United States District Court,
N.D. Illinois, Eastern Division.

ROCKWELL ELECTRONIC COMMERCE CORPORATION and Rockwell International Corporation,
Plaintiffs.
v.
APROPOS TECHNOLOGY, INC,
Defendant.

Jan. 9, 2002.

FINDINGS OF FACT AND CONCLUSIONS OF LAW AFTER TRIAL

LEFKOW**, J.**

Rockwell Electronic Commerce Corporation and Rockwell International Corporation (collectively, "Rockwell") have accused Apropos Technology, Inc. ("Apropos"), of infringement of U.S. Patent Nos. 5,511,117; 5,832,059; 5,832,070; and 5,991,394. FN1 Rockwell claims to be the assignee of all right, title and interest in all of these patents. The court's jurisdiction rests in 28 U.S.C. s.s. 1331 and 1338(a). Venue is undisputed. Following the guidance of Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996), *aff'g,* 52 F.3d 967 (Fed.Cir.1995) (*en banc*), the court has heard evidence regarding the scope of the claims of the various patents. The patents in suit all relate to enhancements of "automatic call distributors" ("ACDs"), which are sophisticated telephone call management systems used by businesses that handle large volumes of telephone calls, such as credit card companies, banks, and travel reservation systems.

FN1. As is customary, the patents will be referred to herein by their last three numbers.

The following principles of claim construction apply: The court must, in the first instance, rely on the intrinsic evidence-namely, the patents themselves, their prosecution history and the prior art-and may resort to extrinsic evidence (e.g., expert testimony) only if the intrinsic evidence is ambiguous or irreconcilable. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed.Cir.1996) (Where "an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term ... it is improper to rely on extrinsic evidence."). Terms in the claims should be given their ordinary meaning, as understood by those skilled in the art, unless the specification or the prosecution history clearly provides a special definition for the term. Markman, 52 F.3d at 980; *see* Kegel Co. v. AMF Bowling, Inc., 127 F.3d 1420, 1427 (Fed.Cir.1997) ("Without an express intent to impart a novel meaning to a claim term, the term takes on its ordinary meaning."); *see also* Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999) ("The general rule is, of course, that terms in the claim are to be given their ordinary and accustomed meaning."). Nevertheless, where special meanings are ascribed to a term in the patent specification or prosecution history, such special meanings must be used to construe the claims, and the terms must be construed in accordance with their usage in the specification. Laitram Corp. v. Morehouse

Industs., Inc., 143 F.3d 1456, 1463 (Fed.Cir.1998). Further, the prosecution history of the claims must be thoroughly considered when construing the claims of a patent in order to make sure that the plaintiff is not attempting to cover subject matter that was surrendered or distinguished during prosecution, Elekta Instrument, S.A. v. O.U.R. Scientific Int'l, Inc., 214 F.3d 1302, 1308 (Fed.Cir.2000), and because the prosecution history makes clear the patent examiner's understanding of what the inventor deemed to be patentable. Multiform Disiccants, Inc. v. Medzam Ltd., 133 F.3d 1473, 1478 (Fed.Cir.1998). Finally, the court may consider the testimony of expert witnesses, to educate itself about the invention, although it may decline to rely on the expert testimony in construing the claims. Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1373 (Fed.Cir.1998). Expert testimony "may not correct errors or erase limitations or otherwise diverge from the description of the invention" of the patent. Aqua-Aerobic Sys., Inc. v. Aerators, Inc., 211 F.3d 1241, 1245 (Fed.Cir.2000).

Based on the exhibits and testimony received, the court having considered the weight of the evidence and credibility of the witnesses, construes the following terms as they are used within the claims, as follows:

I. *Term Relating to All Patents:* "automatic call distributor"

Rockwell proposes that the term "automatic call distributor" or "ACD" means "a system that receives incoming calls, then routes the calls (e.g., by queuing incoming calls to put them 'in line' until they are able to be answered), so as to distribute each call to a selected one of a set of agents at the call center." This definition comprehends a system that is software-based rather than requiring a hardware apparatus called a central processing unit or "CPU." Apropos proposes that ACD means "a device that receives incoming telephone calls and automatically distributes those calls, which is comprised of an integrated FN2 telephone switch and computer apparatus, in communication with one another through a specialized proprietary software interface." Rockwell, noting that ACD is not specifically defined in the patent specifications, relies on a broad, functional definition such as is found in dictionaries.FN3 It relies on testimony of its expert, John E. MacCrisken, as well as the testimony of Leonard J. Forys, Ph.D., that the ordinary English meaning of ACD is "an apparatus that connects calls to agents in some automatic fashion," (Tr. of Markman Hr'g, Feb. 12-14, 2001 ("Markman Tr.") at 83, l. 17), and points to the testimony of Patrick Kevin Brady, Apropos' founder and former chief technology officer, that ACD means "a device, not an operator, that automatically distributes calls" and other extrinsic evidence from which such a functional definition might be drawn.FN4 Apropos, on the other hand, contends that ACD, at the time of the filing of the '059 patent application (1996),FN5 was understood in the industry as consisting of an integrated telephone switch and a computer that, together, performed the function of call distribution. It points to the specification of the '059 patent which states that an ACD "... generally includes a multiport switch controlled by a central processing unit (CPU) to interconnect the customers and the agents ...," col. 1, l. 22-23. Apropos also cites the '117 patent, which refers to ACD as a "switch," col. 2, l. 23-24, fig. 1, and the reference in the '070 patent which describes existing (unsatisfactory) telephone systems as "hard-wired by the manufacturer," col. 1, l. 4-16, and col. 2, l. 26-27: "The telephone switching system 12 has a network 14 which is connected to a switching system such as an Automatic Call Distributor (ACD) ....") as evidence that Rockwell understood at the time it filed these applications that an ACD was an integrated telephone switch and computer using proprietary software.FN6

FN2. Apropos' expert, Leonard J. Forys, Ph.D., explained that "integrated" in this context means "that the switch and the software associated with the switch were integrated together." (Tr. of Markman Hr'g, Feb. 12-14, 2001 ("Markman Tr.") at 182).

FN3. *See* Interactive Gift Express, Inc. v. Compuserve, Inc., 231 F.3d 859, 866 (Fed.Cir.2000) ("Dictionaries, which are a form of extrinsic evidence, hold a special place and may sometimes be considered along with intrinsic evidence."), *withdrawn,* 256 F.3d 1323, 1327 (Fed.Cir.2001); IIEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONIC TERMS 6 th ed. 58 (defines an ACD as "[t]he facility for allotting incoming traffic to idle operators or attendants."); IBM DICTIONARY OF COMPUTING 43 (defines an ACD "[i]n telephony, [as] a service that allows incoming telephone calls directed to the same dialed number to be routed to one of multiple agents, all of whom can provide the same service to the calling party and all of whom are assigned to the same ACD group."); NEWTON'S TELECOM DICTIONARY 87 (defines an ACD as "[a] specialized phone system originally designed simply to route an office's incoming calls to all available personnel so that calls are evenly distributed....").

FN4. (Brady Dep. at 94) (Brady agreed to a functional definition of "Automatic Call Distributor"). Rockwell also cites the following Brady Dep. at 105-06 (Brady agreed with Rockwell that an "ACD" need not be "in one box"; "it doesn't matter how many cabinets that device is in...."); Brady Dep. at 266-67 (Brady agreed with Rockwell that an "ACD" need not have a switch that is "integrated" with a computer apparatus: "they [ACDs] were not integrated."); Brady Dep. at 261 (Mr. Brady testified that the term "automatic call distributor" did not necessarily require that the device contain "specialized proprietary software interface" and Brady agreed with Rockwell and Apropos that the '059 patent at Col. 1, l. 20-24 gives a brief but accurate description to a person of ordinary skill in the art of the term "automatic call distributor."); Brady Dep. at 101-02 (Brady agreed that the individual words in the phrase "automatic call distributor" describe the function being performed by the device.); Brady Dep. at 236-38 (Brady agreed that ACDs did in fact contain "general purpose computers" such as the Intel 80386, and that the Opinion Letters stating the opposite should be rephrased in that regard.).

FN5. "In the past, telephone call centers have been provided with two major systems, an [ACD] and a business data system comprising a host computer. (Markman Tr. at 180-82) (Forys) (In the time frame that the applications for the patents-in-suit were filed, Forys had seen or inspected 12-15 models of ACDs manufactured by separate companies and all were integrated systems. In that time frame, an automatic call distributor was "an integrated system which distributed calls.... Proprietary protocols were used for the communication"), and at 455 (Forys) (an ACD "was integrated with this hard wired switch with it, switch fabric together with the computer. Very rigid kind of thing. That's what existed back then.").

FN6. Apropros cites other evidence as well: '394 Patent, col. 3, l. 37-44 and Fig. 1 ("The ACD 116, or alternatively a private branch exchange (PBX), operates in a well-known manner to connect an agent telephone ... to external telephonic units...."); Competitive Flash, Ex. 116 to the MacCrisken Dep., R006356-6359, attached as Ex. A to the Decl. of Chris Rechtsteiner ("While not a true ACD, Apropos [Call Link] is positioned as a robust, call handling system"); Decl. of Chris Rechtsteiner, para.para. 2, 5, 11 and 12 (stating that he prepared Ex. A when he was a Rockwell employee, and that the statement that Apropos' product was not a "true ACD" reflected the perception both at Rockwell and throughout the industry that products such as Apropos' Call Link were not ACDs, because they were not hardware-based products; the prevailing mindset at Rockwell and in the industry was that software-based solutions such as Apropos' Call Link were not automatic call distributors); MacCrisken May Dep. at 657-62 (MacCrisken admitting that the phrase "while not a true ACD" in reference to Apropos' product is a statement that Apropos' product is not an

ACD); MacCrisken May Dep. at 661, l. 21-662, l. 7 (Richard McLaren, Rockwell's counsel, contending that the "not a true ACD" language must have been written by an Apropos employee, thus implying that if it were written by a Rockwell employee, it was an admission by Rockwell that Apropos' product was not an ACD); Brady Dep. at 105, l. 13-23 ("I think we're leaving out that the industry has seen many call distributors, and ... they come in certain configurations and ... the term 'automatic call distributor' ... implies this mating of a computer or embedded CPU with the switching hardware. And you run wires to it, for instance, and ... it has its own phones, et cetera."); id. at 109, l. 14-110, l. 10 ("by implication your question lumped the Apropos product in with the other devices, which have a CPU and a switch which is controlled directly by the CPU, not just interfaced to it, and has phones wired up to it, and I can't agree with that"); id. at 111, l. 9-20 (ACDs control the switching matrix itself); id. at 265, l. 10-17 ("It's not really that important whether its control computer is on a shelf in a rack or if it's sitting next to it. If it's sending the same kind of information and doing the same types of control of the hardware that comprise that switching device, then ... it's an integrated, all-in-one, stand-alone unit.").

The court finds Apropos more persuasive than Rockwell. The inventor, as well as those ordinarily skilled in the art, necessarily understood the term ACD as a device that existed at the time these patents were being pursued, unless evidence of foresight exists. *See* Elekta Instrument S.A., 214 F.3d at 1308 (The prosecution history of the claims must be thoroughly considered when construing the claims of a patent because the prosecution history makes clear the patent examiner's understanding of what he or she deemed to be patentable.). Although there may have been other types of ACDs in existence in 1996, there is no evidence of any ACD that did not consist of an integrated telephone switch and computer using proprietary software (whether or not in a single "box"). Nor is there evidence that the inventor would have foreseen ACDs that were not comprised of these elements. Therefore, the court adopts Apropos' definition of automatic call distributor for the purposes of this case.

II. ***Terms Relating to*** the '117 Patent

The '117 patent titled "Integrated Voice and Business Transaction Reporting for Telephone Call Centers" is a device that integrates data from an ACD (e.g., caller's telephone number, number dialed, duration of call) with business data from a host computer (e .g., number of transactions, number of sales per representative) and generates in "real time" a written report containing the combined information, enabling the manager of the call center to make decisions based on more complete information than was previously possible.

2.1 Real Time

The dispute about "real time" arises from claim 1, which comprises "a means for correlating the voice information and business transaction data in real time and for generating a written report containing the combined information and data in real time," along with an ACD and a host computer for supplying information about the call ("voice information") to agents, and generating business transaction data. Rockwell proposes that real time means " 'fast enough for the purpose intended' which in the context of the '117 patent is a minute-to-minute time frame in which reports are printed within minutes of being requested and can include reports of data summarized in 15 to 30 minute time periods." According to Rockwell, real time does not require that correlation or printing occur "instantly." Apropos proposes that real time means "immediately, as it happens; in the context of a system that processes data, it means processing the data as it is received (as against storing the data as it is received and processing the data later on)."

The idea of the '117 patent is to take caller information that is generated by the ACD (data which indicates

to an administrator how well calls are being answered, and generally how well the phone staff are performing) and correlate it with business information (reports of customer sales, reservations, complaints) to enable the call center manager to be more accurate in business decisions. (*See* col. 1, l. 5-45). In the background section of the patent, the inventor reports that typically the ACD-generated information is available in real time and summarized in 15 to 30 minute time periods, but the business information is usually "batched and available on a daily basis." The improvement he proposes is to correlate the two streams of information in one report and to do it in a "rapid manner." Rockwell relies on various references in the specification, which uses phrases such as "15-30 minute time periods" for ACD summaries, managing call centers on a "minute-to-minute" (as opposed to daily) basis with only partial information available in real time, and that a report may be prepared "when needed," FN7 as evidence that real time is a flexible term that means merely "fast enough to meet the need." Rockwell contends that real time simply means the appropriate time sequence for taking the appropriate action, *citing* IBM DICTIONARY OF COMPUTING, at 558-59, which defines real time as "... pertaining to the processing of data by a computer in connection with another process outside the computer according to time requirements imposed by the outside process" and "... pertaining to an application such as a process control system or a computer-assisted instruction system in which response to input is fast enough to affect subsequent input." It relies further on MacCrisken, who opined that real time could have more than one meaning and in this instance could be as long as 15 to 30 minutes, and the inventor Andre Zazzera's testimony stating that real time might be different in different contexts.FN8 In opposition, Apropos cites a long list of places within the patent and prosecution history where real time is used in the context of immediate, as soon as technically possible,FN9 as well as MacCrisken's concession that GeoTel's GLOSSARY OF COMPUTER TELEPHONY TERMS defines data that is stored in 5 and 30 minute intervals as "historical data," whereas data that is collected as the events happen is called "real time data" and various witnesses who testified that real time is essentially immediate. FN10

FN7. Rockwell cites *Interactive Gift Express, Inc. v. Compuserve Inc.,* which states "Then [after looking to the claim language] we look to the rest of the intrinsic evidence, beginning with the specification and concluding with the prosecution history, if in evidence." 231 F.3d at 865, *withdrawn,* 256 F.3d at 1327; *see also* col. 1, l. 27-28, and col. 3, l. 3-6 (ACD information is summarized in "15 to 30 minute time periods"); col. 1, l. 44-45 ("call centers are managed minute-to-minute"); col. 4, l. 36 ("This correlation of data may be formed in a simplified manner and may be prepared for the person when needed.").

FN8. Brady also testified that "real-time" is "always" "context-dependent." (Markman Tr. at 91-92). In the context of a physicist at Fermi labs, "real time" might mean nanoseconds (Brady Dep., p. 123), to a filmmaker, "real-time" means faster than a thirtieth of a second (1/30 sec.) because slower than that is visible as a flicker to the human eye (Brady Dep. at 123), and to a computer telephony engineer it might mean 10 to 15 seconds (*Id.* at 156).

FN9. Apropos cites to '117 Patent, col. 1, l. 35-47 (in an air traffic control system, distance and altitude data are available in real time), col. 1, l. 45-46 (call centers are managed on a minute-to-minute basis), col. 3, l. 3-4 ("The ACD generated information is typically available in real-time and summarized in 15 to 30 minute time periods."); and col. 3, l. 8-10 ("as quickly as technically possible"); Pros. Hist. of '117 patent, at R000048 ("information and data is *[sic]* printed in real time such that the user has *immediate* access ...") (emphasis added).

FN10. Apropos cites Ex. 22, Zazzera Dep. at 31 and at 58-59 (inventor Andre Zazzera testifying that the ordinary meaning of "real time" is "now," "immediately," "what's happening right now"); Ex. 53, WEBSTER'S 973 ("real time: the actual time during which something takes place...."); Brady Dep. at 147, l. 16 to 149, l. 18 ("realtime" in the context of a call center "needs to happen in seconds"); id. at 169, l. 17 to 171, l. 20 (the industry would not accept a definition of "real time" as applied to a report that's printed every 15 minutes); id. at 177, l. 14 to 178, l. 4 (the two uses of "real time" in claim 1 have to have the same time horizon because "it seems to clearly say that these things are kind of happening one leading to ... the other"); Markman Tr. at 175 (Forys) (real time means "immediately, right now, without perceptible delay."); id. at 177 (Forys) (explaining that Rockwell uses the term real time in the context of displays (RTDs) to provide *immediate* feedback on call center operations in a form of status and performance data); id. at 127-28 (MacCrisken) (unable to identify even a single example of a telephone system where 15 to 30 minutes was viewed as real time); MacCrisken Dep. at 181 (describing review of historical data regarding routed calls as, "It's not real time. It's not now."); id. at 442 (agreeing that data sent "as it happens is being sent in real time") and id. at 446 (" 'real time' means as those systems have the data available.... In a typical system, the information for reporting to the database would be available within a second.").

Again, Apropos' evidence is more convincing than that offered by Rockwell. The definition contained in the IEEE STANDARD DICTIONARY OF ELECTRICAL TERMS 879 (6 th ed.) (Rockwell Pre-Hr'g Mem., Ex. 7), defines real time as "[p]ertaining to the actual time during which a physical process transpires...." Although the amount of time that constitutes real time may be different in other contexts, in every context the notion is that data is processed as soon as received rather than stored and processed later. The description (at col. 3, l. 20 ff.) of the "interaction between the ACD and the host computer 26 and display 28" as shown in Fig. 2 strongly indicates that the correlation of data is to occur on a immediate basis and that a delay of 15 minutes would not be real time in this context. The court accepts Apropos' definition of real time.

2.2 "means for correlating the voice information and business transaction data in real time"

The parties agree that the phrase "means for correlating the voice information and business transaction data in real time," is "means-plus-function" claim language and that the means for performing the stated function is described in the specification. *See* 35 U.S.C. s. 112 para. 6 ("An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure ... and such claim shall be construed to cover the corresponding structure ... described in the specification ... and equivalents thereof."); B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed.Cir.1997) (the specification or prosecution history must clearly link the corresponding structure to the function recited in the claim). Rockwell proposes that the "means" of claim 1 that performs the correlating function is a structure consisting of a host computer, a CTI ("computer-telephone-integration device"), or an ACD using one of the four disclosed methods for real time correlating the voice and business data which are 1) a time tag method; 2) a transaction serial number method; 3) an event-by-event method; 4) an individual transaction method, and equivalents thereof. Apropos identifies the structure corresponding to the correlating function as the hardware, software and data systems shown in Figs. 1 and 2 of the patent, and described at col. 3, l. 41-61 and col. 3, l. 65 to col. 4, l. 36, *i.e.,* the structure is the ACD computer, the CTI device and the host computer, with their software and data systems and interconnections. This requires that the voice-related information generated by the ACD pertaining to an incoming call (ASI, DNIS, the queue time of the call and the duration of handling of the call) and the business transaction data separately

generated by a host computer pertaining to the incoming call (such as sales, complaints and benefits) are correlated (only) by assigning times to the information and data. The corresponding structure further includes an Application Programming Interface ("API") that transports the voice information and business transaction data to a common, shared database in real time, *i.e.,* as the data and information are generated.

The function of claim 1, as described in the specification, is that of permitting data generated by any agent who receives a call, as well as the transaction data entered by the agent (such as a sale), to be sent to a common data base on an individual transaction basis so as to permit a supervisor or manager to obtain a single, integrated report "on an individual transaction basis." Col. 3, l. 32; col. 4, l. 40. The means for performing the function, described at the text cited by both parties, taken as a whole, describes a structure that consists of an ACD, a CTI and a host computer, among which the voice data and business transaction data are shared in real time (as the information is generated). This enables creation of a data base (using a Detail Reporting ("DR") server or application) that combines the two sets of data into one set of data "in real time, event by event." Col. 3, l. 61. From this combined data base, a report can be generated when needed. The specification recites two methods of correlating the two sets of data: (1) a time tag method by which data sent to the DR server are correlated in real time, event by event, col. 3, l. 15-19; and (2) a transaction serial number method by which data sent to the DR server are correlated "later," col. 3, l. 61-64.FN11 The court's interpretation of the text, however, as it pertains to (2), describes a means that is not consistent with claim 1, which includes a "means for correlating in real time." Rockwell does not explain this inconsistency other than arguing, as described above, that "real time" means only "fast enough for the purpose intended ." As the court has rejected that view, it concludes that the means for correlating described at col. 3, l. 61-64, is a means inconsistent with claim 1 and thus cannot be the structure claimed. Neither is it an equivalent. The court, therefore, accepts Apropos' definition of "means for correlating" language of claim 1.

FN11. Although Rockwell identifies two additional methods as (3) an event-by-event method; and (4) an individual transaction method, these are not distinct methods but rather results or goals of methods (1) and (2).

2.3 "means for ... generating a written report containing the combined information and data in real time"

Rockwell contends that "means for ... generating a written report containing the combined information and data in real time" in claim 1 is the structure disclosed in the patent for writing reports, which is a printer coupled to the means for correlating, and equivalents thereof. Rockwell cites Fig. 1, item 34 printer and col. 4, l. 20-27, 33 of the specification: "The data relating to voice and business transactions may be correlated or assimilated either in the host computer 26, the CTI 24, or the ACD, as desired. In suitable form, the CTI may be connected to ... a printer 34 in order to supply the combined voice and business data report to the manager...." FN12 Apropos contends that, because there is not an adequate description in the patent of a structure corresponding to the recited function of generating a written report in real time, this element of claim 1 is indefinite, citing B. Braun, 124 F.3d at 1425, for the proposition, "If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of 35 U.S.C. s. 112."; *see* Atmel Corp. v. Storage Info. Devices, Inc., 198 F.3d 1374, 1382 (Fed.Cir.1999) ("[F]or a claim to meet the particularity of para. 2 [of s. 112], the corresponding structure[s] of the means-plus-function limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation. Otherwise one does not know what the claim means."). Apropos argues that the

"laundry list of generic hardware and generic software" at col. 3 of the patent does not describe a specific structure capable of printing a written report in *real time* and does not even describe the written report itself. Apropos also cites to MacCrisken Dep. at 467 (acknowledging that there is no description in the patent of creating a combined report in real time) and Markman Tr. at 120-21 (MacCrisken)(same). Even if described particularly, Apropos urges the court to strictly construe the language in accordance with the most conventional of definitions of "real time." In that regard, Apropos argues that the structure corresponding to this function described in the specification includes (1) the host computer, with its associated hardware, software, data systems and links to the CTI and to the ACD (as shown in Fig. 1), that receives the correlated voice information and generates the business data; (2) a Detail Reporting Applications Programming Interface ("DRAPI") which receives the correlated data and information and formats it into message sets on an individual transaction basis; and (3) a printer or other device to receive the correlated data and immediately print it out in the form of a report, as it is received, in real time.FN13 To qualify as the corresponding structure, Apropos argues, the structure must generate a printed report in *real time,* event-by-event as the data is received.

FN12. Rockwell asserts that the specification further "discloses that the report is prepared for the manager 'when needed" ' referring to col. 4, l. 30-36. The subject of the sentence, however, is not "report" but "correlation of data[.]" "The correlation of data ... may be prepared for the person when needed."

FN13. *See* Fig. 1, and col. 2, l. 29-51, col. 3. l. 11-61 and col. 2, l. 65 to col. 4, l. 27; Pros. Hist. of '117 Patent at R000048 ("[T]he present invention correlates call information and business transaction data in real time, which information and data is printed in real time such that the user has *immediate* access to the information and data ...") (emphasis added).

As stated in 2.2 above, "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure ..., and such claim shall be construed to cover the corresponding structure ... described in the specification and equivalents thereof." 35 U.S.C. s. 112 para. 6. The court determines that the references to "printer" at col. 4, l. 23, 26, describe an element of the structure to accomplish the function of generating reports. Combined with the "means for correlating," set out above at 2.2, the printer generates a written report of the combined voice and business data. As described, the printer is "coupled" to the host computer, the CTI or the ACD (wherever the data are assimilated). By stating later that the report may be prepared for the manager "when needed," col. 4, l. 36, it is implicit that the specification describes a report that is available at any time, *i.e.,* real time. Therefore, the court concludes that the "means for generating a written report containing the combined information and data in real time" in claim 1 of the '117 patent is adequately disclosed as a printer coupled to the "means for correlating" which is capable of FN14 generating a report in real time, and equivalents thereof.

FN14. The court disagrees with Apropos that the report must be generated in real time. Rather, the data must be available in real time so the report can be generated whenever needed.

III. ***Construction of Terms in*** the '394 Patent

3.1 "automatically," "automatically establishing," "automatically dialing"

The '394 patent covers a "method and system for establishing voice communications between a computer

user and an agent of a business over a computer network, such as the Internet." In simple terms, an individual (computer user) who wishes to shop from XYZ Company over the Internet is shown a screen where the computer user provides a name, phone number and time; a computer at XYZ Company will call the computer user back at the stated time; and the call will be routed by the ACD to an agent of XYZ Company to respond to the computer user's inquiry or request. Claim 1 claims that the method comprises, *inter alia,* "automatically establishing voice communications between the agent and the computer user by the telephone switching system in response to the call request." Col.6, l. 47-49. In claim 5, similarly, the method includes "the step of automatically dialing the telephone number of the telephone associated with the computer user...." Col. 6, l. 66 to col. 7, l. 2. The parties dispute the meaning of "automatically," specifically "automatically establishing" and "automatically dialing." Rockwell contends that the term "automatically establishing" in the phrase "automatically establishing voice communications between the agent and the computer user" means the switching system automatically sets up the call including automatically dialing the telephone number of the computer user (customer) with very limited or no human intervention, for example, without requiring the agent to key in the telephone numbers (digits). Nevertheless, Rockwell contends that some human intervention is permitted by the term "automatically," such as pushing one button to activate or enable the automatic function.FN15 Apropos contends that "automatically" as used in the phrase "automatically establishing voice communications," requires that the step of establishing voice communications between a called party and a calling party is initiated and performed without human intervention, *i.e.,* without manual dialing, manual activation or other manual activity. For example, establishing voice communications by manually dialing or manually activating a connection using a button (such as on a phone, mouse, keyboard or other device) to initiate a call is not "automatically establishing voice communications." Additionally, Apropos argues, as used in the patent, "automatically dialing" requires that the step of dialing a telephone number be performed without human intervention, *i.e.,* without manual activity. For example, initiating a call by manually dialing the digits or manually activating a connection using a button (such as on a phone, mouse, keyboard or other device) to initiate a call is not "automatically dialing."

FN15. Rockwell refers to the prosecution history for its position that some human intervention is allowed. In one amendment to the '394 parent patent application, Rockwell's patent attorney stated as follows:
"As described in the Background of the Invention, the problem involved how to automatically establish voice communications between computer users and companies advertising on the Internet. The problem has many facets. The call back cannot be instantaneous since most computer users have only one telephone line. Any solution must permit the computer user to continue browsing, if so desired. *The solution must have very limited, or no, human intervention*." (Emphasis added).

(Rockwell Trial Ex. 6, '394 Prosecution History, A010057).
"Absent an express intent to impart a novel meaning, claim terms take on their ordinary meaning." Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc., 214 F.3d 1302, 1307 (Fed.Cir.2000). As Rockwell's expert, MacCrisken, testified, (Markman Tr. at 236-37), reading the definition of "automatic" from the IEEE STANDARD DICTIONARY, "Automatic ... [pertains] to a function, operation, process or device that ... functions without intervention by a human operator." Without detailing all the relevant portions cited, the court, after reviewing the text, discerns that the only human intervention permitted in the "automatically dialing" phrase is the entry by the computer user of the information that permits the call center's telephone switching system to return the call. (Rockwell cites col. 1, l. 8-19, col. 2, l. 17-30, 51-67, and col. 4, l. 51 to col. 5, l. 42, in support of its position). For example, at col. 1, l. 17, the Background of the Invention portion recites, "... [T]he computer user transmits a call request over the computer network to a telephone switching

system associated with the agent and, in response to the call request, *the telephone switching system calls the computer user* and connects the agent to the computer user when the computer user answers the call." (Emphasis added.) The specification recites, " *The telephone computer may detect* the time to call in the call request *and delay* transmitting the call request to the ACD until the time to call.... *The ACD would then attempt to dial the telephone number* substantially immediately upon receipt of the dial request command." Col. 4, l. 55-62 (Emphasis added). The unambiguous meaning of the text is that the computer detects the information in the call-back request and at the appointed time makes the call which can be routed to any available agent. The term "automatically establishing voice communication" also occurs without human intervention: "When the computer user answers the computer user telephone, *the telephone switching system connects* an agent telephone associated with the agent to the computer user telephone." Col. 2, l. 27-30 (emphasis added). The word "automatic" may, indeed, be nuanced in that typically some human action in a chain of events sets the automatic function in motion, but the circumstances described in the patent do not admit the notion that human intervention occurs either at the point of dialing or establishing the voice connection, such as an agent making a decision to push a button to activate a call back. The inventor, William Quayle, conceded as much. *See* (Ex. 23); (Quayle Dep. at 134-35); (Markman Tr. at 257-58) (testifying that "automatically establishing voice communications" does not include "where an agent must manually click on a mouse"). The prosecution history is equally clear.FN16 For these reasons, the court accepts Apropos' definition of "automatically dialing" and "automatically establishing."

FN16. As Apropos pointed out, *see* discussion note 12, *supra,* the prosecution history demonstrates that the applicant overcame the initial rejection by asserting that the computer must activate the callback. *See* A10052.

IV. ***Terms in*** the '059 Patent

The '059 patent covers a call path system and method for modeling and modifying a call path of a telephone call routed by a telephone switch. The method provides a graphic display on a video screen of the prospective path of a telephone call moving through a call center. Typically, software routes the call according to a prescribed procedure based on information received as to the type of call, for example, ANI, DNIS, or if no information is known, "default." The invention permits an administrator to monitor the path of a particular call and modify the prospective call path according to prescribed criteria. This gives the administrator more information and flexibility in distributing calls.

4.1 "monitoring"

The parties dispute, however, what it means to "monitor" a call path. Rockwell contends that the claim term "monitoring" means observing or viewing information and putting the information on a display, thus illustrating the information. By this interpretation, "monitor" is not limited to contemporaneous on-line monitoring of an existing call. According to Rockwell, monitoring a "prospective call path" addresses re-routing types of calls to be received in the future so that an off-line program for prospective calls is within the claims. Apropos contends that the term "monitoring," as used in the '059 patent, means observing events as they occur in order to ensure that they are proceeding as expected or desired. Therefore, Apropos posits, "monitoring" does not cover off-line programming tools.

Rockwell first relies on dictionaries to support its view: "monitor: to watch, keep track of, or check usually for a special purpose; display: to put or spread before the view." MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 752 and 335 (ed. not cited); "monitor: to observe, record, or detect (an operation or

condition) with instruments that have no effect upon the operation or condition"; "display: to show or exhibit; make visible." RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY 847 and 378 (ed. not cited). Rockwell also points to the preamble of claim 1, which, it contends, literally speaks to a system for monitoring "information regarding a prospective call ...," and argues that there is no requirement in the claims or the specification that the patent only apply to on-line monitoring, that a certain time when the information that is monitored must occur, or that the information that is monitored must be current calls in a queue. Rockwell also points to Fig. 3, which describes three call "types," DNIS, ANI, and Default, suggesting that a current call is excluded, and to the specification which describes "monitoring and modifying the call path ....," col. 3, l. 15, the administrator monitors the route of types of calls, col. 3, l. 60-63, and the administrator may select a type of call, modify the route that type of call will take, and display which agents will receive which types of calls, col. 4, l. 1-24. Suggesting that on-line monitoring would be impossible because current calls are switched in a fraction of a second, Rockwell argues that these references indicate that the invention addresses re-routing types of prospective incoming calls to be received in the future. According to Rockwell's expert, MacCrisken, "monitoring" is the same as "examining." *See* (Markman Tr. at 350, l. 17) ("In an off-line environment the system can be used to model some conceptual operation of the system, but it can actually be used in an offline fashion to observe the actual program that will be operated if the system were to be used in an online fashion. That is not merely modeling some possible system, but it is actually monitoring the real program that would be used in the system were it to be operated."); (MacCrisken Dep. at 178, l. 19-21) ("Monitoring as used in Claim 1 could be either monitoring it when it is in operation or just monitoring what is there in the program.").FN17

FN17. Rockwell also relies on the testimony of the inventor, Aldred (Aldred Dep. at 11, l. 15; 12, l. 1; 37, l. 12-24; 38, l. 1-4), in which he responded to a question whether monitoring of a call flow could occur if there was no actual call coming into the system. Aldred responded affirmatively, adding:
A monitoring doesn't require that activity be occurring.

Q: If there is no activity occurring ... what would be monitored?

A: The absence of activity [is] the narrowest sense of monitoring.

The court finds this unpersuasive because the context indicates watching something as it occurs or, in this instance, does not occur. Rockwell also cites to the inventor, Van Berkum who testified, " 'Monitoring' is a word that's used in two different ways." He continues that in col. 1, the patent uses the term "in a very broad way ... it indicates that you're looking at almost every type of activity that can occur within a call-a call center or-yeah, pretty much everything that goes on within the call center ..." (Van Beckum Dep. at 50, l. 12-24; 52, l. 2-24; 53, l. 1-10). This testimony is inconclusive at best.
In support of its view, Apropos relies on the same dictionary citation as Rockwell, but argues that "monitor" means "to watch, keep track of, or check" something *as it occurs*. Apropos also refers to text within the patent to support its view that "monitoring" is used in the sense of the contemporaneous watching of calls as they come in. It cites col. 1, l. 31-34 ("Management personnel continually monitor activities of the call center to assure that callers, or customers, are being promptly assisted by agents having the desired skills."), and col. 3, l. 1-2 ("Administrative, or supervisory, personnel monitor call processing activity within the

telephonic switching system...."). Further, Apropos points to the prosecution history, at R000142, in which Rockwell represents that whereas the Kline prior art is only able to trace calls retrospectively, because of the multitude of paths a call may take, "a computer of an automatic call distributor *is* able to monitor a prospective call path" and "the computer ... selects the agent to receive the call based upon many factors including skills, availability and the like...." (Emphasis in original). This means, Apropos argues, observing events as they occur in order to ensure that they are proceeding as expected or desired. As further support, Apropos points to the specification, detailed in the margin, to indicate that in the context of call centers "monitoring" means observing activities of the call center for the purpose of ensuring proper business performance.FN18 Finally, Apropos points out that one of the inventors, Paul E. Van Berkum, conceded that "monitoring" does not cover off-line programming tools, such as Rockwell's Telescript Editor or Bellcore's SCE.FN19

FN18. Apropos cites '059 Patent at col. 2, l. 23-24 ("[T]he method further comprises the step of modifying the call path."), col. 3, l. 16-17 ("The computer 112 executes various programs for monitoring and modifying the call path of a telephone call."), and col. 3, l. 62-63 ("An administrator may select any of the blocks to view and/or modify its contents.").

FN19. (Van Berkum Dep. at 81-86) (describing Rockwell's Telescript Editor generally as an offline programming tool that had a series of icons that you would put together to control call flow), at 82 (the Telescript Editor is "completely outside the context of this patent"); (id. at 84-85) (comparing the '059 patent to Rockwell's Telescript Editor is "mixing apples and oranges"); (id. at 85) ("[T]he telescript editor was a product that was used to create and control call flow by creating these scripts, call flow scripts. How that refers ... to this patent, I have no idea.), and at 86 (Rockwell's Telescript Editor has "no implications to this patent whatsoever."); *see also* (Markman Tr. at 370) (Forys) (describing a similar prior art offline programming tool called the Service Creation Environment (SCE) that was used at Bellcore in 1988); (Apropos Br. at 16) (explaining that claim cannot be validly construed such that "monitoring" encompasses off-line programming, because if it does, the claim is anticipated by the prior art, including the Rockwell Telescript Editor prior art admitted to by inventor; the claim would be anticipated and unenforceable because the inventor and Rockwell would have committed serious inequitable conduct in failing to disclose such prior art); (MacCrisken Dep. at 262-63 (MacCrisken unable to differentiate prior art-type telescript editors from '059 patent as he construes it).

As stated above, when there is no express intent to impart a novel meaning to a term in a claim anywhere in the patent or its prosecution history, the term must be given its ordinary meaning. *Kegel Co. v. AMF Bowling, Inc.,* 127 F.3d 1429, 1427 (Fed.Cir.1997). Monitor, however, is a word whose ordinary meaning is malleable. One can monitor water quality by testing it three times a year for ten years, and one can monitor a telephone call by listening to it as it occurs. Thus, monitor in the context of the '059 patent must be grounded in the particular technology and the specification. *See* Renishaw PLC v. Marposs Societa' Per Azioni, 158 F.3d 1243, 1248 (Fed.Cir.1998) (While it is improper to read limitations from the written description into a claim, claims must be read in light of the specification of which they are a part.) Rockwell is correct that neither the preamble, the claims nor the specification explicitly state that the patent only applies to on-line monitoring, or that a certain time when monitoring must occur, or that the information that is monitored must be current calls in a queue. Nevertheless, where the specification refers to the administrator, who may select a type of call, modify the route that type of call will take, and display which agents will receive which types of calls, the message conveyed is that the administrator is viewing

activity as it occurs so that the administrator can see which agents ("Sally, Nancy, and Bruce") will receive a particular type of call and modify that path according to the needs at the time. For example, col. 4, l. 14-33, can only be understood in the context of monitoring activity "on line" as it happens. With respect to Rockwell's argument that on-line monitoring would be impossible because current calls are switched in a fraction of a second, this may or may not be accurate, FN20 but if the prospective call path is programmed, as stated, *e.g.,* col. 3, l. 16-27, one must assume that all calls will proceed according to that programmed path until modified by the administrator, and that is what this invention does for the user.

FN20. This is puzzling because the court does not understand Rockwell to be taking the position that on-line monitoring is not covered by the '059 patent. Van Berkum states, "So-as one example, if you were [dealing with] a VIP customer ... [y]ou [i.e., an administrator] could use that information to move them to the first available agent in the whole call center. Or maybe [the customer] dealt with a specific person. You could move that information to page that person or have that call drop in next on that person." (Van Berkum Dep. at 88).

If it is assumed that the invention applies to an on-line situation, the issue is whether it also applies to an off line monitoring of "what is there in the program." The answer is no. The primary difficulty with Rockwell's position is that it does not distinguish the invention from the prior art. Van Berkum tellingly described an offline programming tool, Telescript Editor, used by Rockwell "to create and control call flow by creating these ... call flow scripts," which seems to be what Rockwell is arguing, as not, to the best of his knowledge, a part of this patent, (Van Berkum Dep. at 85), as having "no implications to this patent whatsoever[,]" (id. at 86). This is confirmed by the prosecution history in which the examiner initially rejected the application in light of Thompson, "which monitors the prospective call path of an incoming call, ... [the call path] is displayed in the form of a graphical display on the screen of an operator who then can transfer the call.... [It also] teaches ... that a prospective call path ... can be displayed ... and modified by an operator...." R000148. After the applicant amended claim 1 to include a feature of acquiring information relating to the identity of the caller to influence the prospective call path at a point between the switch and the agent, the claim was allowed. R000171. The initial context of the file relates to "live" or incoming calls, not a programming tool.

For these reasons, the court concludes that "monitoring" in the '059 patent means observing events as they occur.

4.2 "prospective call path"

The dispute over the term "prospective call path" in claims 1 and 4 turns on whether the term comprehends, as Rockwell contends, the route or flow which a "prospective" or future call may follow through the various functions and elements of a call center,FN21 which would include a visual display of the potential call paths of a call center generated by an off-line programming or scripting tool, or, as Apropos contends, is limited to the unique path along which a telephone call will be routed to an agent, as determined by the ACD computer for a call received at an ACD, absent modification of the call path by the call center administrator or supervisor. Rockwell points out that "prospective" was added to the claims to distinguish it from Kline and relies on the prosecution history for its position that "prospective" modifies "call" as well as "path." FN22 Apropos, by contrast, argues that the prosecution history supports the interpretation that "prospective" modifies "path" not "call." FN23

FN21. Rockwell cites the record as follows: Dr. Forys testified that " 'prospective" ' means "in advance" or "future," (Markman Tr. at 373, l. 13-17) and Rockwell suggests that Apropos agrees when describing "prospective call path" as the unique path a telephone call ... will be routed through the ACD...." Rockwell seems to believe that Apropos' definition, however, is inconsistent with Dr. Forys' testimony that the claims are limited to monitoring "live calls" that are switched through the call center in 250 milliseconds, not "prospective" calls in the future, citing Markman Tr. at 372, l. 14 ("monitoring means live calls"); id. at 374, l. 6 ("only live calls"); id. at 375, l. 15 ("monitoring live calls"); id. at 376, l. 9 ("250 milliseconds"), and accusing Apropos of reading out of the claim the requirement that a call be "prospective."

Rockwell also relies on the specification, citing Interactive Gift Express, Inc. v. Compuserve, Inc., 231 F.3d at 865 ("Then [after looking to the claim language] we look to the rest of the intrinsic evidence, beginning with the specification and concluding with the prosecution history, if in evidence."), *withdrawn,* 256 F.3d at 1327, citing col. 3, l. 38-40, Rockwell argues that reference is made to prospective types of calls being re-routed: "The telephonic switch 100 *thereafter* routes telephone calls in accordance with the modified applications."; col. 4, l. 18, "The administrator thus knows which agents *are going to receive* DNIS 7002 telephone calls routed by the telephone switch 100."; col. 1, l. 65-67, "the computer would notify the telephone switch of the modification and the telephone switch *would thereafter* route telephone calls of that type in accordance with the modifications." (emphasis added). Rockwell cites, in addition, excerpts of testimony of various witnesses which the court has considered but does not detail here.

FN22. Rockwell argues,

"The patentee added "prospective" to the claim to distinguish it over the prior art." Rockwell Hearing Ex. 7, p. R000142[.] "[T]he claims have been amended to specifically claim the monitoring of *prospective* call paths.... Under Kline, a call path cannot be determined prospectively.... Accordingly, Kline is only able to trace calls *retrospectively*." Then at R00171, the Patent Examiner identified future programming as an aspect for allowance. He indicated both "call prospective path" and "prospective call path" which clearly covers both future paths and future calls."

FN23. Apropos cites Pros. Hist. at R000171, Examiner's Reason For Allowance ("Applicant's independent claim 1 recite[s], inter alia, a computer connected to the telephonic switch of the automatic call distributor (ACD) for acquiring information relating to the prospective (to be determined) call path based upon an identity of a caller and to generate a telephone system functional display of the prospective (to be determined) call path located between the telephone switch and the agents and a display which visually displays the prospective call path."). (Markman Tr. at 379-81) (Forys) (disagreeing with Mr. McLaren's contention, [at Markman Tr. at 373-74], that the term "prospective" modifies "call" rather than "call path" and explaining that the prosecution history makes it clear that "prospective" modifies "call path" not "call"); (Pros. Hist .at R00142) (referring to the monitoring of prospective call paths, not prospective calls).

According to the examiner, Kline teaches "that a call path can be graphically illustrated on a display of the graphical computer (32), and "that a call path can be modified by a network control center operator." R000131-32. "Therefore, it would have been obvious ... to modify the computer graphical generator to include the possibility of displaying available agents thus routing incoming [calls] to an idle agent when there is one available instead of waiting on-hold for agents already servicing other customers." R000133. The responsive amendment recited that under Kline,

... a call path cannot be determined prospectively ... because of the multitude of paths that a call may take through the switches of the PSTN. Accordingly, Kline is only able to trace calls *retrospectively*. In contrast, the automatic call distributor of Fig. 1 of the Specification shows only a single switch through which to route a call to an agent. Consequently, a computer of an automatic call distributor is able to monitor a prospective call path.

R000142. Allowing claim 1 based on the amendment, the examiner explained that the invention "is drawn to an ACD system wherein an incoming call after it reaches a switch is sent to a computer administration center wherein a call['s] prospective path is determined and then sent to the switch to complete the given call to its destination (agent) based on the *prospective call as shown in figs. 1-3*." (Emphasis added). The examiner distinguished the prior art which "teaches [merely] displaying the geographical location of a calling party or of an incoming call's location." R000171. As the court understands this, the examiner finds novelty in the ability of the invention to receive an incoming call, in effect take a look at it before it reaches the switch,FN24 at that point determine a prospective path, and send the call on to a switch which will direct it along the (no longer prospective) call path to its destination.

FN24. See also col. 1, l. 40-46 ("analyzing the call path of a single telephone call" and "wherein a path of a telephone call through the call center is graphically represented"), col. 1, l. 59-64 ("The call path system comprises a computer ... for acquiring information relating to the call path and for generating a display of the call path. A display ... visually displays the generated display of the call path."), and col. 2, l. 5-9 ("a method for monitoring a call path of a telephone call routed by a telephonic switch ... comprising the steps of determining the call path of the telephone call; and visually displaying the call path of the telephone call").

Kline, on the other hand, permits modification based on retrospective observation. The only reference to "prospective call" as opposed to "prospective call path" in the cited text is within the examiner's first sentence allowing claim 1, italicized above. This is an anomalous statement, however, in that Figs. 1-3 do not identify a "prospective call" but rather illustrate the path along which calls may travel. If it is not an error by the examiner, it is at best a slender reed on which to hang Rockwell's argument that an offline programming tool is comprehended by these claims.FN25 At all other places, the discussion is about a prospective "call path" determined in an online setting. For these reasons, the court defines "prospective call path" as the path of an incoming call as it will be routed through the various functions and elements of a call center.

FN25. Apropos cites persuasively to Ex. 25, Van Berkum Dep. at 81-82 (testifying that Rockwell's Telescript Editor-an offline programming tool that had a series of icons that you would put together that would control call flow-was "completely outside the context of the patent") and at 84-86 (the telescript editor was not part of the invention-"we're mixing apples and oranges" and "it has no implications to this patent whatsoever."). *See also* (Markman Tr. at 370) (Forys) (describing a similar offline programming tool called the Service Creation Environment (SCE) that was used at Bellcore in 1988); (Ex. 16 in MacCrisken Dep. at 240-43) (explaining that the script defined by a telescripting device is not the prospective call path).

4.3 "received from a public switched telephone network"

The dispute over the phrase in the preamble to claim 1 "telephone calls received from a public switched

telephone network" is simply the meaning of "received." Rockwell contends that "received" means incoming, as opposed to outgoing, calls. Apropos argues that "received" means telephone calls that are actually received, namely, the system monitors and displays information regarding calls that are actually received from a public switched telephone network by the system in operation. Rockwell's position is a version of its argument with regard to "prospective call." FN26 It follows from the resolution of "prospective call path" that the patent in using the word "received" is referring to what happens to a call that is actually received. FN27 Rockwell is correct that this interpretation, therefore, reads "prospective" out of the claim as it respects a "call" rather than a "call path."

FN26. Rockwell relies again on the specification which, it contends, does not limit "calls received" to "calls actually received," relying on the same language as cited with respect to "prospective call path", see discussion note 5 supra); col. 3, l. 38-40 ("The telephone switch 100 *thereafter* routes telephone calls in accordance with the modified application); col. 1, l. 65-67 ("the computer would notify the telephonic switch of the modification and the telephonic switch would *thereafter* route telephone calls of that type in accordance with the modifications"); col. 4, l. 18 ("The administration thus knows which agents are going to receive DNIS 7002 telephone calls routed by the telephone switch 100.").

FN27. Apropos' citations, likewise, confirm this conclusion: col. 3, l. 27-37 ("A telephone call *is received* by the telephonic switch 100 from the telephone network 104. The telephonic switch 100 further receives information relating to the type of the telephone call."); Pros. Hist. at R000171, Examiner's Reason for Allowance ("Applicant's invention is drawn to an ACD system wherein an incoming call *after it reaches* a switch is sent to a computer administration center wherein a call prospective path is determined...."). (Emphasis supplied by the court.)

V. *Construction of Terms in* the '070 Patent

The invention of the '070 patent is a programming tool that allows the user to create, edit, and manage script sets in a telephone system. In contrast to previous devices, which were typically "hard-wired" by the manufacturer, the invention provides "flexibility for the customer's need at the site of the user," in that the script may be modified according to a user's needs." *See* col. 1, l. 13-18. The dispute centers on the following language of claim 1, part (b):

a host computer coupled to the control device and configured to receive script instructions according to a user and transmit programming data to the control device in accordance with the script instructions, the host computer providing a script editing facility having an interface in the form of a plurality of menus accessible to the user; * * * *

and of claim 11, part (c), "coupling a host computer to the control device...."

5.1 "control device"

There appears to be no material dispute regarding the meaning of "control device." As it is used in the claims, a control device is, or is within, an ACD (as defined above, "a device that receives incoming telephone calls and automatically distributes those calls, which is comprised of an integrated telephone switch and computer apparatus, in communication with one another through a specialized proprietary software interface") and consists of a routing vector,FN28 an application vector and an intercept vector.

FN29

FN28. "[A] routing vector ... is a collection of programming ... statements used to route a call in a call center or switching system ." (Bloom Dep. at 43).

FN29. See Figs. 1 and 2 and col. 2, l. 24-28 (stating that the control device includes an ACD, and referring to Fig. 1 as showing the control device); col. 2, l. 29-40 (listing the components of the control device, all of which are actually components of ACD 17 as shown in Fig. 1, "The control device has a routing vector ... 18 to receive incoming calls.... The routing vector 18 may route calls to an application 22 which in turn directs the calls to an application vector 24.").); claim 1, col.1-col.4.

5.2 "host computer coupled to the control device"

A host computer, according to a standard dictionary is "[a] computer attached to a network providing primarily services such as computation, database access or specific programs of special programming languages." NEWTON'S TELECOM DICTIONARY 425 (16-1/2 th ed.2000). Rockwell asserts that the term "host computer" means a computer "associated with" the control device, but the claims do not require that the computer be limited to a "stand-alone" or "separate" computer. Although Rockwell concedes that the specification describes a stand alone host computer, it argues the claims do not. *See* Interactive Gift Express, Inc. v. Compuserve Inc., 231 F.3d 859, 865 (Fed.Cir.2000) ("[I]n looking to the specification to construe claim terms, care must be taken to avoid reading 'limitations appearing in the specification ... into the claims.") *withdrawn,* 256 F.3d 1323, 1327 (Fed.Cir.2001). Apropos contends that the phrase "host computer coupled to the control device" is a computer, separate and distinct from the automatic call distributor, which communicates directly with the control device in operation.FN30 The evidence is fairly straightforward that the patent is claiming a host computer that is a separate piece of equipment from the control device.FN31 Both parties' experts appear to agree on the fundamental point that they are separate. *See* (Markman Tr. at 179, 465) (Forys) (a "host computer" is a stand-alone computer in communication with an ACD); (Ex. 16 in MacCrisken Dep. at 62) (the host computer is a computer that is separate from the ACD). And even though Mr. MacCrisken testified, (Mackman Tr. at 425), that "host computer" is merely used to distinguish it from the computer that controls the ACD (which is the large box 17 of Fig. 1), it is plain enough that the control device and the host computer must function separately, so even if one were to physically place them both in one bigger "box," they would still operate independently until "coupled."

FN30. Ex. 3, '070 Patent at col. 3, l. 34-47 (the routing vector-which is part of the control device/ACD-informs the host computer of an incoming call, and requests information concerning the call from the host computer, and the host computer may request information concerning the call from the routing vector; the application vector-also part of the control device/ACD-may request the host computer to route the call, and the host computer may direct the call to the application); '070 Patent, col. 4, l. 11 to col. 5, l. 27 (Examples I, II and III including the step of "INFORM HOST ON ARRIVAL" in each of the Examples, thus confirming two-way routing communication); (Markman Tr. at 446-47) (Forys) ("two-way communication is absolutely necessitated" by the architecture); id. at 478-79 (Forys) ("coupled to the control device" language would be superfluous if not separately requiring communication other than in connection with the transmission of programming data to the vectors).

FN31. See Fig. 1 (showing the host computer as a separate device from the ACD/control device) and col. 2, l. 41-44; (Pros. Hist. of the '070 Patent at R000875) (distinguishing the Shaio prior art because it did "not teach a host computer connected to a routing vector and application").

5.3 "configured to receive script instructions"

The court finds no material dispute with respect to this term. Rockwell asserts that the host computer must be "configured so that it can receive script instructions provided by a user and also so that it can send programming data to the control device[,]" (Rockwell Br. at 14), and Apropos asserts, "The host computer also is configured to receive script instructions from the user through the script editing facility, derive programming data from the script instructions, and transmit the programming data to the appropriate vectors in the control device[,]" (Apropos' Updated Br. at 13). Therefore, the court accepts Rockwell's definition.

5.4 "script instructions"

Rockwell defines "script instructions" as statements or instructions in a programming language (called a script language) used to write programs (referred to as scripts or script sets) that provide instructions to program the call processing by the call center, as, for example, instructions in a simplified application-specific programming language.FN32 Apropos defines script instructions as instructions entered by the user, through the script editing facility, in the form of successive menu bar selections and dialog box selections and numerical entries, which are translated to programming data, and transmitted to one or more pre-defined vectors FN33 in the control device to configure or program the vectors.

FN32. Hardly an example of clarity, the sentence, trimmed to its basic grammar, is "Script instructions are instructions that provide instructions." Or, "Script instructions are instructions used to write programs that provide instructions to program."

FN33. "Vector" means instructions in a computer program, e.g., a "routing vector", "an application vector" or an "intercept vector," each referring to a particular set of fixed and pre-defined statements within the computer program that function as programmable switches for defining the distribution of calls within the ACD. The term "intercept vector" is a vector that detects an exceptional event and interrupts normal processing so as to cause or allow something different to happen, in this context, to accept the user's instructions.

The term "script instructions" does not appear in the specification of the invention or in the claims as originally filed. Apropos points out that the term was first used in a preliminary amendment filed December 31, 1996 with the Patent and Trademark Office, in which the applicants stated "the script instructions are provided to the host computer through a script editing facility having an interface in the form of menus accessible to the user." (Apropos' Mem. in Support of Its Updated Claim Construction App. C at 8). In that document, the applicants are distinguishing Shaio, and in the paragraph following the cited text state, "Shaio's use of a simple programming language is very different from applicants' claimed system using programmable menus to facilitate quick and efficient programming of the various parts of the system." Rockwell relies here, however, on a general definition such as is contained in the MICROSOFT COMPUTER DICTIONARY 423 (3d ed.), which defines "scripting *language*" as "[a] simple programming language designed to perform special or limited tasks, sometimes associated with a particular application or

function." Clearly, "script instructions" means something different from "simple programming language" in order to be distinguishable from Shaio and must include programmable menus to facilitate programming of other parts of the system, which interpretation appears to be consistent with Apropos' position that the user gives instructions (from a menu) which are translated into programming data in order to configure the vectors (instructions in a computer program) which modify the call path according to predefined computer programs or vectors of the control device.

5.5 "programming data"

The sentence in claim 1(b), including the term "programming data," paraphrased, means: The host computer is configured to receive script instructions from a user and transmit programming data to the control device according to the script instructions. Rockwell would define "programming data" in this sentence broadly as data relating to a computer program including, for example, any computer programming instructions (not limited to low level instructions),FN34 pointing out that "low level" programming data or any other similar term does not appear anywhere in the patent specification or the prosecution history, and it therefore should not be imported into the claim. Apropos, on the contrary, defines "programming data" in the context of the claim as meaning the low-level data such as numbers and letters, based on script instructions entered by the computer user via the line editors in the menus of the script editing facility. Apropos argues the term "programming data" excludes software code. Rather, script instructions are entered into or selected from the script editing facility screens by the user, and such script instructions are thereafter translated into programming data and transmitted to the control device to configure the various pre-defined vectors in the control device.

FN34. By "low level," the court understands the parties to be referring to simple menu choices, or as Mr. MacCrisken put it, "a program from binary ones and zeros up to C" (Markman Tr. at 392,l. 6-393,l. 13), and Dr. Forys, "sending very low level information-the result of the user's clicks, which would be numbers and letters-down to the ACD to fill in the tables." (Id. at 456).

As both parties agree and as is readily apparent, this isolated reference to programming data is not explained in the specification. The ordinary sense of the sentence is that the user can send instructions to the host computer and the host computer translates the instructions into programming data through which the host computer tells the control device to follow the user's instruction. Whether it is low level or high level is simply not apparent in the claim, so the court concludes that the programming data is that which is needed to perform the function described. The testimony is persuasive that the user would not be transmitting programming data; rather that would be something already within the host computer at the time the user sends script instructions.FN35

FN35. (Markman Tr. at 457) (Forys) ("you don't want the user touching your holy code here ... you don't want [the users] doing it down here with real live code" because the ACD manufacturers could not allow users (who are not professional programmers) to make mistakes with the ACD software).

5.6 "script editing facility"

Rockwell proposes that the term "script editing facility" means a programming mechanism for modifying scripts. Apropos uses many more words, defining it as a user interface that presents the user with a series of line editors driven by menu bar selections and dialog box interactions, so that the user can enter script

instructions. In other words, Apropos asserts, the script editing facility presents the user with a series of windows, each of which offers successive menu selections; the user enters script instructions by making menu bar selections and dialog box entries; and the script editing facility translates the script instructions into the programming data. Rockwell's definition certainly comprehends Apropos's definition but is also broader so as to include "all the tools a user would use to edit and manage scripts," which are a type of code. The specification describes the script editing facility as follows: "The SEF user interface is a line editor driven by menu bar selections and dialog box interactions. A window is presented to the user for the monitoring and the selection (via pointing and clicking or cursoring) of script step edits." Col. 5, l. 52-55. Referring to Fig. 3, the text describes in precise detail how the user is presented with a screen, a menu bar, and particular options, col. 5, l. 55 to col. 11, l. 15, and concludes, "Thus, ... the user may readily program the device through use of scripts or vectors in order to customize the routing of incoming telephone calls in a manner as desired at the site of the user." Col. 11, l. 17-20. The preponderance of the evidence is that the script editing facility is a pre-programmed system which permits a user to accomplish specified choices in order to change scripts but it does not permit a user to create "software" or to program the system.

5.7 "interface in the form of a plurality of menus"

Interface is "[t]he point at which a connection is made between two elements so that they can work with each other." MICROSOFT COMPUTER DICTIONARY 257. "Menu" is "[a] list of options from which a user can make a selection in order to perform a desired action...." Id. at 303. Both parties seem to agree that "interface in the form of a plurality of menus" includes a computer screen with windows and dialog boxes which contain menus. Rockwell adds "icons, pictures or symbols" as part of menu. Apropos says, "menus" exclude "icons, pictures or symbols" and adds that the term includes "successive" menus presenting lists which enable the user to make successive selections and access dialog boxes to enter instructions. Apropos relies on the specification, which certainly does describe successive menus. The claim itself uses "plurality" which is, in this context, more than one, presumably. Concerning the scope of "menus," the court relies on the specification and illustrations which refer entirely to menus as lists containing words. *See, e.g.,* Figs. 3 and following. Rockwell has pointed to no evidence that an icon is functionally the same thing as a menu. Therefore, the court defines "interface in the form of a plurality of menus" as a connection that provides a user with one or more screens with two or more menus (but not icons, pictures or symbols) to permit the user to make selections from the menus in order to enter script instructions.

ORDER

The claims are interpreted as stated above. A status hearing will be held in this matter on February 7, 2002, at 9:30 a.m. The parties are directed to meet together in a conscientious effort to resolve this case prior to the status hearing.

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