United States District Court,
W.D. Pennsylvania.

SIGHTSOUND.COM INCORPORATED, a Pennsylvania Corporation,
Plaintiff.
v.
N2K, INC., a Delaware corporation, CDNOW, Inc., a Pennsylvania Corporation, and CDNOW Online, Inc., a Pennsylvania Corporation,
Defendants.

No. Civ.A.98-CV-118

Feb. 8, 2002.

Patentee brought infringement action against competitor relating to patent directed to commercially acceptable systems and methods for selling music and video in digital form over telecommunications lines. The District Court, Benson, United States Magistrate Judge, entered report and recommendation concluding that: (1) term "party" included any legally distinct entity that performed activities described, was not required to act on its own behalf, and was not restricted to any location or financial distinctions; (2) phrase "transferring money electronically" included, but was not limited to, providing authorization to charge credit card account; and (3) phrase "telecommunications line" referred to any electronic medium of communicating between computers that required end to end connectivity, and did not exclude Internet.

Report and recommendation filed.

5,191,573, 5,675,734, 5,966,440. Construed.

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MEMORANDUM ORDER

BENSON**, United States Magistrate Judge.**

A Report and Recommendation has been filed in this matter addressed to the construction of claim language in the patents-in-suit. A *Markman* hearing was held in which a single evidentiary ruling remains to be

made. Hence, this order.

Plaintiff sought to introduce at the hearing as Plaintiff's Exhibit J what it termed "counter-designations" from the deposition testimony of the inventor, Arthur Hair (Docket # 93 at 118). The portions of the transcript were offered in response to an argument made by defendants that the inventor, at the time of the patent application, had no knowledge of packet-switch networks such as the Internet (*Id.*).

Defendants objected, noting that they had introduced portions of the Hair Deposition for the purpose of construing the term "electronic sales," but that they had not introduced deposition excerpts for any other purpose (*Id.,* at 119; Defendants' Exhibit 12). Indeed, the designations offered by defendants are limited to the "electronic sales" issue, and Plaintiff's Exhibit J is not properly a cross-designation thereto.

Nonetheless, plaintiff's proposed deposition designations are extrinsic evidence which is responsive to arguments made by defendants. They are, in that respect, relevant to the inquiry before the court. In light of the fact that the undersigned sits in an advisory position, and that the record should tend more towards over-inclusiveness than not, the exhibit will be admitted. The undersigned notes, however, that Plaintiff's Exhibit J was not relied upon in reaching the recommendation regarding claim construction.

IT IS HEREBY ORDERED that defendants' objection to the admission of Plaintiff's Exhibit J is OVERRULED, and that exhibit is ADMITTED into evidence.

MAGISTRATE JUDGE'S REPORT AND RECOMMENDATION

I. *RECOMMENDATION*

It is respectfully recommended that the claims in suit be interpreted as set forth in more detail in the following report.

II. *REPORT*

[1] This is a patent infringement action filed by the holder of three patents which, as described by plaintiff, "are directed to commercially-acceptable systems and methods for selling music and video in digital form over telecommunications lines." (Docket # 69 at 1). Plaintiff, Sightsound.com, Inc. ("Sightsound") accuses defendants N2K, Inc. ("N2K"), CDnow, Inc., and CDnow Online, Inc. (collectively referred to as "CDnow" or "defendants") of infringing multiple claims of U.S.Patent Nos. 5,191,573 ("the '573 Patent"), 5,675,734 ("the '734 Patent"), and 5,966,440 ("the '440 Patent") through the practice of downloading digital music over the internet. FN1

FN1. Of course, the court is not concerned with the accused product or practice at this point. Claim construction is accomplished "independent of the accused product." Embrex, Inc. v. Service Engineering Corp., 216 F.3d 1343, 1347 (Fed.Cir.2000); Union Oil Company of California v. Atlantic Richfield Co., 208 F.3d 989, 994 (Fed.Cir.2000).

In view of the numerous claims which have allegedly been infringed, the court encouraged the parties to narrow issues by agreeing, where possible, to interpretations of various claims in the patents. After the parties engaged in this process, however, many disputes remained concerning claim interpretation FN2. Hence, the court scheduled a *Markman* hearing, and the parties filed claim construction briefs (Docket # s

65, 69 and 75), a joint compilation of exhibits (Docket # s 70-72), and expert reports and declarations filed independently (Docket # s). A hearing was held before the undersigned on April 18, 19, 20 and May 16, 2001, at which expert testimony, demonstrative evidence, exhibits and argument were offered by the parties (Docket # s 93-96). The undersigned has considered all of the briefs, exhibits, testimony and argument submitted. The following conclusions of law are recommended.

FN2. Plaintiff initially asserted a total of thirty-nine (39) claims which contain thirty-four (34) instances of disputed claim language. The claims-in-suit are claims 1-3 of the '573 patent, claims 1-8, 10-14, and 26-27 of the '734 patent, and claims 1-10, 12-15, 22, and 36-41 of the '440 patent. Plaintiff also seeks to assert claim 11 of the '440 patent, and defendants challenge this on the basis that it was added just prior to the briefing prior the hearing (Docket # 75 at 17-18). While the undersigned agrees that claim 11 was submitted late in the day, the terms used therein are not unique. Hence, for purposes of claim construction, no new burden is imposed for the parties or the court by including claim 11 at this stage. The question of the propriety of this claim being considered by the court in ruling on the ultimate issue shall be held in abeyance.

1. THE LAW OF CLAIM CONSTRUCTION

A. INTRINSIC EVIDENCE

[3] [4] Intrinsic evidence is the most important source of information in construing the language used in a patent. Vitronics Corporation v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). "Intrinsic" evidence consists of the claim language, the specification and the prosecution history. *Id.;* Markman, 52 F.3d at 979. "In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to 'particularly point[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention.' 35 U.S.C. s. 112, para. 2." Interactive Gift, 231 F.3d at 865.

[5] [6] [7] The purpose of a patent is to secure to the patentee "all to which he is entitled" while "appris[ing] the public of what is still open to them." Markman, 517 U.S. at 373, 116 S.Ct. 1384. In construing the scope and meaning of a claim, terms used in the claim are to be given their ordinary meaning to one skilled in the art unless it appears from the patent and file history that the terms were used differently by the inventor. *Id.; Intellicall, supra;* Phillips Electronics v. Universal Electronics, Inc., 930 F.Supp. 986, 997 (D.Del.1996). Thus, the court must first look to the language of the patent claim. "If the claim language is clear on its face, then [the court's] consideration of the rest of the intrinsic evidence is restricted to determining if a deviation from the clear language of the claim is specified." Interactive Gift, 231 F.3d at 865. A patentee, after all, may "choose to be his own lexicographer and use terms in a manner other than their ordinary meaning." Vitronics, 90 F.3d at 1582.

[8] [9] [10] The court may also find that a deviation from the plain meaning of the terms used in a patent claim is warranted because the patentee, in amending a claim before the PTO or in arguing to distinguish a reference to prior art, has relinquished part of what would normally be included within a claim's plain meaning. Interactive Gift, 231 F.3d at 865, *quoting* Elkay Manufacturing Co. v. Ebco Manufacturing Co., 192 F.3d 973, 976 (Fed.Cir.1999). Hence, "[i]f a patentee takes a position before the PTO, such that a 'competitor would reasonably believe that the applicant had surrendered the relevant subject matter,' the patentee may be barred from asserting an inconsistent position on claim construction." Katz v. AT & T

Corp., 63 F.Supp.2d 583, 591 (E.D.Pa.1999). This does not mean, however, that every amendment, or every attempt by an applicant during the application process to distinguish prior art, automatically results in a corresponding limitation during claim construction. "Unless altering claim language to escape an examiner rejection, a patent applicant only limits claims during prosecution by clearly disavowing claim coverage." York Products, Inc. v. Central Tractor Farm & Family Center, 99 F.3d 1568, 1575 (Fed.Cir.1996).

[11] Further, although the specification may be "the single best guide to the meaning of a disputed term." Vitronics, 90 F.3d at 1582, the court must be careful to use the specification to ascertain the meaning of disputed claim term, and not merely to impose a limit on a claim term. Interactive Gift, 231 F.3d at 865-66; *citing* Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed.Cir.1998) ("fine line" exists between "reading a claim in light of the specification" and impermissible practice of "reading a limitation into the claim from the specification.").

B. EXTRINSIC EVIDENCE

[12] [13] [14] "In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence." Id., 90 F.3d at 1583. In cases where the scope of the invention is described unambiguously by the intrinsic evidence, it is improper to consider extrinsic evidence. *Id*. The public is entitled to rely upon the "public record" of the invention, i.e., the claims, the specification and the file history. *Id., citing* Markman, 52 F.3d at 978-79. "Allowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make this right meaningless." Vitronics, 90 F.3d at 1583. This same limitation applies whether it is the alleged infringer or the patentee who seeks to alter the scope of the claims. *Id*.

[15] "Only if there were still some genuine ambiguity in the claims, after review of all available intrinsic evidence, should the trial court have resorted to extrinsic evidence, such as expert testimony...." Vitronics, 90 F.3d at 1584. Further, even if expert testimony is accepted and properly considered, it should be afforded no weight if it is inconsistent with the specification and file history. *Id*. Likewise, the inventor's subjective intent, if not expressed in the patent documents, is not entitled to any weight. *Id*.

[16] In fact, a preferred type of extrinsic evidence, useful to demonstrate how a particular term is used by those skilled in the art, is a prior art reference, whether or not that reference is cited in the specification or file history. Vitronics, 90 F.3d at 1584. Again, however, consideration of such extrinsic evidence is "unnecessary, indeed improper, when the disputed terms can be understood from a careful reading of the public record." *Id*.

[17] [18] [19] [20] This does not mean that extrinsic evidence ought never to be considered. On the contrary, extrinsic evidence may be appropriate for a purpose other than clarifying ambiguous language in the patent:

A judge is not usually a person conversant in the particular technical art involved and is not the hypothetical person skilled in the art to whom a patent is addressed. Extrinsic evidence, therefore, may be necessary to inform the court about the language in which the patent is written. But this evidence is not for the purpose of clarifying ambiguity in claim terminology. It is not ambiguity in the document that creates the need for extrinsic evidence but rather unfamiliarity of the court with the terminology of the art to which the patent is addressed.

Markman, 52 F.3d at 986.FN3 The court may, then, and in this instance, did, resort to extrinsic evidence for the purpose of determining "what one of ordinary skill in the art at the time of the invention would have understood [a particular] term to mean." *Id.; see also,* Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1309 (Fed.Cir.1999). Technical treatises and dictionaries, although extrinsic evidence, may be consulted "at any time in order to better understand the underlying technology...." Vitronics, 90 F.3d at 1584. Dictionary definitions may be used by the court "when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." *Id.*

FN3. Indeed, as one who felt (and still feels) uncomfortable with the technology of the 20th Century, and who will undoubtedly feel increasingly so with the technology of the present century, this explanation from the Court of Appeals in *Markman* is particularly trenchant.

C. MEANS-PLUS-FUNCTION CLAIMS

[21] [22] [23] [24] [25] Also relevant to the construction of the claims at issue in this case is the "means-plus-function" format of stating patent claims:

An element in a claim for a combination may be expressed as a means of step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. s. 112, para. 6 (1994). "This provision of the patent statute permits a patentee to write a limitation in a combination claim as a means for performing a function without reciting structure, materials or acts in the limitation." Katz, 63 F.Supp.2d at 592. When interpreting a claim written in the "means-plus-function" format, the court must construe the functional language of the claim "to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. s. 112; Valmont Industries, Inc. v. Reinke Manufacturing Co., Inc., 983 F.2d 1039, 1042 (Fed.Cir.1993). The patentee, however, must describe in the specification some structure which performs the specified function. Id., at 1042.

In determining whether to apply the statutory procedures of section 112, para. 6, the use of the word "means" triggers a presumption that the inventor used this term advisedly to invoke the statutory mandates for means-plus-function clauses. 35 U.S.C. s. 112, para. 6 (1994); *see* Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1584, 39 U.S.P.Q.2d 1783, 1787 (Fed.Cir.1996). Nonetheless, mere incantation of the word "means" in a clause reciting predominantly structure cannot evoke section 112, para. 6. [citations omitted]. Conversely, "[t]he recitation of some structure in a means plus function element does not preclude the applicability of section 112(6)." Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1536, 19 U.S.P.Q.2d 1367, 1369 (Fed.Cir.1991).

York Products, Inc. v. Central Tractor, 99 F.3d 1568, 1574 (Fed.Cir.1996). Thus, "[t]o invoke this statute, the alleged means-plus-function claim element must not recite a definite structure which performs the described function." Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996). The court must "decide on an element-by-element basis, based upon the patent and its prosecution history, whether s. 112, para. 6 applies." *Id.*

[26] Once having decided that the means-plus-function analysis applies, the court should: (1) determine what function the means performs, and (2) find in the claim language a link between the means and the function. Katz, 63 F.Supp.2d at 593. The specification is next considered, and the court "must determine what structure, material or acts ... correspond to the word 'means.' " *Id.,* citing Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc., 145 F.3d 1303, 1308 (Fed.Cir.1998). There is no specific level of detail necessary in the description of structure, so long as one skilled in the art would identify the structure from the description. Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed.Cir.1999).

2. SUMMARY OF THE EVIDENCE

A. BACKGROUND AND CLAIM LANGUAGE

The patents-in-suit stem from a patent application initially filed with the United States Patent and Trademark Office (USPTO) in June, 1988. In fact, the '734 and '440 patents are "continuations" of the '573 patent, disclosing additional inventions arising from the original invention. Unsurprisingly, therefore, the patent specifications for the '734 and '440 patents mirror the patent specification for the '573 patent.

The patents each address a "system and associated method for the electronic sales and distribution of digital audio or digital video signals, and more particularly, to a system and method which a user may purchase and receive digital audio or digital video signals from any location which the user has access to telecommunications lines." (Docket # 70, Exhibit 51 at 1).

In its first claim, the '573 patent discloses a four-step method of transmitting a digital audio or video signal including steps addressed to: (1) transferring money electronically; (2) connecting two "memories" by telecommunications lines so that a signal can be transmitted from the first to the second; (3) transmitting the signal; and (4) storing the digital signal in the second memory. Claim 2 is a dependent claim, building on the first claim by adding the step of searching for and selecting a desired digital signal from the first memory. Step 3 is, in turn, dependent on claims 1 and 2, and discloses additional steps in transferring money, specifically the steps of telephoning the first party and providing the second party's credit card number "so the second party is charged money." FN4

FN4. The remaining claims of the '573 patent are not asserted in this suit.

The '734 patent, which has claims 1-8, 10-14, and 26-27 in suit, discloses in claim 1 the same basic invention as was disclosed in the '573 patent, but with the addition of steps involving the use of a "hard disk" and "sales random access memory" by the selling party, and "electronic coding" of the signal to prevent unauthorized copying thereof. Claim 2 adds the use of a "second party integrated circuit" and a "control panel" to execute commands during the process described in Claim 1. Claim 3 describes an "incoming random access memory chip" in the buyer's possession which temporarily stores the incoming digital signal until it is transferred to the buyer's hard disk. Claims 4-8 describe the use of a "control integrated circuit" in this process, and claims 10-14 describe the use of "telephone lines" as a type of "telecommunications lines" in the invention disclosed in Claim 4. Claims 26 and 27 summarize much of the preceding claims, and disclose a "means or mechanism for the first party to charge a fee to the second party remote from the second party location."

The '440 patent has sixty-three (63) claims, of which 1-15, 22, and 36-41 are at issue. Again, the claims set

forth a method for transferring digital audio or digital video signals, but also disclose methods for playing such digital signals on an integrated system used by the second party.

The actual language of a claim is the key consideration in any construction of a patent; that language is not reproduced as an attachment to this Report, but is set out at length in the text as appropriate. So too, certain intrinsic evidence, the patent specifications and prosecution histories, are set forth in relevant part during the analysis portion of this report.

B. OTHER EVIDENCE

Other evidence presented, in the nature of declarations, dictionary definitions, expert testimony, etc., will, likewise be set forth in relevant part as necessary to discuss particular issues. However, the court will summarize the testimony presented at the hearing from the expert witnesses (which is premised upon declarations earlier submitted by the parties). This testimony has been relied upon by the undersigned to understand the technology underlying the patents-in-suit, and to determine the level of education and experience which would define "one skilled in the art" in this case. The court will also indicate during the analysis portion which, if any, of the extrinsic evidence has been considered as relevant to the construction of particular claims.

i. Dr. Tygar

Justin Douglas Tygar, Ph.D., testified as an expert on behalf of plaintiff (Docket # 95 at 4-41). Dr. Tygar is a professor at the University of California at Berkeley in the department of electrical engineering and computer science (Id., at 4). He works in the area of software engineering, computer security and electronic commerce (Id., at 5). He has also "had occasion" to work with digital audio (Id.). Dr. Tygar is a senior member of the Institute of Electrical and Electronic Engineers (IEEE) (Id.).

Dr. Tygar explained the process of recording sound both by analog and digital means. He explained that a "digital converter" takes an analog representation of a sound wave, samples it at many, many points, measures the signal at each sampling point, representing the measurements with binary numbers (Id., at 8-9). The reverse process is used to change the digital sound representations back into an analog sound wave through a process of "interpolating" a sound wave between the digital signals. This, in turn, can be played through a speaker to create audible sound waves (Id., at 9).

Digital audio may be stored on a compact disk, and then "read" by a laser. The benefits of this technology are obvious to all, most notably the fact that, unlike vinyl records, CD's, unless damaged, will retain the digital information unchanged indefinitely.

"Compressed" digital audio, whereby the binary representation of a sound wave is made smaller by, for example, eliminating repeated signals, is, in Dr. Tygar's opinion, still digital audio (Id., at 3).

Dr. Tygar also testified that there is a difference between digital sound on one hand, and digital instructions for sound on the other. He compared the MIDI format (for "Music Instrument Digital Interface"), or instructions for sound, with sheet music. The MIDI instructions, which are binary, tell the computer what sounds to make on an internal synthesizer (Id., at 13-14; Docket # 74, Exhibit B at 5-8). He contrasted this with a sound wave represented digitally, which, although also stored in binary, permits a computer program to reproduce a sound wave which has been recorded. One of the differences between MIDI and digital sound is that vocals cannot be faithfully represented in MIDI format, while digital sound has no such

limitations (Docket # 95 at 15). MIDI, although versatile, is, in Dr. Tygar's opinion, simply a series of on/off commands (Id., at 6).

Dr. Tygar also testified concerning the advantages inherent in sending digital music from one computer to another (Id., at 17). There is no need for packaging, no stock problems, low overhead, and presents an easier way to find and keep in storage various types of music (Id., at 17-18).

Part of Dr. Tygar's expert report is also addressed to the nature of telecommunications systems (Docket # 74, Exhibit B at 8-14). He testified that about 80% of households have a "direct link" to a telecommunication provider's "central office" (Docket # 95 at 18). Although the connection between a private home and a central office is now, and was in 1988, likely to be copper wire carrying electric impulses, the telephone network is mostly digital from the central office until the individual communication reaches the other party's copper lines (Id., at 19). Hence, in 1988, as today, a telephone call could proceed entirely through copper wire as electric impulses, it could be changed into light impulsesand travel through fiber optic cable, and it could also travel as radio waves, or a combination of all three types (Id., at 20). Today, most telecommunications links are established through the fiber optic "backbone network" used by all telecommunications companies (Id., at 19).

There is in the telephone industry a concept known as "multiplexing" which occurs in telephone links. Time Division Multiplexing, or "TDM," occurs when calls are digitized and broken up into segments. These segments are sent in order, with segments from other telephone calls placed in between, then reassembled at the other end (Id., at 21) FN5. In Dr. Tygar's view, this does not create a "continuous physical conduction path" between the person sending and the person receiving a telephone call (Id.).

FN5. For example, if three calls, A, B and C were sent through the TDM process, the segments might share a fiber optic strand in the order ABCABCABCABC. The segments are then reassembled prior to reaching the ultimate destination, AAAA, BBBB, CCCC.

The Internet uses the same infrastructure as is used by the telephone system, including telephone lines and the fiber optic "backbone" (Id., at 22). There is "end to end connectivity" in an Internet transaction in that the computers at opposite ends of a transmission must establish communication with one another, i.e., a "session." (Id.). On cross-examination, Dr. Tygar conceded that a book he uses in instructing his students provides a definition of "connection" which does not include the Internet, but does include the telephone network (Id., at 37). He believes this to be an error in the text (Id., at 40), and noted when he was recalled as a witness that the same text, at a different point, clearly states that a type of connection is made over the Internet (Id., at 161), and that the ultimate delivery to the receiving user in an Internet communication is in the same order as it was sent (Id., at 162).

Cell phones use radio waves, and call segments may be "handed off" between cells in a network while the cell phone user is traveling (Id., at 23). This is comparable to the manner in which the Internet uses different means of routing a message, i.e., the path used for different "packets" of information may change.

Dr. Tygar also offered opinions concerning the meaning of various terms in the patent. Briefly, they are that one skilled in the art would not have interpreted the Hair patents (the patents-in-suit, identified by the inventor's name) as covering instructions to produce sound, or MIDI (Id., at 25). Further, the process of compressing or storing digital audio is not in the nature of "computer instructions" (Id., at 27).

Also, the term "telecommunications" as used in the patents-in-suit includes both telephone communications and TCP/IP networks such as the Internet (Id., at 28). Each provides end-to-end connectivity, and uses the same infrastructure (Id., at 29). Further, TDM has many similarities to the packet-switch nature of the Internet (Id.).

The term "telephoning" includes both human and machine-initiated calls (Id.).

"Providing payment electronically" can constitute any means of payment which is accomplished over telecommunications lines, such as the buyer providing his or her credit card number, or the more advanced means of electronic commerce systems now being used on the Internet (Id., at 30).

ii. Professor Larky

Arthur I. Larky, Ph.D., is professor emeritus at Lehigh University where he taught as a tenured professor in electrical engineering and computer science from 1960 until his retirement. (Docket # 95 at 44-45; Docket # 68). He holds a Ph.D. in electrical engineering (Docket # 95 at 47), and has extensive experience teaching the use of computers in the telephone system for Bell Telephone Laboratories from 1962 through 1992 (Id., 47-48). He has also helped design telephone switching systems and performed experimental work for telephone companies (Id., at 49). He was called by the defendants.

Professor Larky reviewed the Hair patents and concluded that one "skilled in the art" for purposes of those patents would be "someone who had a background in computer engineering or a combination of computer engineering and computer programming background and about two years experience in actually doing some things in the field." (Id., at 50-51).

Doctor Larky testified that an integrated circuit (IC) is a microprocessor or the "brains" of a computer (Id., at 53). Random Access Memory (RAM) is the "basic storage unit for programs and data on a computer." (Id., at 54). Although the patent lists "incoming" and "playback" RAM separately, such functions are normally performed by the same "set of chips" in a computer (Id.). The "hard disk" of a computer is a metal disk which retains information recorded on it until that information is erased (Id., at 55).

Dr. Larky testified that it was common in 1988 to connect two computers directly by means of telephone lines (Id., at 56). One would use the keyboard or the mouse to instruct the computer to make a telephone connection through a modem (Id., at 57-58). Further, there were also, in 1988, services available which would provide computer files for download over telephone lines (Id., at 58). Files which produced audible sounds could also be downloaded in this time frame (Id., at 59).

Professor Larky described the connection made between computers via telephone lines in 1988 as establishing a "direct line connection" in that a wire would connect the computer to the telephone company, and the company would "close the necessary switches" so that the signals reach the other end (Id.). There is, in his view, allowing for the use of fiber optics, "a closed electrical path" from one computer to the other (Id., at 60). The telephone system was using both analog and digital formats in 1988 (Id., at 63).

Important to his discussion of the nature of the connections made is the concept of "conduction path," which has two meanings. The first is an electrical conduction path whereby electrons flow through a wire, and the second denotes a path through which a conversation is conducted, but which is not necessarily purely

electrical in nature (Id., at 65).

Dr. Larky also addressed time division multiplexing, or, TDM, which, he explained, works because the segments are always in a predetermined order. Hence, the receiving multiplexing equipment parcels the information out in the order in which it is received (Id., at 67-68). Further, each piece of information or segment follows the same path as the first. These segments are not individually "addressed" in any way because they are "in step" and are thus sorted out on the receiving end (Id., at 68, 71). There is also no means for verifying the correct delivery of information (Id., at 72). In Dr. Larky's view, as of 1988, a "solid conduction path" would exist between computers which accessed each other over the telephone system (Id., at 73).

As of 1988, two computers could connect via modem over telephone lines and exchange data (Docket # 68 at 7). This is accomplished in "a single, unbroken transmission." Data exchange via a package-switch network occurred in 1988, as it does today, by the "executing computer dividing up data into packets as described by internet protocols, transmitting each packet individually to the second computer by way of network routers." The second computer, after receiving all of the packets, reassembles the data into its original form. During the packet-switch transmission, no "continuous point-to-point conduction path" is established between the computers, and the information is not sent in one unbroken transmission (Id.).

At the hearing, Dr. Larky explained that the information being exchanged in an Internet transmission is broken down into packets by the sending computer, and that the packets are individually "addressed" so that the particular packet's proper place in order can be identified at the other end of the transmission (Docket # 95 at 74). The packets are sent over the telephone system to Internet "nodes," where a computer "looks" at a packet and sends it on to another such node, an so on toward its final destination (Id., at 74). Not all packets from the same transmission necessarily follow the same path (Id., at 75). Also, a particular packet may be detained, with some packets sent later arriving at their destination before packets sent earlier (Id., at 77). A person skilled in the art would have been aware of the existence of the Internet as of 1988 (Id., at 78).

In summary, Dr. Larky indicated that the Internet is connectionless and best-effort and, therefore, inherently less reliable than a telephone connection (Id., at 79). The Internet is "connection-oriented," which means it attempts to do what a connection would do (Id., at 89). He contrasted the used of TDM by the telephone system on the basis that TDM packets are of uniform length, whereas Internet packages are of varying lengths (Id., at 85). A packet used in a switch network has a "checksum" and an "address," consisting of digital information which tells a receiving computer how large the total communication should be, and the ultimate destination, respectively. "Segment" is a term used to identify a TDM bit of information, as opposed to "packet" (Id., at 88).

The Internet operates according to the Transmission Control Protocol and the Internet Protocol ("TCP/IP"), which are part of the *Internet Suite of Protocols* (Docket # 68 at 4). TCP governs how data is broken down into packets, IP governs the routing of the packets, and TCP governs how the packets are recombined (Id.).

On cross-examination, Dr. Larky conceded that connections exist between each router, or on each "leg," of a packet-switch network (Docket # 95 at 98-100). In fact, Newton's Telecom Dictionary (Plaintiff's Exhibit A at page 680) states that "TCP first establishes a connection between the two systems that intend to exchange data" (Docket # 95 at 102-03). Dr. Larky was also shown a glossary of telecommunications terms from the Federal Standard, marked as Plaintiff's Exhibit B (Id., at 104). There is no date on this exhibit,

although there is reference therein to standards adopted in 1994. In that glossary, "telecommunications" is defined as meaning any transmission by wire, radio, optical or other electromagnetic systems (Id.).

Dr. Larky, too, offered an opinion concerning the Hair patents. In his view, one skilled in the art in 1988 would have understood "that the Internet is connectionless" and that "connecting electronically via a telecommunications line" would not apply to Internet communications (Id., at 90). Further, there is no reference to computer networks in the patents or the accompanying papers, and no reference to the Internet or packet-switch networks (Id., at 92).

Dr. Larky also filed a rebuttal declaration (Docket # 88) in which he explains that a user of the Internet today normally has a continuous connection with the Internet Service Provider ("ISP") over a telephone line, and that the ISP then "affords access" to the Internet (Id., at 8). There is, however, no "similar connection" formed with the server of the ISP and other routers and servers located on the Internet (Id., at 9).

iii. James A. Moorer, Ph.D.

Also testifying for defendants was James Anderson Moorer, an expert in the field of digital audio signals and digital audio music (Docket # 95 at 110-11; Docket # 86). He has Bachelor's Degrees in electrical engineering and applied mathematics, and a Ph.D. in computer science (Docket # 95 at 113). He has extensive experience with digital audio, including work with Lucasfilm and later for his own firm, Sonic Solutions (Id., at 114). Dr. Moorer has created software which address sound concerns in the film industry (Id., at 114-115), and has published in the area of digital audio, and has taught courses at Stanford University in that field (Id., at 115-16). He built a number of products used in the digital audio field, and composed digital audio music, including the theme played before the feature film in every theater equipped with a THX sound system (Id., at 116-17). He has received numerous awards, including an Emmy and a technical Oscar (Id., at 117).

Dr. Moorer believes one "skilled in the art" for purposes of these patents would possess a degree in engineering or computers, but that some experience or skill in digital audio or digital music would be necessary as well (Id., at 112).

In 1988, the Pulse Code Modulation ("PCM") format, the format described by Dr. Tygar as a digital representation of a sound wave, would not have been practical in 1988 on account of the size of such files, while MIDI and other formats would have been (Id.). This is because commercially available hard drives at that time were between 10 to 40 megabytes in size for a consumer (Id., at 143), while such hard drives were as large as 85 megabytes for professional applications (Id., at 144). The 85 megabyte size would have allowed for the storage of about 8 minutes of music in PCM format (Id.). To do "thousands" of songs, as referenced in the patents, would have required about 30 gigabytes of storage space, a size not commercially viable for consumers at that time (Id., at 145).

However, thousands of songs could have been stored at that time in MIDI format (Id., at 146). For example, a performance of Beethoven's piano sonata "Fur Elise" played for the court in PCM format was 74,000 bytes for 6.7 seconds, while three minutes of the same music in MIDI format was 6,600 bytes (Id., at 148-49). In Dr. Moorer's opinion, MIDI is digital music (Id., at 149), although "[i]n some ways, MIDI operates like the old player pianos, in that it is capable of recording the exact performance without having to record the sounds." (Docket # 86 at 10). In fact, he would have chosen MIDI as the commercially viable format in 1988 for the invention disclosed in the patent (Docket # 95 at 150).

Further, the CD format in 1988 included both "digitized audio" as well as "music encoded as MIDI data and graphical information as well." (Docket # 86 at 3). "Therefore, as of 1988, the complete specification for CD-based audio was not merely sound waves in digital form, but also included instructions of various kinds, optionally including MIDI data." (Id., at 6).

All forms of digital music, MIDI or otherwise, go through a digital to analog converter and then to a speaker (Id., at 121). The audio format for a compact disk was first published in the early 1980's (Id., at 123). One form of representations on a CD is pulse code modulation or PCM (Id.). PCM audio on a compact disk is more than a sound wave converted to binary form (Id., at 124). There are correction codes and instructions which direct the decoding process (Id., at 124-25), as well as instructions which start and stop the individual tracks (Id., at 125). Some CDs in 1988 had MIDI information on them (Id., at 127).

There were forms of digital audio in 1988 other than PCM or MIDI (Id., at 128; Docket # 86 at 5). All of these forms contain some kind of instructions or directions, such as commands to the decoding software and hardware concerning interpretation of the data (Docket # 95 at 129). MP3 is another means of digital audio, and it also contains instructions (Id., at 130).

MIDI revolutionized music in the mid-80's, by allowing artists to play complex pieces without doing so all at one time (Id., at 132). MIDI does have limitations, such as the inability to represent voices well (Id., at 136). MIDI, however, does not lack nuance (Id.).

All methods of producing sound digitally ultimately involve "numbers that describe how to make a sound pressure wave. In other words, they include instructions to a computer decoding device as to how to create a voltage that can then be sent to a loudspeaker or headphone." (Docket # 86 at 12).

In Dr. Moorer's opinion, the inventor did not exclude MIDI from the definition of "digital audio music" (Id., at 113). Rather, Mr. Hair was referring to any means of using zeros and ones to encode musical sound (Id., at 138). The witness based his opinion on the fact that the patents do not use words "sound wave" or "sound pressure wave" at any point, and there is no limitation in the patent on the way the music is stored digitally (Id., at 139).

Also, the use of the term "laser retrieval" in the specification means any information which can be placed on CD (Id.). MIDI is not excluded by this language (Id., at 141).

"Software" as used in the patent means a way of representing digital music as opposed to being a physical device (Id., at 142). Thus, any method of creating music from zeros and ones appears acceptable under the patent (Docket # 86 at 12).

3. CONSTRUCTION OF THE CLAIMS PRESENTED AT THE MARKMAN HEARING

The parties dispute the meaning of numerous terms, many of which are used throughout the three patents-in-suit. The court will initially focus upon the four terms which the parties recognize as being at the center of the dispute in this matter.

A. "Digital Audio Signal"

[27] This term appears in each of the patents, beginning with the '573 patent in Claim 1, which begins "A

method for transmitting a desired *digital audio signal* stored on a first memory ..." (Docket # 69, Exhibit J at 6) (italics added). Plaintiff maintains that this term should be construed to mean "a sound wave converted to binary form." (Docket # 69 at 11). Defendants assert that the term's proper construction should be thus:

A representation of audio in binary form intended to produce an audible sound. It can be recorded sound, a sound effect, or instructions for producing a sound, and need not be a complete song.

(Docket # 65 at 15). The essence of the dispute in this instance is whether or not the term "digital audio signal" includes MIDI instructions or computer software programs as opposed to simply digital representations of audible sounds.

MIDI is a means of creating musical sounds by instructing a computer to play a synthesizer to produce a specified tone. By contrast, Pulse Code Modulation, or PCM, is a means of converting a sound wave into binary form so that the same sound wave (or one so close to the original so as to be indistinguishable by the human ear) may be produced when the binary language is interpreted by a computer and sent through a digital/analog converter to a speaker.

Sightsound asserts that the phrase "digital audio music" does not include MIDI representations. Resort to contemporaneous dictionary definitions for those skilled in the art supports this conclusion. The IEEE FN6 Standard Dictionary of Electrical and Electronics Terms in 1988 defined "audio" in the context of data transmission as "pertaining to frequencies corresponding to a normally audible sound wave-roughly 15Hz-20Hz." (Docket # 69, Exhibit A). "Digital" is defined as "pertaining to data in the form of digits." (Id., Exhibit B). "Signal," again as employed in the context of data transmission, is "(a) a visual, audible or other indication used to convey information; (b) the intelligence, message or effect to be conveyed over a communication system; (c) a signal wave; the physical embodiment of a message." (Id., Exhibit C).

FN6. The Institute of Electrical and Electronic Engineers, which is part of an American National Standard (ANSI).

Defendants argue that the phrase "sound wave," which is part of Sightsound's proposed definition of "digital audio signal," is nowhere to be found in the specification. While this is true, "sound wave" is part of the IEEE definition of "audio," and is a source to which one skilled in the art would refer in construing the claim terms. Indeed, Sightsound persuasively argues that, relying upon contemporaneous trade definitions, the term "digital audio signal" refers to "a normally audible sound wave" which has been represented as "data in the form of digits" for purposes of sending or conveying it.

Resort to the specification for purposes of determining if a different meaning was intended by the patentee does nothing to change the meaning of the phrase. The specification of all three patents provides several clues concerning the meaning of "digital audio signal." A review of the specification in some detail at this point will serve to provide needed background for this term, as well as for the other terms which remained to be construed.

First, in rather graceless language in common to the species, the specification contains a description of the field of the invention:

The present invention is related to a method for the electronic sales and distribution of digital audio or video

signals, and more particularly, to a method which a user may purchase and receive digital audio or video signal from any location which the user has access to a telecommunication line.

(Docket # 70, Tab 51, '573 Patent at col. 1, lines 9-14). What follows is a description of the then-existing "medium" or "hardware units" of music, which include records, tapes and compact discs (Id., lines 17-68). Throughout this discussion, the disadvantages inherent in the use of "hardware units" for storing, selling and playing back music are discussed. Then, the advent of digitizing sound is discussed:

QUALITY: Until the recent invention of Digital Audio Music, as used on Compact Discs, distortion free transfer from the hardware units to the stereo system was virtually impossible. Digital Audio Music is simply music converted into a very basic computer language known as binary. A series of commands known as zeros and ones encode the music for future playback. Use of laser retrieval of the binary commands results in distortion free transfer of the music from the compact disc to the stereo system....

(Id., lines 50-59). With respect to copyright protection of musical pieces, the specification indicates that, "[i]f music exists on hardware units, it can be copied." (Id., col. 2 lines 8-9).

Thus, the objectives of the invention are listed as providing a new "methodology/system" to: (1) "electronically sell and distribute Digital Electronic Music"; (2) "electronically storing and retrieving Digital Audio Music"; (3) electronically sorting, cuing and selecting Digital Audio Music; and (4) preventing "unauthorized electronic copying" of Digital Audio Music. (Id., lines 10-23).

The specification goes on to explain that Digital Audio Music, in the disclosed invention, is stored on only one piece of "hardware," that being a hard disk (Id., lines 31-34). This eliminates the former types of "hardware" identified in the specification, namely "records, tapes, or compact discs." (Id., line 34). The reader is further informed that, "[i]nasmuch as Digital Audio Music is software an[d] this invention electronically transfers and stores such music, electronic sales and distribution of the music can take place via telephone lines onto a hard disk." (Id., lines 63-67). A more concise description of the invention is then provided:

The present invention is a method for transmitting a desired digital video or audio signal stored on a first memory of a first party to a second memory of a second party. The method comprises the steps of transferring money via a telecommunications line to the first party from the second party. Additionally, the method comprises the step of then connecting electronically via a telecommunications line the first memory with the second memory such that the desired digital signal can pass there between. Next, there is the step of transmitting desired digital signal from the first memory with a transmitter in control and in possession of the first party to a receiver having the second memory at a location determined by the second party. The receiver is in possession and in control of the second party. There is also the step of then storing the digital signal in the second memory.

(Id., col. 3, lines 3-19). This description is repeated after the preferred embodiment is set forth (Id., col. 5 lines 29-45).

Again, it is helpful to focus the court's inquiry on the crux of the dispute between the parties. Defendants assert that any means of directing a computer to make sound through use of binary code is acceptable as a "digital audio signal" for purposes of the invention. This is so, defendants argue, because the specification identifies "digital audio music" as "music converted into a very basic computer language known as binary"

and because the specification refers to Digital Audio Music as "software." (Docket # 65 at 16). MIDI is a form of computer "software" in that it consists of instructions, stored in binary form, which will produce sound when interpreted by the computer. "Instructions"to produce sound are, in defendants' view, part of the claimed invention.

Sightsound responds that software programs, such as MIDI, are not properly within the scope of the term "digital audio signal." The manner in which the terms "hardware" and "software" are used in the specification are, Sightsound argues, the most important indicia of the meaning of those terms. The specification consistently refers to any physical storage medium for sound, whether in binary form or not, as "hardware." Such storage units including records, tapes, compact discs and even the hard drive of a computer. The specification explains that the key advantage to storing music as digital signals is that the digital signal is "software," i.e., it can be transferred to a purchaser without also transferring along with the signal some type of "hardware" unit on which the signal is stored.

There are repeated references in the specification to "music" and "songs." Likewise, the patentee refers to storing music on other media, such as records and tapes, which do not normally contain computer instructions. These references from the specification lead the court to conclude that Sightsound's definition is the preferred one in this case, and that "digital audio signal" does not include all types of computer software or, more specifically, MIDI. FN7 Rather, it includes only digital representations of sound waves.

FN7. This conclusion has been reached without reference to extrinsic evidence, with the exception of dictionary references. Further, evidence presented by defendants addressed to the ability of the technology available to the normal consumer in 1988 to handle the transfer of PCM songs is not, at this stage, relevant.

The court understands that, in order to play these digital representations of sound waves, a computer must have instructions for converting the binary into analog form. Hence, as Dr. Moorer pointed out, compact discs include, along with a digital representation of sound waves, instructions concerning how those digital representations are to be interpreted. This, however, does not alter the nature of what is being represented: a recorded sound as opposed to an instruction to a computer to play an instrument which, in turn, will produce a sound.

The specification does not, therefore, support the construction proffered by defendants that "digital audio signal" includes "software programs." The specification does not refer to such programs, and clearly uses "software" in a sense different from what is commonly understood when used to refer to "software programs." FN8 Further, the specification focuses upon the common practice of selling musical recordings, and does not mention storing or transferring instructions for playing music.

FN8. This ruling does not require resort to extrinsic evidence. If it did, however, the undersigned would find persuasive the testimony of the inventor, Arthur Hair, that MIDI is "a set of instructions" while "digital music is music that is embodied in a digital signal ... one is a set of instructions and the other is music digitized." (Docket # 74, Exhibit A, Tab 2, Hair Deposition at 169:4-10). This is consistent with Dr. Tygar's and Dr. Moorer's testimony, that MIDI, while a means of creating music, is not a representation of a sound wave.

B. "First Party/Second Party"

[28] Again, these are terms utilized throughout the patents-in-suit referring to the two entities which interact during the transfer of the digital signal, e.g., a "method for transmitting a desired digital audio signal stored on a first memory of a first party to a second memory of a second party...." (Docket # 69, Exhibit J at 6). Plaintiff asserts that the term "party" should be construed as meaning "an entity and/or its agent." Defendants respond that the meaning, each time that the terms are used, should be "a single financially distinct entity at locations separate and distinct from each other."

Sightsound does not contest that, in the context of the claims at issue in this case, the "first party" and "second party" are financially distinct from one another, or that various claims require that the transaction occur when certain items or entities are at distinct locations (Docket # 96 at 8). However, Sightsound takes the position that "financially distinct" and "at separate locations" are limitations imposed, where appropriate, in particular claims, and that there is no need to impose them on the definition of the terms "first party/second party" each and every time that those terms are used.

In claim 1 of the '573 patent, the reader is informed that during the transferring money step the "first party" is "at a location remote from the second memory," and that the "second party" is "financially distinct from the first party." (Docket # 70, Tab 51). This claim also contains the limitation that the second party is in the position of "controlling use and in possession of the second memory" (Id.). Later in this report, the "control and possession" question is addressed. It is enough to say, however, that the combination of the first party being at a location remote from the second memory, and the second party being in possession and control of the second memory, all but ensures that the first and second party will be at distinct locations. The remaining two claims in suit from the '573 patent, claims 2 and 3, are dependent claims which also have these limitations.

The '734 patent includes in each of the asserted claims the requirement that the memory of the first party and that of the second party be "remote" from one another (Docket # 71, Tab 35, '734 Patent Claims 1, 4, 11, 26) FN9. Hence, the issue of whether the parties are at separate locations is not specifically addressed, although the use of memories at distinct locations would generally describe situations where the parties are with their respective memories. Further, as Sightsound suggests, the claims also include at least one step which requires that money or a fee be charged (Claims 1, 26), or that the digital audio signal is "sold" to the second party (Claim 4), or that there must be a means for "transferring money" between the first and second memories (Claim 11). None of these transactions makes sense unless they occur between parties which are "financially distinct."

FN9. Again, the remaining claims are dependent claims which incorporate these same limitations.

Finally, the '440 patent also contains language indicating distinct locations for the first and second party memories (Docket # 69, Exhibit K, Claims 2, 12, 22, 36, 41), as well as "charging a fee" or other indicia that the parties are, necessarily, financially distinct (Id., Claims 1, 12, 22, 36, 41).

Therefore, in virtually all of the claims asserted in this case, the "first party" and the second memory, or the first memory and second memory, must be remote from one another.FN10 The context of those claims further requires that the parties be financially distinct in order for their actions to read on the patent. This distinction, however, is not a matter of construction of the terms "first party/second party," but of the language of each particular claim in which those terms are used. In other words, the location and financial distinctions arise, if at all, from other language in the claims, and not from the use of the terms "first party"

or "second party." The terms will not be construed to include any location or financial distinctions apart from those imparted in the language of particular claims.FN11

FN10. The two claims which do not contain such language are Claims 1 and 11 of the '440 patent, although each claim states that the connection between the first and second party memories is to be made through telecommunications lines. It may be possible, therefore, for these claims to apply to a situation where two financially distinct entities have their equipment at the same location, e.g., in the same room, even though the connection between them occurs over telecommunications lines. The court, however, again sees no basis for including within the term "party" the requirement that the parties be at distinct locations. Any further analysis of these claims must await issues which lie beyond claim construction.

FN11. The court's finding that "financially distinct" is a concept incorporated into each claim-in-suit by the use of the concept of a sale taking place makes it unnecessary for the court to address defendants' argument that the patentee bound himself to "financially distinct" parties through an amendment process before the PTO (See Docket # 75 at 7). Since the asserted limitation appears to be contained in each claim asserted by Sightsound, and since Sightsound does not contest that the first party and second party must be financially distinct from one another, there is no need to determine whether the claims must be construed in light of subject matter allegedly abandoned during prosecution of the patents.

There is a further dispute, however, concerning the term "party," and it has to do with Sightsound's insistence that the term includes an entity or an entities' agent. Defendants assert that there is no indication in the patents or the specifications that an "agent" may act on behalf of either the first party or the second party. Defendants also argue that permitting the use of the term "agent" would create a situation where infringement may occur in one state, but not in another, because of differences in the laws of agency from state to state.

Sightsound responds that the term "agent," offered as part of the definition of "party," simply means "someone who stands in the shoes of the first party," and that there is no intent to imply any particular legal relationship (Docket # 96 at 9).

In the court's view, the use of the term "party" is clearly meant to include any legally distinct entity which performs the activities described. For example, a corporation could clearly be either the "first party" or the "second party" for purposes of the claims in suit. A corporation acts only through its employees or "agents". Likewise, a person may also act on behalf of another. The court agrees with plaintiff that there is no language in the claims which suggests that "first party" and "second party" must act for themselves in performing the tasks set forth in the claims. Likewise, nothing in the specification indicates that the patentee was restricting himself in such fashion.

On the other hand, defendants are correct that the term "agent" may add ambiguity to a term which is not ambiguous. There is no need to add such a term to make the meaning of the claims plain.

Reading the claims-in-suit, the court has no difficulty construing the term "party." A party is an entity, whether a corporation or real person, possessing and/or controlling the stated structure, or performing the necessary steps for the claims. One skilled in the art would understand that a party can act through another. Thus, although the term "agent" will not be added to the term party, the term will not be construed so as to

require that a party act on its own behalf for purposes of the claims in suit, i.e., a party may, as in all other matters, act through others it authorizes to do so for purposes of the claims in suit.

C. "Control" and "Possession" and related phrases.

[29] "Control," in plaintiff's view, is "the authority to guide or manage." "Possession" is "to have and to hold as property." Plaintiff maintains that these terms should be accorded these meanings wherever used, including when they are used in combination or separately.

Defendants, on the other hand, seek to have each of the following phrases construed as meaning the same thing: "controlling use and possession," "in control and possession," "in possession and control," "controlling," and "controlling use." These must each be construed, in defendants' view, to mean "in physical control and ownership." Therefore, there are two disputes here which are interwoven. The court must determine what the terms mean and whether they are being used interchangeably.

Initially, it must be noted that both Sightsound and CDnow offer definitions for each term. "Control" in defendants' view is "physical control" while "possession" is "ownership." These terms may be measured against Sightsound's proposed definitions, and then the question whether they are being used interchangeably in the patent may be addressed.

A useful starting point for construing these terms is Claim 1 of the '573 patent:

1. A method of transmitting a desired digital audio signal stored on a first memory of a first party to a second memory of a second party comprising the steps of:

transferring money electronically via a telecommunications lien [sic] to the first party at a location remote from the second memory and **controlling use** of the first memory from the second party financially distinct from the first party, said second party **controlling use and in possession** of the second memory;

connecting electronically via a telecommunications line in the first memory with the second memory such that the desired digital audio signal can pass there between;

transmitting the desired digital audio signal from the first memory with a transmitter **in control and possession** of the first party to a receiver having the second memory at a location determined by the second party, said receiver **in possession and control** of the second party; and

storing the digital audio signal in the second memory.

(Docket # 69, Tab J, Claim 1) (emphasis added).

The dictionary defines "control" as meaning "exercise authority or influence over: direct" (Docket # 69, Exhibit E, The 1995 Webster's II New College Dictionary). "Possess" is defined as "to hold as property or occupy in person; have as something that belongs to one; own" (Webster's New World Dictionary, Third College Edition, 1988). "Possession" is defined as "a possessing or being possessed, as by ownership or occupancy; hold" (Id.). That these dictionary definitions offer slight but important variations of the meaning for the term "possess," only comports, in the court's view, with the common understanding of this prosaic term. One can "possess" one's house as a renter, with a possessory interest assertable against the whole

world except, under some circumstances, against the owner, who also enjoys a possessory interest. "Possession" thus does not mean "ownership"; it means "holding as property."

[30] The dispute with respect to "control," however, is whether or not the patents require that physical control be exercisedover a particular object, or if the authority to direct the use of the object is sufficient. A review of the claims in suit does not reveal any support for defendants' assertion that physical control over any particular object is required as opposed to the authority to direct the use of that object. Therefore, physical control is not a requirement where the term "control," or any derivation thereof, is used in the claims-in-suit.FN12

FN12. Defendants also make the argument that referring to the "plain meaning" of the terms used would end in an absurd result (which, in any event, defendants profess would be acceptable to them). Specifically, defendants allude to the third paragraph of Claim 1 of the '573 patent, where the receiver "is in possession and control of the second party." A "plain reading" of this language, in defendants' view, would require the receiver to possess and control the second party, rather than the other way around (Docket # 65 at 21-22). The court disagrees. At most, defendants have pointed out the infelicitous placement of a verb. This does not, however, establish that the meaning of the terms in issue are ambiguous. Rather, a reader of normal skill in the art, and with a normal understanding of the English language, will not be confused by the claims which place (or misplace) the terms "possession" and "control." In fact, it does not take one skilled in any art, past a common understanding of English, to understand that "a transmitter in control and possession of the first party" means that the first party controls and possesses the transmitter.

The issue of the interchangeability of the terms is largely disposed of by recognition that the terms do have generally accepted meanings which are distinct. Thus, in Claim 1 of '573 patent, the first party has "controlling use" of the first memory, while the terms possession and control are used together with respect to the first party vis-a-vis a transmitter, and the second party vis-a-vis both the second memory and a receiver. The claim clearly makes a distinction, with respect to possession, between the first party's memory and the first party's transmitter.

Indeed, being in control of a thing, however, is not the same as being in possession of that same thing. The language of the '573 patent does not indicate to the court, nor would it to one skilled in the art, that the party is "in physical control and ownership" when the party is merely "controlling use" of the first memory.

In the court's view, the fact that the terms control and possession have common meanings which are not identical, and that they are not used jointly in all of the relevant patent claims, is strong evidence that each term is intended to convey its own meaning. Also, the dispute is limited in this case to several instances where the first party is asserted to be either "controlling" or "controlling use" of the first memory FN13

FN13. Defendants also assert that the term "controlling" is used individually with respect to the second party controlling the second memory in Claim 3 of the '573 patent (Docket # 65, Appendix B at 3.) However, that claim is a dependent claim, which includes the limitation from Claim 1 that "said second party **controlling use and in possession** of the second memory." (Emphasis supplied). Thus, Claim 3, by definition, includes the restriction that the second party controls the use and possesses the second memory. This is, therefore, a non-issue with respect to Claim 3 of the '573 patent.

In Claim 4 of the '734 patent, by contrast, the phrase "possession and control" is used only once, and that is in reference to the second party possessing and controlling the second memory (Docket # 66, Exhibit 2 at Claim 4, column 10, lines 3-5). Claim 11, by contrast, places the first memory "in possession and control of the first party," and the second memory "in possession and control of the second party." (Id., Column 10, lines 54-56).

Defendants point to the '734 patent specification where it is stated that "the receiver is in possession and control of the second party. The receiver is placed by the second party at a second party location determined by the second party." (Docket # 66, Exhibit 2, '734 Patent at 5:56-59). Defendants argue that this, too, evidences that control **and** possession are required when either term is used in a claim. However, defendants fail to note that this language is used in describing the preferred embodiment of the invention. Indeed, the first portion of the first sentence cited by defendants reads in relevant part "preferably having the second memory while the receiver is in possession and control of the second party." (Id., 5:54-55). Further, the cited portion of the specification is addressed to the second party and the second memory. As noted above, the only disputed used of "control" are with reference to the first party and the first memory. Thus, this is not persuasive evidence supporting defendants' argument.

Further, to the extent that any ambiguity might exist, resort to the prosecution history establishes that the examiner, a person skilled in the art, understood "control" to mean " 'authority to guide or manage.' " (Docket # 70, '573 File History, Tab 13 at 3). This was expressed in the course of explaining the term "control" in light of prior art, the Lightner patent. Likewise, the term "possession" was explained by the applicant in 1991, in the course of distinguishing the patent from the Hughes patent:

[The] Hughes' receiver, although located in the user's home is taught to be owned by the owner of the transmitter and is thus 'in possession' of the owner.

(Id., Tab 34 at 9). Thus, the prosecution history also informs the court that control and possession are separate terms, that possession has an element of holding as property attached to it, and that physical control is not necessary.

The court therefore agrees that the terms control and possession have the meanings of "authority to direct" and "holding as property," respectively. Further, the court finds that the terms are not used interchangeably in the claims in suit.

D. "First Memory (or hard disk)/Second Memory (or hard disk)"

[31] Defendants assert that, each time the terms "first memory" and "second memory" are used (and they are used throughout the three patents-in-suit) they should be read as being in the "possession and control" of the respective parties. Sightsound responds, much as it did with respect to the location dispute concerning the terms "first party/second party," that "control" and "possession" of the first and second memories are expressly stated in those claims which possess those limitations.

In support of their position, defendants argue that the specification of the patents recites explicitly that the first memory is in the first party's control and possession, and that the "receiver" is in the second party's possession (Docket # 70, Tab 51, '573 Patent at col. 3, lines 10-18). The terms "possession" and "control" are used throughout the patents, and the court finds that they are used where and when the patentee intended. In any event, reading them into the patent claims every time the first memory or second memory

are mentioned would be an improper reading into the claims of a limitation set forth in the specification. Intervet Am., Inc. v. Kee-Vet, Inc., 887 F.2d 1050, 1053 (Fed.Cir.1989).

Defendants also assert that, with respect to the '573 patent, the inventor overcame a prior art rejection by asserting that the "second party" has "control of the second memory throughout the transaction." (Id., Tab 16, at 5-7). Accepting this argument on its face, it proves too little. Claim 1 of the '573 patent explicitly requires (and this requirement carries through to dependent claims 2 and 3) that the second memory is in the second party's possession and control. The reference to the prosecution history made by defendants does not address the possession and control of the first memory by the first party.

[32] The court would be rewriting the claims asserted to read "first memory" and "second memory" to include the restriction that they each be possessed and controlled by the respective parties. Such a reading would, moreover, contradict the express terms of the claims. "In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to 'particularly point[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention.' 35 U.S.C. s. 112, para. 2." Interactive Gift, 231 F.3d at 865. The terms "first memory" and "second memory" will not be construed to include the terms "in the control and possession" of the respective parties unless such language expressly appears in the claim.

E. "Transferring money electronically," "Charging a fee," "providing a credit card number ... so the second party is charged money," "Selling electronically," "Electronic sales," and "Electronically Selling."

[33] Sightsound asserts that the term "transferring money electronically" should be construed to mean "providing payment electronically." Defendants assert that "transferring money electronically" and "charging a fee" should be construed to mean the same thing: "providing an authorization over telecommunications lines which allows the first party access to funds." Put more directly, Sightsound asserts that the claim language permits any type of payment which is accomplished electronically. Defendants assert that the only type of payment arrangements covered by the claim language would be provision of authorization by the buyer, as in providing a credit card number, which permits the seller access to funds.

The '573 patent recites in claim 1 the step of "transferring money electronically via a telecommunications [line]." (Docket # 70, Tab 51, Column 6 lines 8-9). Then, in claim 3 (a dependent claim) an additional limitation is recited "wherein the transferring step includes the steps of telephoning the first party ... by the second party; providing a credit card number of the second party ... to the first party so the second party is charged money." (Id., lines 29-36).FN14 The specification states that this is "a method for the electronic sales and distribution of digital video and audio signals, and more particularly, to a method by which a user may purchase and receive digital audio or video signal from any location which the user has access to a telecommunication line." (Id., Column 1, lines 9-14).

FN14. Defendants' voice a concern that, if Sightsound's definition is accepted, Sightsound may later choose to argue that "payment" would exclude providing authorization for payment, as by providing a credit card number. The court cannot agree. The provision of authorization for use of a credit card is expressly claimed in claim 3 of the '573 patent. Further, while this express language is not used in Claims 11-14 of the '734 (the other instance where "transferring money electronically" appears) Mr. Hair's declaration in the prosecution history of the '573 and '734 patents clearly binds Sightsound to include situations where authorization to charge a credit card is provided over telecommunications lines.

Defendants assert that missing from the specification is any mention of the word "payment" in relation to the term "transferring money electronically." (Docket # 65 at 25). While this is true, the concept of the second party purchasing, i.e., making a payment for and receiving, the "desired digital signals" is manifest. Defendants also argue, however, that the inventor noted during the prosecution history of both the '573 and '734 patents that "[o]ne skilled in the art would know that an electronic sale inherently assumes a transferring of money by providing an account number or a credit card or a debit card number (since that is the only way for electronic sales to occur) coupled with a transferring of a service or product." (Docket # 70, Tab 37, at 2; Docket # 71, Tab 10, at 2).

In the court's view, there is no need to resort to the prosecution history. The fact that the '573 patent employs "transferring money electronically" as a general term, and includes within that term the concept of providing a credit card number and authorization, establishes clearly that the methods of providing payment electronically over a telecommunications line include but are not limited to providing authorization to charge a credit card account. If this had been intended, there would have been no reason to use a more general term and then include provision of a credit card account number within that concept.

Also, at issue is the phrase "charging a fee via telecommunications lines," which is language used in claims 2, 36 and 37 of the '440 patent. The context of this claim language also does not limit itself to any specific manner of accomplishing the end result, which is to ensure payment for the services provided through information provided over a telecommunications line.

A related phrase, "providing a credit card number ... so the second party is charged money" is also disputed by the parties. Defendants assert that this must be accomplished over the telephone, verbally, between two persons, one at each location (Docket # 65, Appendix A at 4). Sightsound objects to the inclusion of the "person to person" limitation, and to the verbal exchange requirement (Docket # 74 at 24). Indeed, the court can find no support in the plain language of the claims, or the specification, for the requirement that the information be exchanged in a person-to person call.

Providing authorization to access a credit card account is one means of "transferring money electronically." There is no evidence that the inventor ceded coverage of any other means of making payment for the desired digital signals so long as it is done "over telecommunications lines." In the court's view, "transferring money electronically" is a sufficiently descriptive phrase that no further description than that set forth above is necessary for its construction.

Related to this discussion is the dispute concerning the terms "selling electronically," "electronic sales," and "electronically selling." Sightsound contends that each of these three terms should be interpreted as meaning "providing a product or service electronically in exchange for payment provided electronically." Defendants agree that these terms each mean the same thing, but would have them be construed to mean "a transaction including authorization over telecommunications lines which allows the first party access to funds, and the providing of a service or product." Defendants present the same argument as they did for the phrase "transferring money electronically." Again, the court is not persuaded.

Defendants further assert that "electronic sales" may include situations where the product is not provided electronically. Sightsound disagrees, and argues that, in the context of these patents, the service must also be provided electronically.

The claims which use these terms all appear in the '734 patent and the later '440 patent. An illustrative example of the use of the language within a claim is claim 4 of the '734 patent wherein a system is described which includes a "means for electronically selling" digital signals, and "electronic sales" of the signals which involve those signals being "electronically transferred" to the second party (Docket # 66, Exhibit 2, Column 9 at lines 51-53, 65-67; Column 10, lines 1-6). Thus, the requirement that the sale include both payment and electronic transfer of the digital signal is express in claim 4 of the '734 patent. Further, the '734 specification begins by describing "[a] method for transferring desired digital ... signals." (Docket # 66, Exhibit 2, Abstract). It sets forth the "forming a connection" requirement, and then describes "the step of selling electronically by the first party to the second party **through telecommunications lines,** the desired ... signals ..." followed by transferring the signals. (Id.) (emphasis added). Also, in support of the '734 patent, Mr. Hair made the following representation:

The terms "electronically sell", "electronic sales" and "electronically sold" are used throughout the specification of the above-identified patent application.

One skilled in the art would know that an electronic sale inherently assumes a transferring of money by providing an account number of a credit card or debit card number which then allows for access to or transferring of a service or product **through telecommunications lines.**

(Docket # 71, Tab 10 at 2) (emphasis supplied).

The language used in the patents, the specification, and the prosecution history each and all indicate that the concept of "electronic sales" or "selling electronically" involves transactions in which both the payment and the provision of services is accomplished "electronically" via "telecommunications lines." Therefore, this is an additional limitation on the claims which include those terms.

F. Terms which include "Telecommunications Line(s)"

[34] Sightsound asserts that the term "telecommunications line," which is used throughout the claims in suit, should be interpreted in all instances to mean "a medium for the transmission of information from one location to another." Defendants respond that this could refer to, among other things, the Pony Express.

Defendants, on the other hand, wish to focus the inquiry upon the use of the term "connecting" in relation to "telecommunications lines," as in the following examples from the various patent claims: "connecting electronically via a telecommunications line," "forming a connection through telecommunications lines," "telecommunications lines connected," "connecting electronically via the telecommunications lines," and "connecting electronically via telecommunications lines." Defendants assert that each of these formulations of the terms "connection" and "telecommunications lines" entails the following construction:

Establishing a continuous point-to-point conduction path using a telephone service providers' circuit-switched network for the transfer of information. These terms do not include a packet-switched network link, such as a TCP/IP link.

The TCP/IP reference is, of course, addressed to the Internet. Defendants take the position that the use of the terms "connect[ion]" and "telecommunications line(s)" bespeak the use of telephone lines and telephone switching services only. A connection over the Internet (which would, in most cases, involve at least some

use of telephone lines and the telephone switching system), would not be covered.

The expert testimony in this case was most helpful in describing the distinction between the telephone system and a TCP/IP system such as the Internet. What becomes clear from a review of the testimony and the sources relied upon by the experts, however, is that the distinction which defendants wish to make is not drawn from the claim language, or from the specification.

It is helpful, first, to note that both sides agree that a modem-to-modem connection between two computers over telephone lines would clearly be covered by the claim language. Defendants, however, wish to differentiate from this the process by which an Internet transfer occurs. A common form of such a transaction, and one which was known in 1988, would involve the second party (or buyer) connecting to an internet service provider (ISP) through a modem and over a telephone line. The next part of the process occurs between "nodes" on the packet-switch network (the Internet), until the transmission, in the form of information "packets," reaches another ISP connected to the first party (the seller) by telephone lines. Thus, in each instance, the transmission is ultimately accomplished, at each end, by a traditional telephone communication over telephone lines and through a telephone switching system.

The difference between the two methods of exchanging data occurs in the manner in which the information is sent between the nodes of the packet-switch system, and the manner in which data is sent through a telephone company switching system. However, while a transfer over the Internet differs in some respects from a transfer made directly between two computers over modems and through telephone lines, there is simply no way of reading the plain language of the claims in suit explicitly or implicitly to exclude any means of transferring information so long as it can occur over telecommunications lines.

[35] Defendants, for example, rely upon Figure 1 from the specification of each patent which shows the respective equipment of the first party and second party connected to a "box" entitled "Telephone Lines 30." Even if the use of the phrase "telephone lines" limited the invention, it is not clear that it would do so to omit the Internet, which is normally connected to individual users by telephone lines in any event. Also, Figure 1 is a representation of the preferred embodiment only. It is improper to read into the patent claims limitations from the specification. Comark Communications, 156 F.3d at 1186 ("fine line" exists between "reading a claim in light of the specification" and impermissible practice of "reading a limitation into the claim from the specification.").

Likewise, defendants' asserted definition of the term "connection" to differentiate telephone communications and an Internet session is not persuasive. Dr. Larky explained in detail how a telephone communication establishes a "continuous point-to-point conduction path," regardless of the use of time division multiplexing (TDM), which results in several different telephone connections sharing the same line. This is so, in his view, because TDM still results in the telephone user having the right to a specific and consistent pathway through which his or her entire conversation is put through to the other party. Resort to the claims and the specification, however, does not yield any basis for making a distinction between the "connection" made in an Internetsession, which produces "end-to-end" connectivity, but not a continuous conduction path, and a telephone connection which produces both end-to-end connectivity **and** a continuous conduction path.

[36] Defendants resort to the prosecution history and note that the term "telecommunications lines" did not become part of the patent until 1992. The manner in which this was accomplished, in defendants' view, should inform the court's interpretation of that term. The original specification and claims disclosed

"electronically transferred via telephone lines" (Docket # 70, Tab 4 at 6). This was altered in December, 1988, to "connecting electronically the first memory with the second memory" (*Id.,* Tab 7 at 1). In December, 1991, the first use of the term "telecommunications link" is proposed, and rejected by the examiner as not being well-connected in the system (*Id.,* Tabs 34 and 35). Ultimately, in June, 1992, the term "telecommunications line" was added throughout the claims (*Id.,* Tab 36).

[37] First, defendants assert that, if the term "telecommunications line" is read to reach anything more than a "continuous telephone-circuit network path" this would violate the "written description requirement" which requires a patentee in the initial disclosure to provide an adequate description of what is being patented. *See,* Purdue Pharma L.P. v. Faulding Inc., 230 F.3d 1320 (Fed.Cir.2000). This, however, is a validity issue which the court should not reach at this point. And, in any event, the use of the term "telephone lines" in the initial disclosure does not, in light of the fact that the Internet is normally accessed through telephone lines on each end of a transaction between parties, provide support for limiting the definition of "telecommunications lines" to exclude Internet transactions.FN15

FN15. Defendants also assert that "telecommunications lines" is "new matter" which was improperly added to the patent in the years following the initial application. Again, however, defendants seek to introduce a matter normally addressed during the validity stage into the construction phase, and, in any event, it does not serve to raise the distinction which defendants desire.

Defendants also seek to limit the reach of the term "telecommunications line" in light of the changes made during the prosecution of the patents from "link" to "line," a small portion of which the court has already described above. A more complete description of the prosecution history is now necessary.

The original term in the application for the '573 patent was "telephone line." Then, in December, 1988, the term "electronically connecting" was proffered and rejected. This rejection was premised upon the Lightner patent (Docket # 70, Tab 11). The next attempt was simply to recite "connecting" the first and second memories, but this was also rejected over Lightner and the Hughes patent (Id., Tabs 12 and 13). "Connecting electronically" was added (Id., Tab 16), but again a rejection over Hughes resulted because "Hughes ... shows that the first and second memory are connected electronically ... such that information can pass there through." (Id., tab 30). Claim 11 was amended to state "connecting electronically via a telecommunications link" (Id., Tab 34). The examiner found the term "telecommunications link" to be not well connected in the system (Id., Tab 35 at 6). This resulted in the inclusion of the term "telecommunications line" in the next amendment, which was approved (Id., Tab 38 at 6).

Defendants assert that, in view of the prior art, "link" is a broad term, and "line" is a narrower term. Specifically, defendants point to the Hughes patent which discloses "transmitting and recording stations" which are "linked by telephone lines or other signal transmission means" (Defendants' Exhibit 4 at Column 8, lines 39-42). Lightner disclosed a "signal transmission link" with examples thereof including telephone lines, a microwave transmission link and CATV cable (Defendants' Exhibit 8, Column 15, line 47; Column 14, lines 53-55; Figures 10 and 12). Lockwood discloses "any suitable remote links ... such as phone line data communication links" and an indirect link "via a computerized telecommunication network service such as TELENET." (Defendants' Exhibit 7, Column 4, lines 1-16). TELENET is described in Newton's Telecomm Dictionary, 7th Ed., p. 686, as a "private, commercially available network providing both packet-switched and circuit-switched service to subscribers in North America, Europe and some parts of Asia." FN16

FN16. Defendants also point to Freeny (Defendants Exhibit 5) and Elkins (Defendants' Exhibit 6) as examples of prior art which use the term "communications link" as a broad term.

Thus, defendants argue that anything defined in the prior art as a "link" was given up when the Mr. Hair amended his claim from "telecommunications link" to "telecommunications line." This, in defendants' view, includes claiming a packet-switched network, such as that offered by TELENET.

[38] A patentee may limit the definition of a claim term through "altering claim language to escape an examiner rejection" or by "clearly disavowing claim coverage." York Products, Inc. v. Central Tractor Farm & Family Center, 99 F.3d at 1575. Here, in offering the amendment, the patentee gave the following explanation:

The Examiner has also stated that "telecommunication link" is not well connected in the system. Accordingly, "link" has been amended to the more familiar term "line" and "via telephone line" has been added to the connecting step in Claims 11 and 15.

(Docket # 70, Tab 38 at 15).

Here, the examiner did not reject the term "link" on the basis that it was taught by the prior art. Rather, the examiner indicated that a term more closely connected with the disclosed invention was required. Thus, the applicant indicated during the amendment not that he was giving up coverage, but that he was amending to include a "more familiar term" in the patent. Hence, this is not a situation where coverage was expressly conceded, nor would a person skilled in the art believe that any specific coverage had been conceded through this amendment. In fact, neither the examiner nor the patentee ever indicated that there was any difference beyond familiarity between the terms "link" and "line."

Once again, this review of the prosecution history was an attempt by defendants to establish that Sightsound cannot claim coverage of package-switch networks such as the Internet. The court is not convinced that this is so. Thus, the terms "telecommunications line," even when used in the context of "connecting," should not be interpreted as excluding the Internet.

Further, with respect to Sightsound's construction, it is true that "a medium for the transmission of information from one location to another" is much too broad in the context of these patents. This does not mean, however, that Sightsound is attempting to claim coverage of the Pony Express or notes sent by carrier pigeon. Reading the term in context, "telecommunications lines" is used most often in conjunction with the terms "connecting" and "electronically." Where this is done, the coverage claimed is both narrow and clear. Sightsound is claiming an electronic medium of communicating between computers, which requires end-to-end connectivity. The court has not located any language in the patents which would permit any other reading, in context, of the term "telecommunication line(s)".

G. "Sales random access memory chip," "Incoming Random Access Memory Chip," and "Playback Random Access Memory Chip"

[39] Sightsound sees no reason to further define these terms. Defendants assert that "sales random access memory chip," and "sales random access memory," should be interpreted as "a semiconductor storage

element within the first memory at the first party location." "Incoming playback memory chip" should be "a semiconductor storage element within the second memory at the second party location," and "playback random access memory chip" should be "a semiconductor storage element within the second memory at the second party location that is separate and distinct from the incoming random access memory chip."

These terms appear in the '734 and '440 patents. Claim 1 of the '734 patent discloses a "first memory" which has a "hard disk having a plurality of digital ... signals ... and a sales random access memory chip which temporarily stores a replica of the ... desired ... signals" (Docket # 69, Exhibit I, Column 8, lines 42-50). Claim 3, which builds upon claims 1 and 2, then discloses that "the second memory includes an incoming random access memory chip which temporarily stores the coded desired ... signals ... and a playback random access memory chip for temporarily storing the ... signals ... for sequential playback." (Id., Column 9, lines 17-26). Other claims are similar, except that the term "chip" is not included in all iterations.

The specification of the '734 patent also provides a detailed description of the preferred embodiment:

In FIG. 1 and FIG. 2, the following components are already commercially available: the agent's Hard Disk 10, the Telephone Lines 30, the Compact Disc Player 40, the user's Hard Disk 60, the Video Display Unit 70, and the Stereo Speakers 80. The Control Units 20 and 50, however, would be designed specifically to meet the teachings of this invention. The design of the control units would incorporate the following functional features:

* * * * * *

3) the Sales Random Access Memory Chip 20c would be designed to temporarily store user purchased Digital Audio Music for subsequent electronic transfer via telephone lines to user's Control Unit 50.

4) the Incoming Random Access Memory Chip 50c would be designed to temporarily store Digital Audio Music for subsequent electronic storage to the user's Hard Disk 60.

5) the Play Back Random Access Memory Chip 50d would be designed to temporarily store Digital Audio Music for sequential playback.

The foregoing description of the Control Units 20 and 50 is intended as an example only and thereby is not restrictive with respect to **the exact number of components and/or its actual design.**

(Id., Column 4, lines 32-65).

The focus of the dispute in this case is whether the claims may be read to include configurations where the RAM of a computer is used interchangeably as the "Sales Random Access Memory" and for other functions as part of the first party's control unit, and as the "Incoming Random Access Memory" and "Playback Random Access Memory" as well as other functions in the second party's control unit. Defendants would read each of these phrases as requiring a separate storage element in the respective computers, apparently without the ability to be used for other purposes for which RAM is typically used on personal computers.

Reading the language of the claims in light of the specification, and particularly the language following the description of the preferred embodiment regarding the intended breadth with respect to the number of components and design of the control units, there is no indication that the inventor limited himself to

situations in which particular RAM chips are designated for a specific purpose only. In the court's view, the language cited covers any RAM in a system which is configured to perform the function described, whether or not that is the only function it is configured to perform.

H. "before the forming step ... commanding the second integrated circuit ... to initiate the purchase"

[40] This language appears in claims 2 and 3 of the '734 patent and claim 8 of the '440 patent. The parties agree that the language imposes an order with respect to the timing of the claimed steps. Defendants maintain, however, that the language requires that the second part "formulate" the request, and that the second party personally performs the "commanding" step. Sightsound sees no reason to include a "formulating" step when "commanding" is all which is disclosed, and disputes defendants' analysis that an "automated" form of commanding would be outside the scope of the claim language.

The language, in context, reads as follows:

2. A method as described in claim 1 wherein there is a second party integrated circuit which controls and executes commands of the second party, and a second party control panel connected to the second party integrated circuit, and before the forming step, there is a step of commanding the second party integrated circuit with the second party control panel to initiate the purchase of the desired digital video of digital audio signals from the first party hard disk.

(Docket # 69, Exhibit 1, Column 9, lines 9-16). Claim 8 of the '440 patent reads virtually the same (Id., Exhibit K, Column 9, lines 33-41).

While it is clear that the "command" must originate from the second party, there is no indication that this must be accomplished by the second party physically entering a command at any specific time. The claim requires that, before the forming step, the integrated circuit be commanded to initiate the purchase. This command clearly must originate with the second party, but there is no limitation on how the second party can accomplish this. Thus, the limitation that the command be "performed personally" by the second party does not arise from plain language of the claims and, hence, is inappropriate.

The court also sees no basis to change the term "command" to "formulates a request." One skilled in the art would clearly understand the means by which an integrated circuit may be commanded to perform a function. Therefore, the court finds that this language does not impose a limitation requiring that a request be "formulated," or that the command be personally entered by the second party.

I. "Control integrated circuit"

This term appears in several claims in the '734 and '440 patents. Defendants assert that it should be defined as "a microelectronics device with at least 1 transistor." Sightsound does not contest that this is an accurate description of a control integrated circuit, but notes that this is an incomplete definition, as it potentially includes devices, such as an Operational Amplifier (Docket # 74, Exhibit B, Tab 3 at 340), which would fit this definition but would make the claimed invention inoperable. Defendants respond that the "control integrated circuits" of the claimed inventions "perform too many functions to be defined with any more specificity." The court, however, sees no need to define them any more specifically than the plain language of the patents suggest: a microelectronics device which is capable of performing the functions identified in the patents.

J. "Regulate the transfer"

[41] This language appears in claim 7 of the '734 patent in describing the role of the integrated circuits with respect to the transfer of signals: "said second party control integrated circuit and said first party control integrated circuit regulate the transfer of the desired digital video or digital audio signals...." (Docket # 69, Exhibit I, Column 10, lines 29-32). Identical language appears in claim 15 of the '440 patent (Id., Tab K, Column 11, lines 20-23).

Defendants assert that this means "receive or transmit." Sightsound responds that "the claimed term 'transfer' may not be exactly the same as receive or transmit, as such verbs may describe part of the transfer but not the whole occurrence thereof." (Docket # 74 at 29). Clearly, the transfer of the digital signals involves transmitting on one end and receiving on the other. To "regulate" that transfer, however, bespeaks more than simply transmitting or receiving. The use of the term "regulate" indicates that the transmitting and receiving are being controlled, directed or governed. *See,* Webster's New World Dictionary, Third College Edition (1988). Thus, in the context of the patent claims at issue, the phrase "regulate the transfer" is construed to mean that the first party and second party integrated circuits control the transfer of the digital signals, i.e., control the transmitting and receiving of such signals.

K. "electrical communication/electronically connected"

These terms are used in several claims in the '734 patent and claims 13-15 of the '440 patent, such as in claim 4 of the '734 patent referring to a "first party control unit" which has "a sales random access memory chip electronically connected to the first party hard disk ..." (Docket # 69, Exhibit I, Column 9, lines 44-48). Claim 5 describes "the second memory" which includes "a playback random access memory chip electronically connected to the second party hard disk ..." (Id., Column 10, lines 7, 10-12). Claim 11 discloses a "means or a mechanism for connecting electronically via the telecommunications lines the first memory with the second memory such that the desired digital video or digital audio signals can pass there between, said connecting means or mechanism in electrical connection with the transferring means or mechanism...." (Id., Column 10, lines 60-61).

Defendants assert that the ordinary and accustomed meaning of "electrical communication" is a connection through "a hard-wired conduction path." Defendants further point out that Figure 1 of the patents illustrates a hard-wired conduction path between all of the elements.

Sightsound responds, first, that even if a hard-wired conduction path is necessary, there is no basis in the claims or specification for requiring that it be "single," as opposed to multiple, hard-wired conduction paths. The court agrees. The term "single" cannot be part of the definition.

Second, Sightsound notes that defendants' definition would require that the parties' respective control units be in a hard-wired conduction path with one another. The court has already analyzed the term "connecting through telecommunications lines," and the court agrees, for the reasons set forth above, that the control units need not be in a hard-wired conduction path while "electronically connected over telecommunications lines."

What remains, however, is a determination of whether the individual components of the first party memory must be connected by a hard-wired conduction path, and whether the same is true for the components of the second party memory. Sightsound states that, as to invention elements at the same site, "[t]he language of the claims specifically uses these terms to link related elements and it does so by clear and express

recitations." (Docket # 74, at 30). Thus, the parties are in agreement that, as to invention elements at the same location, "electronically connected" and "electrical communication" each require a hard-wired conduction path.

L. "Individual songs" and "Temporary Staging Areas"

[42] Defendants assert that "individual songs" should be interpreted as meaning "one or more digital audio signals." This language is used in Claims 26 and 27 of the '734 patent, and is in the context of describing "a plurality of digital audio signals which include a plurality of desired individual songs as desired digital audio signals" (Docket # 69, Exhibit I, column 14, lines 41-43). Defendants are correct, therefore, that "individual songs" are a subset of "digital audio signals."

Likewise, the phrase "temporary staging area" is used in reference to the "playback random access memory chip" and the "playback random access memory chip." Specifically, claim 14 of the '440 patent discloses:

14. A system as described in claim 13 wherein the second party control unit includes a second party hard disk which stores a plurality of digital video or digital audio signals, and **a playback random access memory chip** electronically connected to the second party hard disk for storing a replica of the desired digital video or digital audio signals **as a temporary staging area for playback.**

(Docket # 69, Exhibit K, Column 10, lines 63-67; Column 11, lines 1-2) (emphasis added). Similar language appears in claim 5 of the '734 patent with respect to the use of the "playback random access memory chip" of the second memory. Thus, defendants are correct that, in each instance, the term "temporary staging area" refers to the "random access memory chip" being used for that purpose.

M. Means-Plus-Function Claims

The parties also present several claims which employ the means-plus-function format. As a general matter, the parties disagree on the amount of structure necessary for each means-plus-function claim, although there are also two disputes concerning the propriety of analyzing claims as means-plus-function. The claims will be addressed *seriatim*.

1. "Means [or a mechanism] for electronically selling the desired digital video or digital audio signals" (Claims 4-8 & 10 of the '734 patent**, and claims 12-15 of** the '440 patent)

[43] The parties agree that this is "means-plus-function" language which occurs in claims 4 and 10 of the '734 patent and claim 12 of the '440 patent FN17. Defendants assert that the phrase as used in claim 4 of the '734 patent (which uses the term "means," and not "mechanism") should be construed to include the following structure:

FN17. This limitation also appears by incorporation in dependent claims 5-8 of the '734 patent and 13-15 of the '440 patent.

A structure equivalent to (i) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 20a and Control IC 20b, (ii) telephone lines 30, and (iii) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a and Control IC 50b.
(Docket # 65 at 36). Additionally, the language used in claim 12 of the '440 patent (which employs the

phrase "means or a mechanism") requires a structure, in defendants' view, consisting of "a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a, Control IC 50b, Hard Disk 60, Playback RAM Chip 50d and Stereo Speakers 80." (Id., at 40). Sightsound responds, with respect to both forms of the phrase, that "the corresponding structure is a control integrated circuit configured to effect the electronic sale of the digital video or digital audio signals." (Docket # 69 at 24).
Thus, the parties have a very basic disagreement (which carries over to each of the remaining means-plus-function claims in dispute) concerning the amount of structure necessary to the disclosed function. Sightsound seeks an interpretation which limits the structure to the control integrated circuit and the particular configuration thereof which will enable the disclosed function to occur.FN18 Defendants, on the other hand, seek to include in the required structure all elements necessary to carry out the "selling," including the structure on the receiving end of the sale, and a "hard-wired conduction path."

FN18. As discussed above with respect to the construction of the term "electronically connected," the court does not understand Sightsound to contest that the individual elements of the first party control unit are connected electronically through a "hard-wired" connection, and that the same is true with respect to the elements of the second party control unit. Hence, the court will not address this element of the defendants' proposed definition in this or the ensuing claims.

Initially, the court agrees that the claim term at issue recites a function, but does not recite a definite structure in support of that function. Hence, this is means-plus-function language, and analysis pursuant to 35 U.S.C. s. 112(6) is appropriate. Cole v. Kimberly-Clark Corp., supra, 102 F.3d at 531.

Before determining the structure associated with the disclosed means, the court must first determine the meaning of the term "electronically selling." The parties have disputed this language, and the court has already determined that "the requirement that the sale include both payment and electronic transfer of the digital signal is express in claim 4 of the '734 patent." Hence, the function disclosed, a means for "electronically selling," is a means for effectuating the transfer of payment and product over telecommunications lines.

Defendants' inclusion of telephone lines and the structure on the buyer's side of the transaction is, however, improper in this case. Claim 4 of the '734 patent (and claim 12 of the '440 patent) set forth the "means for electronically selling" as part of the "first party control unit." The elements of the buyer's control unit, as well as the telecommunications lines connecting the two control units, are set forth in separate paragraphs of the same claims, and are clearly not part of the "means" by which the first party control unit accomplishes the function necessary to effectuate the sale.

Thus, the more specific question to be answered in this case is what structure, **as part of the first party control unit,** is disclosed in the specification as being related to the function of electronically selling? The specification discloses that "the Control Unit 20 of the authorized agent is the means by which the electronic transfer of the Digital Audio Music from the agent's Hard Disk 10 via the Telephone Lines 30 to the user's or second party's Control Unit 50 is possible." (Docket # 69, Exhibit I, Column 4, lines 12-16) FN19. Further, "Control Unit 20 has a control panel and control integrated circuit ... [which] requires the Sales Random Access Memory Chip." (Id., lines 19-23). The reader is also informed that "[t]he Control Units 20 and 50 ... would be designed specifically to meet the teachings of this invention." (Id., lines 35-37). The design of the control units is further described:

FN19. This is the specification for the '734 patent. Identical language appears in the '440 patent specification (Id., Exhibit J, Column 4).

2) the Control Integrated Circuits 20b and 50b would be designed to control and execute the respective commands of the agent and user and regulate the electronic transfer of Digital Audio Music throughout the system, additionally, the **sales Control Integrated Circuit** 20b could electronically code the Digital Audio Music in a configuration which would prevent unauthorized reproductions of the copyrighted material, (Id., lines 43-50) (emphasis added). Later in the specification, the "means or mechanism for electronically selling" is discussed.

Preferably, the means or mechanism for electronically selling includes a means or a mechanism for charging a fee via telecommunications lines by the first party to the second party ... Preferably, the second party has an account and the means or mechanism for charging a fee includes means or mechanism for charging the account of the second party. Preferably, the means or mechanism for charging the account includes means or a mechanism for receiving the credit card number of the second party. The means or mechanism for receiving a credit card number preferably is part of the control integrated circuit 20b.

(Id., Column 7, lines 40-52).

Therefore, the specification discloses that the first party control integrated circuit will be "designed to control and execute the ... commands of the [first party] and regulate the electronic transfer," and that it will be the "means or mechanism" for charging the account of the buyer. It follows, then, that the "means" for electronically selling, which includes the transfer of the product in return for electronic payment, is a properly programmed control integrated circuit.

2. "Means or mechanism for the first party to charge a fee to the second party" (Claims 26 and 27 of '734 patent)**.**

[44] This language appears in claims 26 and 27 of the '724 patent. Defendants propose that the structure disclosed for this function is:

... equivalent to (1) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 20a and Control IC 20b, (ii) telephone lines 30, and (iii) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a and Control IC 50b.

(Docket # 65 at 39). Sightsound again responds that the only structure of the disclosed function is "a control integrated circuit configured to enable the first party to charge a fee to the second party." (Docket # 69 at 25).

The analysis of this claim proceeds in much the same fashion as the analysis for the prior claim language. The inclusion of telephone lines and the structure associated with the second party control unit is unnecessary because the "means for charging a fee" is expressly made part of the first party control unit only. Thus, the structure the court must discern is the means by which the first party control unit "charges a fee."

The specification discloses that the function of charging a fee is accomplished by the control integrated circuit (Id., Column 7, lines 40-52). Hence, the structure associated with this claim language is an appropriately programmed control integrated circuit.

3. "Means or mechanism for transferring money electronically via a telecommunication line" (Claims 11-14 of '734 patent)**.**

Sightsound again asserts that an appropriately-configured integrated circuit is the necessary structure in claims 11-14 of the '734 patent (Docket # 69 at 25). Defendants would describe the required structure thusly:

A structure equivalent to (i) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 20a and Control IC 20b, (ii) telephone lines 30, and (iii) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a and Control IC 50b.

(Docket # 65 at 38). Again, the same analysis applies, and Sightsound's definition is correct.

4. "Means [or a mechanism] for playing the desired digital video or digital audio signals" (Claims 4-8 and 10 of '734 patent**, and claims 12-15 of** the '440 patent)

[45] Defendants treat the phrase used in the '734 patent, "a means for playing ..." identically as they do the phrase used in claims 12-15 of the '440 patent, "a means or a mechanism for playing...." Both, in defendants' view, require a "structure equivalent to a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a, Control IC 50b, Hard disk 60, Playback RAM Chip 50d and Stereo Speakers 80." (Docket # 65 at 37, 40).

Sightsound argues that the structure is limited to an appropriately configured control integrated circuit "and a video display and/or speakers." (Docket # 69 at 26).

Claim 4 of the '734 patent includes the following language in its description of the second party control unit:

a second party control unit having a second party control panel, a second memory connected to a second party control panel, and means for playing the desired digital video or digital audio signals connected to the second memory and the second party control panel, said means for playing operatively controlled by the second party control panel, said second party control unit remote from the first party control unit, said second party control unit placed by the second party at a location determined by the second party....

(Docket # 69, Exhibit I, Column 9, lines 54-63) FN20. The claim expressly discloses the connection between the second memory, the second control panel and the "means" for playing the signal. Therefore, defendants' inclusion of the second party control panel and memory (hard disk and RAM), is unnecessary since that structure is expressly described in the claim. The structure which is not disclosed in the claim is the structure which, when directed by the control panel, causes the signals to be played.

FN20. The language used in claim 12 of the '440 patent is identical with the addition of the words "or a mechanism" each time the work "means" is used (Id., Exhibit K, Column 10, lines 34-44).

The specification provides in this respect:

To play a stored song, the user types in the appropriate commands on the Control Panel 50a, and those commands are relayed to the Control Integrated Circuit 50b which retrieves the selected song from the Hard

Disk 60 ... The Control Integrated Circuit 50b then sends the electronic output back to the Stereo Speakers 80 at a controlled rate using the Play Back Random Access Memory Chip 50d as a temporary staging point for the Digital Audio Music.

(Id., Exhibit J, '734 Patent, column 5, lines 2-16). Thus, the structure necessary, in the context of the claims as written, is an appropriately configured control integrated circuit, connected by hard-wire electrical connection to a video display and/or stereo speakers.

5. "Means or a mechanism for storing the desired digital video or digital audio signals" (Claims 11-14 of the '734 patent)

[46] Sightsound proffers a structure consisting of "a control integrated circuit configured to effect the storing of the desired digital video or digital audio signals in the memory." (Docket # 69 at 27). Defendants have it this way:

A structure equivalent to (i) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 20a, Control IC 20b, and Sales RAM 20c, (ii) telephone lines 30, and (iii) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a, Control IC 50b, Hard disk 60, and Incoming RAM 50c.

(Docket # 65 at 39).

The claim language, appearing in claim 11 of the '734 patent, and incorporated in claim 12 as well, is part of "a system for transmitting desired" signals and, in relevant part, provides for a:

means or a mechanism for storing the desired digital video or digital audio signals from the first memory in the second memory, said storing means or mechanism in electrical communication with said receiver or said transmitting means or mechanism and with said second memory.

(Docket # 69, Exhibit I, Column 11, lines 33-38). Again, in the context of the claim, the elements being described are associated with the second party memory only. Thus, inclusion of telephone lines connecting the first and second memories is inappropriate, as is the inclusion of any structure on the first party side of the transaction. Further, the second memory is disclosed explicitly in the claim language, as is the connection between the "storing means" and the second memory. What is not disclosed is the structure to accomplish the "storing" in the second memory, and that is the focus of the court's inquiry.

The specification states that "[t]he Control Integrated Circuit 50b stores the replica onto the Play Back Random Access Memory Chip 50d at a high transfer rate." (Id., column 5, lines 9-12). The appropriate structure, then, is the control integrated circuit, which has been configured to effect the storing of the digital signals into the memory.

6. "Means or a mechanism for transmitting the desired digital audio signals from the first memory to the second memory" (Claims 11, 26 and 27 of the '734 patent)

[47] Defendants assert that the language used in each cited claim requires:

A structure equivalent to (i) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 20a, Control IC 20b, and Sales RAM 20c, (ii) telephone lines 30, and (iii) a continuous hard-

wired conduction path directly interconnecting portions of Control Panel 50a, Control IC 50b, Hard disk 60, and Incoming RAM 50c.

(Docket # 65 at 38). Sightsound asserts that, as used in claim 11 of the '734 patent, this is not means-plus-function language. With respect to claim 26, plaintiff asserts that the "corresponding structure is a transmitter and a control integrated circuit configured to effect the transmitting of the desired digital video or digital audio signal via the transmitter." (Docket # 69 at 27).

Claim 11 discloses the following:

means or a mechanism for transmitting the desired digital video or digital audio signals from the first memory to the second memory, **said means or mechanism for transmitting comprising a transmitter connected to the first memory and the telecommunications lines and a receiver connected to the second memory** ...

(Id., Exhibit I, Column 11, lines 19-24) (emphasis supplied). Sightsound is correct that the structure of the "means or a mechanism for transmitting" is disclosed in the claim language, and, hence, this is not "means-plus-function" language which requires reference to the specification.

The relevant language from claim 26, which describes a "system for transferring digital audio signals," and which sets forth the elements of the first party control unit, reads as follows:

means or mechanism for transmitting the desired digital audio signals from the sales random access memory chip, said means or mechanism for transferring connected to the sales random access memory chip....

(Id., column 14, lines 48-51). Again, the inclusion of any structure which exists between the first and second party control units, or any structure which is part of the second party control unit, is improper because the claim is clearly limited to a description of the first party control unit. Further, the claim sets forth the existence and relationship between the transmitting means and the random access memory. Thus, inclusion of other elements of the first party control unit is unnecessary, and the court must discern the structure associated with the function of transmitting from the first party control unit.

The specification provides that the "Control Integrated Circuits 20b and 50d would be designed to control and execute the respective commands of the [parties] and regulate the electronic transfer ..." (Id., column 4, lines 43-46). The transmitting function is clearly expressed in the specification, which discloses "a system for transmitting desired digital video or digital audio signals...." (Id., column 3, lines 13-14). Thus, the court cannot agree with defendants, proposed required structure. Instead, the corresponding structure is a transmitter connected to a properly programmed control integrated circuit.FN21

FN21. Defendants protest that the specifications of the '734 and '440 patents do not contain a description of a "transmitter." One skilled in the art, however, would not have difficulty in determining the nature of a transmitter necessary to perform the function at issue. Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1381 (Fed.Cir.1999) (No specific level of detail necessary in the description of structure, so long as one skilled in the art would identify the structure from the description.).

7. "Means or mechanism for connecting electronically via the telecommunications link" (Claim 11 of

the '734 patent)

[48] Once again, defendants assert that this language requires:

A structure equivalent to (i) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 20a, Control IC 20b, and Sales RAM 20c, (ii) telephone lines 30, and (iii) a continuous hard-wired conduction path directly interconnecting portions of Control Panel 50a, Control IC 50b, Hard disk 60, and Incoming RAM 50c.

(Docket # 65 at 38). Sightsound responds that this language is not means-plus-function as utilized in that claim, and the court must refer to that language in context to rule on this issue:

means or a mechanism for connecting electronically via the telecommunications lines the first memory with the second memory such that the desired digital video or digital audio signals can pass there between, ... said connecting means or mechanism comprises a first control unit in possession and control of a first party, and a second control unit in possession and control of a second party....

(Docket # 69, Exhibit I, Column 10, lines 65-67; column 11, lines 1-7). The court must agree with Sightsound that the structure of the connecting means is disclosed in the claim. Therefore, there is no need to refer to the specification.

N. Order of Steps

[49] Defendants also assert that claims which list steps (Claims 1-3 of the '573 patent, Claims 4, 26 and 28 of the '734 patent, and claim 12 of the '440 patent) should be construed to require that those steps be performed in the order that they are listed. "Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one." Interactive Gift Express, Inc. v. Compuserve, Inc., et al., 231 F.3d 859, 875 (Fed.Cir.2000). An order may be imposed, however, if such a requirement is apparent from the claim language, Mantech Environmental Corporation v. Hudson Environmental Services, Inc., 152 F.3d 1368, 1376 (Fed.Cir.1998), or where such a sequential order is implicit from a review of the claim, the specification and the prosecution history. Loral Fairchild Corp. v. Sony Corp., 181 F.3d 1313, 1322 (Fed.Cir.1999).

The specification of the '573 patent implies, in two separate paragraphs, that a specific order is required in performing the steps set forth in claims 1-3 (Docket # 70, Tab 51, col. 3, lines 3-19; col. 5, lines 29-45). The specification first lists the "transferring money" step and states that "then" the step of connecting electronically occurs. "Next," transmitting the desired audio signal is set forth, and "then" storing the signal in the second memory. The use of these terms clearly implies that they are to be performed in the order in which they are set forth.

Further, Claim 1 of the '573 patent does contain an implied order of at least the final three steps (i.e., the "connecting," "transmitting" and "storing" steps). Indeed, one skilled in the art would recognize that the digital audio signal cannot be transferred until a connection is made such that the signal may pass from the first memory to the second memory. In like fashion, the signal cannot be stored on the second memory until a connection has been made **and** the signal has been transmitted from the first memory. Therefore, although there is no explicit language in claims 1-3 of the '573 patent which imposes an order of steps, the plain meaning of the terms used, and the process described, implies such an order. Therefore, the connecting step must precede the transmission step, and the transmission must, in turn, precede the storing on the second

memory. There is, however, no such indication that the transferring money step must occur at any specific time in this process.

Claim 2, on the other hand, contains express language imposing an order on the transferring step:

2. A method as described in claim 1 including **after** the transferring step, the steps of searching the first memory for the desired digital audio signal; and selecting the desired digital audio signal from the first memory.

(Emphasis supplied). Plaintiff concedes that this imposes some order upon the steps. Once again, one would necessarily have to select the desired signal from the first memory prior to the first memory transmitting same. Thus, transferring money must occur, for purposes of Claim 2, prior to transmitting (and, of course, prior to storing the transmitted signal on the second memory).

Claim 3, also a dependent claim, builds upon Claim 2 and adds additional steps to be included within the "transferring step." Once again, the steps set forth in Claim 3 must necessarily occur prior to the transmitting and storing steps.

Defendants urge that the transferring of money must be the first step in the method described in claims 1-3 of the '573 patent. The court disagrees. The patentee showed himself to be entirely capable of imposing an order upon steps when he wished to do so. Further, while the specification implies that an order is required, it does not expressly state that this is so. In the court's view, beginning and ending with the language of the claim, it would rewrite Claim 1 of the '573 patent to say that this claim requires the transferring money step to occur first.FN22

FN22. The parties here have argued their claims construction cases with a clear intent to more favorably position themselves for the next stages of the case. While this is unseemly, it is probable also inevitable. The court, however, cannot indulge in it; we construe the claims and do so without regard to what may come.

Nonetheless, the steps do have an order imposed by logic in light of the method which is described. Connecting electronically must be accomplished prior to the transmitting and storing steps. For similar reasons, the storing step must occur last in the context of Claim 1. The transfer of money, however, need not occur at any specific point. This, however, changes for Claims 2 and 3, which require that the transferring of money occur prior to transmission and storing, but does not impose any order on the transferring and connecting steps.

The court has reviewed Claim 4 of the '734 patent. In that claim, a system is set forth in which the "first party control unit" is described, then the "second party control unit" is described (Docket # 69, Exhibit I, Claim 4). The operative language in terms of imposing order is contained in the third paragraph of the claim:

telecommunications lines connected to the first party control unit and the second party control unit through which the electronic sales of the desired digital video or digital audio signals occur and through which the desired digital video or digital audio signals are electronically transferred from the sales random access memory chip to the second memory while the second memory is in possession and control of the second

party and **after** the desired digital video or digital audio signals are sold to the second party by the first party.

(Id.) (Emphasis added). This claim clearly states that the digital audio signals are transferred only "after" they are "sold" to the second party. Hence, the only order imposed in this Claim is that the sale of the desired digital audio signal occur prior to transmission of that digital audio signal. The court is not persuaded by defendants' argument that this claim should be interpreted as requiring the electronic transfer of money prior to connecting the first memory to the second memory. The claim does not recite any order in respect to the connection between the first and second memories and the transfer of money.

Claims 26 and 28 of the '734 patent are much the same, with two paragraphs describing the composition of the first and second party control units, respectively, followed by a third paragraph, which differs slightly from claim to claim, but which in each case contains the only language that mandates any order to the steps described. The third paragraph of Claim 26 reads:

telecommunications lines connected to the first party control unit and the second party control unit through which the desired digital audio signals in the sales random access memory are electronically transferred by the means or mechanism for transferring to the receiver while the second party is in possession and control of the second party control unit and **after** the desired digital audio signals of the first party's hard disk are sold to the second party by the first party with the means or mechanism for the first party to charge a fee.

(Id., Claim 26). The third paragraph of Claim 28 provides:

telecommunications lines connected to the first party control unit and the second party control unit through which the electronic sales of the desired digital video or digital audio signals occur of the first party's hard disk, and over which the desired digital video or digital audio signals of the first party's hard disk are electronically transferred from the sales random access memory chip to the second memory while the second party is in possession and control of the second memory and **after** the desired digital video or digital audio signals are sold to the second party by the first party.

(Id., Claim 28). In both Claims 26 and 28, therefore, the transfer of the digital audio (or video) signal is expressly said to occur after the signal has been "sold" to the second party. Otherwise, no order is expressly or implicitly imposed by the claim.

This leaves Claim 12 of the '440 patent. It is set forth in a form similar to the claims from the '734 patent, with the first two paragraphs describing a "first party control unit" and a "second party control unit," respectively. The third paragraph provides as follows:

telecommunications lines connected to the first party control unit and the second party control unit through which the electronic sales of the desired digital video or digital audio signals occur and through which the desired digital video or digital audio signals are electronically transferred from the first memory to the second memory while the second memory is in possession and control of the second party and **after** the desired digital video or digital audio signals are sold to the second party by the first party.

(Docket # 69, Exhibit K, Claim 12). Once again, the claim expressly states that the sale occurs, followed by the transfer, but is otherwise silent concerning the order of any further steps in the method described.

O. "Telephoning the First Party ... by the Second Party"

[50] The dispute between the parties with respect to this claim language is whether it requires a person-to-person telephone call. Defendants assert that it does, while Sightsound asserts that it should include any means of initiating a connection over telephone lines, including person-to-machine calls, and machine-to-machine calls.

This language appears in Claim 3 of the '573 patent, claim 1 of the '734 patent, and claims 4 and 39 of the '440 patent. The '573 patent discloses:

3. A method as described in claim 2 wherein the transferring step includes the steps of telephoning the first party controlling use of the first memory by the second party; providing a credit card number of the second party controlling the second memory to the first party controlling the first memory so the second party is charged money.

(Docket # 70, Tab 51, Column 6, lines 29-36). The "transferring step" referred to in claim 3 is contained in claim 1, and reads as follows:

transferring money electronically via a telecommunication lien [sic] to the first party at a location remote from the second memory and controlling use of the first memory from the second party financially distinct from the first party, said second party controlling use and in possession of the second memory;

(Id., at lines 8-14). The '734 patent includes the disputed language in claim 1:

1. A method for transferring desired digital video or digital audio signals comprising the steps of:

forming a connection through telecommunications lines between a first memory of a first party at a first party location and a second memory of a second party at a second party location ...

telephoning the first party controlling use of the first memory by the second part[y];

providing a credit card number of the second party controlling the second memory to the first party ...

(Docket # 69, Exhibit I, Column 8, lines 39-59). The language is included in claims 4 and 39 of the '440 patent as a step included within the process of "charging the account" of the second party. Both claim 4 and claim 39 read as follows:

A method as described in claim [3 or 38] wherein the step of charging the account of the second party includes the steps of telephoning the first party controlling use of the first memory by the second party; providing a credit card number of the second party controlling the second memory to the first party controlling the first memory so the second party is charged money.

(Docket # 69, Exhibit K, Column 9, lines 7-13; Column 14, lines 40-46).

Defendants assert that each use of the "telephoning" language requires a construction that involves "placing a telephone call by a person at the second party location to a person at the first party location."

Plaintiffs would construe the term "telephoning" to mean "initiating a connection over a telephone line."

Defendants first note that the telephoning step as set forth in each of the claims is separate from the step of "connecting" the memories electronically by telecommunications lines step. Hence, it is argued, "telephoning the first party" must have some meaning other than forming a connection via telephone lines, and that it must not involve a computer-to-computer connection.

The court, however, notes that the telephoning step may be performed by one person to another person, while the "connecting" step necessarily involves an interaction between the machines on either end, hence the language from, e.g., claim 1 of the '734 patent, "forming a connection through telecommunications lines between a first memory of a first party at a first party location and a second memory of a second party at a second party location...." Thus, the obvious distinction here is not that the "telephoning" must be person-to-person, but, instead, is that the connecting step cannot be a person-to-person call, but must involve machines. The "telephoning" step, however, is the more expansive term in this respect, and could include a person placing a call, either by dialing a telephone himself, or by instructing a computer or modem to dial a number. Likewise, the receiving end of that communication could be a person, or it could be computer configured to accept the call and to record the information provided. This type of communication was not unknown to persons of ordinary skill in the art in 1988, and is certainly commonplace today.

Also, reference to the preferred embodiment and Figure 1 of the patent specification, which is a diagram included in each patent, shows the "Control I.C." of the first party connected by "Telephone lines" to the "Control I.C." of the second party. There is no indication in the specification, or in the diagram, that a separate, person to person communication is required for the steps of the claimed invention to be performed, i.e., there are no people, or telephones depicted in Figure 1.

Plaintiff also points to the 1995 Webster's Dictionary definition of "telephoning", which includes: (1) to communicate with by telephone; (2) to call on the telephone; and (3) to transmit by telephone (Plaintiff's Exhibit H). Defendants prefer the 1986 Webster's New Collegiate Dictionary definition, which is "to send by telephone" or "to speak by telephone." In the court's view, each version of the dictionary cited could reasonably be read to include either person-to-person calls or any combination of people and machines on either end. For example, the 1995 definition explicitly states that telephoning means "to communicate" or "to transmit" by telephone, and the 1986 version includes the concept of "to send" by telephone along with "speaking." It is only this final definition, "speaking," which implies a person-to-person communication.

Defendants also note that the inventor referred to the transferring money step and noted that this could be accomplished "such as by telephoning the agent who has the hard disc over the phone lines...." (Docket # 70, Tab 37 at 2). A similar comment was made during the prosecution of the '734 patent (Docket # 71, Tab 10 at 2). The use of the words "such as," however, bespeaks the existence of other options for accomplishing this step. Hence, the court does not find that any limitation on the manner of "telephoning" can be read into the patent claims through the prosecution history.FN23

FN23. The court is also unpersuaded by the extrinsic evidence, from the inventor's deposition testimony, that an "example" of an electronic sale would be "calling up and ordering a pair of shoes from L.L. Bean." (Hair Deposition at 179-180). First, this is extrinsic evidence which is not necessary in this instance for the court to construe the claim language. Second, even if it were used, it is merely an example offered by the inventor, and does not bespeak a limit on the language used in the claims.

The term "telephoning," therefore, does not include the restriction that it be a person-to-person call, and does not exclude the use of machines on either or both ends of the telephone communication. The court does not believe that further construction of this term is required.

P. CLAIMS 22, 36 AND 41 OF THE '440 PATENT

Defendants seek a ruling by this court that claims 22, 36 and 41 of the '440 patent are identical, or are so nearly so that there is no need to analyze an alleged infringing device separately under each claim. Even a cursory review of the claims establishes that they are, indeed, very similar. However, the court has not been presented with a construction question in this respect. Instead, defendants assert that the language is so similar, "indistinguishable" in defendants' view, that "it is difficult, if not impossible, to imagine either an accused infringing product or asserted piece of prior art that contains the elements of one of these claims, but not the other two." (Docket # 65 at 34).

The court understands, and shares, defendants' anticipation of a substantial narrowing of the claims asserted in this case. Nonetheless, a concern that claims with the same coverage not be asserted so as to streamline this case is not properly addressed during claim construction. There is simply no construction of these claims necessary to answer defendants' question, i.e., whether a prior art challenge or an accused infringing product could be found that reads on one claim but not the others. What is required is for the case to reach the point where such matters can be litigated.FN24

FN24. And, or course, if the claims are as indistinguishable as defendants maintain, it would do Sightsound no good service to assert all three when a ruling on infringement is sought. The decision to assert one or more of these claims is, however, not a decision to be made by the court in the guise of claim construction.

Q. "Stored replica/storing a replica/stores a replica"

[51] Several claims in the '734 and '440 patents include the "replica" limitation FN25. It is employed in the first step of Claim 1 of the '734 Patent, referring to the forming of a connection between the first and second memories, and describes the first memory as including a "sales access random memory chip which temporarily stores a replica of the coded desired digital video or digital audio signals" prior to the transfer of same to the second party ('734 Patent, Claim 1). Later in that same claim, a separate step of "storing a replica of the coded desired digital video or digital audio signals from the hard disk to the sales random access memory chip" is disclosed. The "stored replica" is then transferred to the second memory, and the final step listed is "storing the transferred replica of the coded desired digital video or digital audio signals in the second memory." (Docket # 69, Exhibit I, Column 9, lines 7-8).

FN25. It does not appear in the '573 patent.

Claim 26 of the '734 patent again recites a "sales random access memory chip" as part of the "first party control unit." The random access memory chip is "electronically connected to the first party hard disk for storing a replica" of the desired digital signals (Id., Column 14, lines 43-46). The term "replica" is not thereafter used in that claim.

In the '440 patent, claims 2-10 are dependent claims, each building on the prior claim beginning with Claim

1, which claims a "method for transferring desired digital video or digital audio signals" and lists the steps of "forming a connection," "selling electronically," and "transferring" the signal. The term "replica" is not used until Claim 7, where it claims a method as described in claims 1-6 where the first memory has "a sales random access memory chip which temporarily stores a replica of the desired ... signals." That claim also notes that, before the transferring step, there is also "the step of storing a replica" of the signal "from the hard disk into the sales random access memory chip." (Docket # 69, Exhibit K, Column 9 at 29-32). In claim 9, the '440 patent also discloses a method by which the desired digital audio signal is stored in the second party's hard disk after the signal is temporarily stored in the incoming random access memory, and then is played back after the second party integrated circuit is commanded to do so. The term "replica" is not used until the final portion of claim 9 where a "replica" of the stored signal is transferred from the second party hard disk to the second party playback random access memory for "playback." (Id., lines 59-61).

Claim 10 of the '440 patent discloses "[a] method as described in claim 9 including after the transferring step, there is the step of repeating the commanding, playing, and transferring a replica steps."

Claims 13, 14 and 15 also contain the term "replica." Claim 13 describes the first party control unit as including a sales random access memory chip which is used for "storing a replica" of the signal. Claim 14 describes the second party control unit as including a playback random access memory chip used for "storing a replica" of the signal prior to playback. Claim 15 does not include the term "replica," but is a dependent claim which incorporates the term as used in claims 13 and 14.

Defendants propose that the use of the term "replica" in all of the above-listed permutations requires a construction that this comprises a "complete copy of the digital audio signal that is stored at one time in the random access memory chip." Sightsound has not proposed a construction, but does not disagree that a "replica" is a copy of a digital audio signal and that it is stored in the random access memory chip of either the first or second party control unit. Sightsound maintains, however, that defendants' construction improperly imposes two limitations on the term "stores a replica," the first being a requirement that a complete copy be made first, and the second being that the complete copy would then be stored, all at one time, in the memory. Sightsound contends that a replica may be made and sent from the hard disk to the random access memory, and from there to the second memory, in portions. Indeed, the plain language of the claims set forth above does not indicate that any specific method of creating and storing the replica is required.

[52] Defendants argue that the inventor relinquished any claim to transferring portions of the signals into and out of the sales random access memory. An inventor may, through his action in distinguishing a reference to prior art, relinquish part of what would normally be included within a claim's plain meaning. Interactive Gift, 231 F.3d at 865, *quoting* Elkay Manufacturing Co., 192 F.3d at 976. The '734 patent initially did not include "replica" in the first three claims, but incorporated it into the fourth:

1. A method for transferring desired digital video or digital audio signals comprising the steps of:

forming a connection through telecommunications lines between a first memory of a first party and a second memory of a second party, said first memory having said desired digital video or digital audio signals;

selling electronically by the first party to the second party through telecommunications lines, the desired digital video or digital audio signals in the first memory; and

transferring the desired digital video or digital audio signals from the first memory of the first party to the second memory of the second party through telecommunications lines while the second memory is in possession and control of the second party.

2. A method as described in Claim 1 including after the transferring step, the step of storing the desired digital video or digital audio signals in the second memory.

3. A method as described in Claim 2 including before the transferring step, the step of electronically coding the desired digital video or digital audio signals into a configuration which would prevent unauthorized reproduction of the desired digital video or digital audio signals.

4. A method as described in Claim 3 wherein the first memory includes a first party had disk having a plurality of digital video or digital audio signals, and a sales random access memory chip which temporarily stores a replica of the desired digital video or digital audio signals purchased by the second party for subsequent transfer via telecommunications lines to the second memory of the second party; and including before the transferring step, there is the step of storing a replica of the desired digital video or digital audio signals from the hard disk in to the sales random access memory chip.

(Docket # 71, tab 12 at 11-12). The first three claims were rejected, however, as being anticipated by the Freeny Patent (Docket # 71, Tab 15 at 1). Freeny was described by the patent examiner on May 4, 1994, as follows:

Freeny, Jr. a method for transferring digital information which includes forming a connection through telecommunications lines between a first memory of a first party and a second memory of a second party, the first party having the digital signals, selling electronically by the first party to the second party through the telecommunications lines the desired digital signals, transferring the desired digital signals from the first party to the second party through said lines while the second memory is in possession and control of the second party and the step of storing the digital signals in the second memory.

(Docket # 71, Tab 15 at 2). Mr. Hair responded to this rejection by cancelling claims 2-4, and rewriting claim 1 as "Claim 4 in independent form with the limitations of any intervening claims." (*Id*., Tab 17 at 17). In other words, Claims 1-4 as initially presented were combined into the new claim 1. The amendment caused several changes to claim 1, including adding the "store a replica" language and the language incorporating the use of a sales random access memory chip (*Id*., at 2-3).

Defendants assert that the addition of the "store a replica" language effectively surrendered the option of storing less than a complete copy of the desired signal at one time. The court does not agree.

[53] An amendment to avoid a prior art rejection will surrender coverage included within the plain meaning of a term only when "a patentee takes a position before the PTO, such that a 'competitor would reasonably believe that the applicant had surrendered the relevant subject matter....'." Katz, 63 F.Supp.2d at 591. Here, if the rejection by the examiner in light of Freeny could be read to be premised upon the lack of a requirement that the replica be stored and transferred at one time, then, perhaps, defendants' argument would succeed. The examiner's description of Freeny, though, does not include any mention of transferring all or only a portion of the desired digital signal at one time. Hence, there is no indication that this was the basis for the prior art rejection.

In fact, when one compares the elements lacking in the examiner's description of Freeny, and in proposed claims 1-3, with the new elements which were included in the amended claim 1, it appears that there could have been several bases for the examiner to find Freeny applicable. First, the amended claim 1 incorporates the description of "sales random access memory." Second, the concept of using a "replica" of the desired signal, rather than the signal itself, is introduced. Third, the amendment added the concept of the second party control unit being "remote" from the first party control unit. Hence, even if the lack of the term "replica" was the reason for the rejection, and the court is not convinced that it was, this would only establish that the use of the sales RAM to store such a replica prior to transfer was required to avoid Freeny. Again, the rejection and amendment do not suggest to the reasonable competitor that the inventor was surrendering coverage of a claim which includes transferring portions of the replica into and out of the sales RAM.

Therefore, the various forms of "stores a replica" will not be construed so as to require that a complete replica be stored at one time in the random access memory.

CONCLUSION

It is respectfully recommended that the claims in suit be construed in the manner set forth with more particularity above.

In accordance with the Magistrate's Act, 28 U.S.C. Section 636(b)(1)(B) and (C), and Local Rule 72.1.4 B, the parties are allowed ten (10) days from the date of service to file written objections to this report. Any party opposing the objections shall have seven (7) days from the date of service of objections to respond thereto. Failure to timely file objections may constitute a waiver of any appellate rights.