching system 16, NDC and Taylor each disclose the recited call distributors. NDC discloses an operator driven system that includes an ACD (automatic call distributor), DNIS for routing calls to operators and selecting formats for display on operator screens, all in combination with a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 71 ("Dialed Number Identification"), 70 ("Galaxy ACD interfaces the AT&T lines via T-1 carriers", "this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). In addition to NDC,

Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements.

Claim 43 recites:

> 43. An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations.

As above, the combination of Barger, NDC, Student Registration and Taylor discloses a plurality of call distributors with at least one call distributor receiving DNIS. Both NDC and Taylor each disclose the recited call distributors at different geographic locations. NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 70 ("this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced DNIS automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of

Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements.

D. Claims 42 and 43 – Barger in combination with NDC, VCT '86, Student Registration and Taylor Raise Substantial New Questions of Patentability.

As above in Section V(B), the combination of Barger, NDC, VCT '86 and Student Registration raise an SNQ with respect to independent claim 27 (through claims 31, 32, 39 and 49). Claims 42 and 43 depend directly and indirectly from independent claim 27. For this reason, the analyses presented in Section V(B) above will not be repeated below, but is incorporated herein as if repeated below.

As above in Section V(C), Taylor is effective prior art under 35 U.S.C § 102(b). The combination of Barger, NDC, VCT '86, Student Registration and Taylor meets all the claim limitations for claims 42 and 43 and is not cumulative of any art previously of record. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability. Because this combination with the exception of Taylor raises an SNQ with respect to independent claim 27, this combination with the addition of Taylor, also raises an SNQ with respect to claims 42 and 43. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. A reasonable examiner would therefore consider the teachings of this combination important to determining the patentability of claims 42 and 43. As set forth in more detail below, the primary reference, alone and in combination with the various references, raises a substantial new question of patentability as to claims 42 and 43.

Claim 42 recites:

> 42. An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors.

Although Barger does not expressly disclose the recited plurality of call distributors, but rather a switching system 16, NDC and Taylor each disclose the recited call distributors. NDC discloses an operator driven system that includes an ACD (automatic call distributor), DNIS for routing calls to operators and selecting formats for display on operator screens, all in combination with a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 71 ("Dialed Number Identification"), 70 ("Galaxy ACD interfaces the AT&T lines via T-1 carriers", "this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced DNIS automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

Claim 43 recites:

> 43. An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations.

As above, the combination of Barger, NDC, VCT '86, Student Registration and Taylor disclose a plurality of call distributors with at least one call distributor receiving DNIS. Both NDC and Taylor each further disclose the recited call distributors at different geographic locations. NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 70 ("this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the DNIS automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

E. Claims 42 and 43 – Barger in combination with NDC, Student Registration, Oliphant and Taylor Raise Substantial New Questions of Patentability.

As above in Section V(A), the combination of Barger, NDC and Student Registration raise an SNQ with respect to independent claim 27 (through claims 31, 32, 39 and 49). Claims 42 and 43 depend directly and indirectly from independent claim 27. For this reason, the analyses presented in Section V(A) above will not be repeated below, but is incorporated herein as if repeated below.

As above in Section V(C), Taylor is effective prior art under 35 U.S.C § 102(b). The article "An ACD And VRU Can Provide Mutual Benefits" by Jean R. Oliphant ("Oliphant") was published in the *Proceedings '87 of Voice I/O Systems Applications Conference* in October 1987. Oliphant is therefore effective prior art under 35 U.S.C § 102(a). The combination meets all the claim limitations for the claims listed in the above heading and is not cumulative of any art previously of record. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability. Because this combination with the exceptions of Oliphant and Taylor raises an SNQ with respect to independent claim 27, this combination with the addition of Oliphant and Taylor, also raises an SNQ with respect to claims 42 and 43. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. Oliphant provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited feature of an ACD receiving DNIS because it discloses the conventional ACD fronting VRU arrangement. A reasonable examiner would therefore consider the teachings of this combination important to determining the patentability of claims 42 and 43. As set forth in more detail below, the primary reference, alone and in combination with the various references, raises a substantial new question of patentability as to claims 42 and 43.

Claim 42 recites:

> 42. An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors.

Although Barger does not expressly disclose the recited plurality of call distributors, but rather a switching system 16, NDC and Taylor each disclose the recited call distributors. NDC

discloses an operator driven system that includes an ACD, DNIS for routing calls to operators and selecting formats for display on operator screens, all in combination with a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 71 ("Dialed Number Identification"), 70 ("Galaxy ACD interfaces the AT&T lines via T-1 carriers", "this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15).

Oliphant discloses two configurations for a system having a voice response unit and operators.

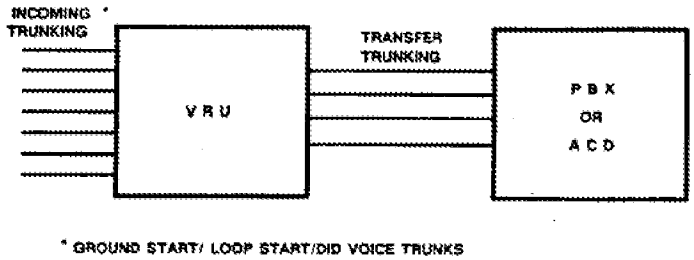


Figure 1 Stand Alone VRU Installation

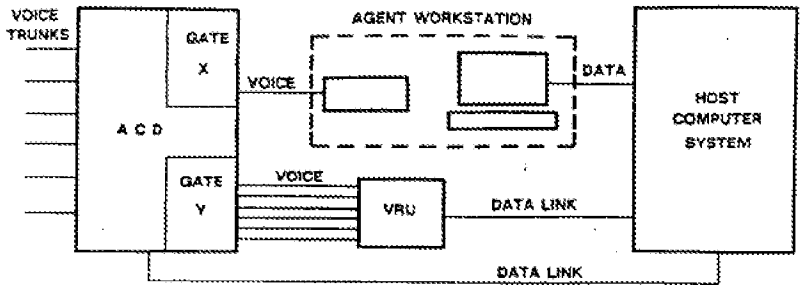


Figure 2 Integrated ACD and VRU Installation

(Oliphant at 225, 227). Oliphant further discloses that, for systems like Barger using a voice response unit, "a device is needed which can queue calls and overflow them to agents for handling if the delay while waiting for an available VRU port becomes too long." (Oliphant at 226). Oliphant discloses the drawbacks of the stand-alone VRU system: "The most typical approach is to let the calls get blocked at the central office, or to provide a no answer at the VRU." (Oliphant at 226). Oliphant also discloses at least one benefit of the alternative front-facing ACD system configuration – non-blocked calls:

> An ACD is designed to accept high volumes of inbound calls from a variety of sources and to react favorable under call load conditions …. An ACD uses software queues to hold calls awaiting distribution.

(Oliphant at 226). A person of skill in the art would be motivated to enhance the Barger system to achieve the benefit of non-blocked calls under peak load conditions as disclosed by the Oliphant ACD configuration of Figure 2.

The Barger system, as modified by the DNIS enhanced automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements, further benefiting from the front-facing ACD system configuration of Oliphant.

Claim 43 recites:

> 43. An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations.

As above, the combination of Barger, NDC, Student Registration, Oliphant and Taylor disclose a plurality of call distributors with at least one call distributor receiving DNIS. Both NDC and Taylor each disclose the recited call distributors at different geographic locations.

NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 70 ("this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15).

The Barger system, as modified by the enhanced DNIS automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the DNIS automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements, further benefiting from the front-facing ACD system configuration of Oliphant.

F. Claims 42 and 43 – Barger in combination with NDC, VCT '86, Student Registration, Oliphant and Taylor Raise Substantial New Questions of Patentability.

As above in Section V(B), the combination of Barger, NDC, VCT '86 and Student Registration raise an SNQ with respect to independent claim 27 (through claims 31, 32, 39 and 49). Claims 42 and 43 depend directly and indirectly from independent claim 27. For this reason, the analyses presented in Section V(B) above will not be repeated below, but is incorporated herein as if repeated below.

As above in Section V(E), Taylor is effective prior art under 35 U.S.C § 102(b) and Oliphant is effective prior art under 35 U.S.C. § 102(a). The combination meets all the claim limitations for the claims listed in the above heading and is not cumulative of any art previously

of record. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability. Because this combination with the exceptions of Taylor and Oliphant raises an SNQ with respect to independent claim 27, this combination with the addition of Taylor and Oliphant, also raises an SNQ with respect to claims 42 and 43. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. Oliphant provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited feature of an ACD receiving DNIS because it discloses the conventional ACD fronting VRU arrangement. A reasonable examiner would therefore consider the teachings of this combination important to determining the patentability of claims 42 and 43. As set forth in more detail below, the primary reference, alone and in combination with the various references, raises a substantial new question of patentability as to claims 42 and 43.

Claim 42 recites:

> 42. An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors.

Although Barger does not expressly disclose the recited plurality of call distributors, but rather a switching system 16, NDC and Taylor each disclose the recited call distributors. NDC discloses an operator driven system that includes an ACD, DNIS for routing calls to operators and selecting formats for display on operator screens, all in combination with a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 71 ("Dialed Number Identification"), 70 ("Galaxy ACD interfaces the AT&T lines via T-1 carriers", "this ACD in all five of our other US call centers"

and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15).

Oliphant discloses two configurations for a system having a voice response unit and operators.

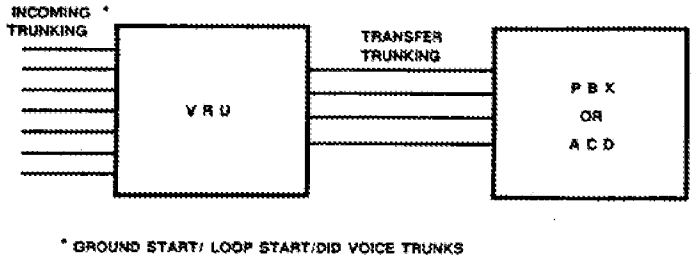


Figure 1 Stand Alone VRU Installation

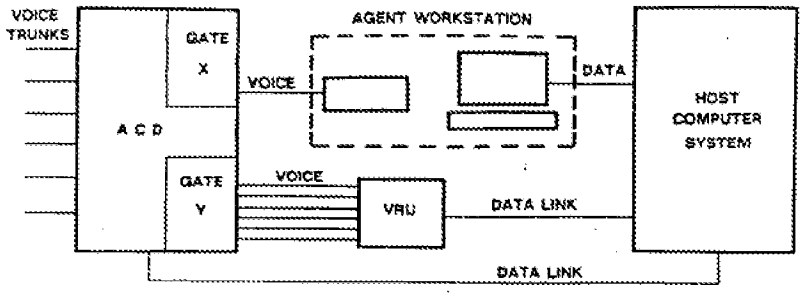


Figure 2 Integrated ACD and VRU Installation

(Oliphant at 225, 227). Oliphant further discloses that, for systems like Barger using a voice response unit, "a device is needed which can queue calls and overflow them to agents for handling if the delay while waiting for an available VRU port becomes too long." (Oliphant at 226). Oliphant discloses the drawbacks of the stand-alone VRU system: "The most typical approach is to let the calls get blocked at the central office, or to provide a no answer at the

VRU." (Oliphant at 226). Oliphant also discloses at least one benefit of the alternative front-facing ACD system configuration – non-blocked calls:

> An ACD is designed to accept high volumes of inbound calls from a variety of sources and to react favorable under call load conditions .... An ACD uses software queues to hold calls awaiting distribution.

(Oliphant at 226). A person of skill in the art would be motivated to enhance the Barger system to achieve the benefit of non-blocked calls under peak load conditions as disclosed by the Oliphant ACD configuration of Figure 2.

The Barger system, as modified by the enhanced DNIS automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements, further benefiting from the front-facing ACD system configuration of Oliphant.

Claim 43 recites:

> 43. An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations.

As above, the combination of Barger, NDC, VCT '86, Student Registration, Oliphant and Taylor disclose a plurality of call distributors with at least one call distributor receiving DNIS. Both NDC and Taylor each disclose the recited call distributors at different geographic locations. NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 70 ("this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1,

lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the DNIS enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the DNIS automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements, further benefiting from the front-facing ACD system configuration of Oliphant.

G. Claim 116 – Barger in combination with NDC, Student Registration, VCT '87 and Taylor Raise Substantial New Questions of Patentability.

As above in section V(A), Barger, NDC and Student Registration are effective prior art under 35 U.S.C § 102(b). As above in section V(C), Taylor is also effective prior art under 35 U.S.C § 102(b). Furthermore, VCT '87 is an article that was published in *VCT Quarterly Newsletter* in in Winter, 1987. Accordingly, VCT '87 constitutes effective prior art under 35 U.S.C. § 102(a).

The Office did not cite or apply Barger, NDC, Student Registration, VCT '87 or Taylor during the prosecution of the '863 patent. The combination meets all the claim limitations for the claims listed in the above heading and is not cumulative of any art previously of record. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability.

Claim 116 of the '863 patent has not been the subject of any prior reexamination proceedings. Further, as discussed in Section V(A) above, as part of the '095 proceeding, the

Examiner found that the '863 patent appeared to patentable during original prosecution, in part, because the previous art did not disclose or render obvious at least the limitation of DNIS. An SNQ was found to exist based on the recited DNIS feature in the '095 proceeding, as well as other related proceedings. (Reexamination Request 90/008,095 for Determination Order of 09-22-2006 at 2). However, as discussed herein, the combination of Barger, NDC, Student Registration, VCT '87 and Taylor teaches these very limitations.

The primary reference identified in this Request – Barger– discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication. Moreover, the primary reference disclose (a) an interface structure for coupling callers to the communication facility, (b) a plurality of different formats, (c) record structure that includes means to develop, store, and retrieve caller data, (d) qualification structure that qualifies access based on two forms of identification data, and (e) switching structure that can transfer calls to live operators. The DNIS feature of claim 116 is taught by the references of VCT '87 and NDC. The ACD feature of claim 116 is taught by the references of VCT '87, NDC and Taylor. The ANI feature of claim 116 is taught by the reference of VCT '87. The caller identification feature of claim 116 is taught by Student Registration and VCT '87. A reasonable examiner would therefore consider the teachings of primary reference important to determining the patentability of claim 116. As set forth in more detail below, the primary reference, in combination with the various references, raises a substantial new question of patentability as to claim 116.

Claim 116 recites:

> 116. An [1] analysis control system for use with [2] a communication facility including [3] remote terminals for individual callers, wherein each of said [4] remote terminals may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of

> alphabetic numeric buttons for providing data and wherein said [5] communication facility has a capability to provide called number identification data (DNIS) and calling number identification data, said analysis control system comprising:

Figures 1 and 2 of Barger disclose the recited [1] analysis control system (Interactive Voice Response system or IVR system). (Barger, Figs. 1, 2, Abstract). Barger further discloses the recited [2] communication facility (Public Telephone System 12) and [3] remote terminals (devices 14, 24 and 25). (Barger, Figs. 1, 2). Barger discloses the [4] remote terminals (push button phones 25). (Barger, Fig. 2). As per the recited claim language, the [5] communication facility and its respective capabilities are not part of the claimed analysis control system, irrespective of whether the prior art discloses such features, which they do.

Claim 116 further recites:

> multiple automatic call distributors at geographically distinct locations for receiving calls from said individual callers at said remote terminals;

Although Barger does not expressly disclose the recited plurality of call distributors, but rather a switching system 16, NDC and Taylor each disclose the recited call distributors. NDC discloses an operator driven system that includes an ACD, DNIS for routing calls to operators and selecting formats for display on operator screens, all in combination with a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 70 ("Galaxy ACD interfaces the AT&T lines via T-1 carriers", "this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The

Barger system, as modified by the enhanced DNIS automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC requires DNIS to achieve those enhancements.

Claim 116 further recites:

> [1] interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication, and [2] including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data and [3] and said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats;

Barger discloses that the recited [1] interface structure has a matching feature that includes telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31, automatic answer 27 , pushbutton interface 45, and touch-tone signal interface 39 of Figure 2. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the recited [2] means to receive caller data signals necessarily includes this caller data signals "means" because the data processor responds to push-button codes entered by a caller, with data entered by the caller including caller personal identification data. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62).

Although Barger does not explicitly disclose [3] means to receive DNIS and calling number identification data, Barger does disclose distinct called numbers are dialed for operator assistance (Barger, 3:3-8) and push-button mode (Barger, Figs. 1, 2; 3:61-65). NDC discloses the use of DNIS "to identify a select one of a plurality of different called numbers associated

with a select format of a plurality of different formats." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message .... Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. ... Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats").

Further, although Barger does not explicitly disclose [3] means to receive calling number identification data (ANI), Barger does disclose that new customers are required to provide contact and payment information, including name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT '87 discloses the use of ANI, specifically the recited "calling number identification data provided automatically by said communication facility." VCT '87 discloses that ANI may be used to look up customer information automatically. Specifically, VCT '87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from

> which the call is being placed. With this type of identification, the voice response system can match the number with a customer's account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6).

The Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) for selection of particular formats (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC, with automatically matching ANI to an existing customer account as disclosed by VCT '87, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 116 further recites:

> voice generator structure coupled through said interface structure for actuating said remote terminals as to provide vocal operating instructions in accordance with said select format to said individual callers and to prompt said individual callers to enter data;

Barger discloses that the recited voice generator structure has a matching feature that includes telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31, automatic answer 27, pushbutton interface 45, and touch-tone signal interface 39 of Figure 2 for prompting and receiving caller entered data. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the data processor responds to push-button codes entered by a caller. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62).

Although Barger does not explicitly disclose "said select format" identified using DNIS, NDC discloses the use of DNIS to identify "said select format." NDC discloses the use of DNIS

signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message …. Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. … Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats").

As above, the Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) to prompt callers and receive caller data (the modes of operation in Barger (2:16-3:22)) or the different Barger applications (6:55-62)) as taught by, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 116 further recites:

> record testing structure connected to receive and test said caller data signals including said calling number identification data and said caller personal identification data against previously stored calling number identification data and caller personal identification data; and

Barger discloses the recited record testing structure because Barger teaches that new customers are required to provide name, address and account or credit card number for credit verification purposes. (Barger, 4:61-67). Barger further discloses structure that accesses previously stored information for testing including a memory (RAM 23, magnetic disc pack (MDP) 41, magnetic tape unit (MTU) 43) and control means (CPU 21). (Barger, Fig. 2). Barger also discloses an exemplary credit verification function (CVF) 45 which the CPU accesses under control of a programmed subroutine for credit verification, that is accessed by account or credit card number and maintained current on a day-to-day basis. (Barger, 8:60-65). Further, Barger discloses the recited caller data signals (account number) are keyed in by the caller and used by the control means (CPU), when received by the system, to access the caller's established account for the purposes of credit verification, for calling up the caller's transaction history, and for storing transactions. (Barger, 9:36-45; 2:5-12; 5:30-38; 11:37-42).

Student Registration also discloses the recited "caller personal identification data" because it discloses that a caller may provide a student identification number, a personal access code (birth date) or social security number that is received and then tested while accessing the voice response system. (Student Registration at C-1).

Further, although Barger does not explicitly disclose the recited calling number identification data (ANI), Barger does disclose that new customers provide various identification data including name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT '87 discloses the use of ANI, specifically the recited "calling number identification." VCT '87 discloses that ANI is received and tested in the process of using ANI to look up customer information automatically. Specifically, VCT '87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from

> which the call is being placed. With this type of identification, the voice response system can match the number with a customer's account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6). Because VCT '87 discloses the requirement that the voice system "match" the received with a customer's account, the received ANI data is matched against previously stored calling number identification data (telephone number). With respect to Barger's new customer intake procedure, as modified by the teachings of VCT '87, a telephone number of a customer is information contained within each customer's account record and may be tested. A person of skill in the art would be aware that multiple individuals in a household may call from using the same telephone line, and for increased security, the caller's birth date may distinguish one caller from another, if desired.

The Barger system would therefore benefit economically by being modified to include the ANI match for an existing customer account as disclosed by VCT '87, with further security provided by the personal access code (birth date) of Student Registration, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 116 further recites:

> analysis structure for receiving and processing said caller data signals under control of said record testing structure.

Barger discloses the recited analysis structure as an order processing system 20. Barger discloses that following completion of an order via telephone,

> the customer's block of data is returned to a master file, but if an order has been entered, the data processor first transfer the order to an order processing system 20 with the name, address, and any other information required to fill the order, such as the account or credit card number.

(Barger at 5:46-57). The order processing system receives and processes order information received from the caller via batch processing for fulfillment of the orders. Specifically, Barger discloses:

> The order processing system may be comprised of a magnetic disk pack and/or magnetic tape unit to accumulate all of the orders for a given period, which may be an entire business day. Once the order period has been closed, the orders are processed off-line in order to batch orders to the same customer and to prepare shipping labels, packing slips and account (or credit card) charge slips. Orders to be prepaid or shipped C.O.D. are set aside for further manual processing in respect to preparing and mailing a statement to be prepaid or for preparing C.O.D. documents.

(Barger at 6:10-20).

As above, the record testing structure is taught by Barger's CPU, which determines whether an order is complete for order processing and fulfillment to be handled by order processing system 20 (analysis structure). (Barger at 6:3-9, see also cols. 14-16 (claim 17) ("said data processor responds to a code entered from a push-button keyboard on the customer's telephone for an order of merchandise or services corresponding to the requested demonstration just completed by transmitting an order to an order processing system.").

As described in the preceding section and detailed in Section VI(G) below, the Requester has established that each and every limitation of claim 116 is taught by the combination. Accordingly, the Requester has shown a substantial new question of patentability for this claim. In light of the foregoing, the Office would consider Barger in view of NDC, Student Registration, VCT '87 and Taylor, as described above, pertinent in deciding the question of patentability as the combination presented herein teaches each limitation of this claim. The combination teaches each of the limitations of the claims that the Office considered absent in the prior art and deemed important during the prosecution of the '863 patent. Accordingly,

reexamination should be ordered, and the above-listed claim should be rendered null, void, and otherwise unenforceable in light of this reexamination request.

H. Claim 116 – Barger in combination with NDC, Student Registration, VCT '86, VCT '87 and Taylor Raise Substantial New Questions of Patentability.

As above in section V(A), Barger, NDC and Student Registration are effective prior art under 35 U.S.C § 102(b). As above in section V(B), VCT '86 is also effective prior art under 35 U.S.C § 102(b). As above in section V(C), Taylor is also effective prior art under 35 U.S.C § 102(b). As above in section V(G), VCT '87 is effective prior art under 35 U.S.C. § 102(a).

The Office did not cite or apply Barger, NDC, Student Registration, VCT '86, VCT '87 or Taylor during the prosecution of the '863 patent. The combination meets all the claim limitations for the claims listed in the above heading and is not cumulative of any art previously of record. The combination's teaching is such that a reasonable examiner would have considered the combination pertinent in deciding the question of patentability.

As above in section V(G), Claim 116 of the '863 patent has not been the subject of any prior reexamination proceedings. Further, as discussed in Section V(A) above, as part of the '095 proceeding, the Examiner found that the '863 patent appeared to patentable during original prosecution, in part, because the previous art did not disclose or render obvious at least the limitation of DNIS. An SNQ was found to exist based on the recited DNIS feature in the '095 proceeding, as well as other related proceedings. (Reexamination Request 90/008,095 for Determination Order of 09-22-2006 at 2). However, as discussed herein, the combination of Barger, NDC, Student Registration, VCT '86, VCT '87 and Taylor teaches these very limitations.

The primary reference identified in this Request – Barger– discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication. Moreover, the primary reference disclose (a) an interface structure for coupling callers to the communication facility, (b) a plurality of different formats, (c) record structure that includes means to develop, store, and retrieve caller data, (d) qualification structure that qualifies access based on two forms of identification data, and (e) switching structure that can transfer calls to live operators. The DNIS feature of claim 116 is taught by the references of VCT '86, VCT '87 and NDC. The ACD feature of claim 116 is taught by the references of VCT '86, VCT '87, NDC and Taylor. The ANI feature of claim 116 is taught by the reference of VCT '87. The caller identification feature of claim 116 is taught by Student Registration and VCT '87. NDC provides additional teachings beyond the disclosures in the previous reexamination requests, and is specifically relevant to the recited features of format, DNIS and the operator attended mode of Barger. A reasonable examiner would therefore consider the teachings of primary reference important to determining the patentability of claim 116. As set forth in more detail below, the primary reference, in combination with the various references, raises a substantial new question of patentability as to claim 116.

Claim 116 recites:

> 116. An [1] analysis control system for use with [2] a communication facility including [3] remote terminals for individual callers, wherein each of said [4] remote terminals may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing data and wherein said [5] communication facility has a capability to provide called number identification data (DNIS) and calling number identification data, said analysis control system comprising:

Figures 1 and 2 of Barger disclose the recited [1] analysis control system (Interactive Voice Response system or IVR system). (Barger, Figs. 1, 2, Abstract). Barger further discloses

the recited [2] communication facility (Public Telephone System 12) and [3] remote terminals (devices 14, 24 and 25). (Barger, Figs. 1, 2). Barger discloses the [4] remote terminals (push button phones 25). (Barger, Fig. 2). As per the recited claim language, the [5] communication facility and its respective capabilities are not part of the claimed analysis control system, irrespective of whether the prior art discloses such features, which they do.

Claim 116 further recites:

> multiple automatic call distributors at geographically distinct locations for receiving calls from said individual callers at said remote terminals;

Although Barger does not expressly disclose the recited plurality of call distributors, but rather a switching system 16, NDC and Taylor each disclose the recited call distributors. NDC discloses an operator driven system that includes an ACD, DNIS for routing calls to operators and selecting formats for display on operator screens, all in combination with a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), 71 ("Dialed Number Identification"), 70 ("Galaxy ACD interfaces the AT&T lines via T-1 carriers", "this ACD in all five of our other US call centers" and "These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced DNIS automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the

automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

Claim 116 further recites:

> [1] interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication, and [2] including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data and [3] and said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats;

Barger discloses that the recited [1] interface structure has a matching feature that includes telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31, automatic answer 27 , pushbutton interface 45, and touch-tone signal interface 39 of Figure 2. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the recited [2] means to receive caller data signals necessarily includes this caller data signals "means" because the data processor responds to push-button codes entered by a caller, with data entered by the caller including caller personal identification data. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62).

Although Barger does not explicitly disclose [3] means to receive DNIS and calling number identification data, Barger does disclose distinct called numbers are dialed for operator assistance (Barger, 3:3-8) and push-button mode (Barger, Figs. 1, 2; 3:61-65). NDC discloses the use of DNIS "to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed

message …. Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. … Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats").

VCT '86 also discloses the use of DNIS "to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats." Specifically, VCT discloses a voice response unit that includes capabilities to receive calls via multiple 800 telephone numbers and to recognize and direct calls for different service formats according to the "DNIS identifiers" that are provided by the public telephone system. The voice response unit directs calls from a specific 800 number to live operators, and handles calls from a different 800 number itself through voice prompts to callers. (VCT '86 at 1, col. 2, second full para; at 5, col. 1, first full para; at 5, Fig. 5).

Further, although Barger does not explicitly disclose [3] means to receive calling number identification data (ANI), Barger does disclose that new customers are required to provide name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT '87

discloses the use of ANI, specifically the recited "calling number identification data provided automatically by said communication facility." VCT '87 discloses that ANI is used to look up customer information automatically. Specifically, VCT '87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from which the call is being placed. With this type of identification, the voice response system can match the number with a customer's account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6).

The Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '86 (for voice response applications) for selection of particular formats (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC and VCT '86, while automatically matching ANI to an existing customer account as disclosed by VCT '87, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 116 further recites:

> voice generator structure coupled through said interface structure for actuating said remote terminals as to provide vocal operating instructions in accordance with said select format to said individual callers and to prompt said individual callers to enter data;

Barger discloses that the recited voice generator structure has a matching feature that includes telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31, automatic answer 27, pushbutton interface 45, and touch-tone signal interface 39 of Figure 2 for prompting and receiving caller entered data. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62).

Barger discloses that the data processor responds to push-button codes entered by a caller. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62). Although Barger does not explicitly disclose "said select format" identified using DNIS, NDC discloses the use of DNIS to identify "said select format." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message .... Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. ... Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats").

VCT '86 also discloses the use of DNIS to identify "said select format." Specifically, VCT discloses a voice response unit that includes capabilities to receive calls via multiple 800 telephone numbers and to recognize and direct calls for different service formats according to the "DNIS identifiers" that are provided by the public telephone system. The voice response unit directs calls from a specific 800 number to live operators, and handles calls from a different 800

number itself through voice prompts to callers. (VCT '86 at 1, col. 2, second full para; at 5, col. 1, first full para; at 5, Fig. 5).

As above, the Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '86 (for voice response applications) to prompt callers and receive caller data (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC and VCT '86, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 116 further recites:

> record testing structure connected to receive and test said caller data signals including said calling number identification data and said caller personal identification data against previously stored calling number identification data and caller personal identification data; and

Barger discloses the recited record testing structure because Barger teaches that new customers are required to provide name, address and account or credit card number for credit verification purposes. (Barger, 4:61-67). Barger further discloses structure that accesses previously stored information for testing including a memory (RAM 23, magnetic disc pack (MDP) 41, magnetic tape unit (MTU) 43) and control means (CPU 21). (Barger, Fig. 2). Barger also discloses an exemplary credit verification function (CVF) 45 which the CPU accesses under control of a programmed subroutine for credit verification, that is accessed by account or credit card number and maintained current on a day-to-day basis. (Barger, 8:60-65). Further, Barger discloses the recited caller data signals (account number) are keyed in by the caller and used by the control means (CPU), when received by the system, to access the caller's established account for the purposes of credit verification, for calling up the caller's transaction history, and for storing transactions. (Barger, 9:36-45; 2:5-12; 5:30-38; 11:37-42).

Student Registration also discloses the recited "caller personal identification data" because it discloses that a caller may provide a student identification number, a personal access code (birth date) or social security number that is received and then tested while accessing the voice response system. (Student Registration at C-1).

Further, although Barger does not explicitly disclose the recited calling number identification data (ANI), Barger does disclose that new customers provide various identification data including name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT '87 discloses the use of ANI, specifically the recited "calling number identification." VCT '87 discloses that ANI is received and tested in the process of using ANI to look up customer information automatically. Specifically, VCT '87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from which the call is being placed. With this type of identification, the voice response system can match the number with a customer's account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6). Because VCT '87 discloses the requirement that the voice system "match" the received with a customer's account, the received ANI data is matched against previously stored calling number identification data (telephone number). With respect to Barger's new customer intake procedure, as modified by the teachings of VCT '87, a telephone number of a customer is information contained within each customer's account record and may be tested. A person of skill in the art would be aware that multiple individuals in a household may call from using the same telephone line, and for increased security, the caller's birth date may distinguish one caller from another, if desired.

The Barger system would therefore benefit economically by being modified to include the ANI match for an existing customer account as disclosed by VCT '87, with further security provided by the personal access code (birth date) of Student Registration, in order to handle more calls in less time, and to reduce the number of operators required.

Claim 116 further recites:

> analysis structure for receiving and processing said caller data signals under control of said record testing structure.

Barger discloses the recited analysis structure as an order processing system 20. Barger discloses that following completion of an order via telephone,

> the customer's block of data is returned to a master file, but if an order has been entered, the data processor first transfer the order to an order processing system 20 with the name, address, and any other information required to fill the order, such as the account or credit card number.

(Barger at 5:46-57). The order processing system receives and processes order information received from the caller via batch processing for fulfillment of the orders. Specifically, Barger discloses:

> The order processing system may be comprised of a magnetic disk pack and/or magnetic tape unit to accumulate all of the orders for a given period, which may be an entire business day. Once the order period has been closed, the orders are processed off-line in order to batch orders to the same customer and to prepare shipping labels, packing slips and account (or credit card) charge slips. Orders to be prepaid or shipped C.O.D. are set aside for further manual processing in respect to preparing and mailing a statement to be prepaid or for preparing C.O.D. documents.

(Barger at 6:10-20).

As above, the record testing structure is taught by Barger's CPU, which determines whether an order is complete for order processing and fulfillment to be handled by order processing system 20 (analysis structure). (Barger at 6:3-9, see also cols. 14-16 (claim 17) ("said data processor responds to a code entered from a push-button keyboard on the customer's

telephone for an order of merchandise or services corresponding to the requested demonstration just completed by transmitting an order to an order processing system.”).

As described in the preceding section and detailed in Section VI(H) below, the Requester has established that each and every limitation of claim 116 is taught by the combination. Accordingly, the Requester has shown a substantial new question of patentability for this claim. In light of the foregoing, the Office would consider Barger in view of NDC, Student Registration, VCT ’86, VCT ’87 and Taylor, as described above, pertinent in deciding the question of patentability as the combination presented herein teaches each limitation of this claim. The combination teaches each of the limitations of the claims that the Office considered absent in the prior art and deemed important during the prosecution of the ‘863 patent. Accordingly, reexamination should be ordered, and the above-listed claim should be rendered null, void, and otherwise unenforceable in light of this reexamination request.

VI. DETAILED APPLICATION OF THE PRIOR ART TO THE CLAIM IN SUPPORT OF SUBSTANTIAL NEW QUESTIONS OF PATENTABILITY

A. Claims 31, 32, 39 and 49 are obvious over Barger and NDC and Student Registration.

Claims 27, 31, 32, 39 and 49 are unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC and Student Registration. Just as in the concurrently pending reexamination of the ‘863 patent, Barger discloses the majority of the limitations for Claim 27 from which claims 31, 32, 39 and 49 depend. NDC provides additional disclosures related to the DNIS limitation. Student Registration provides disclosures related to qualification, which is relevant to the additional limitations in claims 31, 32, 39 and 49.

As found by the Patent Office in the concurrently pending '095 reexamination, Barger discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication, and further including (a) interface structure for coupling callers to said communication facility, (b) a plurality of formats, (c) record structure that includes means to develop, store, and retrieve caller data, (d) qualification structure that qualifies access based on two forms of identification data, and (e) switching structure that can transfer calls to live operators.

1. Claim 27 – "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication, and including means to provide caller data signals representative of data relating to said individual callers developed by said remote terminals and including means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats"

a. "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication"

The phrase "interface structure … to interface said remote terminals" is arguably a "means plus function" limitation under § 112, paragraph six. The term "interface structure" provides little (if any) guidance as to the structure of the element, and it is only when coupled with its intended function ("to interface …") that the term takes on any meaning.

However, because the claim uses the term "interface structure" instead of "means," there is a possibility that the limitation will be construed literally, instead of under § 112, paragraph 6. Consequently the Requestor will address both possible interpretations.

i. Literal interpretation

If this limitation is construed without regard to its intended function, then the limitation includes *any* interface structure that is coupled to a communication facility to interface remote terminals for voice and digital communication.

As shown in FIG. 1, and in greater detail in Fig. 2, the Barger system and method couples dialed or leased lines of the public telephone system (12) to a data processor (10) or to a CPU (21) and bus (22) of the Barger system. The system connects multiple telephone lines (14), which may include dial telephones (24) and push button telephones (25) to the processor (10) or to the CPU (21) and bus (22). (*See also*, Barger, col. 3, lines 41-46). The disclosures in Barger further describe a plurality of telephone couplers (13) including, as shown in Fig. 2, telephone data couplers (26) and data coupling sets (32) configured to connect dial and push button telephones through an automatic answer device (27) and a pushbutton interface (46), respectively, to the system's data processor (10) or CPU (21). (Barger, FIGS. 1 and 2; col. 3, lines 52-65; col. 4, lines 10-13, col. 7, lines 38-51; and col. 9, lines 29-62). The telephone couplers (13), (26) and (32) are connected to an automatic answering device (11), as shown in Fig. 1, which responds to ringing signals and sends signals to the data processor (10). The data processor (10) or CPU (21) responds to such signals by automatically connecting caller telephone lines to an audio program repeater (17) and (28). (Barger, col. 2, lines 16-33; col. 4, lines 5-9 and 10-20).

Thus Barger discloses the interface structure as claimed in the '863 patent.

ii. "Means plus function"

If this limitation is construed according to § 112, paragraph 6, then "interface structure" is to be construed as any corresponding structure disclosed in the specification for carrying out the stated function. In the '863 patent, the structure disclosed that is coupled to the

communication facility for interfacing with the remote terminals is the series of call distributors AC1-ACn, interface 20, and switch 21. ('863 patent, FIG. 1, col. 4, lines 15-27).

Barger discloses interface structure for interfacing callers. The structures in Barger that correspond to the structures in the '863 patent that perform the recited function include telephone data couplers (26) and data coupling sets (32) that are configured to connect dial and push button telephones through an automatic answer device (27) and a pushbutton interface (46), respectively, to the system's data processor (10) or CPU (21). (Barger, FIGS. 1 and 2; col. 3, lines 52-65; col. 4, lines 10-13, col. 7, lines 38-51; and col. 9, lines 29-62). The telephone couplers (13), (26) and (32) are connected to an automatic answering device (11), as shown in Fig. 1, which responds to ringing signals and sends signals to the data processor (10). The data processor (10) or CPU (21) responds to such signals by automatically connecting caller telephone lines to an audio program repeater (17) and (28). (Barger, col. 2, lines 16-33; col. 4, lines 5-9 and 10-20).

Thus Barger discloses the interface structure as claimed in Claim 27 of the '863 patent.

b. "means to provide caller data signals representative of data relating to said individual callers developed by said remote terminals….

This clause of Claim 27 is a "means plus function" clause under § 112, paragraph 6.[5] The structure disclosed in the '863 patent that provides caller data signals representative of data relating to individual callers developed by the remote terminals is the processing system P1, and more particularly, interface 20, switch 21 and processors PR1-PRn. ('863 patent, FIG. 1; col. 4, lines 46-55).

[5] "Means to provide" is clearly just another way of saying "Means for providing".

The data processor or CPU controls the audio program repeater to connect caller lines through a switching system (16), or, as shown in Fig. 2, through a switching matrix (29), to a plurality of channels of the audio program repeater to play a "hello" message to callers. (Barger, col. 2, lines 16-27; col. 3, lines 52-54; col. 4, lines 10-20; and col. 9, lines 53-60). When the "hello" message is completed, the audio program repeater signals the data processor or CPU, which then switches caller telephone lines to a plurality of customer service operators (18) and (34) through the switching system (16) and (29). (Barger, col. 2, lines 22-30; and col. 4, lines 20-24). Alternatively, in the push button service mode, the data processor or CPU communicates directly with callers via preprogrammed messages the audio program repeater provides to caller telephones. The preprogrammed messages deliver instructions or prompts to callers as required by the transaction. (Barger, col. 2, line 62-col. 3, line 22). Callers respond to the instructions or prompts by entering relevant information into the data processor or CPU using their telephone keypads. (Barger, col. 2, lines 30-33; col. 3, lines 14-22; col. 6, lines 35-43; and col. 9, lines 29-62).

As such, the structures and associated processes discussed above show that Barger disclosed in 1977 a system that includes an interface structure that couples or "interfaces" caller telephones with the system data processor or CPU and includes, particularly in the push button service mode, structure that corresponds to means to provide caller data signals or signals representative of data relating to said individual callers that are developed by said remote terminals as recited in claim 27. The corresponding structure of Barger includes those structures and processes necessary to transmit signals that are developed by at push button telephones, as a result of callers keying data into their telephone keypads, to the data processor or CPU, including

the plurality of data coupling sets (32) and the pushbutton interface (46) that couple push button telephones (25) to the bus (22) and the CPU (21), as shown in Fig. 2.

> c. means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers . . .

The next clause of Claim 27 recites "means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats." Such identification signals or identification data are provided through the capabilities and services of a public telephone company or system that are collectively well known in the art as "dialed number identification service," or "DNIS," whereby the telephone company or system provides to the customer or subscriber equipment data or signals that identify the telephone number being called. This limitation of Claim 27 is a "means plus function" clause under § 112, paragraph 6. The structure disclosed in the '863 patent that receives called number identification signals (DNIS) and identifies one of a plurality of called numbers is the automatic call distributor AC1, interface 20, and switch 21. (See '863 patent, col. 4, lines 56-63; col. 6, lines 36-44).

To the extent that Barger does not explicitly describe such DNIS signals in use with its system, Barger clearly discloses routing calls based on the telephone number dialed. For example, Barger teaches call routing to different call modes or applications. Barger explicitly teaches that certain telephone numbers are routed to different call modes. (Barger, col. 3, lines 3-7). The structure disclosed in Barger for performing this function includes telephone couplers 13, and one or more data coupling sets 32. Although Barger discloses only one technical way in which to accomplish this (i.e. dedicated telephone ports), alternative routing techniques, such as

those that involve signals that represent the called number (DNIS), multiplexed operations involving PBXs, and other basic routing concepts are inherently disclosed in Barger.

To the extent that Barger does not inherently disclose call routing based on DNIS signals, Barger in view of the non-patent reference NDC, teaches or suggests means for receiving DNIS data or signals, rendering Claim 27 obvious. NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message .... Then as the agent greets the caller, the entire format for handling that client's business comes up on the CRT screen, while the DNI greeting is erased at the bottom.")). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. ... Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")).

A person of skill in the art would have been motivated to combine NDC with Barger. A number of practical and economic benefits would have motivated one to implement DNIS based routing of calls to particular call modes. NDC specifically identifies the time savings, error reduction, and efficiency aspects of using the dialed number to achieve automation benefits for agent-handled calls, such as those in the Barger system:

> This software system helps eliminate errors because the first time the agent has to type any information on the keyboard is to input the caller's name and address.
>
> Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen. Those four seconds saved on the labor side of the system added up to dollars saved for NDC. Again, Dean Smith's figures estimated they add up to $75,450 a year in savings.
>
> Andy Zazzera said, "Without Galaxy 3 tied to our host computer in Atlanta, all these agents would have required dedicated lines connected only to specific customer calls coming in. Each agent would have just one script and answer only one type of call, Or at best, each agent would hear a "whisper" and hear the company name and then have to translate the name of that company onto the CRT screen through the keyboard, and this is the point where errors can creep in."

(NDC at 72); (see also '095 Reexamination, Examiner's Answer at p. 15 ("It would have been obvious for one of ordinary skill in the art, at the time of the invention to use DNIS to identify respective formats or modes in Barger's system . . .")). Such additional considerations include, for example, expansion of the automated system for increased call volume, time zone discrepancies, or the desire to run varied formats. Such considerations were practical pressures on the automated call systems in general and that would have necessitated call routing changes. As discussed in the concurrent reexamination, Barger discloses and uses call routing based on the number dialed by the caller. Although Barger used or discloses one way in which to accomplish such routing, i.e. dedicated telephone lines, it would have been obvious to utilize other routing techniques such as DNIS signals as such technology was in widespread use.

2. Claim 27 – "record structure, including memory and control means, said record structure connected to receive said caller data signals from said interface structure for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers"

The next clause of Claim 27 recites "record structure, including memory and control means, said record structure connected to receive said caller data signals from said interface structure for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers." In the concurrently pending reexamination, this record structure and memory were construed to mean the computer hardware and software that receives data signals, update files, and store information. ('095 Reexamination, 11/23/09 Examiner's Answer at p. 15-16). The term "control means" was construed as a processor or microprocessor. (Id.).

Barger also discloses *record structure, including memory and control means . . . for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers* as recited in Claim 27. With reference to Fig. 2, Barger specifically discloses that the system maintains a complete record of all transactions, historical records of particular customers, and accurate and informative customer profiles. Customer information and records are stored in a master file and retrieved by the data processor (10) or CPU (21) as required. (Barger, col. 2, lines 5-12, col. 5, lines 29-37 and lines 46-53; col. 5, lines 46-53; and col. 6, lines 21-26). In addition, the CPU (21) is in communication via the bus (22) with RAM (23) and a magnetic disk pack (MDP) (41) and a magnetic tape unit (MTU) (43), that provide storage capabilities to the embodiment of the Barger system shown in Fig. 2. (Barger, col. 7, lines 33-37; and col. 8, lines 48-60). Moreover, as found by the Examiner in the concurrently pending reexamination, Barger discloses a CPU (21), or control means, connected to RAM (23), or memory, via the bus (22). These structures allow the Barger system to store caller data from caller telephones through the data coupling sets 32 and the pushbutton interface

46. Thus, Barger discloses *record structure connected to receive said caller data signals from said interface structure.*

Claim 27 also requires *accessing a file and storing certain of said data . . ..* As found by the AT&T Court and the Examiner in the '095 reexamination, accessing a file means gaining or obtaining the ability to enter or make use of files. ('095 Reexamination, 11/23/09 Examiner's Answer at p. 16). As shown in FIG. 1, the data processor (10) and order processing system 20 are configured to gain access to and store information from a file. Barger discloses a record structure having a memory (RAM 23, magnetic disc pack (MDP) 41, and magnetic tape unit (MTU) 43, FIG. 2) and control means (CPU 21), wherein said structures can access account or credit card information. (Barger, col. 8, lines 48-65). Barger further discloses caller's entering account or credit card information and verifying the accuracy of this information against files stored by the Barger system. (Barger, col. 9, lines 36-45). Finally, Barger discloses updating or recording caller entered data. (Barger col. 5, lines 45-53; Barger, col. 5, line 65-col. 6, line 2; col. 6, lines 21-26). Barger discloses that caller information may be accessed or stored in either the operator attended format or the automated format. (Barger, col. 6, lines 38-43).

3. Claim 27 – "qualification structure coupled to said record structure for qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data provided by a respective one of said individual callers"

Barger also discloses *qualification structure . . . for qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data*, as recited in Claim 27 of the '863 patent.

The phrase "qualification structure… for qualifying access" is a "means plus function" limitation under § 112, paragraph six as found by the AT&T Court and the Examiner in the concurrently pending '095 reexamination. The term "qualification structure" provides little (if any) guidance as to the structure of the element, and it is only when coupled with its intended function ("for qualifying access…") that the term takes on any meaning. As previously construed by the AT&T Court and the '095 reexamination, the function recited by the claim term is controlling access to the Katz system. The structure associated with the recited function is "that hardware and software that perform the function of controlling access to the analysis control system by individual callers." ('095 reexamination, 3/20/09 Office Action at p. 19).

In either the operator attended mode or the push button caller mode, Barger discloses qualification of a caller using credit card and account information. (Barger, col. 2, lines 53-57 ("Before the first order is accepted, the operator may request credit verification through the data processor or other means using the customer's credit card or account number.")). In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor (10) transfers information, including name, address, credit card number and account number, to the order processing system (20). (Barger, col. 5, lines 46-57).

The push button mode accomplishes the same functions performed by customer service operators, by replacing operator functions with programmed subroutines in the data processor and messages prerecorded on the audio program repeater. The audio program repeater would thus necessarily request a push button caller to enter certain data that otherwise would be

requested by a customer service operator. Such data would necessarily include "required information from the customer, such as name and account number, demonstrations desired, and orders for merchandise or services demonstrated," as well as "the customer's credit card or account number" for credit verification. (Barger, col. 2, lines 34-38 and lines 53-56; and col. 6, lines 38-41). A push button caller's account number includes a code reserved for push button telephone customers (Barger, col. 9, lines 40-42). Therefore, a push button caller would identify themselves to the Barger system by entering their account number that includes the code for push button callers, or caller customer number data, to signal the data processor or the CPU that a push button caller was on the line. (Barger, col. 9, lines 40-42).

Although the Examiner in the '095 reexamination employs Yoshizawa to satisfy claim 27's limitation requiring "personal identification data" (See '095 reexamination, 3/20/09 Office Action at p. 19), Barger alone discloses qualification using "personal identification data." And to the extent that Barger alone does not disclose qualification using "personal identification data," Student Registration discloses this feature (as described further below).

As discussed above, Barger discloses an operator obtaining a caller's name (in addition to other information) when processing a call. (Barger, col. 4, lines 61-67). Setting aside the claim construction dispute from the '707 reexamination that relates to the term "personal identification data," there is no doubt that a person's name is personal identification data. Thus, Barger clearly discloses obtaining a caller's name during credit verification in the operator attended mode. In such a situation, if the caller could not provide their name it would defy common sense to think that Barger's system would allow the caller to access the format. In this manner, the data processor or the CPU in conjunction with the credit verification function (CVF) serve as *qualification structure . . . for qualifying access.*

Although Barger describes qualification of callers using a caller's name in connection with the operator attended mode, Barger also explicitly states that such qualification may be automated: "Although the telephone record marketing system described with reference to Fig. 1 has relied upon a human customer service operator for customer communications, the functions of the customer service operator may be replaced by programmed subroutines in the data processor and messages prerecorded on channels of the audio program repeater." (Barger, col. 6, lines 35-41). In fact, Barger discloses a credit verification routine that starts with automated prompts, and if it can not be completed, transfers to an operator for completion. (Barger, col. 8, line 48-col. 9, line 4).

Like Barger, Student Registration also discloses qualification of callers via automated prompts and caller touch tone response. Student Registration discloses that callers provide a "student identification number" and a "personal access code." (Student Registration at C-1). Specifically, Student Registration discloses that the "Student Identification Number … is your social security number unless you have been assigned a special number." (Student Registration at C-1). The disclosed "Personal Access Code" is disclosed as "your birth month, stated in 2 digits, and your birth day, also stated in 2 digits." (Student Registration at C-1).

As above, in every practical sense and application of the disclosures in Barger, a person would necessarily be qualified using multiple forms of identification data in at least one of the examples discussed in Barger. Because identification of the caller was important in the Barger system, a person of skill in the art would have recognized that incorporating the social security number and personal access code (both personal identification data) of Student registration with the account number (customer number) of Barger would provide the advantage of preventing unauthorized access to a customer's account. Thus, Barger in combination discloses *qualification*

structure for qualifying access and the use of *distinct identification data element consisting of personal identification data*, to enable the data processor of the CPU to obtain online credit verification of the push button caller for credit purchases.

4. Claim 27 – "switching structure coupled to said interface structure for switching certain select ones of said individual callers at said remote terminals to any one of a plurality of live operators wherein said live operators can enter at least a portion of said caller data relating to said select one of said individual callers through interface terminals which is stored in said record structure"

Barger further discloses switching structure, as recited in Claim 27, *for switching certain select ones of said individual callers . . . to any one of a plurality of live operators wherein said live operators can enter at least a portion of said caller data . . . through interface terminals, which is stored in said record structure.*

"Switching structure" means the computer hardware and software that switches individual callers to live operators. Barger discloses that operator assistance is available to push button callers. (Barger, col. 2, lines 22-30). To receive operator assistance, a caller may either telephone a distinct telephone number of a telephone line that is directly connected to a coupler (26) that connects the call to a live operator, or a caller may enter in their telephone keypads a specified code for operator assistance. (Barger, col. 9, lines 33-45). For instance, the data processor or the CPU switches or transfers a telephone caller through the switching system (16) from the audio program repeater (17) to a live operator when the repeater signals the data processor that a message or demonstration is complete, or when a push button caller enters a specified code or "0". (Barger, col. 3, lines 52-55; col. 4, lines 20-24 and lines 57-59; col. 5, lines 23-29; col. 9, lines 36-40 and col. 11, lines 59-61). The "hello" message the repeater plays to a push button caller may instruct a push button caller to enter a specified code or to enter "0"

for operator assistance, whereby the data processor or the CPU is signaled. Upon being signaled, the switching system switches the caller to a live operator. (Barger, Fig. 4; and col. 9, lines 36-40 and col. 11, lines 59-61). In other instances, such as when delivery problems exist for requested demonstration selections, or when the credit verification function cannot validate push button callers online, the calls may be transferred to live operators. (Barger, Fig. 4; col. 9, lines 42-45; and col. 11, lines 25-28).

When calls are connected to live operators for assistance, Barger discloses that live operators may readily pick up transactions with callers through a video display. The video display is populated by the data processor, and data is presented to operators. Such data may include all data for that customer call, including historical and credit data, which the data processor retrieves from memory. (Barger, col. 5, lines 24-57). Operators may then directly enter information for push button callers into "a customer's block of data" and thereby into the data processor using an alphanumeric video terminal (19). (Barger, col. 8, lines 48-60). Thereafter, operators would return "the customer's block of data" to a master file when the transaction is completed or concluded. (Barger, col. 3, lines 57-60, col. 4, lines 64-66; and col. 5, lines 39-41 and lines 46-49). Thus, the data processor or the CPU in conjunction with the switching system (16) switches or transfers push button callers requiring operator assistance to live operators and thereby teach or suggest *switching structure,* as recited in Claim 27.

5. Claim 31 – "An analysis control system according to claim 27, wherein said caller customer number data is tested to determine if caller status is unacceptable or cancelled"

Claim 31 of the '863 patent, which depends from Claim 27, recites that "caller customer number data is tested to determine if caller status is unacceptable or cancelled." In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit

verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor (10) transfers information, including name, address, credit card number and account number, to the order processing system (20). (Barger, col. 5, lines 46-57). Barger further discloses that a caller status is determined by system when an order is placed based on either the account number or credit card number. Specifically, Barger discloses:

> If the customer does not have an acceptable account or credit card number, the operator asks the customer whether the order is to be prepaid or shipped collect on delivery (C.O.D.). The choice made by the customer is keyed in by the operator at the time the order is placed and transferred as part of the order data by the data processor to the order processing system.

(Barger, col. 5, lines 58-64). When the caller status for credit transactions, as determined by the account number, is deemed to be unacceptable ("does not have an acceptable account or credit card number"), the caller is limited to prepayment or payment on delivery for an order.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 31 obvious.

6. Claim 32 – "An analysis control system according to claim 27, wherein said qualification structure qualifies said individual callers to provide access to at least a portion of said system"

Claim 32 of the '863 patent, which depends from Claim 27, recites that "said qualification structure qualifies said individual callers to provide access to at least a portion of said system." As noted previously, the BPAI has found that the qualification structure recited in claim 27 is obvious in view of Barger.

Pertinent to claim 32, Barger teaches qualifying callers for access to the system or parts thereof. For example, Barger discloses qualifying callers before individual callers may place an order for merchandise through the system. In this context, the system performs qualification of callers for accessing at least a portion of the system by performing a credit verification process. During the credit verification process, callers must provide certain information, including the caller's name, address, credit card number, and other information (such as the Student Registration social security number and personal access code) before a caller may place an order. As noted by the BPAI, "the customer cannot access the automatic telephone service without first having the credit card number verified or qualified" (BPAI at 31). For this reason, the qualification structure in Barger (i.e., the "credit verification") is required to access at least a portion of the system (i.e., "the automatic telephone service") as recited by claim 32.

The qualification operation in Barger is accomplished through the use of a data processor or CPU and a credit verification function. Barger discloses that the data processor 10 or the CPU 21 accesses a credit verification function 45 (CVF) that is controlled by a programmed subroutine (Barger, col. 8, line 60 to col. 9, line 4). The CVF is accessed by the data processor 10 or the CPU 21 by an account number or a credit card number. Through the data processor or the CPU the credit verification function can be carried out online, for instance, with push-button callers, or alternatively, through a customer service operator entering the account or credit card information into the data processor or CPU (Barger, col. 2, lines 34-37; col. 3, lines 3-5, 8- 10; col. 9, lines 22-24). To carry out the verification function, the data processor or CPU accesses a credit report "on file," which accesses credit information stored in memory (see Barger Fig. 2; col. 2, lines 53-56; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 60 to col. 9, line 4; col. 9, lines 36-45). Accordingly, as confirmed

by the BPAI, the data processor or CPU and the credit verification function collectively serve as qualification structure for qualifying access by said individual callers to said select format. Moreover, because select format is resident on the system in Barger, the data processor or CPU and the credit verification function also qualify the individual callers to provide access to at least a portion of the Barger system, as recited in claim 32.

Barger further discloses that access to the record marketing system is based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data. For a push button caller, for example, Barger teaches that the caller would enter "an established account number having a code reserved for push-button telephone customers," in addition to a credit card number or personal identification data, in order to verify that the caller is eligible for credit purchases and access at least a portion of the system (col. 2, lines 33-39 and lines 49-57; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 6 to col. 9, line 4; col. 9, lines 36-45). Using multiple forms of identification, such as a customer account number, a social security number and a personal access code, the Barger system, as modified by Student Registration, qualifies access to the system based upon caller customer number data and at least one distinct personal identification data element as recited in claim 32 of the '863 patent.

Thus, as previously found by the BPAI with respect to the different combination of Barger and Yoshizawa, modifying Barger to include the social security number and personal access code of Student Registration would also have been obvious because a person of ordinary skill in the art would recognize that incorporating these additional forms of

identification with the customer number of Barger would provide the advantage of preventing unauthorized access to a customer's account managed by a portion of the system (*see* BPAI, p. 30). Moreover, as above, this same combination of Barger and Student Registration also teaches qualifying access to a portion of the system as recited in claim 32 because the qualification operations in Barger and Student Registration are intended to segregate the individual callers by providing access to at least a portion of the system.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 32 obvious.

7. Claim 39 – "An analysis control system according to claim 27, wherein at least one of said at least two forms of distinct identification includes social security number data"

Claim 39 of the '863 patent, which depends from Claim 27, recites that "at least one of said at least two forms of distinct identification includes social security number data." As noted previously, the BPAI has found that the qualification structure recited in claim 27 is obvious in view of Barger.

Pertinent to claim 39, Barger teaches qualifying callers for access to the system or parts thereof. In this context, the system performs qualification of callers for accessing at least a portion of the system by performing a credit verification process. During the credit verification process, callers must provide certain information, including the caller's name, address, credit card number, and other information (such as the Student Registration social security number and personal access code) before a caller may place an order. As noted by the BPAI, "the customer cannot access the automatic telephone service without first having the credit card number verified or qualified" (BPAI at 31).

Barger further discloses that access to the record marketing system is based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data. For a push button caller, for example, Barger teaches that the caller would enter "an established account number having a code reserved for push-button telephone customers," in addition to a credit card number or personal identification data, in order to verify that the caller is eligible for credit purchases and access at least a portion of the system (col. 2, lines 33-39 and lines 49-57; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 6 to col. 9, line 4; col. 9, lines 36-45). Using multiple forms of identification, such as a customer account number, a social security number and a personal access code, the Barger system, as modified by Student Registration, qualifies access to the system based upon caller customer number data and at least one distinct personal identification data element as recited in claim 32 of the '863 patent.

Thus, as previously found by the BPAI with respect to the different combination of Barger and Yoshizawa, modifying Barger to include the social security number and personal access code of Student Registration would also have been obvious because a person of ordinary skill in the art would recognize that incorporating these additional forms of identification with the customer number of Barger would provide the advantage of preventing unauthorized access to a customer's account managed by a portion of the system *(see* BPAI, p. 30). Moreover, as above, this same combination of Barger and Student Registration also teaches that at least of one the two forms of distinct identification includes

social security number data as recited in claim 39 because the qualification operations for the combination of Barger and Student Registration include a social security number.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 39 obvious.

8. Claim 49 – "An analysis control system according to claim 27, wherein said caller customer number is verified against a record of qualified customer numbers and said personal identification data is provided on-line by said individual callers and stored in said record structure for subsequent use"

Claim 49 of the '863 patent, which depends from Claim 27, recites that "said caller customer number is verified against a record of qualified customer numbers and said personal identification data is provided on-line by said individual callers and stored in said record structure for subsequent use." As noted previously, the BPAI has found that the qualification structure recited in claim 27 is obvious in view of Barger.

Pertinent to claim 49, Barger discloses verifying customer number data against a record of qualified customer numbers. For example, the system in Barger elicits customer number data in the form of an account number. As discussed previously, the system checks customer records stored in the system to determine if the caller has an account. (Barger, col. 2, lines 53-57, col. 4, lines 61-67, col. 5, lines 46-57, col. 6, lines 35-43, col. 8, line 48-col. 9, line 4, col. 9, lines 36-45). Accordingly, Barger discloses verifying customer number data as recited by claim 49.

With respect to the other limitations in claim 49, Barger discloses a system that collects personal identification data from a caller online and further discloses a system wherein caller data is stored for subsequent use. For example, Barger discloses a scenario in which the caller is asked by the operator for his or her name and account number. The caller's record is located, and in doing so, Barger discloses verification of qualified customer numbers. Barger also

discloses operators taking caller personal identification data, such as name or address, and entering such data through the operator terminals, which Barger discloses may be stored for subsequent use. (See, e.g. Barger, col. 2, lines 33-39 (". . . data are entered into a customer record block in the data processing system through operator terminal means."), col. 4, lines 61-67 and col. 6, lines 35-43). The combination of Barger and Student Registration includes the additional personal identification data including social security number and personal access code. The operators would also collect this personal identification data, which Barger discloses may be stored for subsequent use. Accordingly, the combination of Barger and Student Registration discloses verifying a caller's customer number and operators entering caller data online into a record structure for subsequent use as recited in claim 49.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 49 obvious.

B. Claims 31, 32, 39 and 49 are obvious over Barger and NDC, VCT '86 and Student Registration.

Claims 31, 32, 39 and 49 are unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, VCT '86 and Student Registration. Just as in the concurrently pending reexamination of the '863 patent, Barger in view of VCT '86 raises a substantial new question of patentability with respect to Claim 27 from which claims 31, 32, 39 and 49 depend. NDC provides additional disclosures related to the DNIS limitation. Student Registration provides disclosures related to qualification, which is relevant to the additional limitations in claims 31, 32, 39 and 49.

As found by the Patent Office in the concurrently pending '095 reexamination, Barger discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication, and further including (a) interface structure for

coupling callers to said communication facility, (b) a plurality of formats, (c) record structure that includes means to develop, store, and retrieve caller data, (d) qualification structure that qualifies access based on two forms of identification data, and (e) switching structure that can transfer calls to live operators.

1. Claim 27 – "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication, and including means to provide caller data signals representative of data relating to said individual callers developed by said remote terminals and including means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats"

a. "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication"

Claim 27 recites "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication."

The phrase "interface structure … to interface said remote terminals" is arguably a "means plus function" limitation under § 112, paragraph six. The term "interface structure" provides little (if any) guidance as to the structure of the element, and it is only when coupled with its intended function ("to interface …") that the term takes on any meaning.

However, because the claim uses the term "interface structure" instead of "means," there is a possibility that the limitation will be construed literally, instead of under § 112, paragraph 6. Consequently the Requestor will address both possible interpretations.

i. Literal interpretation

If this limitation is construed without regard to its intended function, then the limitation includes *any* interface structure that is coupled to a communication facility to interface remote terminals for voice and digital communication.

As shown in FIG. 1, and in greater detail in Fig. 2, the Barger system and method couples dialed or leased lines of the public telephone system (12) to a data processor (10) or to a CPU (21) and bus (22) of the Barger system. The system connects multiple telephone lines (14), which may include dial telephones (24) and push button telephones (25) to the processor (10) or to the CPU (21) and bus (22). (*See also*, Barger, col. 3, lines 41-46). The disclosures in Barger further describe a plurality of telephone couplers (13) including, as shown in Fig. 2, telephone data couplers (26) and data coupling sets (32) configured to connect dial and push button telephones through an automatic answer device (27) and a pushbutton interface (46), respectively, to the system's data processor (10) or CPU (21). (Barger, FIGS. 1 and 2; col. 3, lines 52-65; col. 4, lines 10-13, col. 7, lines 38-51; and col. 9, lines 29-62). The telephone couplers (13), (26) and (32) are connected to an automatic answering device (11), as shown in Fig. 1, which responds to ringing signals and sends signals to the data processor (10). The data processor (10) or CPU (21) responds to such signals by automatically connecting caller telephone lines to an audio program repeater (17) and (28). (Barger, col. 2, lines 16-33; col. 4, lines 5-9 and 10-20).

Thus Barger discloses the interface structure as claimed in the '863 patent.

ii. "Means plus function"

If this limitation is construed according to § 112, paragraph 6, then "interface structure" is to be construed as any corresponding structure disclosed in the specification for carrying out the stated function. In the '863 patent, the structure disclosed that is coupled to the

communication facility for interfacing with the remote terminals is the series of call distributors AC1-Can, interface 20, and switch 21. ('863 patent, FIG. 1, col. 4, lines 15-27).

Barger discloses interface structure for interfacing callers. The structures in Barger that correspond to the structures in the '863 patent that perform the recited function include telephone data couplers (26) and data coupling sets (32) that are configured to connect dial and push button telephones through an automatic answer device (27) and a pushbutton interface (46), respectively, to the system's data processor (10) or CPU (21). (Barger, FIGS. 1 and 2; col. 3, lines 52-65; col. 4, lines 10-13, col. 7, lines 38-51; and col. 9, lines 29-62). The telephone couplers (13), (26) and (32) are connected to an automatic answering device (11), as shown in Fig. 1, which responds to ringing signals and sends signals to the data processor (10). The data processor (10) or CPU (21) responds to such signals by automatically connecting caller telephone lines to an audio program repeater (17) and (28). (Barger, col. 2, lines 16-33; col. 4, lines 5-9 and 10-20).

Thus Barger discloses the interface structure as claimed in Claim 27 of the '863 patent.

b. "means to provide caller data signals representative of data relating to said individual callers developed by said remote terminals…."

This limitation of Claim 27 is a "means plus function" clause under § 112, paragraph 6.[6] The structure disclosed in the '863 patent that provides caller data signals representative of data relating to individual callers developed by the remote terminals is the processing system P1, and more particularly, interface 20, switch 21 and processors PR1-PRn. ('863 patent, FIG. 1; col. 4, lines 46-55).

[6] "Means to provide" is clearly just another way of saying "Means for providing".

The data processor or CPU controls the audio program repeater to connect caller lines through a switching system (16), or, as shown in Fig. 2, through a switching matrix (29), to a plurality of channels of the audio program repeater to play a "hello" message to callers. (Barger, col. 2, lines 16-27; col. 3, lines 52-54; col. 4, lines 10-20; and col. 9, lines 53-60). When the "hello" message is completed, the audio program repeater signals the data processor or CPU, which then switches caller telephone lines to a plurality of customer service operators (18) and (34) through the switching system (16) and (29). (Barger, col. 2, lines 22-30; and col. 4, lines 20-24). Alternatively, in the push button service mode, the data processor or CPU communicates directly with callers via preprogrammed messages the audio program repeater provides to caller telephones. The preprogrammed messages deliver instructions or prompts to callers as required by the transaction. (Barger, col. 2, line 62-col. 3, line 22). Callers respond to the instructions or prompts by entering relevant information into the data processor or CPU using their telephone keypads. (Barger, col. 2, lines 30-33; col. 3, lines 14-22; col. 6, lines 35-43; and col. 9, lines 29-62).

As such, the structures and associated processes discussed above show that Barger disclosed in 1977 a system that includes an interface structure that couples or "interfaces" caller telephones with the system data processor or CPU and includes, particularly in the push button service mode, structure that corresponds to means to provide caller data signals or signals representative of data relating to said individual callers that are developed by said remote terminals as recited in claim 27. The corresponding structure of Barger includes those structures and processes necessary to transmit signals that are developed by at push button telephones, as a result of callers keying data into their telephone keypads, to the data processor or CPU, including

the plurality of data coupling sets (32) and the pushbutton interface (46) that couple push button telephones (25) to the bus (22) and the CPU (21), as shown in Fig. 2.

c. "means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers . . ."

The next clause of Claim 27 recites "means to receive called number identification signals (DNIS) automatically provided by said communication facility to identify a select one of a plurality of different called numbers associated with a select format of a plurality of different formats." Such identification signals or identification data are provided through the capabilities and services of a public telephone company or system that are collectively well known in the art as "dialed number identification service," or "DNIS," whereby the telephone company or system provides to the customer or subscriber equipment data or signals that identify the telephone number being called. This limitation of Claim 27 is a "means plus function" clause under § 112, paragraph 6. The structure disclosed in the '863 patent that receives called number identification signals (DNIS) and identifies one of a plurality of called numbers is the automatic call distributor AC1, interface 20, and switch 21. (See '863 patent, col. 4, lines 56-63; col. 6, lines 36-44).

To the extent that Barger does not explicitly describe such DNIS signals in use with its system, Barger clearly discloses routing calls based on the telephone number dialed. For example, Barger teaches call routing to different call modes or applications. Barger explicitly teaches that certain telephone numbers are routed to different call modes. (Barger, col. 3, lines 3-7). The structure disclosed in Barger for performing this function includes telephone couplers 13, and one or more data coupling sets 32. Although Barger discloses only one technical way in which to accomplish this (i.e. dedicated telephone ports), alternative routing techniques, such as

those that involve signals that represent the called number (DNIS), multiplexed operations involving PBXs, and other basic routing concepts are inherently disclosed in Barger.

To the extent that Barger does not inherently disclose call routing based on DNIS signals, Barger in view of the non-patent references NDC and VCT '86, teach or suggest means for receiving DNIS data or signals, rendering Claim 27 obvious. NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message .... Then as the agent greets the caller, the entire format for handling that client's business comes upon on the CRT screen, while the DNI greeting is erased at the bottom.")) VCT '86 also discloses the use of DNIS signals to route calls to particular automated and operator attendant functions. (VCT '86, p. 1 ("The voice response unit receives the call and directs it according to the 800 number. These numbers designate how the voice response unit should handle the call.")). Moreover, just as the Examiner found in the concurrently pending reexamination, VCT '86 discloses the use of DNIS to identify one of a plurality of different called numbers. (See '095 reexamination, Nov. 23, 2009 Examiner's Answer at p. 14). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps oversimplistically, the called number now becomes the product name. ... Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")).

A person of skill in the art would have been motivated to combine both VCT '86 and NDC with Barger. A number of practical and economic benefits would have motivated one to implement DNIS based routing of calls to particular call modes. VCT '86 discloses DNIS automation techniques for voice response units, whereas NDC discloses DNIS automation techniques for operator features. Both enhanced automation techniques improve upon the voice response an operator modes of Barger. NDC specifically identifies the time savings, error reduction, and efficiency aspects of using the dialed number to achieve automation benefits for agent-handled calls, such as those in the Barger system:

> This software system helps eliminate errors because the first time the agent has to type any information on the keyboard is to input the caller's name and address.
>
> Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen. Those four seconds saved on the labor side of the system added up to dollars saved for NDC. Again, Dean Smith's figures estimated they add up to $75,450 a year in savings.
>
> Andy Zazzera said, "Without Galaxy 3 tied to our host computer in Atlanta, all these agents would have required dedicated lines connected only to specific customer calls coming in. Each agent would have just one script and answer only one type of call, Or at best, each agent would hear a "whisper" and hear the company name and then have to translate the name of that company onto the CRT screen through the keyboard, and this is the point where errors can creep in."

(NDC at 72); (see also '095 Reexamination, Examiner's Answer at p. 15 ("It would have been obvious for one of ordinary skill in the art, at the time of the invention to use DNIS to identify respective formats or modes in Barger's system . . .")). Such additional considerations include, for example, expansion of the automated system for increased call volume, time zone discrepancies, or the desire to run varied formats. Such considerations were practical pressures on the automated call systems in general and that would have necessitated call routing changes.

As discussed in the concurrent reexamination, Barger discloses and uses call routing based on the number dialed by the caller. Although Barger used or discloses one way in which to accomplish such routing, i.e. dedicated telephone lines, it would have been obvious to utilize other routing techniques such as DNIS signals as such technology was in widespread use.

2. Claim 27 – "record structure, including memory and control means, said record structure connected to receive said caller data signals from said interface structure for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers"

The next clause of Claim 27 recites "record structure, including memory and control means, said record structure connected to receive said caller data signals from said interface structure for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers." In the concurrently pending reexamination, this record structure and memory were construed to mean the computer hardware and software that receives data signals, update files, and store information. ('095 Reexamination, 11/23/09 Examiner's Answer at p. 15-16). The term "control means" was construed as a processor or microprocessor. (Id.).

Barger also discloses *record structure, including memory and control means . . . for accessing a file and storing certain of said data developed by said remote terminals relating to certain select ones of said individual callers* as recited in Claim 27. With reference to Fig. 2, Barger specifically discloses that the system maintains a complete record of all transactions, historical records of particular customers, and accurate and informative customer profiles. Customer information and records are stored in a master file and retrieved by the data processor (10) or CPU (21) as required. (Barger, col. 2, lines 5-12, col. 5, lines 29-37 and lines 46-53; col. 5, lines 46-53; and col. 6, lines 21-26). In addition, the CPU (21) is in communication via the

bus (22) with RAM (23) and a magnetic disk pack (MDP) (41) and a magnetic tape unit (MTU) (43), that provide storage capabilities to the embodiment of the Barger system shown in Fig. 2. (Barger, col. 7, lines 33-37; and col. 8, lines 48-60). Moreover, as found by the Examiner in the concurrently pending reexamination, Barger discloses a CPU (21), or control means, connected to RAM (23), or memory, via the bus (22). These structures allow the Barger system to store caller data from caller telephones through the data coupling sets 32 and the pushbutton interface 46. Thus, Barger discloses *record structure connected to receive said caller data signals from said interface structure.*

Claim 27 also requires *accessing a file and storing certain of said data . . ..* As found by the AT&T Court and the Examiner in the '095 reexamination, accessing a file means gaining or obtaining the ability to enter or make use of files. ('095 Reexamination, 11/23/09 Examiner's Answer at p. 16). As shown in FIG. 1, the data processor (10) and order processing system 20 are configured to gain access to and store information from a file. Barger discloses a record structure having a memory (RAM 23, magnetic disc pack (MDP) 41, and magnetic tape unit (MTU) 43, FIG. 2) and control means (CPU 21), wherein said structures can access account or credit card information. (Barger, col. 8, lines 48-65). Barger further discloses caller's entering account or credit card information and verifying the accuracy of this information against files stored by the Barger system. (Barger, col. 9, lines 36-45). Finally, Barger discloses updating or recording caller entered data. (Barger col. 5, lines 45-53; Barger, col. 5, line 65-col. 6, line 2; col. 6, lines 21-26). Barger discloses that caller information may be accessed or stored in either the operator attended format or the automated format. (Barger, col. 6, lines 38-43).

3. Claim 27 – "qualification structure coupled to said record structure for qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct

> identification data element consisting of personal identification data provided by a respective one of said individual callers"

Barger also discloses *qualification structure . . . for qualifying access by said individual callers to said select format based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data*, as recited in Claim 27 of the '863 patent.

The phrase "qualification structure… for qualifying access" is a "means plus function" limitation under § 112, paragraph six as found by the AT&T Court and the Examiner in the concurrently pending '095 reexamination. The term "qualification structure" provides little (if any) guidance as to the structure of the element, and it is only when coupled with its intended function ("for qualifying access…") that the term takes on any meaning. As previously construed by the AT&T Court and the '095 reexamination, the function recited by the claim term is controlling access to the Katz system. The structure associated with the recited function is "that hardware and software that perform the function of controlling access to the analysis control system by individual callers." ('095 reexamination, 3/20/09 Office Action at p. 19).

In either the operator attended mode or the push button caller mode, Barger discloses qualification of a caller using credit card and account information. (Barger, col. 2, lines 53-57 ("Before the first order is accepted, the operator may request credit verification through the data processor or other means using the customer's credit card or account number.")). In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor (10) transfers information, including name,

address, credit card number and account number, to the order processing system (20). (Barger, col. 5, lines 46-57).

The push button mode accomplishes the same functions performed by customer service operators, by replacing operator functions with programmed subroutines in the data processor and messages prerecorded on the audio program repeater. The audio program repeater would thus necessarily request a push button caller to enter certain data that otherwise would be requested by a customer service operator. Such data would necessarily include "required information from the customer, such as name and account number, demonstrations desired, and orders for merchandise or services demonstrated," as well as "the customer's credit card or account number" for credit verification. (Barger, col. 2, lines 34-38 and lines 53-56; and col. 6, lines 38-41). A push button caller's account number includes a code reserved for push button telephone customers (Barger, col. 9, lines 40-42). Therefore, a push button caller would identify themselves to the Barger system by entering their account number that includes the code for push button callers, or caller customer number data, to signal the data processor or the CPU that a push button caller was on the line. (Barger, col. 9, lines 40-42).

Although the Examiner in the '095 reexamination employs Yoshizawa to satisfy claim 27's limitation requiring "personal identification data" (See '095 reexamination, 3/20/09 Office Action at p. 19), Barger alone discloses qualification using "personal identification data." As discussed above, Barger discloses an operator obtaining a caller's name (in addition to other information) when processing a call. (Barger, col. 4, lines 61-67). Setting aside the claim construction dispute from the '707 reexamination that relates to the term "personal identification data," there is no doubt that a person's name is personal identification data. Thus, Barger clearly discloses obtaining a caller's name during credit verification in the operator attended mode. In

such a situation, if the caller could not provide their name it would defy common sense to think that Barger's system would allow the caller to access the format. In this manner, the data processor or the CPU in conjunction with the credit verification function (CVF) serve as *qualification structure . . . for qualifying access.*

Although Barger describes qualification of callers using a caller's name in connection with the operator attended mode, Barger also explicitly states that such qualification may be automated: "Although the telephone record marketing system described with reference to Fig. 1 has relied upon a human customer service operator for customer communications, the functions of the customer service operator may be replaced by programmed subroutines in the data processor and messages prerecorded on channels of the audio program repeater." (Barger, col. 6, lines 35-41). In fact, Barger discloses a credit verification routine that starts with automated prompts, and if it can not be completed, transfers to an operator for completion. (Barger, col. 8, line 48-col. 9, line 4).

Like Barger, Student Registration also discloses qualification of callers via automated prompts and caller touch tone response. Student Registration discloses that callers provide a "student identification number" and a "personal access code." (Student Registration at C-1). Specifically, Student Registration discloses that the "Student Identification Number … is your social security number unless you have been assigned a special number." (Student Registration at C-1). The disclosed "Personal Access Code" is disclosed as "your birth month, stated in 2 digits, and your birth day, also stated in 2 digits." (Student Registration at C-1).

As above, in every practical sense and application of the disclosures in Barger, a person would necessarily be qualified using multiple forms of identification data in at least one of the examples discussed in Barger. Because identification of the caller was important in the Barger

system, a person of skill in the art would have recognized that incorporating the social security number and personal access code (both personal identification data) of Student registration with the account number (customer number) of Barger would provide the advantage of preventing unauthorized access to a customer's account. Thus, Barger in combination discloses *qualification structure for qualifying access* and the use of *distinct identification data element consisting of personal identification data*, to enable the data processor of the CPU to obtain online credit verification of the push button caller for credit purchases.

4. Claim 27 – "switching structure coupled to said interface structure for switching certain select ones of said individual callers at said remote terminals to any one of a plurality of live operators wherein said live operators can enter at least a portion of said caller data relating to said select one of said individual callers through interface terminals which is stored in said record structure"

Barger further discloses switching structure, as recited in Claim 27, *for switching certain select ones of said individual callers . . . to any one of a plurality of live operators wherein said live operators can enter at least a portion of said caller data . . . through interface terminals, which is stored in said record structure.*

"Switching structure" means the computer hardware and software that switches individual callers to live operators. Barger discloses that operator assistance is available to push button callers. (Barger, col. 2, lines 22-30). To receive operator assistance, a caller may either telephone a distinct telephone number of a telephone line that is directly connected to a coupler (26) that connects the call to a live operator, or a caller may enter in their telephone keypads a specified code for operator assistance. (Barger, col. 9, lines 33-45). For instance, the data processor or the CPU switches or transfers a telephone caller through the switching system (16) from the audio program repeater (17) to a live operator when the repeater signals the data

processor that a message or demonstration is complete, or when a push button caller enters a specified code or "0". (Barger, col. 3, lines 52-55; col. 4, lines 20-24 and lines 57-59; col. 5, lines 23-29; col. 9, lines 36-40 and col. 11, lines 59-61). The "hello" message the repeater plays to a push button caller may instruct a push button caller to enter a specified code or to enter "0" for operator assistance, whereby the data processor or the CPU is signaled. Upon being signaled, the switching system switches the caller to a live operator. (Barger, Fig. 4; and col. 9, lines 36-40 and col. 11, lines 59-61). In other instances, such as when delivery problems exist for requested demonstration selections, or when the credit verification function cannot validate push button callers online, the calls may be transferred to live operators. (Barger, Fig. 4; col. 9, lines 42-45; and col. 11, lines 25-28).

When calls are connected to live operators for assistance, Barger discloses that live operators may readily pick up transactions with callers through a video display. The video display is populated by the data processor, and data is presented to operators. Such data may include all data for that customer call, including historical and credit data, which the data processor retrieves from memory. (Barger, col. 5, lines 24-57). Operators may then directly enter information for push button callers into "a customer's block of data" and thereby into the data processor using an alphanumeric video terminal (19). (Barger, col. 8, lines 48-60). Thereafter, operators would return "the customer's block of data" to a master file when the transaction is completed or concluded. (Barger, col. 3, lines 57-60, col. 4, lines 64-66; and col. 5, lines 39-41 and lines 46-49). Thus, the data processor or the CPU in conjunction with the switching system (16) switches or transfers push button callers requiring operator assistance to live operators and thereby teach or suggest *switching structure,* as recited in Claim 27.

5. Claim 31 – "An analysis control system according to claim 27, wherein said caller customer number data is tested to determine if caller status is unacceptable or cancelled"

Claim 31 of the '863 patent, which depends from Claim 27, recites that "caller customer number data is tested to determine if caller status is unacceptable or cancelled." In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor (10) transfers information, including name, address, credit card number and account number, to the order processing system (20). (Barger, col. 5, lines 46-57). Barger further discloses that a caller status is determined by system when an order is placed based on either the account number or credit card number. Specifically, Barger discloses:

> If the customer does not have an acceptable account or credit card number, the operator asks the customer whether the order is to be prepaid or shipped collect on delivery (C.O.D.). The choice made by the customer is keyed in by the operator at the time the order is placed and transferred as part of the order data by the data processor to the order processing system.

(Barger, col. 5, lines 58-64). When the caller status for credit transactions, as determined by the account number, is deemed to be unacceptable ("does not have an acceptable account or credit card number"), the caller is limited to prepayment or payment on delivery for an order.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 31 obvious.

6. Claim 32 – "An analysis control system according to claim 27, wherein said qualification structure qualifies said individual callers to provide access to at least a portion of said system"

Claim 32 of the '863 patent, which depends from Claim 27, recites that "said qualification structure qualifies said individual callers to provide access to at least a portion of said system." As noted previously, the BPAI has found that the qualification structure recited in claim 27 is obvious in view of Barger.

Pertinent to claim 32, Barger teaches qualifying callers for access to the system or parts thereof. For example, Barger discloses qualifying callers before individual callers may place an order for merchandise through the system. In this context, the system performs qualification of callers for accessing at least a portion of the system by performing a credit verification process. During the credit verification process, callers must provide certain information, including the caller's name, address, credit card number, and other information (such as the Student Registration social security number and personal access code) before a caller may place an order. As noted by the BPAI, "the customer cannot access the automatic telephone service without first having the credit card number verified or qualified" (BPAI at 31). For this reason, the qualification structure in Barger (i.e., the "credit verification") is required to access at least a portion of the system (i.e., "the automatic telephone service") as recited by claim 32.

The qualification operation in Barger is accomplished through the use of a data processor or CPU and a credit verification function. Barger discloses that the data processor 10 or the CPU 21 accesses a credit verification function 45 (CVF) that is controlled by a programmed subroutine (Barger, col. 8, line 60 to col. 9, line 4). The CVF is accessed by the data processor 10 or the CPU 21 by an account number or a credit card number. Through the data processor or the CPU the credit verification function can be carried out online, for instance, with push-button callers, or alternatively, through a customer service operator entering the account or credit card information into the data processor or CPU (Barger, col.

2, lines 34-37; col. 3, lines 3-5, 8- 10; col. 9, lines 22-24). To carry out the verification function, the data processor or CPU accesses a credit report "on file," which accesses credit information stored in memory (see Barger Fig. 2; col. 2, lines 53-56; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 60 to col. 9, line 4; col. 9, lines 36-45). Accordingly, as confirmed by the BPAI, the data processor or CPU and the credit verification function collectively serve as qualification structure for qualifying access by said individual callers to said select format. Moreover, because select format is resident on the system in Barger, the data processor or CPU and the credit verification function also qualify the individual callers to provide access to at least a portion of the Barger system, as recited in claim 32.

Barger further discloses that access to the record marketing system is based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data. For a push button caller, for example, Barger teaches that the caller would enter "an established account number having a code reserved for push-button telephone customers," in addition to a credit card number or personal identification data, in order to verify that the caller is eligible for credit purchases and access at least a portion of the system (col. 2, lines 33-39 and lines 49-57; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 6 to col. 9, line 4; col. 9, lines 36-45). Using multiple forms of identification, such as a customer account number, a social security number and a personal access code, the Barger system, as modified by Student Registration, qualifies access to the system based upon caller customer number data and at least one distinct personal identification data element as recited in claim 32 of the '863 patent.

Thus, as previously found by the BPAI with respect to the different combination of Barger and Yoshizawa, modifying Barger to include the social security number and personal access code of Student Registration would also have been obvious because a person of ordinary skill in the art would recognize that incorporating these additional forms of identification with the customer number of Barger would provide the advantage of preventing unauthorized access to a customer's account managed by a portion of the system *(see* BPAI, p. 30). Moreover, as above, this same combination of Barger and Student Registration also teaches qualifying access to a portion of the system as recited in claim 32 because the qualification operations in Barger and Student Registration are intended to segregate the individual callers by providing access to at least a portion of the system.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 32 obvious.

7. Claim 39 – "An analysis control system according to claim 27, wherein at least one of said at least two forms of distinct identification includes social security number data"

Claim 39 of the '863 patent, which depends from Claim 27, recites that "at least one of said at least two forms of distinct identification includes social security number data." As noted previously, the BPAI has found that the qualification structure recited in claim 27 is obvious in view of Barger.

Pertinent to claim 39, Barger teaches qualifying callers for access to the system or parts thereof. In this context, the system performs qualification of callers for accessing at least a portion of the system by performing a credit verification process. During the credit verification process, callers must provide certain information, including the caller's name, address, credit

card number, and other information (such as the Student Registration social security number and personal access code) before a caller may place an order. As noted by the BPAI, "the customer cannot access the automatic telephone service without first having the credit card number verified or qualified" (BPAI at 31).

Barger further discloses that access to the record marketing system is based on at least two forms of distinct identification including caller customer number data and at least one other distinct identification data element consisting of personal identification data. For a push button caller, for example, Barger teaches that the caller would enter "an established account number having a code reserved for push-button telephone customers," in addition to a credit card number or personal identification data, in order to verify that the caller is eligible for credit purchases and access at least a portion of the system (col. 2, lines 33-39 and lines 49-57; col. 4, lines 61-67; col. 6, lines 35-43; col. 8, line 6 to col. 9, line 4; col. 9, lines 36-45). Using multiple forms of identification, such as a customer account number, a social security number and a personal access code, the Barger system, as modified by Student Registration, qualifies access to the system based upon caller customer number data and at least one distinct personal identification data element as recited in claim 32 of the '863 patent.

Thus, as previously found by the BPAI with respect to the different combination of Barger and Yoshizawa, modifying Barger to include the social security number and personal access code of Student Registration would also have been obvious because a person of ordinary skill in the art would recognize that incorporating these additional forms of identification with the customer number of Barger would provide the advantage of preventing unauthorized access to a customer's account managed by a portion of the system

(see BPAI, p. 30). Moreover, as above, this same combination of Barger and Student Registration also teaches that at least of one the two forms of distinct identification includes social security number data as recited in claim 39 because the qualification operations for the combination of Barger and Student Registration include a social security number.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 39 obvious.

8. Claim 49 – "An analysis control system according to claim 27, wherein said caller customer number is verified against a record of qualified customer numbers and said personal identification data is provided on-line by said individual callers and stored in said record structure for subsequent use"

Claim 49 of the '863 patent, which depends from Claim 27, recites that "said caller customer number is verified against a record of qualified customer numbers and said personal identification data is provided on-line by said individual callers and stored in said record structure for subsequent use." As noted previously, the BPAI has found that the qualification structure recited in claim 27 is obvious in view of Barger.

Pertinent to claim 49, Barger discloses verifying customer number data against a record of qualified customer numbers. For example, the system in Barger elicits customer number data in the form of an account number. As discussed previously, the system checks customer records stored in the system to determine if the caller has an account. (Barger, col. 2, lines 53-57, col. 4, lines 61-67, col. 5, lines 46-57, col. 6, lines 35-43, col. 8, line 48-col. 9, line 4, col. 9, lines 36-45). Accordingly, Barger discloses verifying customer number data as recited by claim 49.

With respect to the other limitations in claim 49, Barger discloses a system that collects personal identification data from a caller online and further discloses a system wherein caller data is stored for subsequent use. For example, Barger discloses a scenario in which the caller is

asked by the operator for his or her name and account number. The caller's record is located, and in doing so, Barger discloses verification of qualified customer numbers. Barger also discloses operators taking caller personal identification data, such as name or address, and entering such data through the operator terminals, which Barger discloses may be stored for subsequent use. (See, e.g. Barger, col. 2, lines 33-39 (". . . data are entered into a customer record block in the data processing system through operator terminal means."), col. 4, lines 61-67 and col. 6, lines 35-43). The combination of Barger and Student Registration includes the additional personal identification data including social security number and personal access code. The operators would also collect this personal identification data, which Barger discloses may be stored for subsequent use. Accordingly, the combination of Barger and Student Registration discloses verifying a caller's customer number and operators entering caller data online into a record structure for subsequent use as recited in claim 49.

Accordingly, the combination of Barger, NDC, VCT '86 and Student Registration render claim 49 obvious.

C. Claims 42 and 43 are obvious over Barger, NDC, Student Registration and Taylor.

Claims 42 and 43 are unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, Student Registration and Taylor. Just as in the concurrently pending reexamination of the '863 patent, Barger discloses the majority of the limitations with respect to Claim 27 from which claims 42 and 43 depend. NDC provides additional disclosures related to the DNIS limitation. Student Registration provides disclosures related to qualification, which is relevant to Claim 27. Taylor provides disclosures related to ACDs, which is relevant to the limitations of claims 42 and 43.

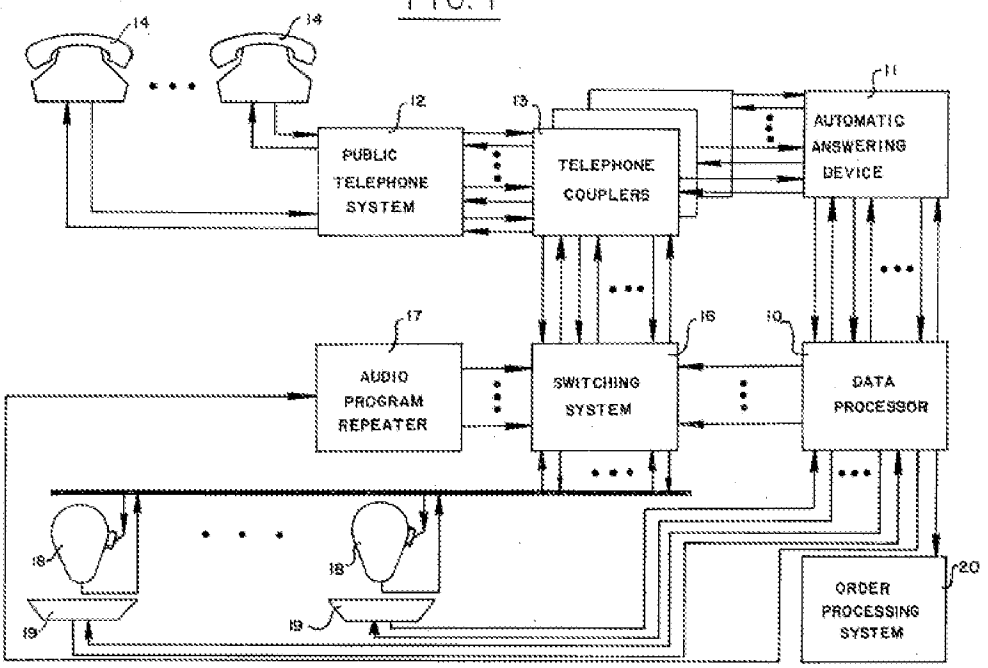
As shown in section A above, the combination of Barger, NDC, and Student Registration disclose the limitations of Claim 27, from which Claims 42 and 43 depend. As such, those arguments are incorporated herein in their entirety. The disclosures relevant to the additional limitations of Claims 42 and 43 are addressed below.

1. Claim 42 – "An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors"

Claim 42 of the '863 patent, which depends from Claim 27, recites that one of a plurality of call distributors receive DNIS signals. Claim 42 requires that at least one of the plurality of ACDs receive DNIS signals.

Barger does not expressly disclose a call distributor, but rather a switching system (16). Barger does, however, disclose a voice response device (11) and operators (18) for receiving calls.

FIG. 1



NDC discloses an operator driven system that includes an ACD. (NDC at 70 ("[the Rockwell] Galaxy ACD interfaces the AT&T lines via t-1 carriers")). NDC discloses a system that correlates incoming call data with operator displays. (NDC at 70 ("These two processors are the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor.")) The call data received by the ACD and used to pre-prompt the operator displays is DNIS. (NDC at 71 ("the agent sees the name of the product or service on a printed line on the bottom the CRT screen. The term for this is DNI, or Dialed Number Identification.")) NDC therefore discloses a system wherein at least one automatic call distributor receives DNIS.

NDC further discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors with at least one call distributor receiving DNIS.

A person of skill in the art, motivated by the desire to pre-prompt operator displays, would have combined the teachings of NDC with the system disclosed in Barger. The same pressures identified above that made combining certain call routing features with the Barger system remain applicable for the NDC ACD features. Further, in the event that the Barger system experienced any appreciable call volume or drew from customers in different time zones or geographic locations, a person of skill in the art would have been motivated to add additional ACDs and locate the ACDs in different geographic locations as taught by NDC. Such a system

could handle more calls using multiple ACDs. By providing those ACDs in different geographic locations or time zones, or by grouping the call centers according to function, the ACDs could be programmed with regional specific content or could be serviced regionally by service technicians in temporal and geographic proximity with the customer the systems serviced. ACDs may also be located in different geographic areas to avoid catastrophic blackouts that might impact a call center in the event of a natural disaster.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by enhanced automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, Student Registration and Taylor render claim 42 obvious.

2. Claim 43 – "An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations"

With respect to the additional limitations in claims 43, NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the

mainframe computer at our Atlanta headquarters.”)). Accordingly, NDC discloses a system with a plurality of call distributors at different geographic locations.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced automation features of NDC, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, Student Registration, and Taylor render claim 43 obvious.

D. Claims 42 and 43 are obvious over Barger, NDC, VCT ’86, Student Registration and Taylor.

Claims 42 and 43 are unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, VCT ’86, Student Registration and Taylor. Just as in the concurrently pending reexamination of the ‘863 patent, Barger in view of VCT ’86 discloses the majority of the limitations with respect to Claim 27 from which claims 42 and 43 depend. NDC provides additional disclosures related to the DNIS limitation. Student Registration provides disclosures related to qualification, which is relevant to Claim 27. Taylor provides disclosures related to ACDs, which is relevant to the limitations of claims 42 and 43.

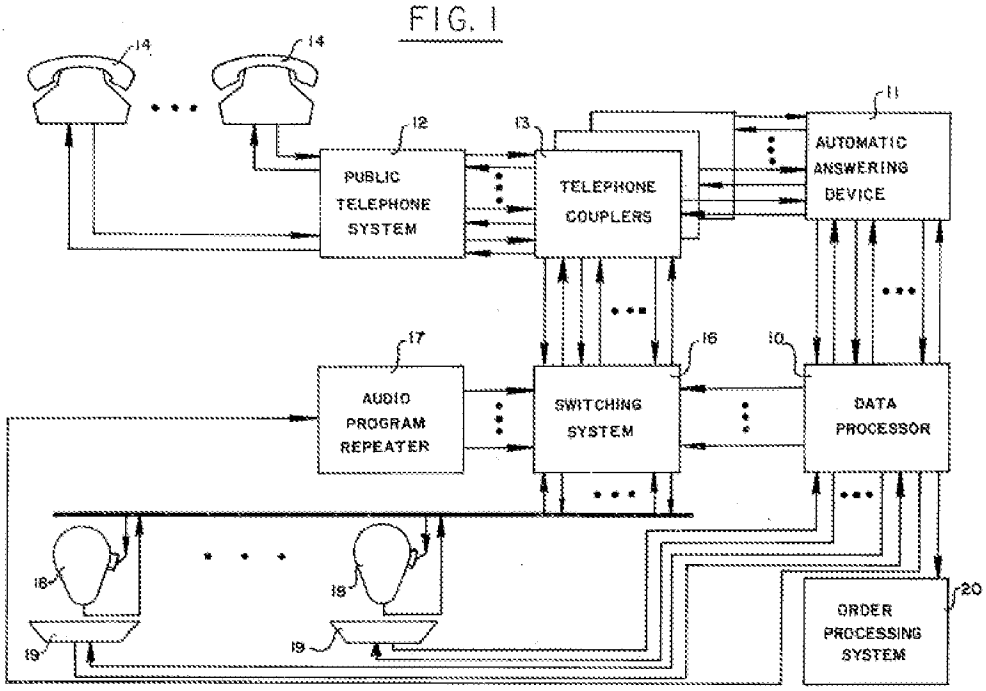
As shown in section B above, the combination of Barger, NDC, VCT ’86 and Student Registration disclose the limitations of Claim 27, from which Claims 42 and 43 depend. As

such, those arguments are incorporated herein in their entirety. The disclosures relevant to the additional limitations of Claims 42 and 43 are addressed below.

1. Claim 42 – "An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors"

Claim 42 of the '863 patent, which depends from Claim 27, recites that one of a plurality of call distributors receive DNIS signals. Claim 42 requires that at least one of the plurality of ACDs receive DNIS signals.

Barger does not expressly disclose a call distributor, but rather a switching system (16). Barger does, however, disclose a voice response device (11) and operators (18) for receiving calls.



NDC discloses an operator driven system that includes an ACD. (NDC at 70 ("[the Rockwell] Galaxy ACD interfaces the AT&T lines via t-1 carriers")). NDC discloses a system that correlates incoming call data with operator displays. (NDC at 70 ("These two processors are

the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor.")) The call data received by the ACD and used to pre-prompt the operator displays is DNIS. (NDC at 71 ("the agent sees the name of the product or service on a printed line on the bottom the CRT screen. The term for this is DNI, or Dialed Number Identification.")) NDC therefore discloses a system wherein at least one automatic call distributor receives DNIS.

NDC further discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors with at least one call distributor receiving DNIS.

A person of skill in the art, understanding the benefits of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in Barger. The same pressures identified above that made combining certain call routing features with the Barger system remain applicable for the NDC ACD features. Further, in the event that the Barger system experienced any appreciable call volume or drew from customers in different time zones or geographic locations, a person of skill in the art would have been motivated to add additional ACDs and locate the ACDs in different geographic locations as taught by NDC. Such a system could handle more calls using multiple ACDs. By providing those ACDs in different geographic locations or time zones, or by grouping the call centers according to function, the ACDs could be programmed with regional specific content or could be serviced regionally by

service technicians in temporal and geographic proximity with the customer the systems serviced. ACDs may also be located in different geographic areas to avoid catastrophic blackouts that might impact a call center in the event of a natural disaster.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, VCT '86, Student Registration and Taylor render claim 42 obvious.

2. Claim 43 – "An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations"

With respect to the additional limitations in claims 43, NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors at different geographic locations.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, VCT '86, Student Registration and Taylor render claim 43 obvious.

E. Claims 42 and 43 are obvious over Barger, NDC, Student Registration, Oliphant and Taylor.

Claims 42 and 43 are unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, Student Registration, Oliphant and Taylor. Just as in the concurrently pending reexamination of the '863 patent, Barger discloses the majority of the limitations with respect to Claim 27 from which claims 42 and 43 depend. NDC provides additional disclosures related to the DNIS limitation. Student Registration provides disclosures related to qualification, which is relevant to Claim 27. Oliphant and Taylor provide disclosures related to ACDs, which is relevant to the limitations of claims 42 and 43.

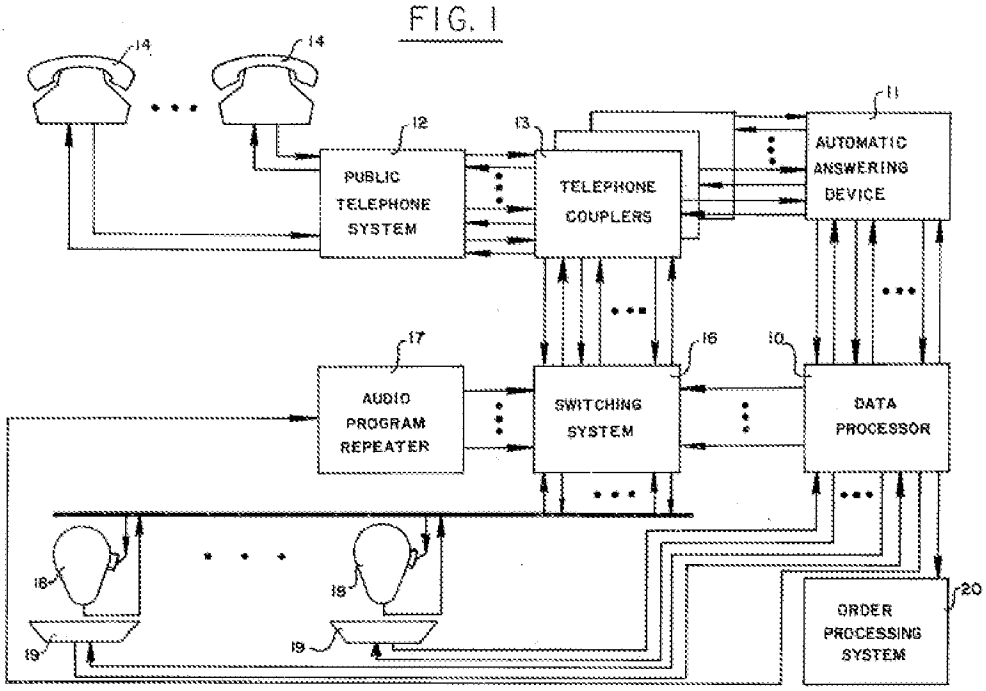
As shown in section A above, the combination of Barger, NDC, and Student Registration disclose the limitations of Claim 27, from which Claims 42 and 43 depend. As such, those

arguments are incorporated herein in their entirety. The disclosures relevant to the additional limitations of Claims 42 and 43 are addressed below.

1. Claim 42 – "An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors"

Claim 42 of the '863 patent, which depends from Claim 27, recites that one of a plurality of call distributors receive DNIS signals. Claim 42 requires that only one of the plurality of ACDs receive DNIS signals.

Barger does not expressly disclose a call distributor, but rather a switching system (16). Barger does, however, disclose a voice response device (11) and operators (18) for receiving calls.



Oliphant discloses two configurations for a system having a voice response unit and operators. In a first configuration (Figure 1), termed "stand-along VRU", the "fronting" VRU receives

incoming calls and the ACD remains "behind" the VRU for switching calls from the VRU to agents. (Oliphant at 225).

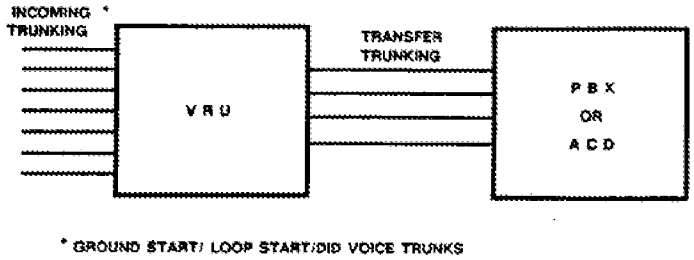


Figure 1 Stand Alone VRU Installation

Oliphant also discloses a second VRU and ACD configuration. In the second configuration (Figure 2), the "fronting" ACD receives incoming calls with the VRU "behind" the ACD. (Oliphant at 227).

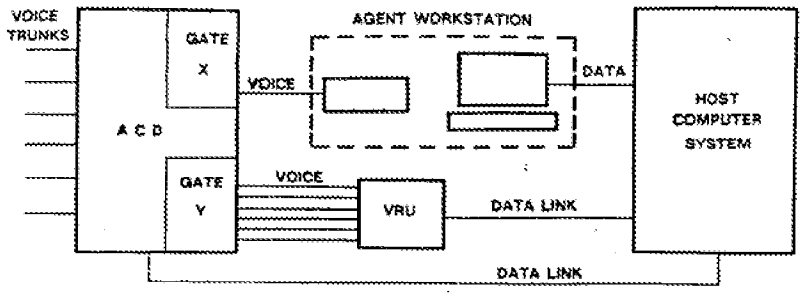


Figure 2 Integrated ACD and VRU Installation

Oliphant further discloses that, for systems like Barger using a voice response unit, "a device is needed which can queue calls and overflow them to agents for handling if the delay while waiting for an available VRU port becomes too long." (Oliphant at 226). Oliphant discloses the drawbacks of the stand-alone VRU system: "The most typical approach is to let the calls get blocked at the central office, or to provide a no answer at the VRU." (Oliphant at 226). Oliphant also discloses at least one benefit of the alternative front-facing ACD system configuration – non-blocked calls:

> An ACD is designed to accept high volumes of inbound calls from a variety of sources and to react favorable under call load conditions …. An ACD uses software queues to hold calls awaiting distribution.

(Oliphant at 226). A person of skill in the art would be motivated to enhance the Barger system to achieve the benefit of non-blocked calls under peak load conditions as disclosed by the Oliphant ACD configuration of Figure 2.

NDC discloses an operator driven system that includes an ACD. (NDC at 70 ("[the Rockwell] Galaxy ACD interfaces the AT&T lines via t-1 carriers")). NDC discloses a system that correlates incoming call data with operator displays. (NDC at 70 ("These two processors are the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor.")) The call data received by the ACD and used to pre-prompt the operator displays is DNIS. (NDC at 71 ("the agent sees the name of the product or service on a printed line on the bottom the CRT screen. The term for this is DNI, or Dialed Number Identification.")) NDC therefore discloses a system wherein at least one automatic call distributor receives DNIS.

NDC further discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors with at least one call distributor receiving DNIS.

A person of skill in the art, motivated by the Oliphant disclosure of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in

Barger. The same pressures identified above that made combining certain call routing features with the Barger system remain applicable for the NDC ACD features. Further, in the event that the Barger system experienced any appreciable call volume or drew from customers in different time zones or geographic locations, a person of skill in the art would have been motivated to add additional ACDs and locate the ACDs in different geographic locations as taught by NDC. Such a system could handle more calls using multiple ACDs. By providing those ACDs in different geographic locations or time zones, or by grouping the call centers according to function, the ACDs could be programmed with regional specific content or could be serviced regionally by service technicians in temporal and geographic proximity with the customer the systems serviced. ACDs may also be located in different geographic areas to avoid catastrophic blackouts that might impact a call center in the event of a natural disaster.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, Student Registration, Oliphant and Taylor render claim 42 obvious.

2. Claim 43 – "An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations"

With respect to the additional limitations in claims 43, NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors at different geographic locations.

As described more fully above, a person of skill in the art, motivated by the Oliphant disclosure of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in Barger.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, Student Registration, Oliphant and Taylor render claim 43 obvious.

F. Claims 42 and 43 are obvious over Barger, NDC, VCT '86, Student Registration, Oliphant and Taylor.

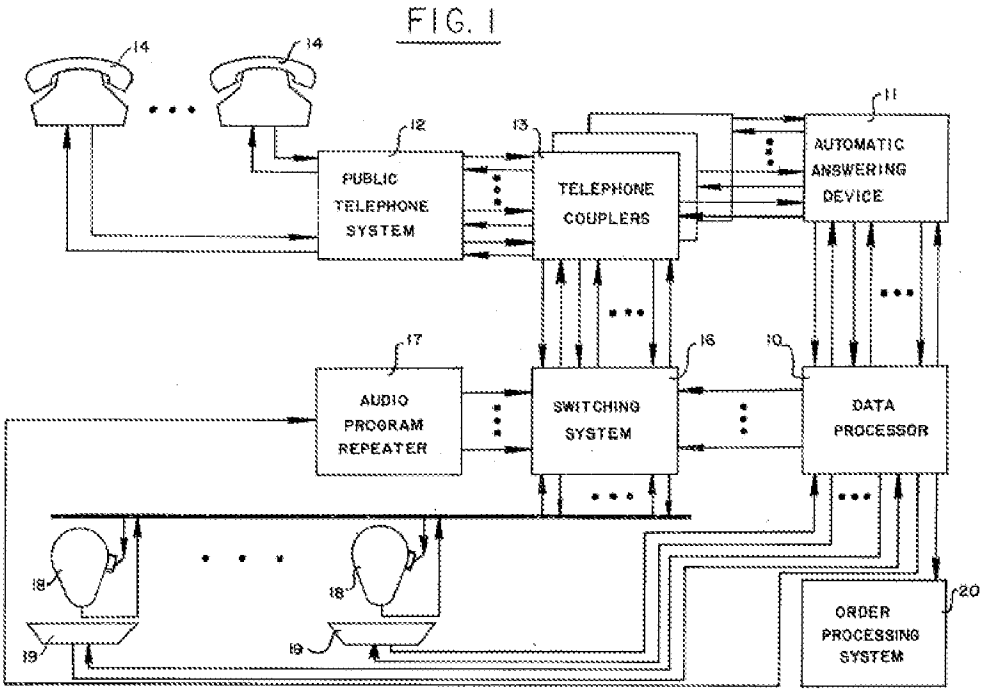
Claims 42 and 43 are unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, VCT '86, Student Registration, Oliphant and Taylor. Just as in the concurrently pending reexamination of the '863 patent, Barger in view of VCT '86 discloses the majority of the limitations with respect to Claim 27 from which claims 42 and 43 depend. NDC provides additional disclosures related to the DNIS limitation. Student Registration provides disclosures related to qualification, which is relevant to Claim 27. Oliphant and Taylor provide disclosures related to ACDs, which is relevant to the limitations of claims 42 and 43.

As shown in section B above, the combination of Barger, NDC, VCT '86 and Student Registration disclose the limitations of Claim 27, from which Claims 42 and 43 depend. As such, those arguments are incorporated herein in their entirety. The disclosures relevant to the additional limitations of Claims 42 and 43 are addressed below.

1. Claim 42 – "An analysis control system according to claim 27, wherein said called number identification signals (DNIS) are received by one of a plurality of call distributors"

Claim 42 of the '863 patent, which depends from Claim 27, recites that one of a plurality of call distributors receive DNIS signals. Claim 42 requires that only one of the plurality of ACDs receive DNIS signals.

Barger does not expressly disclose a call distributor, but rather a switching system (16). Barger does, however, disclose a voice response device (11) and operators (18) for receiving calls.



Oliphant discloses two configurations for a system having a voice response unit and operators. In a first configuration (Figure 1), termed "stand-along VRU", the "fronting" VRU receives incoming calls and the ACD remains "behind" the VRU for switching calls from the VRU to agents. (Oliphant at 225).

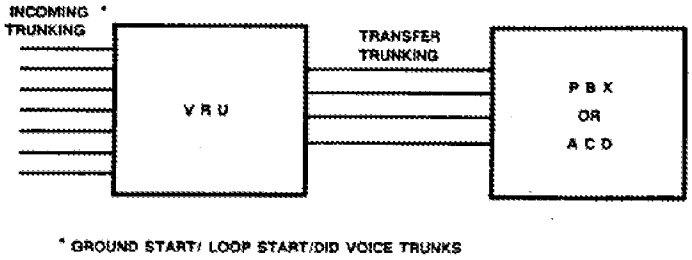
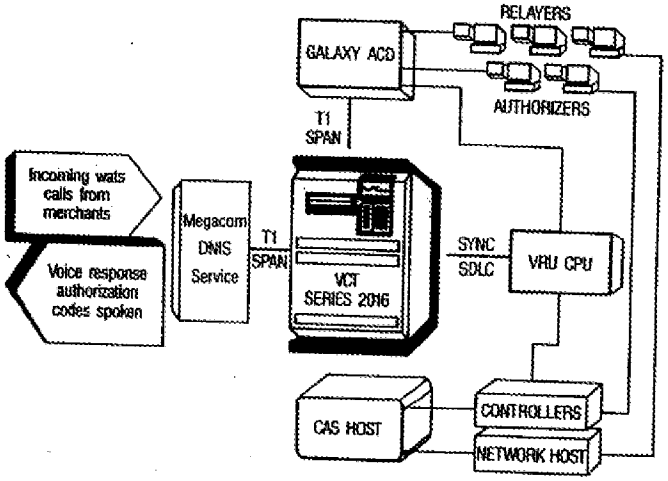


Figure 1 Stand Alone VRU Installation

The "fronting" VRU configuration of Oliphant is also disclosed in VCT '86. (VCT '86 at 5).



Oliphant also discloses a second VRU and ACD configuration. In the second configuration (Figure 2), the "fronting" ACD receives incoming calls with the VRU "behind" the ACD. (Oliphant at 227).

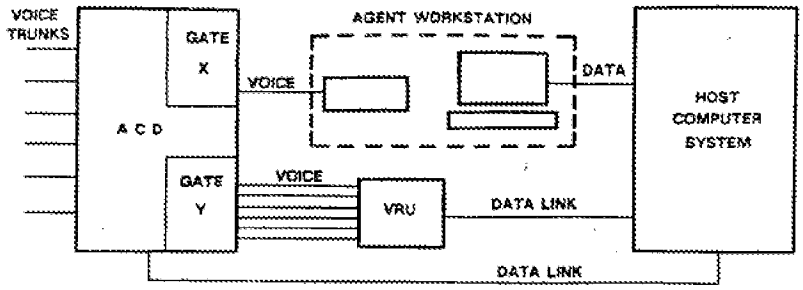


Figure 2 Integrated ACD and VRU Installation

Oliphant further discloses that, for systems like Barger using a voice response unit, "a device is needed which can queue calls and overflow them to agents for handling if the delay while waiting for an available VRU port becomes too long." (Oliphant at 226). Oliphant discloses the drawbacks of the stand-alone VRU system of VCT '86: "The most typical approach is to let the calls get blocked at the central office, or to provide a no answer at the VRU." (Oliphant at 226). Oliphant also discloses at least one benefit of the alternative front-facing ACD system configuration – non-blocked calls:

> An ACD is designed to accept high volumes of inbound calls from a variety of sources and to react favorable under call load conditions …. An ACD uses software queues to hold calls awaiting distribution.

(Oliphant at 226). A person of skill in the art would be motivated to enhance the Barger system to achieve the benefit of non-blocked calls under peak load conditions as disclosed by the Oliphant ACD configuration of Figure 2.

NDC discloses an operator driven system that includes an ACD. (NDC at 70 ("[the Rockwell] Galaxy ACD interfaces the AT&T lines via t-1 carriers")). NDC discloses a system that correlates incoming call data with operator displays. (NDC at 70 ("These two processors are the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor.")) The call data received by the ACD and used to pre-prompt the operator displays is DNIS. (NDC at 71 ("the agent sees the name of the product or service on a printed line on the bottom the CRT screen. The term for this is DNI, or Dialed Number Identification.")) NDC therefore discloses a system wherein at least one automatic call distributor receives DNIS.

NDC further discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors with at least one call distributor receiving DNIS.

A person of skill in the art, motivated by the Oliphant disclosure of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in

Barger. The same pressures identified above that made combining certain call routing features with the Barger system remain applicable for the NDC ACD features. Further, in the event that the Barger system experienced any appreciable call volume or drew from customers in different time zones or geographic locations, a person of skill in the art would have been motivated to add additional ACDs and locate the ACDs in different geographic locations as taught by NDC. Such a system could handle more calls using multiple ACDs. By providing those ACDs in different geographic locations or time zones, or by grouping the call centers according to function, the ACDs could be programmed with regional specific content or could be serviced regionally by service technicians in temporal and geographic proximity with the customer the systems serviced. ACDs may also be located in different geographic areas to avoid catastrophic blackouts that might impact a call center in the event of a natural disaster.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, VCT '86, Student Registration, Oliphant and Taylor render claim 42 obvious.

2. Claim 43 – "An analysis control system according to claim 27, wherein said plurality of call distributors are at different geographic locations"

With respect to the additional limitations in claims 43, NDC discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of call distributors at different geographic locations.

As described more fully above, a person of skill in the art, motivated by the Oliphant disclosure of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in Barger.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by the enhanced automation features of NDC and VCT '86, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor. The Taylor ACDs would further include the feature of receiving DNIS, as the automation enhancement features of NDC and VCT '86 require DNIS to achieve those enhancements.

Accordingly the combination of Barger, NDC, VCT '86, Student Registration, Oliphant and Taylor render claim 43 obvious.

G. Claim 116 is obvious over Barger and NDC, VCT '87, Student Registration and Taylor.

Claim 116 is unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, VCT '87, Student Registration and Taylor. Barger discloses the overall structural limitations of Claim 116 including the interface structure, voice generator structure, record testing structure, and analysis structure. NDC and VCT '87 provide additional disclosures related to the DNIS feature. Taylor provides additional disclosures related to the ACD feature. VCT '87 provides additional disclosures related to the ANI feature. Student Registration provides disclosures related to record testing structure.

As found by the Patent Office in the concurrently pending '095 reexamination, Barger discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication, and further including (a) interface structure for coupling callers to said communication facility, (b) a plurality of formats, (c) record structure that includes means to develop, store, and retrieve caller data, and (d) qualification structure that qualifies access based on two forms of identification data.

1. Claim 116 - "An [1] analysis control system for use with [2] a communication facility including [3] remote terminals for individual callers, wherein each of said [4] remote terminals may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing data and wherein said [5] communication facility has a capability to provide called number identification data (DNIS) and calling number identification data, said analysis control system comprising:"

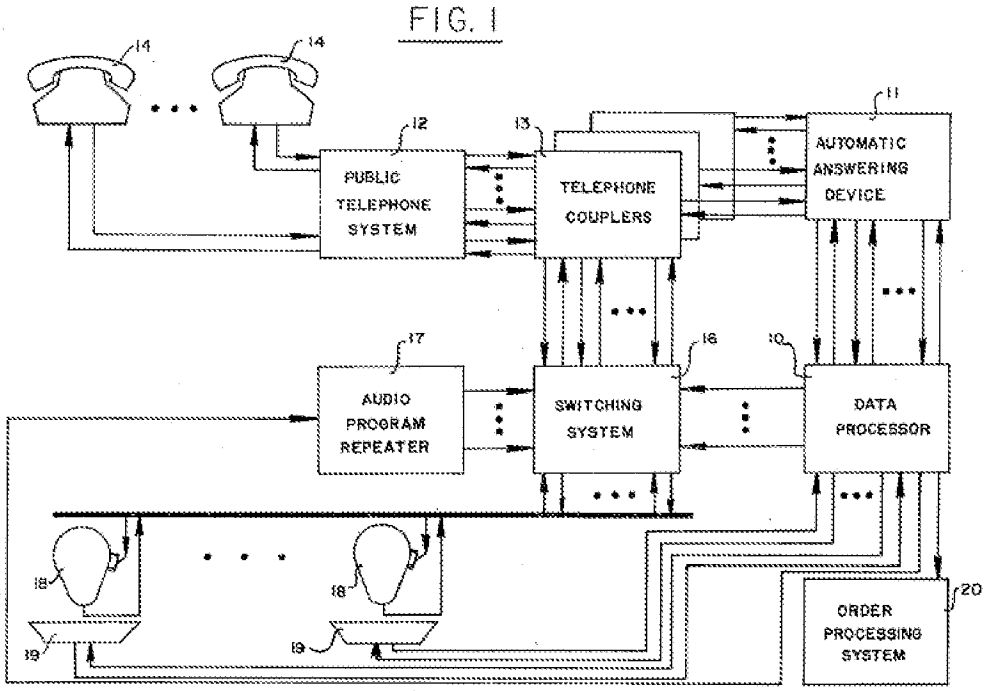
Figures 1 and 2 of Barger disclose the recited [1] analysis control system (Interactive Voice Response system or IVR system). (Barger, Figs. 1, 2, Abstract). Barger further discloses the recited [2] communication facility (Public Telephone System 12) and [3] remote terminals

(devices 14, 24 and 25). (Barger, Figs. 1, 2). Barger discloses the [4] remote terminals (push button phones 25). (Barger, Fig. 2). As per the recited claim language, the [5] communication facility and its respective capabilities are not part of the claimed analysis control system, irrespective of whether the prior art discloses such features, which they do.

2. Claim 116 - "multiple automatic call distributors at geographically distinct locations for receiving calls from said individual callers at said remote terminals"

Claim 116 of the '863 patent recites that multiple automatic call distributors at distinct geographic locations receive calls from callers.

Barger does not expressly disclose a call distributor, but rather a switching system (16). Barger does, however, disclose a voice response device (11) and operators (18) for receiving calls.



NDC discloses an operator driven system that includes an ACD. (NDC at 70 ("[the Rockwell] Galaxy ACD interfaces the AT&T lines via t-1 carriers")). NDC discloses a system

that correlates incoming call data with operator displays. (NDC at 70 ("These two processors are the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor.")) The call data received by the ACD and used to pre-prompt the operator displays is DNIS. (NDC at 71 ("the agent sees the name of the product or service on a printed line on the bottom the CRT screen. The term for this is DNI, or Dialed Number Identification.")).

NDC further discloses a nationwide system for credit verification and telemarketing. (NDC at 69 ("five credit card verification centers scattered across the nation"), at 70 ("We already have this ACD in all five of our other US call centers"), at 70 ("These TI processors are the CRT controllers. It's our interface with the mainframe computer at our Atlanta headquarters.")). Accordingly, NDC discloses a system with a plurality of ACDs at different geographic locations.

A person of skill in the art, understanding the benefits of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in Barger. The same pressures identified above that made combining certain call routing features with the Barger system remain applicable for the NDC ACD features. Further, in the event that the Barger system experienced any appreciable call volume or drew from customers in different time zones or geographic locations, a person of skill in the art would have been motivated to add additional ACDs and locate the ACDs in different geographic locations as taught by NDC. Such a system could handle more calls using multiple ACDs. By providing those ACDs in different geographic locations or time zones, or by grouping the call centers according to function, the ACDs could be programmed with regional specific content or could be serviced regionally by

service technicians in temporal and geographic proximity with the customer the systems serviced. ACDs may also be located in different geographic areas to avoid catastrophic blackouts that might impact a call center in the event of a natural disaster.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by enhanced automation features of NDC attributable to DNIS, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor.

Accordingly the combination of Barger, NDC, VCT '87, Student Registration and Taylor disclose this limitation.

3. Claim 116 – "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication and including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data and said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats"

Claim 116 recites "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication and including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data and said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication

facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats." This limitation has been divided into three clauses: (a) interface structure; (b) means to provide signals representative of data developed by said remote terminals; and (c) means to provide signals … and for receiving said calling number identification data and said called number identification data (DNIS) … .

a. "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication"

As shown in FIG. 1, and in greater detail in Fig. 2, the Barger system and method couples dialed or leased lines of the public telephone system (12) to a data processor (10) or to a CPU (21) and bus (22) of the Barger system. The system connects multiple telephone lines (14), which may include dial telephones (24) and push button telephones (25) to the processor (10) or to the CPU (21) and bus (22). (*See also*, Barger, col. 3, lines 41-46). The disclosures in Barger further describe a plurality of telephone couplers (13) including, as shown in Fig. 2, telephone data couplers (26) and data coupling sets (32) configured to connect dial and push button telephones through an automatic answer device (27) and a pushbutton interface (46), respectively, to the system's data processor (10) or CPU (21). (Barger, FIGS. 1 and 2; col. 3, lines 52-65; col. 4, lines 10-13, col. 7, lines 38-51; and col. 9, lines 29-62). The telephone couplers (13), (26) and (32) are connected to an automatic answering device (11), as shown in Fig. 1, which responds to ringing signals and sends signals to the data processor (10). The data processor (10) or CPU (21) responds to such signals by automatically connecting caller telephone lines to an audio program repeater (17) and (28). (Barger, col. 2, lines 16-33; col. 4, lines 5-9 and 10-20).

Thus Barger discloses the interface structure as recited in claim 116 of the '863 patent.

b. "including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data"

This clause of Claim 116 is a "means plus function" clause under § 112, paragraph 6. The structure disclosed in the '863 patent that receives caller data signals representative of data relating to individual callers is the processing system P1, and more particularly, interface 20, switch 21 and processors PR1-PRn. ('863 patent, FIG. 1; col. 4, lines 46-55).

The data processor or CPU controls the audio program repeater to connect caller lines through a switching system (16), or, as shown in Fig. 2, through a switching matrix (29), to a plurality of channels of the audio program repeater to play a "hello" message to callers. (Barger, col. 2, lines 16-27; col. 3, lines 52-54; col. 4, lines 10-20; and col. 9, lines 53-60). When the "hello" message is completed, the audio program repeater signals the data processor or CPU, which then switches caller telephone lines to a plurality of customer service operators (18) and (34) through the switching system (16) and (29). (Barger, col. 2, lines 22-30; and col. 4, lines 20-24). Alternatively, in the push button service mode, the data processor or CPU communicates directly with callers via preprogrammed messages the audio program repeater provides to caller telephones. The preprogrammed messages deliver instructions or prompts to callers as required by the transaction. (Barger, col. 2, line 62-col. 3, line 22). Callers respond to the instructions or prompts by entering relevant information into the data processor or CPU using their telephone keypads. (Barger, col. 2, lines 30-33; col. 3, lines 14-22; col. 6, lines 35-43; and col. 9, lines 29-62).

As such, the structures and associated processes discussed above show that Barger disclosed in 1977 a system that includes an interface structure that couples or "interfaces" caller telephones with the system data processor or CPU and includes, particularly in the push button

service mode, structure that corresponds to means to receive caller data signals or signals representative of data relating to said individual callers that are developed by said remote terminals as recited in claim 116. The corresponding structure of Barger includes those structures and processes necessary to transmit signals that are developed by at push button telephones, as a result of callers keying data into their telephone keypads, to the data processor or CPU, including the plurality of data coupling sets (32) and the pushbutton interface (46) that couple push button telephones (25) to the bus (22) and the CPU (21), as shown in Fig. 2.

Although the Examiner in the '095 reexamination employs Yoshizawa to satisfy "personal identification data" (See '095 reexamination, 3/20/09 Office Action at p. 19), Barger alone discloses qualification using "personal identification data." And to the extent that Barger alone does not disclose qualification using "personal identification data," Student Registration discloses this feature (as described further below).

As discussed in this reexamination request, Barger discloses an operator obtaining a caller's name (in addition to other information) when processing a call. (Barger, col. 4, lines 61-67). Setting aside the claim construction dispute from the '707 reexamination that relates to the term "personal identification data," there is no doubt that a person's name is personal identification data. Thus, Barger clearly discloses obtaining a caller's name during credit verification in the operator attended mode. In such a situation, if the caller could not provide their name it would defy common sense to think that Barger's system would allow the caller to access the format.

Although Barger describes qualification of callers using a caller's name in connection with the operator attended mode, Barger also explicitly states that such qualification may be automated: "Although the telephone record marketing system described with reference to Fig. 1

has relied upon a human customer service operator for customer communications, the functions of the customer service operator may be replaced by programmed subroutines in the data processor and messages prerecorded on channels of the audio program repeater." (Barger, col. 6, lines 35-41). In fact, Barger discloses a credit verification routine that starts with automated prompts, and if it can not be completed, transfers to an operator for completion. (Barger, col. 8, line 48-col. 9, line 4).

Like Barger, Student Registration also discloses qualification of callers via automated prompts and caller touch tone response. Student Registration discloses that callers provide a "student identification number" and a "personal access code." (Student Registration at C-1). Specifically, Student Registration discloses that the "Student Identification Number … is your social security number unless you have been assigned a special number." (Student Registration at C-1). The disclosed "Personal Access Code" is disclosed as "your birth month, stated in 2 digits, and your birth day, also stated in 2 digits." (Student Registration at C-1).

As above, in every practical sense and application of the disclosures in Barger, a person would necessarily be qualified using multiple forms of identification data in at least one of the examples discussed in Barger. Because identification of the caller was important in the Barger system, a person of skill in the art would have recognized that incorporating the social security number and personal access code (both personal identification data) of Student registration with the account number (customer number) of Barger would provide the advantage of preventing unauthorized access to a customer's account. Thus, Barger in combination discloses *caller personal identification data*, to enable the data processor of the CPU to obtain online credit verification of the push button caller for credit purchases.

c. "including means to receive … said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats"

The next clause of Claim 116 recites "including means to receive … said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats." Such identification signals or identification data are provided through the capabilities and services of a public telephone company or system that are collectively well known in the art as "dialed number identification service," or "DNIS," and "automatic number identification" or ANI, whereby the telephone company or system provides to the customer or subscriber equipment data or signals that identify the telephone number being called as well as the calling telephone number. This limitation of Claim 116 is a "means plus function" clause under § 112, paragraph 6. The structure disclosed in the '863 patent that receives calling number identification data (ANI) and called number identification signals (DNIS), and that identifies one of a plurality of called numbers is the automatic call distributor AC1, interface 20, and switch 21. (See '863 patent, col. 4, lines 56-63; col. 6, lines 36-44).

To the extent that Barger does not explicitly describe such ANI and DNIS signals in use with its system, Barger clearly discloses differentiating called numbers based on the telephone number dialed. For example, Barger teaches call routing to different call modes or applications. Barger explicitly teaches that certain telephone numbers are routed to different call modes. (Barger, col. 3, lines 3-7). The structure disclosed in Barger for performing this function

includes telephone couplers 13, and one or more data coupling sets 32. Although Barger discloses only one technical way in which to accomplish this (i.e. dedicated telephone ports), alternative routing techniques, such as those that involve signals that represent the called number (DNIS), multiplexed operations involving PBXs, and other basic routing concepts are inherently disclosed in Barger.

To the extent that Barger does not inherently disclose differentiating called numbers based on DNIS signals, Barger in view of the non-patent references NDC and VCT '87, teach or suggest means for receiving DNIS data or signals, rendering Claim 116 obvious. NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message .... Then as the agent greets the caller, the entire format for handling that client's business comes upon on the CRT screen, while the DNI greeting is erased at the bottom.")). VCT '87 also discloses the use of DNIS signals to differentiate called numbers to route calls to particular automated and operator attendant functions. (VCT '87, p. 6 ("The DNIS codes associated with each 800 number are identified by the voice system and directed to the appropriate department before the call is even answered.")). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps oversimplistically, the called number now becomes the product name. ... Prior to DNI, the agent

heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.”)).

Further, although Barger does not explicitly disclose [3] means to receive calling number identification data (ANI), Barger does disclose that new customers are required to provide name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT ’87 discloses the use of ANI, specifically the recited “calling number identification data provided automatically by said communication facility.” VCT ‘87 discloses that ANI is used to look up customer information automatically. Specifically, VCT ’87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from which the call is being placed. With this type of identification, the voice response system can match the number with a customer’s account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT ’87 at 6).

A person of skill in the art would have been motivated to combine VCT ’87 and NDC with Barger. A number of practical and economic benefits would have motivated one to implement the differentiating of called numbers, including DNIS based routing of calls to particular call modes. VCT ’87 discloses DNIS automation techniques for voice response units, whereas NDC discloses DNIS automation techniques for operator features. Both enhanced automation techniques improve upon the voice response and operator modes of Barger. NDC specifically identifies the time savings, error reduction, and efficiency aspects of using the dialed number to achieve automation benefits for agent-handled calls, such as those in the Barger system:

> This software system helps eliminate errors because the first time the agent has to type any information on the keyboard is to input the caller's name and address.
>
> Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen. Those four seconds saved on the labor side of the system added up to dollars saved for NDC. Again, Dean Smith's figures estimated they add up to $75,450 a year in savings.
>
> Andy Zazzera said, "Without Galaxy 3 tied to our host computer in Atlanta, all these agents would have required dedicated lines connected only to specific customer calls coming in. Each agent would have just one script and answer only one type of call, Or at best, each agent would hear a "whisper" and hear the company name and then have to translate the name of that company onto the CRT screen through the keyboard, and this is the point where errors can creep in."

(NDC at 72); (see also '095 Reexamination, Examiner's Answer at p. 15 ("It would have been obvious for one of ordinary skill in the art, at the time of the invention to use DNIS to identify respective formats or modes in Barger's system . . .")). Such additional considerations include, for example, expansion of the automated system for increased call volume, time zone discrepancies, or the desire to run varied formats. Such considerations were practical pressures on the automated call systems in general and that would have necessitated call routing changes. As discussed in the concurrent reexamination, Barger discloses and uses call routing based on the number dialed by the caller. Although Barger used or discloses one way in which to accomplish such routing, i.e. dedicated telephone lines, it would have been obvious to utilize other routing techniques such as DNIS signals as such technology was in widespread use. Further, based upon the same considerations for employing DNIS in the Barger system (time savings, efficiency, less operator involvement), the Barger system further benefits from the use of ANI as disclosed by VCT '87. VCT '87 teaches the use of automatically identifying a Barger customer account by matching a customer record using ANI for telephone number matching.

For these reasons, the Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '87 (for voice response applications) for selection of particular formats (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC and VCT '87, while automatically matching ANI to an existing customer account as disclosed by VCT '87, in order to handle more calls in less time, and to reduce the number of operators required.

4. Claim 116 – "voice generator structure coupled through said interface structure for actuating said remote terminals as to provide vocal operating instructions in accordance with said select format to said individual callers and to prompt said individual callers to enter data"

The next clause of Claim 27 recites "voice generator structure coupled through said interface structure for actuating said remote terminals as to provide vocal operating instructions in accordance with said select format to said individual callers and to prompt said individual callers to enter data."

Barger discloses the recited voice generator structure in that telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31 are connected to automatic answer 27, pushbutton interface 45, and touch-tone signal interface 39 of Figure 2 for prompting and receiving caller entered data. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the data processor responds to push-button codes entered by a caller. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62). Although Barger does not explicitly disclose "said select format" identified using DNIS, NDC discloses the use of DNIS to identify "said select format." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see

and respond to this printed message …. Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. … Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats").

VCT '87 also discloses the use of DNIS to identify "said select format." Specifically, VCT discloses a voice response unit that includes capabilities to receive calls via multiple 800 telephone numbers and to recognize and direct calls for different service formats according to the "DNIS codes associated with each 800 number" that are provided by the public telephone system. (VCT '87 at 6, col. 1).

As above, the Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '87 (for voice response applications) to prompt callers and receive caller data (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC and VCT '87, in order to handle more calls in less time, and to reduce the number of operators required.

5. Claim 116 – "record testing structure connected to receive and test said caller data signals including said calling number identification

> data and said caller personal identification data against previously stored calling number identification data and caller personal identification data"

The next clause of Claim 116 recites "record testing structure connected to receive and test said caller data signals including said calling number identification data and said caller personal identification data against previously stored calling number identification data and caller personal identification data." In the concurrently pending reexamination, this record structure and memory were construed to mean the computer hardware and software that receives data signals, update files, and store information. ('095 Reexamination, 11/23/09 Examiner's Answer at p. 15-16).

With reference to Fig. 2, Barger specifically discloses that the system maintains a complete record of all transactions, historical records of particular customers, and accurate and informative customer profiles. Customer information and records are stored in a master file and retrieved by the data processor (10) or CPU (21) as required. (Barger, col. 2, lines 5-12, col. 5, lines 29-37 and lines 46-53; col. 5, lines 46-53; and col. 6, lines 21-26). In addition, the CPU (21) is in communication via the bus (22) with RAM (23) and a magnetic disk pack (MDP) (41) and a magnetic tape unit (MTU) (43), that provide storage capabilities to the embodiment of the Barger system shown in Fig. 2. (Barger, col. 7, lines 33-37; and col. 8, lines 48-60). Moreover, as found by the Examiner in the concurrently pending reexamination, Barger discloses a CPU (21), or control means, connected to RAM (23), or memory, via the bus (22). These structures allow the Barger system to store caller data from caller telephones through the data coupling sets 32 and the push button interface 46. Thus, Barger discloses *record testing structure ... to receive said caller data signals.*

Claim 116 also requires that the system test *caller data signals*. As shown in FIG. 1, the data processor (10) and order processing system 20 are configured to gain access to and store information from a file. Barger discloses a record structure having a memory (RAM 23, magnetic disc pack (MDP) 41, and magnetic tape unit (MTU) 43, FIG. 2) and control means (CPU 21), wherein said structures can access account or credit card information. (Barger, col. 8, lines 48-65). Barger further discloses caller's entering account or credit card information and verifying the accuracy of this information against files stored by the Barger system. (Barger, col. 9, lines 36-45). Additionally, Barger discloses updating or recording caller entered data. (Barger col. 5, lines 45-53; Barger, col. 5, line 65-col. 6, line 2; col. 6, lines 21-26). Barger discloses that caller information may be accessed or stored in either the operator attended format or the automated format. (Barger, col. 6, lines 38-43).

This limitation further recites that *said caller data signals* include (1) caller personal identification data and (2) calling number identification. In either the operator attended mode or the push button caller mode, Barger discloses qualification of a caller using credit card and account information. (Barger, col. 2, lines 53-57 ("Before the first order is accepted, the operator may request credit verification through the data processor or other means using the customer's credit card or account number.")). In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor (10) transfers information, including name, address, credit card number and account number, to the order processing system (20). (Barger, col. 5, lines 46-57).

The push button mode accomplishes the same functions performed by customer service operators, by replacing operator functions with programmed subroutines in the data processor and messages prerecorded on the audio program repeater. The audio program repeater would thus necessarily request a push button caller to enter certain data that otherwise would be requested by a customer service operator. Such data would necessarily include "required information from the customer, such as name and account number, demonstrations desired, and orders for merchandise or services demonstrated," as well as "the customer's credit card or account number" for credit verification. (Barger, col. 2, lines 34-38 and lines 53-56; and col. 6, lines 38-41). A push button caller's account number includes a code reserved for push button telephone customers (Barger, col. 9, lines 40-42). Therefore, a push button caller would identify themselves to the Barger system by entering their account number that includes the code for push button callers, or caller customer number data, to signal the data processor or the CPU that a push button caller was on the line. (Barger, col. 9, lines 40-42).

Although the Examiner in the '095 reexamination employs Yoshizawa to satisfy claim 27 of the '863 patent's limitation requiring "personal identification data" (See '095 reexamination, 3/20/09 Office Action at p. 19), Barger alone discloses qualification using "personal identification data." Regardless, Student Registration also discloses qualification using "personal identification data."

As discussed above, Barger discloses an operator obtaining a caller's name (in addition to other information) when processing a call. (Barger, col. 4, lines 61-67). Setting aside the claim construction dispute from the '707 reexamination that relates to the term "personal identification data," there is no doubt that a person's name is personal identification data. Thus, Barger clearly discloses obtaining a caller's name during credit verification in the operator attended mode. In

such a situation, if the caller could not provide their name it would defy common sense to think that Barger's system would allow the caller to access the format. In this manner, the data processor or the CPU in conjunction with the credit verification function (CVF) serve as the recited *receive and test said caller data signals including ... said caller personal identification data against previously stored ... caller personal identification data.*

Although Barger describes qualification of callers using a caller's name in connection with the operator attended mode, Barger also explicitly states that such qualification may be automated: "Although the telephone record marketing system described with reference to Fig. 1 has relied upon a human customer service operator for customer communications, the functions of the customer service operator may be replaced by programmed subroutines in the data processor and messages prerecorded on channels of the audio program repeater." (Barger, col. 6, lines 35-41). In fact, Barger discloses a credit verification routine that starts with automated prompts, and if it can not be completed, transfers to an operator for completion. (Barger, col. 8, line 48-col. 9, line 4).

Like Barger, Student Registration also discloses qualification of callers via automated prompts and caller touch tone response. Student Registration discloses that callers provide a "student identification number" and a "personal access code." (Student Registration at C-1). Specifically, Student Registration discloses that the "Student Identification Number … is your social security number unless you have been assigned a special number." (Student Registration at C-1). The disclosed "Personal Access Code" is disclosed as "your birth month, stated in 2 digits, and your birth day, also stated in 2 digits." (Student Registration at C-1).

As above, in every practical sense and application of the disclosures in Barger, a person would necessarily be qualified using multiple forms of identification data in at least one of the

examples discussed in Barger. Because identification of the caller was important in the Barger system, a person of skill in the art would have recognized that incorporating the social security number and personal access code (both personal identification data) of Student Registration with the account number (customer number) of Barger would provide the advantage of preventing unauthorized access to a customer's account. Thus, Barger in combination with Student Registration discloses the testing of *personal identification data*, to enable the data processor of the CPU to obtain online credit verification of the push button caller for credit purchases.

Further, although Barger does not explicitly disclose the recited calling number identification data (ANI), Barger does disclose that new customers provide various identification data including name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT '87 discloses the use and testing of ANI, specifically the recited "calling number identification." VCT '87 discloses that ANI is received and tested in the process of using ANI to look up customer information automatically. Specifically, VCT '87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from which the call is being placed. With this type of identification, the voice response system can match the number with a customer's account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6). Because VCT '87 discloses the requirement that the voice system "match" the received with a customer's account, the received ANI data is matched against previously stored calling number identification data (telephone number). With respect to Barger's new customer intake procedure, as modified by the teachings of VCT '87, a telephone number of a customer is information contained within each customer's account record and may be tested. A person of

skill in the art would be aware that multiple individuals in a household may call from using the same telephone line, and for increased security, the caller's birth date may distinguish one caller from another, if desired.

The Barger system would therefore benefit economically by being modified to include the ANI match for an existing customer account as disclosed by VCT '87, with further security provided by the personal access code (birth date) of Student Registration, in order to handle more calls in less time, and to reduce the number of operators required.

6. Claim 116 – "analysis structure for receiving and processing said caller data signals under control of said record testing structure"

Barger also discloses *analysis structure for receiving and processing said caller data signals under control of said record testing structure*, as recited in Claim 116 of the '863 patent. Claim 116 of the '863 patent recites "receiving and processing said caller data signals." In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor 10 (record testing structure) transfers information, including name, address, credit card number and account number, to the order processing system 20 (analysis structure). (Barger, col. 5, lines 46-57).

Barger discloses the recited analysis structure as an order processing system 20. Barger discloses that following completion of an order via telephone,

> the customer's block of data is returned to a master file, but if an order has been entered, the data processor first transfer the order to an order processing system 20 with the name, address, and any other information required to fill the order, such as the account or credit card number.

(Barger at 5:46-57). The order processing system receives and processes order information received from the caller via batch processing for fulfillment of the orders. Specifically, Barger discloses:

> The order processing system may be comprised of a magnetic disk pack and/or magnetic tape unit to accumulate all of the orders for a given period, which may be an entire business day. Once the order period has been closed, the orders are processed off-line in order to batch orders to the same customer and to prepare shipping labels, packing slips and account (or credit card) charge slips. Orders to be prepaid or shipped C.O.D. are set aside for further manual processing in respect to preparing and mailing a statement to be prepaid or for preparing C.O.D. documents.

(Barger at 6:10-20).

As above, the record testing structure is taught by Barger's CPU, which determines whether an order is complete for order processing and fulfillment to be handled by order processing system 20 (analysis structure). (Barger at 6:3-9, see also cols. 14-16 (claim 17) ("said data processor responds to a code entered from a push-button keyboard on the customer's telephone for an order of merchandise or services corresponding to the requested demonstration just completed by transmitting an order to an order processing system.").

Accordingly, the combination of Barger, NDC, Student Registration, VCT '87 and Taylor renders claim 116 obvious.

H. Claim 116 is obvious over Barger and NDC, VCT '86, VCT '87, Student Registration and Taylor.

Claim 116 is unpatentable under 35 U.S.C. § 103 as being obvious over Barger in view of NDC, VCT '86, VCT '87, Student Registration and Taylor. Barger discloses the overall structural limitations of Claim 116 including the interface structure, voice generator structure, record testing structure, and analysis structure. NDC, VCT '86 and VCT '87 provide additional disclosures related to the DNIS feature. Taylor provides additional disclosures related to the

ACD feature. VCT '87 provides additional disclosures related to the ANI feature. Student Registration provides disclosures related to record testing structure.

As found by the Patent Office in the concurrently pending '095 reexamination, Barger discloses an analysis control system for use with a communication facility, including remote terminals for voice and digital communication, and further including (a) interface structure for coupling callers to said communication facility, (b) a plurality of formats, (c) record structure that includes means to develop, store, and retrieve caller data, and (d) qualification structure that qualifies access based on two forms of identification data.

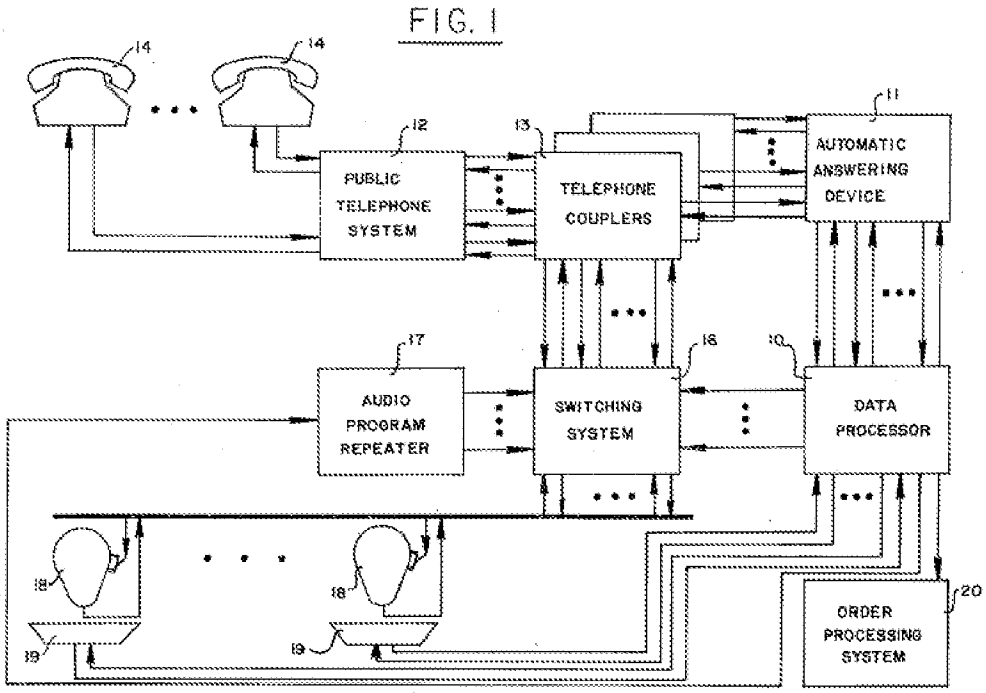
1. Claim 116 - "An [1] analysis control system for use with [2] a communication facility including [3] remote terminals for individual callers, wherein each of said [4] remote terminals may comprise a conventional telephone instrument including voice communication means, and digital input means in the form of an array of alphabetic numeric buttons for providing data and wherein said [5] communication facility has a capability to provide called number identification data (DNIS) and calling number identification data, said analysis control system comprising:"

Figures 1 and 2 of Barger disclose the recited [1] analysis control system (Interactive Voice Response system or IVR system). (Barger, Figs. 1, 2, Abstract). Barger further discloses the recited [2] communication facility (Public Telephone System 12) and [3] remote terminals (devices 14, 24 and 25). (Barger, Figs. 1, 2). Barger discloses the [4] remote terminals (push button phones 25). (Barger, Fig. 2). As per the recited claim language, the [5] communication facility and its respective capabilities are not part of the claimed analysis control system, irrespective of whether the prior art discloses such features, which they do.

2. Claim 116 - "multiple automatic call distributors at geographically distinct locations for receiving calls from said individual callers at said remote terminals"

Claim 116 of the '863 patent recites that multiple automatic call distributors at distinct geographic locations receive calls from callers.

Barger does not expressly disclose a call distributor, but rather a switching system (16). Barger does, however, disclose a voice response device (11) and operators (18) for receiving calls.



NDC discloses an operator driven system that includes an ACD. (NDC at 70 ("[the Rockwell] Galaxy ACD interfaces the AT&T lines via t-1 carriers")). NDC discloses a system that correlates incoming call data with operator displays. (NDC at 70 ("These two processors are the actual interfaces between the ACD and the CRT processors. The data link that Rockwell supplies us, with the call records, interfaces through this processor to pre-prompt the CRT screens on the telemarketing floor.")) The call data received by the ACD and used to pre-prompt the operator displays is DNIS. (NDC at 71 ("the agent sees the name of the product or service on

a printed line on the bottom the CRT screen. The term for this is DNI, or Dialed Number Identification.”)).

NDC further discloses a nationwide system for credit verification and telemarketing. (NDC at 69 (“five credit card verification centers scattered across the nation”), at 70 (“We already have this ACD in all five of our other US call centers”), at 70 (“These TI processors are the CRT controllers. It’s our interface with the mainframe computer at our Atlanta headquarters.”)). Accordingly, NDC discloses a system with a plurality of ACDs at different geographic locations.

A person of skill in the art, understanding the benefits of a non-blocking ACD and VRU architecture, would have combined the teachings of NDC with the system disclosed in Barger. The same pressures identified above that made combining certain call routing features with the Barger system remain applicable for the NDC ACD features. Further, in the event that the Barger system experienced any appreciable call volume or drew from customers in different time zones or geographic locations, a person of skill in the art would have been motivated to add additional ACDs and locate the ACDs in different geographic locations as taught by NDC. Such a system could handle more calls using multiple ACDs. By providing those ACDs in different geographic locations or time zones, or by grouping the call centers according to function, the ACDs could be programmed with regional specific content or could be serviced regionally by service technicians in temporal and geographic proximity with the customer the systems serviced. ACDs may also be located in different geographic areas to avoid catastrophic blackouts that might impact a call center in the event of a natural disaster.

To the extent that NDC does not disclose a plurality of call distributors, Taylor discloses a system that provides for multiple call distributors or ACDs spread out over different

geographic areas. Taylor discloses a system implementing multiple ACDs. (Taylor, col. 1, lines 57-64). Taylor discloses that multiple ACDs can be used to handle call volume and balance the load of calls. (Taylor, col. 3, lines 7-15). The Barger system, as modified by enhanced automation features of NDC and VCT '86 attributable to DNIS, as well as the forms of qualification disclosed by Student Registration, would benefit from the enhanced call volume and load balancing features of Taylor.

Accordingly the combination of Barger, NDC, VCT '86, VCT '87, Student Registration and Taylor disclose this limitation.

3. Claim 116 – "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication and including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data and said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats"

Claim 116 recites "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication and including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data and said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats." This limitation has been divided into three clauses: (a) interface structure; (b) means to provide signals representative of data developed by said remote terminals;

and (c) means to provide signals … and for receiving said calling number identification data and said called number identification data (DNIS) … .

a. "interface structure coupled to said communication facility to interface said remote terminals for voice and digital communication"

As shown in FIG. 1, and in greater detail in Fig. 2, the Barger system and method couples dialed or leased lines of the public telephone system (12) to a data processor (10) or to a CPU (21) and bus (22) of the Barger system. The system connects multiple telephone lines (14), which may include dial telephones (24) and push button telephones (25) to the processor (10) or to the CPU (21) and bus (22). (*See also*, Barger, col. 3, lines 41-46). The disclosures in Barger further describe a plurality of telephone couplers (13) including, as shown in Fig. 2, telephone data couplers (26) and data coupling sets (32) configured to connect dial and push button telephones through an automatic answer device (27) and a pushbutton interface (46), respectively, to the system's data processor (10) or CPU (21). (Barger, FIGS. 1 and 2; col. 3, lines 52-65; col. 4, lines 10-13, col. 7, lines 38-51; and col. 9, lines 29-62). The telephone couplers (13), (26) and (32) are connected to an automatic answering device (11), as shown in Fig. 1, which responds to ringing signals and sends signals to the data processor (10). The data processor (10) or CPU (21) responds to such signals by automatically connecting caller telephone lines to an audio program repeater (17) and (28). (Barger, col. 2, lines 16-33; col. 4, lines 5-9 and 10-20).

Thus Barger discloses the interface structure as recited in claim 116 of the '863 patent.

b. "including means to receive caller data signals representative of data relating to said individual callers, including caller personal identification data"

This clause of Claim 116 is a "means plus function" clause under § 112, paragraph 6. The structure disclosed in the '863 patent that receives caller data signals representative of data relating to individual callers is the processing system P1, and more particularly, interface 20, switch 21 and processors PR1-PRn. ('863 patent, FIG. 1; col. 4, lines 46-55).

The data processor or CPU controls the audio program repeater to connect caller lines through a switching system (16), or, as shown in Fig. 2, through a switching matrix (29), to a plurality of channels of the audio program repeater to play a "hello" message to callers. (Barger, col. 2, lines 16-27; col. 3, lines 52-54; col. 4, lines 10-20; and col. 9, lines 53-60). When the "hello" message is completed, the audio program repeater signals the data processor or CPU, which then switches caller telephone lines to a plurality of customer service operators (18) and (34) through the switching system (16) and (29). (Barger, col. 2, lines 22-30; and col. 4, lines 20-24). Alternatively, in the push button service mode, the data processor or CPU communicates directly with callers via preprogrammed messages the audio program repeater provides to caller telephones. The preprogrammed messages deliver instructions or prompts to callers as required by the transaction. (Barger, col. 2, line 62-col. 3, line 22). Callers respond to the instructions or prompts by entering relevant information into the data processor or CPU using their telephone keypads. (Barger, col. 2, lines 30-33; col. 3, lines 14-22; col. 6, lines 35-43; and col. 9, lines 29-62).

As such, the structures and associated processes discussed above show that Barger disclosed in 1977 a system that includes an interface structure that couples or "interfaces" caller telephones with the system data processor or CPU and includes, particularly in the push button service mode, structure that corresponds to means to receive caller data signals or signals representative of data relating to said individual callers that are developed by said remote

terminals as recited in claim 116. The corresponding structure of Barger includes those structures and processes necessary to transmit signals that are developed by at push button telephones, as a result of callers keying data into their telephone keypads, to the data processor or CPU, including the plurality of data coupling sets (32) and the pushbutton interface (46) that couple push button telephones (25) to the bus (22) and the CPU (21), as shown in Fig. 2.

c. "including means to receive … said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats"

The next clause of Claim 116 recites "including means to receive … said called number identification signals (DNIS) and said calling number identification data provided automatically by said communication facility, said called number identification data signals (DNIS) identifying a select format from a plurality of formats." Such identification signals or identification data are provided through the capabilities and services of a public telephone company or system that are collectively well known in the art as "dialed number identification service," or "DNIS," and "automatic number identification" or ANI, whereby the telephone company or system provides to the customer or subscriber equipment data or signals that identify the telephone number being called as well as the calling telephone number. This limitation of Claim 116 is a "means plus function" clause under § 112, paragraph 6. The structure disclosed in the '863 patent that receives calling number identification data (ANI) and called number identification signals (DNIS), and that identifies one of a plurality of called numbers is the automatic call distributor AC1, interface 20, and switch 21. (See '863 patent, col. 4, lines 56-63; col. 6, lines 36-44).

To the extent that Barger does not explicitly describe such ANI and DNIS signals in use with its system, Barger clearly discloses differentiating called numbers based on the telephone number dialed. For example, Barger teaches call routing to different call modes or applications. Barger explicitly teaches that certain telephone numbers are routed to different call modes. (Barger, col. 3, lines 3-7). The structure disclosed in Barger for performing this function includes telephone couplers 13, and one or more data coupling sets 32. Although Barger discloses only one technical way in which to accomplish this (i.e. dedicated telephone ports), alternative routing techniques, such as those that involve signals that represent the called number (DNIS), multiplexed operations involving PBXs, and other basic routing concepts are inherently disclosed in Barger.

To the extent that Barger does not inherently disclose differentiating called numbers based on DNIS signals, Barger in view of the non-patent references NDC, VCT '86 and VCT '87, teach or suggest means for receiving DNIS data or signals, rendering Claim 116 obvious. NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message …. Then as the agent greets the caller, the entire format for handling that client's business comes upon on the CRT screen, while the DNI greeting is erased at the bottom.")). VCT '87 also discloses the use of DNIS signals to differentiate called numbers to route calls to particular automated and operator attendant functions. (VCT '87, p. 6 ("The DNIS codes associated with each 800 number are identified by the voice system and directed to the appropriate department before the call is even answered.")). VCT '86 as well discloses the use of DNIS signals to differentiate called numbers to route calls to particular automated and operator attendant functions. (VCT '86, p. 1 ("The voice response unit receives

the call and directs it according to the 800 number. These numbers designate how the voice response unit should handle the call.”)). Moreover, just as the Examiner found in the concurrently pending reexamination, VCT ’86 discloses the use of DNIS to identify one of a plurality of different called numbers. (See ‘095 reexamination, Nov. 23, 2009 Examiner’s Answer at p. 14). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 (“The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent’s CRT screen. Perhaps oversimplistically, the called number now becomes the product name. … Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen.”)).

Further, although Barger does not explicitly disclose [3] means to receive calling number identification data (ANI), Barger does disclose that new customers are required to provide name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT ’87 discloses the use of ANI, specifically the recited “calling number identification data provided automatically by said communication facility.” VCT ’87 discloses that ANI is used to look up customer information automatically. Specifically, VCT ’87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from which the call is being placed. With this type of identification, the voice response system can match the number with a customer’s account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response

> system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6).

A person of skill in the art would have been motivated to combine VCT '87, VCT '86 and NDC with Barger. A number of practical and economic benefits would have motivated one to implement the differentiating of called numbers, including DNIS based routing of calls to particular call modes. VCT '86 and VCT '87 disclose DNIS automation techniques for voice response units, whereas NDC discloses DNIS automation techniques for operator features. Both enhanced automation techniques improve upon the voice response and operator modes of Barger. NDC specifically identifies the time savings, error reduction, and efficiency aspects of using the dialed number to achieve automation benefits for agent-handled calls, such as those in the Barger system:

> This software system helps eliminate errors because the first time the agent has to type any information on the keyboard is to input the caller's name and address.
>
> Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the CRT screen. Those four seconds saved on the labor side of the system added up to dollars saved for NDC. Again, Dean Smith's figures estimated they add up to $75,450 a year in savings.
>
> Andy Zazzera said, "Without Galaxy 3 tied to our host computer in Atlanta, all these agents would have required dedicated lines connected only to specific customer calls coming in. Each agent would have just one script and answer only one type of call, Or at best, each agent would hear a "whisper" and hear the company name and then have to translate the name of that company onto the CRT screen through the keyboard, and this is the point where errors can creep in."

(NDC at 72); (see also '095 Reexamination, Examiner's Answer at p. 15 ("It would have been obvious for one of ordinary skill in the art, at the time of the invention to use DNIS to identify respective formats or modes in Barger's system . . .")). Such additional considerations include,

for example, expansion of the automated system for increased call volume, time zone discrepancies, or the desire to run varied formats. Such considerations were practical pressures on the automated call systems in general and that would have necessitated call routing changes. As discussed in the concurrent reexamination, Barger discloses and uses call routing based on the number dialed by the caller. Although Barger used or discloses one way in which to accomplish such routing, i.e. dedicated telephone lines, it would have been obvious to utilize other routing techniques such as DNIS signals as such technology was in widespread use. Further, based upon the same considerations for employing DNIS in the Barger system (time savings, efficiency, less operator involvement), the Barger system further benefits from the use of ANI as disclosed by VCT '87. VCT '87 teaches the use of automatically identifying a Barger customer account by matching a customer record using ANI for telephone number matching.

For these reasons, the Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '86/VCT '87 (for voice response applications) for selection of particular formats (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC, VCT '86 and VCT '87, while automatically matching ANI to an existing customer account as disclosed by VCT '87, in order to handle more calls in less time, and to reduce the number of operators required.

4. Claim 116 – "voice generator structure coupled through said interface structure for actuating said remote terminals as to provide vocal operating instructions in accordance with said select format to said individual callers and to prompt said individual callers to enter data"

The next clause of Claim 116 recites "voice generator structure coupled through said interface structure for actuating said remote terminals as to provide vocal operating instructions

in accordance with said select format to said individual callers and to prompt said individual callers to enter data."

Barger discloses the recited voice generator structure in that telephone couplers 13 and switching system 16 of Figure 1 or the switching matrix 35, 36, telephone data couplers 26, and data coupling sets 32, 33, SMC 31 are connected to automatic answer 27, pushbutton interface 45, and touch-tone signal interface 39 of Figure 2 for prompting and receiving caller entered data. (Barger, Figs. 1, 2; 6:35-43; 3:61-65; 9:20-33; 4:10-15; 9:53-62). Barger discloses that the data processor responds to push-button codes entered by a caller. (Barger, Figs 1, 2; 2:65-3:3; 3:15-22; 4:17-20; 9:45-62). Although Barger does not explicitly disclose "said select format" identified using DNIS, NDC discloses the use of DNIS to identify "said select format." NDC discloses the use of DNIS signals to automate operator attendant functions. (NDC at 71 ("The term for this is DNI, or Dialed Number Identification. The agent has about two seconds to see and respond to this printed message …. Then as the agent greets the caller, **the entire format for handling that client's business** comes up on the CRT screen, while the DNI greeting is erased at the bottom.") (emphasis added)). NDC also discloses that such signals could be used to direct callers to different automated formats of the system. (See e.g., NDC at 71-72 ("The period of time, several seconds in all, between the time of the spoken greeting and the format appearing on the screen is occupied by the information being identified in the 990 interface which sends that information to the host computer. The host computer selects the appropriate data and sends it back to the agent's CRT screen. Perhaps over simplistically, the called number now becomes the product name. … Prior to DNI, the agent heard the whisper, and then took an average of four seconds to key in the name of the client, which then brought the formatted message up on the

CRT screen.")). NDC teaches the benefit of using DNIS selection of formats (i.e. customer screen applications referred to as "formats").

VCT '86 also discloses the use of DNIS to identify "said select format." Specifically, VCT discloses a voice response unit that includes capabilities to receive calls via multiple 800 telephone numbers and to recognize and direct calls for different service formats according to the "DNIS identifiers" that are provided by the public telephone system. The voice response unit directs calls from a specific 800 number to live operators, and handles calls from a different 800 number itself through voice prompts to callers. (VCT '86 at 1, col. 2, second full para; at 5, col. 1, first full para; at 5, Fig. 5).

As above, the Barger system would benefit economically by being modified to include the dialed number technology of NDC (for operator screen format selection) and VCT '86 (for voice response applications) to prompt callers and receive caller data (the modes of operation in Barger (2:16-3:22) or the different Barger applications (6:55-62)) as taught by NDC and VCT '86, in order to handle more calls in less time, and to reduce the number of operators required.

5. Claim 116 – "record testing structure connected to receive and test said caller data signals including said calling number identification data and said caller personal identification data against previously stored calling number identification data and caller personal identification data"

The next clause of Claim 116 recites "record testing structure connected to receive and test said caller data signals including said calling number identification data and said caller personal identification data against previously stored calling number identification data and caller personal identification data." In the concurrently pending reexamination, this record structure and memory were construed to mean the computer hardware and software that receives

data signals, update files, and store information. ('095 Reexamination, 11/23/09 Examiner's Answer at p. 15-16).

With reference to Fig. 2, Barger specifically discloses that the system maintains a complete record of all transactions, historical records of particular customers, and accurate and informative customer profiles. Customer information and records are stored in a master file and retrieved by the data processor (10) or CPU (21) as required. (Barger, col. 2, lines 5-12, col. 5, lines 29-37 and lines 46-53; col. 5, lines 46-53; and col. 6, lines 21-26). In addition, the CPU (21) is in communication via the bus (22) with RAM (23) and a magnetic disk pack (MDP) (41) and a magnetic tape unit (MTU) (43), that provide storage capabilities to the embodiment of the Barger system shown in Fig. 2. (Barger, col. 7, lines 33-37; and col. 8, lines 48-60). Moreover, as found by the Examiner in the concurrently pending reexamination, Barger discloses a CPU (21), or control means, connected to RAM (23), or memory, via the bus (22). These structures allow the Barger system to store caller data from caller telephones through the data coupling sets 32 and the push button interface 46. Thus, Barger discloses *record testing structure ... to receive said caller data signals.*

Claim 116 also requires that the system test *caller data signals*. As shown in FIG. 1, the data processor (10) and order processing system 20 are configured to gain access to and store information from a file. Barger discloses a record structure having a memory (RAM 23, magnetic disc pack (MDP) 41, and magnetic tape unit (MTU) 43, FIG. 2) and control means (CPU 21), wherein said structures can access account or credit card information. (Barger, col. 8, lines 48-65). Barger further discloses caller's entering account or credit card information and verifying the accuracy of this information against files stored by the Barger system. (Barger, col. 9, lines 36-45). Additionally, Barger discloses updating or recording caller entered data. (Barger

col. 5, lines 45-53; Barger, col. 5, line 65-col. 6, line 2; col. 6, lines 21-26). Barger discloses that caller information may be accessed or stored in either the operator attended format or the automated format. (Barger, col. 6, lines 38-43).

This limitation further recites that *said caller data signals* include (1) caller personal identification data and (2) calling number identification. In either the operator attended mode or the push button caller mode, Barger discloses qualification of a caller using credit card and account information. (Barger, col. 2, lines 53-57 ("Before the first order is accepted, the operator may request credit verification through the data processor or other means using the customer's credit card or account number.")). In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor (10) transfers information, including name, address, credit card number and account number, to the order processing system (20). (Barger, col. 5, lines 46-57).

The push button mode accomplishes the same functions performed by customer service operators, by replacing operator functions with programmed subroutines in the data processor and messages prerecorded on the audio program repeater. The audio program repeater would thus necessarily request a push button caller to enter certain data that otherwise would be requested by a customer service operator. Such data would necessarily include "required information from the customer, such as name and account number, demonstrations desired, and orders for merchandise or services demonstrated," as well as "the customer's credit card or account number" for credit verification. (Barger, col. 2, lines 34-38 and lines 53-56; and col. 6,

lines 38-41). A push button caller's account number includes a code reserved for push button telephone customers (Barger, col. 9, lines 40-42). Therefore, a push button caller would identify herself to the Barger system by entering her account number that includes the code for push button callers, or caller customer number data, to signal the data processor or the CPU that a push button caller was on the line. (Barger, col. 9, lines 40-42).

Although the Examiner in the '095 reexamination applied Yoshizawa to satisfy claim 27 of the '863 patent's limitation requiring "personal identification data" (See '095 reexamination, 3/20/09 Office Action at p. 19), Barger alone discloses qualification using "personal identification data." Regardless, Student Registration also discloses qualification using "personal identification data."

As discussed above, Barger discloses an operator obtaining a caller's name (in addition to other information) when processing a call. (Barger, col. 4, lines 61-67). Setting aside the claim construction dispute from the '707 reexamination that relates to the term "personal identification data," there is no doubt that a person's name is personal identification data. Thus, Barger clearly discloses obtaining a caller's name during credit verification in the operator attended mode. In such a situation, if the caller could not provide their name it would defy common sense to think that Barger's system would allow the caller to access the format. In this manner, the data processor or the CPU in conjunction with the credit verification function (CVF) serve as the recited *receive and test said caller data signals including ... said caller personal identification data against previously stored ... caller personal identification data.*

Although Barger describes qualification of callers using a caller's name in connection with the operator attended mode, Barger also explicitly states that such qualification may be automated: "Although the telephone record marketing system described with reference to Fig. 1

has relied upon a human customer service operator for customer communications, the functions of the customer service operator may be replaced by programmed subroutines in the data processor and messages prerecorded on channels of the audio program repeater." (Barger, col. 6, lines 35-41). In fact, Barger discloses a credit verification routine that starts with automated prompts, and if it can not be completed, transfers to an operator for completion. (Barger, col. 8, line 48-col. 9, line 4).

Like Barger, Student Registration also discloses qualification of callers via automated prompts and caller touch tone response. Student Registration discloses that callers provide a "student identification number" and a "personal access code." (Student Registration at C-1). Specifically, Student Registration discloses that the "Student Identification Number … is your social security number unless you have been assigned a special number." (Student Registration at C-1). The disclosed "Personal Access Code" is disclosed as "your birth month, stated in 2 digits, and your birth day, also stated in 2 digits." (Student Registration at C-1).

As above, in every practical sense and application of the disclosures in Barger, a person would necessarily be qualified using multiple forms of identification data in at least one of the examples discussed in Barger. Because identification of the caller was important in the Barger system, a person of skill in the art would have recognized that incorporating the social security number and personal access code (both personal identification data) of Student Registration with the account number (customer number) of Barger would provide the advantage of preventing unauthorized access to a customer's account. Thus, Barger in combination with Student Registration discloses the testing of *personal identification data*, to enable the data processor of the CPU to obtain online credit verification of the push button caller for credit purchases.

Further, although Barger does not explicitly disclose the recited calling number identification data (ANI), Barger does disclose that new customers provide various identification data including name, address and account or credit card number to establish an account. (Barger, 4:61-67). VCT '87 discloses the use and testing of ANI, specifically the recited "calling number identification." VCT '87 discloses that ANI is received and tested in the process of using ANI to look up customer information automatically. Specifically, VCT '87 discloses:

> A second solution to the problem of integration is Automatic Number Identification (ANI). ANI allows the voice system to identify the number from which the call is being placed. With this type of identification, the voice response system can match the number with a customer's account and notify the host of a pending inquiry for that customer while at the same time answer the call. The call can then be handled automatically by the voice system or transferred to a service representative along with a data screen for that customer. The voice response system can also perform some initial data collection to update the customer account before transferring the call and screen to the service representative.

(VCT '87 at 6). Because VCT '87 discloses the requirement that the voice system "match" the received ANI with a customer's account, the received ANI data is matched against previously stored calling number identification data (telephone number). With respect to Barger's new customer intake procedure, as modified by the teachings of VCT '87, a telephone number of a customer is information contained within each customer's account record and may be tested. A person of skill in the art would be aware that multiple individuals in a household may call from using the same telephone line, and for increased security, the caller's birth date may distinguish one caller from another, if desired.

The Barger system would therefore benefit economically by being modified to include the ANI match for an existing customer account as disclosed by VCT '87, with further security provided by the personal access code (birth date) of Student Registration, in order to handle more calls in less time, and to reduce the number of operators required.

6. Claim 116 – "analysis structure for receiving and processing said caller data signals under control of said record testing structure"

Barger also discloses *analysis structure for receiving and processing said caller data signals under control of said record testing structure*, as recited in Claim 116 of the '863 patent. Claim 116 of the '863 patent recites "receiving and processing said caller data signals." In the context of credit verification of push button callers, Barger discloses that the CPU accesses a credit verification function (CVF) (45) using caller provided account number or credit card number, and carries out credit verification online. (Barger, col. 8, line 60 – col. 9, line 4; and col. 6, lines 35-43). Barger discloses that the data processor 10 (record testing structure) transfers information, including name, address, credit card number and account number, to the order processing system 20 (analysis structure). (Barger, col. 5, lines 46-57).

Barger discloses the recited analysis structure as an order processing system 20. Barger discloses that following completion of an order via telephone,

> the customer's block of data is returned to a master file, but if an order has been entered, the data processor first transfer the order to an order processing system 20 with the name, address, and any other information required to fill the order, such as the account or credit card number.

(Barger at 5:46-57). The order processing system receives and processes order information received from the caller via batch processing for fulfillment of the orders. Specifically, Barger discloses:

> The order processing system may be comprised of a magnetic disk pack and/or magnetic tape unit to accumulate all of the orders for a given period, which may be an entire business day. Once the order period has been closed, the orders are processed off-line in order to batch orders to the same customer and to prepare shipping labels, packing slips and account (or credit card) charge slips. Orders to be prepaid or shipped C.O.D. are set aside for further manual processing in respect to preparing and mailing a statement to be prepaid or for preparing C.O.D. documents.

(Barger at 6:10-20).

As above, the record testing structure is taught by Barger's CPU, which determines whether an order is complete for order processing and fulfillment to be handled by order processing system 20 (analysis structure). (Barger at 6:3-9, see also cols. 14-16 (claim 17) ("said data processor responds to a code entered from a push-button keyboard on the customer's telephone for an order of merchandise or services corresponding to the requested demonstration just completed by transmitting an order to an order processing system.").

Accordingly, the combination of Barger, NDC, Student Registration, VCT '86, VCT '87 and Taylor renders claim 116 obvious.

VII. CONCLUSION

The prior art documents presented above were either not previously considered by the Office or are being presented in a new light pursuant to MPEP § 2242(II). Claims 31, 32, 39, 42, 43, 49 and 116 of the '863 patent is not patentable over the prior art documents cited herein. The prior art documents disclose the claim limitations of the '863 patent in a manner such that substantial new questions of patentability are raised for claims 31, 32, 39, 42, 43, 49 and 116 by this Request.

Accordingly, the Office is requested to grant this Request and to initiate reexamination with special dispatch due to the co-pending litigation.

As an aid to the application of the presented prior art to claims of the '863 patent, corresponding claim charts are provided at Exhibit CC-A through CC-H attached hereto.

Enclosed is a credit card authorization to cover the Fee for reexamination. If this authorization is missing or defective please charge the Fee, any additional fees or refund any excess to the Novak Druce Deposit Account No. 14-1437.

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Respectfully submitted,

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