UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

APPLE COMPUTER, INC.,

Plaintiff,

v.

BURST.COM, INC.,

Defendant.
_____/

No. C 06-0019 MHP

MEMORANDUM & ORDER
Re: Plaintiff's Motions for Summary Judgment

Plaintiff Apple Computer, Inc. ("Apple") brought this action for declaratory relief against defendant Burst.com, Inc. ("Burst") seeking a declaration of invalidity and noninfringement on four United States patents. These patents are generally related to the sharing, editing and playing of audio and video works through computers; compression; and high-speed transmission. Now before the court are Apple's motions for summary judgment of invalidity as to the asserted claims in the four patents. Having considered the parties' arguments and submissions, and for the reasons set forth below, the court enters the following memorandum and order.

BACKGROUND

An overview of data compression and transmission technology and summaries of the asserted patents are provided in this court's claim construction order. Docket Entry 104 at 1–3 (hereinafter "Claim Construction Order"). The patents and claims at issue in these motions (collectively "Burst patents") are summarized below.

I. U.S. Patent No. 4,963,995

Apple seeks summary judgment of invalidity as to claims 1, 2, 3, 7, 8, 9, 15, 17, 19, 20, 22, 23, 44, 47, 51, 52, and 80 of U.S. Patent No. 4,963, 995 ("the '995 Patent"). Claims 1 and 17 are independent claims. Claim 1 claims:

> 1. An audio/video transceiver apparatus comprising:
> input means for receiving audio/visual source information;
>
> compression means, coupled to said input means, for compressing the said audio/video source information into a time compressed representation thereof having an associated time period that is shorter than a time period associated with a real time representation of said audio/video source information;
>
> random access storage means, coupled to said compression means, for storing the time compressed representation of said audio/video source information; and
>
> output means, coupled to said random access storage means, for receiving the time compressed audio/video source information stored in said random access storage means for transmission away from said audio/video transceiver apparatus.

'995 Patent at 10:58–11:7. Claims 2, 3 (via 2), 7, 8, 9, 15 (via 9), 20, 22, 23 (via 8), 44, 51 (via 9), 52 (via 9), and 80 all depend from Claim 1. Claim 17 claims:

> 17. An audio/video transceiver apparatus comprising:
>
> input means for receiving audio/visual source information as a time compressed representation thereof, said time compressed representation of said audio/video source information being received over an associated burst time period that is shorter than a real time period associated with said audio/video source information;
>
> random access storage means, coupled to said input means, for storing the time compressed representation of said audio/video source information received by said input means; and
>
> output means, coupled to said random access storage means, for receiving the time compressed representation of said audio/video source information stored in said random access storage means for transmission away from said audio/video transceiver apparatus.

'995 Patent at 14:43–61. Claims 19 and 47 depend from Claim 17.

II. U.S. Patent No. 5,164,839

Apple also seeks summary judgment of invalidity as to claims 1, 2, 3, 9, 15, 17, 19, 20, 28,

44, 45, 47, 51, 76, and 77 of U.S. Patent No. 5,164,839 ("the '839 Patent"). Claims 1, 17, 76, and 77 are independent claims. Claim 1 claims:

> 1. A method for handling audio/video source information, the method comprising:
> receiving audio/video source information;
>
> compressing the received audio/video source information into a time compressed representation thereof having an associated burst time period that is shorter than a time period associated with a real time representation of the received audio/video source information;
>
> storing said time compressed representation of the received audio/video source information; and
>
> transmitting, in said burst time period, the stored time compressed representation of the received audio/video source information to a selected destination

'839 Patent at 13:1–15. Claims 2, 3 (via 2), 9, 15 (via 9), 20, 28 (via 9), 44, 45 (via 2), and 51 (via 9) all depend from Claim 1. Claim 17 claims:

> 17. A method for handling audio/video source information, the method comprising:
> receiving audio/video source information as a time compressed representation thereof, said time compressed representation of said audio/video source information being received over an associated burst time period that is shorter than a real time period associated with real time playback of said audio/video source information;
>
> storing the time compressed representation of said received audio/video source information; and
>
> transmitting, in said burst time period, the stored time compressed representation of said received audio/video source information to a selected destination.

'839 Patent at 14:26–40. Claims 19 and 47 depend from Claim 17. Claims 76 claims:

> 76. A method for handling audio/video source information, the method comprising:
> receiving audio/video source information comprising a multiplicity of video frames in the form of one or more full motion video programs;
>
> compressing said received audio/video source information into a time compressed representation thereof having an associated burst time period that is shorter than a time period associated with areal time representation of said received audio/video source information;
>
> storing the time compressed representation of said received audio/video source information on one or more magnetic disks; and
>
> transmitting, in said burst time period, the stored time compressed representation of said received audio/video source information to a selected destination.

'839 Patent at 20:21–38. Claim 77 claims:

> 77. A method for handling audio/video source information, the method comprising:
> receiving audio/video source information as a time compressed digital representation thereof, said audio/video source information comprising a multiplicity of video frames in the form of one or more full motion video programs selected from a video library, storing a multiplicity of full motion video programs in a time compressed digital representation thereof for selective retrieval, said time compressed digital representation of the received audio/video source information being received in an associated burst time period that is shorter than a time period associated in an associated burst time period that is shorter than a time period associated with a real time representation of said received audio/video source information;
>
> storing the time compressed digital representation of said received audio/video source information; and
>
> transmitting, in said burst time period, the stored time compressed digital representation of said received audio/video source information to a selected destination.

'839 Patent at 20:21–38.

III. U.S. Patent No. 5,995,705

Apple seeks summary judgment of invalidity as to claims 12, 13, and 21 of U.S. Patent No. 5,995,705 ("the '705 Patent"). Claims 12 and 21 are independent claims. Claim 12 claims:

> 12. A method for handling audio/video source information, the method comprising the steps of:
> receiving audio/video source information, said audio/ video source information comprising a multiplicity of video frames collectively constituting at least one full motion video program;
>
> compressing the received audio/video source information into a digital time compressed representation thereof, the digital time compressed representation of said audio/video source information having an associated burst transmission time period that is substantially shorter than a time period associated with real time viewing by a receiver of said audio/video source information;
>
> storing the digital time compressed representation of said audio/video source information; and
>
> transmitting, in said burst transmission time period, the stored digital time compressed representation of said audio/video source information to a selected destination.

'705 Patent at 14:26–46. Claim 13 depends from Claim 12. Claim 21 claims:

21. A method for handling audio/video source information, the method comprising the steps of:

receiving audio/video source information as a digital time compressed representation thereof, said audio/video source information comprising a multiplicity of video frames collectively constituting at least one full motion video program selected from a video library storing a plurality of video programs in a digital time compressed representation thereof for selective retrieval;

said at least one video program being received by a receiver in a burst transmission time period that is substantially shorter than a time period associated with real-time viewing by a receiver of said at least one video program;

storing the digital time compressed representation of said audio/video source information; and

transmitting, in said burst transmission time period, the stored digital time compressed representation of said audio/video source information to a selected destination.

IV. U.S. Patent No. 5,057,932

Apple also seeks summary judgment of invalidity as to claim 4 of U.S. Patent No. 5,057,932 ("the '932 Patent"). Claims 4, an independent claim, claims:

4. An audio/video transceiver apparatus comprising:

input means for receiving audio/visual source information, said audio/video source information comprising a multiplicity of video frames in the form of one or more full motion video programs;

compression means, coupled to said input means, for compressing said audio/video source information into a time compressed representation thereof having an associated time period that is shorter than a time period associated with a real time representation of said audio/video source information;

random access storage means, coupled to said compression means, for storing the time compressed representation of said audio/video source information, said random access storage means comprising one or magnetic disks; and

output means, coupled to said random access storage means, for receiving the time compressed audio/video source information stored in said random access storage means for transmission away from said audio/video transceiver apparatus.

'932 Patent at 14:8–28.

LEGAL STANDARDS

I. Summary Judgment

Summary judgment is proper when the pleadings, discovery and affidavits show that there is "no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). Material facts are those which may affect the outcome of the case. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). A dispute as to a material fact is genuine if there is sufficient evidence for a reasonable jury to return a verdict for the nonmoving party. Id. The party moving for summary judgment bears the burden of identifying those portions of the pleadings, discovery, and affidavits that demonstrate the absence of a genuine issue of material fact. Celotex Corp. v. Cattrett, 477 U.S. 317, 323 (1986). On an issue for which the opposing party will have the burden of proof at trial, the moving party need only point out "that there is an absence of evidence to support the nonmoving party's case." Id.

Once the moving party meets its initial burden, the nonmoving party must go beyond the pleadings and, by its own affidavits or discovery, "set forth specific facts showing that there is a genuine issue for trial." Fed. R. Civ. P. 56(e). Mere allegations or denials do not defeat a moving party's allegations. Id.; Gasaway v. Northwestern Mut. Life Ins. Co., 26 F.3d 957, 960 (9th Cir. 1994). The court may not make credibility determinations and inferences to be drawn from the facts must be viewed in the light most favorable to the party opposing the motion. Masson v. New Yorker Magazine, 501 U.S. 496, 520 (1991); Anderson, 477 U.S. at 249.

The moving party may "move with or without supporting affidavits for a summary judgment in the party's favor upon all or any part thereof." Fed. R. Civ. P. 56(a). "Supporting and opposing affidavits shall be made on personal knowledge, shall set forth such facts as would be admissible in evidence, and shall show affirmatively that the affiant is competent to testify to the matters stated therein." Fed. R. Civ. P. 56(e).

II. Novelty and Anticipation

The Patent Act precludes the patenting of any invention that "was known or used by others in

this country, or patented or described in a printed publication in this or a foreign country" before the date of its invention. 35 U.S.C. § 102(a); Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1352 (Fed. Cir. 2003). Similarly, section 102(b) provides that a patent claim is invalid if the patented invention is "described in a printed publication . . . more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b); see Schering Corp. v. Geneva Pharm., Inc., 339 F.3d 1373, 1377 (Fed. Cir. 2003). To anticipate under either section 102(a) or section 102(b), a single prior art reference must disclose every limitation of the claimed invention. See Schering, 339 F.3d at 1377 (citing Lewmar Mar., Inc. v. Barient, Inc., 827 F.2d 744, 747 (Fed. Cir. 1987)).

Even where every limitation in the claim is not disclosed, a prior art may nevertheless anticipate the claimed invention if it inherently discloses a missing claim limitation. It must, however, be "clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999). This determination of whether a claimed feature is inherent in the prior art reference is a factual issue. Hazani v. U.S. Int'l Trade Comm'n, 126 F.3d 1473, 1477 (Fed. Cir. 1977).

Anticipation is a question of fact, SmithKline Beecham Corp. v. Apotex Corp., 403 F.3d 1331, 1343 (Fed. Cir. 2005), and the determination of whether a prior art reference is enabling "is a question of law, although based upon underlying factual findings." Crown Operations Int'l, Ltd. v. Solutia Inc., 289 F.3d 1367, 1376 (Fed. Cir. 2002). "However, without genuine factual disputes underlying the anticipation inquiry, the issue is ripe for judgment as a matter of law." SmithKline Beecham, 403 F.3d at 1343. The burden of proof in all instances falls upon the party seeking to establish the invalidity of a patent claim, who "must overcome the presumption of validity in 35 U.S.C. § 282 by clear and convincing evidence." State Contracting & Eng'g Corp. v. Condotte Am., Inc., 346 F.3d 1057, 1067 (Fed. Cir. 2003).

III. Obviousness

An additional prerequisite to patentability is the "nonobviousness" requirement of 35 U.S.C. section 103(a), which states:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in [35 U.S.C. § 102], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

To prove that a patented invention is invalid as obvious, the accused infringer must identify prior art references "which alone or combined with other references would have rendered the invention obvious to one of ordinary skill in the art at the time of invention." Al-Site Corp. v. VSI Int'l, Inc., 174 F.3d 1308, 1323 (Fed. Cir. 1999) (citations omitted). "Obviousness is a question of law premised on underlying findings of fact." Eolas Techs. Inc. v. Microsoft Corp., 399 F.3d 1325, 1332 (Fed. Cir. 2005), cert denied, 126 S. Ct. 568 (2005) (citing Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966)).

These underlying factual determinations include: (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and, if necessary, (4) secondary evidence of nonobviousness.[1] Graham, 383 U.S. at 17–18; Para-Ordnance Mfg., Inc. v. SGS Imps. Int'l, Inc., 73 F.3d 1085, 1087–88 (Fed. Cir. 1995). Like anticipation, the affirmative defense of obviousness must be established by clear and convincing evidence. See Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp., 320 F.3d 1339, 1353 (Fed. Cir. 2003).

The Supreme Court has recently clarified the test for obviousness, specifically the analysis applicable to whether there exists some "teaching, suggestion or motivation" ("TSM") to combine prior art references, which has traditionally been a requirement for a finding of obviousness. The Court described the TSM test as a "helpful insight" rather than a rigid formula, and held that "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." KSR Int'l Co. v. Teleflex Inc., 550 U.S. ___, 127 S. Ct. 1727, 1741

(2007). The Court further emphasized the need for courts to value "common sense" over "[r]igid preventative rules." Id. at 1742–43.

While KSR was pending before the Supreme Court, the Federal Circuit emphasized the flexibility of the teaching, suggestion or motivation analysis in DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356 (Fed. Cir. 2006), cert. denied, 127 S. Ct. 2937 (2007). There, the court held that the "suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense." Id. at 1367. Furthermore, the court acknowledged the possibility of an implicit motivation to combine, i.e., one not explicitly apparent in the prior art. "If, as is usually the case, no prior art reference contains an express suggestion to combine references, then the level of ordinary skill will often predetermine whether an implicit suggestion exists." Id. at 1370. Thus, a high skill level renders a finding of implicit motivation more likely, as skilled individuals are more likely to combine references "without being told to do so." Id.

Accordingly, this court's analysis of the parties' arguments regarding obviousness must be flexible and guided by common sense.

DISCUSSION

I. The '839 Patent

Apple argues that Burst did not invent the combination of data compression and faster-than-real-time ("FTRT") transmission for audio or video information. Apple claims this combination was well known in the art long before the Burst patents were filed. Apple identifies three separate references which it claims independently anticipate the '839 Patent: U.S. Patent No. 4,667,088 ("Kramer"),[2] U.S. Patent No. 4,790,003 ("Kepley"),[3] and U.S. Patent No. 4,506,387 ("Walter").[4] The first two patents, Apple contends, anticipate the audio aspect of the '839 patent and the latter anticipates the video aspect of the '839 patent. Apple also argues that the combination of two other patents, U.S. Patent No. 4,499,569 ("Gremillet")[5] and U.S. Patent No. 4,541,012 ("Tescher"),[6] render the claims of the '839 patent obvious.

A. Claim 1

Claim 1 teaches a method comprising of: 1) receiving audio/video source information; 2) compressing said information into a smaller number of bits; 3) storing the compression; and 4) sending the compression in FTRT to a selected destination.

1. Kramer

Kramer teaches a portable system comprising bubble memory that stores digital audio data. The credit card sized memory card can be inserted into a portable decoder to listen to the audio data stored therein. In essence, Kramer discloses an invention akin to a portable cassette player, i.e., walkman, that uses a credit card sized memory card to store individual audio songs. The portable decoder can be designed to hold multiple memory cards thereby allowing the user to create her own play-list of songs. Further, Kramer teaches the copying of information directly from one credit card sized memory card to another credit card sized memory card.

Apple contends that Kramer anticipates the audio only portion of the '839 patent. Burst argues that the portable music player described in Kramer is a "replay unit" which has no memory for storing audio, no means of compression, and no ability to transmit or receive digital audio FTRT. All of these contentions are correct. Burst also points out that all of Apple's arguments are based on the separate memory cards described in Kramer, which have no compression or random access storage capabilities and lack the ability to transmit FTRT. As discussed below, Burst is correct about compression, but is incorrect with respect to random access storage and the ability to transmit FTRT.

a. receiving audio source information

Kramer discloses the receiving of audio data by teaching a "system which is constructed so that information in analogue form can be stored in a memory in digital form and can be retrieved as desired and reproduced again in analogue form." Kramer at 1:8–13. The above definition implicitly requires that the memory card acquire information from an external source as it does not create any information on its own. This element is clearly met by Kramer.

b. compressing said information into a smaller number of bits

Apple contends that Kramer discloses compression of the audio source information because the music signal being received by the memory card in Kramer can be encoded "by any suitable technique" and that the technique "known as differential pulse code modulation (DPCM) is suitable." Kramer at 3:9–11. Burst argues that Kramer's compression is out of sequence with the method claims described in Claim 1 where compression occurs after the audio is received. To this end, Burst demonstrates that Kramer discloses that the music signal must have been encoded outside the illustrated system. The patent states that "[t]he music signal is encoded (outside the illustrated system), into digital form . . . ." Kramer at 3:9–12. Furthermore, Apple admits that the "the music player disclosed in Kramer receives audio programs in compressed form . . . ." Pl.'s First Summary Judgment Brief at 2. Since neither the memory card nor the replay unit in Kramer has any compression components, compression cannot occur in the device described by Kramer. Therefore, this element of the claim is not met by Kramer.

Alternatively, Apple argues that placing a sheet metal enclosure around the encoding unit would meet this limitation as well as all the other limitations of this claim. Even if this limitation were met by placing a sheet metal enclosure around the encoding unit, the limitation requiring FTRT transmission would still not be met. Apple cannot demonstrate obviousness by stating that since all the claim elements were in existence at the time of the Burst patents, their combination in an encoding system is obvious. For instance, it is clear that the encoding unit: 1) gets the uncompressed audio as input; 2) compresses that audio data; 3) stores the compressed data somewhere in order to transmit it to the memory card; and 4) transmits the compressed data to the memory card. Nevertheless, it is unclear whether the transmission from the encoding unit to the memory card is performed FTRT. Kramer's statement that recording "take[s] a very short time" is not clear and convincing evidence of FTRT transmission from the encoding unit to the memory card. Kramer at 4:6–7. FTRT transmission would be possible if the encoding unit initially stored the compressed audio data onto a memory card and then transferred those contents, upon demand, to another memory card. This modified invention, however, is not what Apple contends renders this

limitation obvious. Furthermore, the court is not convinced that it would be obvious to a person of ordinary skill in the art[7] to add the extra step of storing onto a memory card in order to achieve FTRT transmission. Note, however, that this scenario differs from the scenario discussed below in Walter, where there is a reason to combine the compression element with the central data system. Walter also describes the compression element in much greater detail, leaving far less to speculation.

c. storing the compression

Apple contends that Kramer discloses storage of the compressed data since it teaches that "[t]he controller then instructs the memory 22 and its clock to be ready to receive and store the incoming data . . . ." Kramer at 3:60–64. This argument is further buttressed by Kramer's other teachings. For example, it teaches a "system which is constructed so that information in analogue form can be stored in a memory in digital form and can be retrieved as desired and reproduced again in analogue form." Kramer at 1:8–13. The very terms of the specification contemplate storage on the memory card, and consequently, this element is clearly met.

d. sending the compression in FTRT to a selected destination

"Transmission . . . to a selected destination" has been construed by this court to mean the "sending [of] information to an external device." Claim Construction Order at 7. This sending of information must occur in FTRT in order to meet this limitation.

Kramer discloses the transmission of information from the memory card to the replay unit. This is clearly the sending of information to an external device. Burst argues that the memory card passes its analog signal to the replay unit at a real-time rate only. This is correct, as one purpose of the device described in Kramer is to play back audio stored on the memory card. In fact, sending an analog signal to the replay unit in FTRT would defeat the purpose of an audio playback device as the listener likely only wishes to listen to the audio in real-time. Thus, the transfer from the memory card to the replay unit for play back purposes does not meet this limitation.

Kramer, however, does not limit the output of the memory card to analog signals that pass to the replay unit—the external device may also be another memory card. Indeed, Kramer's disclosed memory card can be programmed such that its digital output can serve as input for another memory

card. Kramer at 5:5–12. Apple concedes that this card-to-card transfer is not a "transmission" in the conventional sense of sending information over a distance. Pl.'s First Summary Judgment Brief at 10. The same, however, is not required by the court's claim construction order. Sending information from one memory card to another meets the court's definition as the memory cards are distinct physical devices. Nevertheless, the transfer must be FTRT to meet this limitation.

Apple contends that Kramer discloses transmission of the compressed data in FTRT since it describes transferring the data from one memory card to another at a speed "at least 100 times" FTRT. Kramer at 4:24–26. Burst argues that these speeds can only be achieved when the transfer is between internal components of the memory card and therefore does not meet the "external device" limitation.

Burst argues that the output is of data stored in "memory 22," which is then received by "demultiplexer 24" and "decoders 26," all of which are internal to the memory card. Eventually this data is sent to the "signal detector and transmitter 18" to "output port 15." Kramer Figure 1.[8] Though Burst's factual description is correct, Burst fails to make an argument that all transmissions from this output are not FTRT. As discussed below, since decoders 26 may be completely bypassed, the speed at which output from the decoders 26 is sent to external devices, and Burst's dependent argument that those transfers cannot occur FTRT, is irrelevant.

According to the patent specification, the memory card can be programmed such that "the output is of the data in its digital form." Kramer at 5:6–7. In order to achieve this, "the controller 34 . . . instructs the output register 30 to pass the data from memory 22 directly to the output multiplexer 32, without passing through the [d]ecoders 26." Kramer at 5:7–10. The specification then goes on to say that "such a digital output can be used . . . as input into another memory, e.g. of another portable card of the invention." Kramer at 5:10–12. Again, this data is eventually sent to the "signal detector and transmitter 18" and onward to "output port 15." This demonstrates that during a transfer from memory card to memory card, the source memory card can transfer away the digital audio information at the rate of output from the memory card. Kramer further teaches that it can record at a speed much faster (at least 100 times) than that required for actual sound

reproduction. Kramer at 4:24–26. This disclosure convinces the court that the threshold requirement that the output be FTRT is met.

Burst argues that the transfer does not occur FTRT based on the fact that "[t]he sound frequency spectrum is subdivided into frequency bands each of which is encoded separately in a sub-band encoder . . . ." Kramer at 3:20–23. As a practical matter, Burst is correct that the sub-bands are encoded and transferred in an interleaved fashion. To wit, the first bit of data corresponding to sub-band one is encoded and transferred, followed by the first bit of data corresponding to sub-band two and so forth. Once the first bit of each sub-band has been stored, the process continues with the second bit of each sub-band being transferred and stored, and so on. Burst states that because of storage in this interleaved manner, re-creating one bit of the entire spectrum requires that one bit of each sub-band be transmitted. Burst is correct in this contention, but fails to demonstrate how that slows the rate of transfer from FTRT to exactly real-time.

As specified in the patent, the number of sub-bands that exist must each have a decoder on the memory card. Kramer at 3:27–30. The patent specification only shows four decoders. Kramer Figure 1. Thus, even if, contrary to the exact specification in the patent, data is sent at 100 times the speed required for reproduction of a single sub-band by a single decoder, the data will be sent FTRT because there are only four decoders present on the memory card. In fact, data will be sent FTRT as long as there are less than 100 decoders on the memory card. Moreover, Kramer's specification makes clear that the number of decoders was meant to be substantially less than 100 because "[t]he number of frequency bands may correspond to the number of instruments/voices in an ensemble, and should correspond to the number of decoders." Kramer at 3:27–30. In any event, the figure in the patent only shows four decoders. Furthermore, Kramer clarifies that the device's memory output is "at a speed much faster (at least 100 times) than that required for actual reproduction." Kramer at 4:24–26. This is enough to clearly convince the court.

Finally, even though the '839 patent does not contemplate a specific speed for the FTRT transfer, Burst seems to take further issue with the fact that Kramer does not state the actual speed at which this FTRT transfer would occur. According to the court's construction of the Burst patents,

the transfer need only be FTRT. The degree by which the transfer is FTRT is contemplated neither by the '839 patent nor the court's claim construction order and is therefore irrelevant. Since the memory card to memory card transfer is FTRT, this element of the claim is met.

In sum, even though this limitation is anticipated by Kramer, it does not anticipate the audio only portion of the '839 patent because the compressing limitation is not met.

2. Kepley

Kepley teaches a voice mail system that interconnects and provides transfer capability between multiple message systems. Apple contends that this system anticipates the audio only portion of the '839 patent because its voice mail system compresses voice data, stores it in random access memory, and transfers the same over high speed data lines in order to accomplish FTRT data transmission. In return, Burst argues that Kepley does not disclose audio source information, compression means, and associated burst time periods. Each contention is discussed in turn.

a. receiving audio source information

This court has construed "audio/video source information" as "an audio and/or video work . . . including a portion of a complete program." Claim Construction Order at 8. During claim construction, Apple did not object to the phrase "an audio and/or video work" as the construction for "audio/video source information." Joint Claim Construction Chart by Term, Exh. A. Kepley describes the receipt of audio signals that represent a voice message. Apple contends that the voice message is an audio work whereas Burst contends that a "work" must be a product of creative effort and authorship and that voice mail does not meet this definition.

The language present in the patent specification is "audio/video source information." How this language is intended to cover only products of creative efforts is unclear. Since the heart of the dispute is the underlying technology that compresses audio data in order to achieve FTRT transmission, whether the data being transmitted is a product of creative effort or not is of no consequence.

Burst's argument suffers from another fatal flaw. The definition of creative effort and authorship is not for the court. Burst admits that audio books and recited poetry are works of

creative effort that consist entirely of spoken voice. It then argues that the same cannot be said of the contents of voice mail. Even if that was true, there are certainly instances where a spoken voice mail message can involve creative effort. For example, singing a birthday message or delivering a joke on the recipient's voice mail can both require creative effort. And as any teenager knows, the possibility of reaching a potential date's voice mail requires careful planning that involves both creativity and humor. Finally, it is unclear as to how a piece of audio or video is to be characterized as a product of creative effort. What one considers creative may be considered patently offensive to another. Indeed the vast majority of First Amendment jurisprudence centers around exactly that argument. Since reasonable minds can disagree as to whether a given voice-only piece is creative or not, the court is unwilling to rule that Kepley's voice mail system can never transmit an audio only piece that requires creative talent or effort.

Burst's second contention is that "audio source information" cannot include voice-only pieces due to the differences between voice processing and wideband audio processing. It then lists the frequency range and sample size as representative of these differences. While it is uncontested that voice-only pieces cover a much smaller range of audible frequencies and therefore can be represented in far fewer bits than wideband audio, the distinction is without merit. Again, the inquiry is whether the system describes receipt of "audio/video source information" defined as "an audio and/or video work that can be received from one or more sources and that has a temporal dimension." Claim Construction Order at 8. Thus, the range that the source information encompasses and the number of bits necessary to represent the same are irrelevant.

Even if the frequency or bit count was of any import, Burst's arguments fail on both counts. First, the logical leap made by Burst when its contends that 85% of the frequencies would be eliminated is unwarranted. There is no evidence that wideband audio would be compressed in the same manner as voice-only audio. Furthermore, there is no evidence that the compression described in Kepley would "further degrade the signal beyond acceptable criteria for audio works." Def.'s Opp. to First Motion for Summary Judgment at 19. Second, the size of the audio sample is not dispositive. Wideband audio, indeed creative works as proffered by Burst, can be represented by

digital signals at 64 kbps. In fact, voice-only audio representations can have data rates higher than 64 kbps if stored in a lossless format and wideband audio may be represented in as little as 64 kbps as clearly demonstrated by mp3 compression technology.

b. compressing said information into a smaller number of bits

Burst contends that Apple does not demonstrate that Kepley employs the specific methods required by the court's construction of "time compressed representation," which has been construed by the court as "a version of audio/video source information having a reduced number of bits." Burst does not argue that Kepley fails to reduce the number of bits of the underlying audio representation. Indeed, the Kepley system clearly reduces the number of bits of the underlying audio from 64 kbps down to 16 kbps. Kepley at 8:29–33. Thus, this limitation is met.

c. sending the compression in FTRT

Kepley specifies that its patented message service system network "interconnects a plurality of message service systems and provides a voice mail message transfer capability between message service systems." Kepley at 1:5–10. In order to interconnect this plurality of services, voice mail messages are transmitted "by performing a computer-to-computer data file transfer between the originating and destination voice mail systems." Kepley at 3:18–21. Importantly, the transmitted "data file consists of the digitally encoded and compressed voice mail message . . . ." Kepley at 3:21–23. Indeed, the use of computer-to-computer data file transfers is pervasive throughout the patent. See Kepley at 4:5–9; 13:31–37. The only remaining question then, is whether the transfer take places FTRT. Thus, the court now need only determine the size of the link over which the compressed information is being transmitted in order to determine if these transmissions are in fact FTRT.

Burst argues that Kepley is incapable of FTRT transmission due to technical limitations inherent in the communication protocols and link that Kepley employs. In response, Apple argues that the patent expressly states that the "use of digital high speed transmission facilities of speed greater than 9.6 Kbps enables the exchange of digitally encoded and compressed voice mail messages faster than real time speech." Kepley at 13:31–37.

Burst argues that each segment of the voice mail message requires signaling overhead, in the form of a header, of about 18%, thereby increasing the total size of the 16 kbps encoded voice data stream to about 18.8 kbps. This expert finding is uncontested by Apple. In any event, Burst further argues that it would be impossible to send a voice mail message encoded at 16 kbps FTRT through a transmission link that is less than or equal to 16 kpbs. Thus, since Kepley does not employ any transmission link faster than 16 kbps, FTRT transfer is impossible. Apple does not contest this argument either and instead focuses on the fact that higher transmission links were available when Kepley was issued even though Kepley did not make use of them.

Independent of the size of the header, the court agrees that a voice mail message encoded at 16 kbps cannot be sent FTRT over a transmission link that is less than or equal to 16 kpbs. Burst contends, and Apple does not dispute, that the fastest transmission link claimed by Kepley is 16 kbps. Likewise, the court is unable to find a transmission link claimed in the patent specification that is faster than 16 kbps. The court, however, is able to find contemplated use of wideband transmission links in the patent even though they are not explicitly claimed.

Kepley specifically teaches that the "use of digital high speed transmission facilities of speed greater than 9.6 Kbps enables the exchange of digitally encoded and compressed voice mail messages faster than real time speech." Kepley at 13:31–37. More importantly, it teaches that "[i]f a wideband transmission facility is available, this computer data file transmission can be executed faster than a realtime voice message transmission." Kepley at 2:63–66. To one skilled in the art, the transmission link claimed by Kepley could easily be replaced by a wider transmission link in order to achieve FTRT transmission. This is because the patent lists no change in the system, other than a connection to a wider transmission link, to achieve this goal. Thus, Kepley inherently teaches that the voice mail system can be used with a wideband transmission facility. Therefore, this element of the claim is met.

Even if this element of the claim was not anticipated, the use of wide band transmission links is obvious under the circumstances. As communication technology has evolved, the speed of transmission links has steadily increased. To one of ordinary skill in the art, it would be obvious

that over time the voice mail system could and should be used with transmission links greater than 16 kbps or 18.8 kpbs. Indeed, there can be no serious argument that when sending a piece of already compressed data from point A to point B, it would be not obvious to use a wider transmission link in order to send the data faster.

In sum, Kepley discloses all of the audio limitations of Claim 1 of the '839 patent.[9]

3. Walter

Walter discloses a video on-demand system that transmits videos from a distribution center to a viewer's television in FTRT. Apple contends that all the video limitations of Claim 1 are met by Walter. There is no dispute that Walter discloses compressing video, storing it, and transmitting it FTRT. Burst argues that Walter fails to meet Claim 1 of the '839 patent because the compression in Walter occurs outside the central data system whereas the '839 patent requires the compression to occur after receipt of the video source information.

Walter's specification is replete with references to compression, but does not specify exactly where the compression is to take place. If the compression circuitry is located in the central data station, then this limitation is anticipated. Apple bears the burden of proving that the compression circuitry is located inside the central data station. Apple, however, has conceded that there is an ambiguity in Walter. An ambiguity cannot sustain Apple's burden of clear and convincing evidence and therefore Walter does not anticipate this claim limitation.

Alternatively, Apple argues that it would be obvious to one skilled in the art to place the compression circuitry within the central data station. It is clear from Walter that video data must be converted to digital form and compressed. This compression must occur somewhere. Common sense would suggest compressing the video source information at the central data station as this would ensure that all video information is compressed correctly and in a format that the station can interpret. This arrangement would also alleviate the content providers from having to perform the compression prior to transmission. As there appear to be no technical barriers to receiving the video information and then compressing it within the central data station before storing it, and since it presents clear benefits, the court finds the arrangement obvious as a matter of law.

Burst argues that adding a compressor at the central data station would increase costs and complexity. That is correct. Burst, however, ignores the fact that all video data stored in the memory modules connected to the central data system must be in a compressed format. Thus, at some point, the video data must be compressed. For one implementing Walter, then, the incremental cost and complexity of adding a compressor at the data station would be *de minimis* because it is a necessary part of the process contemplated by the patent.

Thus, the video limitations of Claim 1 are invalidated by Walter.

4. Gremillet and Tescher

Apple contends that the Gremillet patent, in combination with the Tescher patent, renders Claim 1 of the '839 patent obvious. Gremillet describes a music-on-demand system that transmits music from a distribution center to a customer set-top-box FTRT. Tescher discloses a digital video compression technique that achieves a data rate of 0.239 Mbps, which is lower than the transmission rate of the music being distributed FTRT in Gremillet.

Burst contends that Gremillet fails to meet the claimed compression means. It further contends that Tescher only applies to video teleconferencing and thus, by definition, cannot be used to transfer video FTRT. Finally, it argues that the alleged combination is both untenable and unworkable. Each argument is discussed in turn.

a. Gremillet compression means

Gremillet does not specify a particular method of compression. It states "[t]he compression of the sound information can be obtained by writing into a memory and then reading from the memory at the accelerated speed." Gremillet at 3:42–45. This provides the court with no guidance as to whether the number of bits representing the audio piece has in fact decreased. It is unclear whether a compression algorithm is even used. Since this far from clear and convincing evidence, this limitation is not met by Gremillet. Use of a compression mechanism that meets the court's definition is also not obvious since there are multiple compression techniques to choose from and neither common sense nor an apparent reason dictate the use of one over the other.

b. Tescher video conferencing limitation

Burst argues that Tescher discloses a method of compression for video teleconferencing systems, which are, by definition, real-time systems. Thus, Burst contends, any transfer of the teleconferencing data will never need to be FTRT. This argument misapprehends Apple's contention. Apple is using Tescher to demonstrate that video data can be compressed into a size of 0.239 Mbps. Once it is known that video data can be compressed at that rate, Apple contends, it would be obvious to use Gremillet to send video instead of audio. Thus, Apple does not advocate the use of Tescher in order to send real-time teleconferencing data. Instead, it envisions using the compression technology described in Tescher to send video data FTRT by combining the compression technology with the functionality of Gremillet. Accordingly, it is of no consequence that the Tescher patent describes its compression technique only with respect to video conferencing.

c. Tescher combination untenable

Burst claims the combination of Gremillet and Tescher is untenable. The court agrees with this argument. Gremillet envisioned sending audio to the end user in FTRT over bandwidth designed for video transmission. Gremillet at 1:64–68. Since video could already be sent in full resolution over the bandwidth, it defies reason to compress the video and degrade its quality in order to send it FTRT, especially considering that the video could just be sent real-time over the existing bandwidth. Apple has provided no reason why it makes common sense to combine the two, nor are there any apparent reasons to combine the two.

d. Tescher combination unworkable

Burst claims that the combination is unworkable because the underlying format of the data in the two systems are organized differently. Specifically, in Gremillet, the music is encoded using a fixed data rate and in Tescher, the video is encoded using a variable data rate. This assertion is uncontested by Apple. There seems to be no obvious reason to change Gremillet to process data encoded at a variable rate since the same is much more complicated than data encoded at a fixed rate. Thus, the court agrees that the combination is unworkable.

In sum, the Gremillet and Tescher combination does not render obvious Claim 1 of the '839

patent. Since the Gremillet and Tescher combination is untenable and unworkable, all of Apple's other arguments based upon the Gremillet and Tescher combination are also rejected.[10]

B. Claim 17

Claim 17 differs from Claim 1 only in that it re-arranges the sequence of events of Claim 1 and eliminates one of the elements. Instead of the patented device compressing the audio source information, the device receives already compressed audio source information FTRT, stores it, and transmits it in FTRT.

1. Kramer

Kramer did not anticipate Claim 1 of the '839 patent because it did not compress the source information it received—it received already DPCM compressed source information. Kramer at 3:9–12. Claim 17 requires that the device receive already compressed audio source information.

The court has construed a "time compressed representation" as "a version of audio/video source information having a reduced number of bits." Claim Construction Order at 7. Burst contends that Kramer does not teach compression because an analog audio work does not have a bit size and therefore any conversion into a digital form does not reduce the number of bits. In essence, Burst creates a distinction between converting audio source information from analog to digital format versus compressing already digitized audio information into a representation having a lower number of bits. Burst further argues that Apple has conceded this issue through its expert testimony, which primarily confirms the preceding argument—analog source information does not have a bit size.

The court's definition of compression implicitly requires a corresponding uncompressed representation that has a higher number of bits. It does not, however, require that the uncompressed version be saved or ever come into existence. In fact, it would be quite wasteful of processor cycles and storage space to create or store uncompressed versions if that is unnecessary. Thus, it is of no consequence that an analog signal does not have a bit size because the relevant baseline is what the size would be for an uncompressed digital representation of the analog signal. As long as DPCM

reduces that number of bits, it meets the court's definition of time compressed representation.

Apple contends that the DPCM process disclosed by Kramer incorporates both conversion and compression. DPCM is capable of being implemented via either an analog circuit or digital circuit. If a digital circuit is used, the information is digitized first and then differences between samples are calculated; if an analog circuit is used, the differences between samples are calculated first and the difference is then digitized. Either way the final output is the same—analog audio source information is represented in digital form.

Simply stated, DPCM reduces the number of bits by comparing two or more samples and coding certain differences between those samples. Using either the analog circuit DPCM or the digital circuit DPCM, the number of bits in the resultant digital format, will by definition, be lower than the number of bits in an uncompressed digital version of the analog signal. This is because the range of sample differences is less than the range of individual samples and storing a smaller range requires a lower number of bits than storing a larger range. Since the court's Claim Construction order did not differentiate between encoding differences between analog signals and digital signals, DPCM encoding meets the court's definition because its output is smaller than the uncompressed digital representation of the same analog signal. This conclusion is further supported by Kramer's disclosure that 8 MB of space is enough to store three and a half minutes of music. Kramer at 3:35–38. CD-quality audio of the same in the form of digitized uncompressed wideband audio would require about 18.5 MB of space. Def.'s Opp. to First Motion for Summary Judgment at 19 (CD's are encoded at 705 kpbs).

The storage and transmission elements have already been discussed above in Claim 1. Thus, Kramer anticipates all of the elements of Claim 17 of the '839 patent.

2. Kepley

Claim 17 is the same as Claim 1 except that the invention receives already compressed source information FTRT. Re-transmission in a voice mail system that receives and sends FTRT would meet the limitations of this claim because the system could then: 1) receive compressed source information FTRT; 2) store it; and 3) transfer it FTRT by forwarding it. Burst argues that

Kepley does not disclose re-transmission. Apple argues that forwarding a voice mail is clearly re-transmission from the original recipient to another. Kepley at 12:47–13:37. The court agrees. Since Kepley describes a forwarding mechanism, this Claim is invalidated by Kepley.

Even if the limitation was not anticipated, it would be obvious to one of ordinary skill in the art to implement forwarding. A forwarded voice mail is a re-transmitted voice mail even if all the details about the headers and other housekeeping matters are not provided for in the patent specification since those details can easily be determined by one skilled in the art. Since the patent discloses such a possibility, it would be obvious for one skilled in the art to then implement the details if they wished to incorporate a forwarding feature into the voice mail system.

3. Walter

This claim requires receiving the time compressed representation of audio/video source information in FTRT, storing it, and re-transmitting it in FTRT. Walter, however, does not disclose that the data stored in the memory modules of the central data station are received FTRT. Therefore Walter does not anticipate this limitation. The court now turns to Apple's obviousness arguments.

Walter discloses receiving compressed data at the receiving station, storing at both the receiving station and the central data station, and transmitting FTRT from the central data station. Thus, Apple contends, it would be obvious and routine for one of skill in the art to change the order such that the central data station receives compressed data in FTRT.

Apple notes that a desire to quickly transfer a movie from a content provider to the central data station would motivate such a change. The utility of the Walter invention, however, is its ability to provide end users with video content FTRT. To this end, the memory modules at the central data station are preprogrammed with compressed video data. There is no need for a content provider to send information to the memory modules FTRT as long as they are preprogrammed before being made available to the end user. Furthermore, a connection that allows content providers to upload FTRT to the memory modules defies common sense: There seems to be no financial benefit realized from having the content provider upload FTRT whereas there is a financial

detriment because expensive fiber optic links must be installed in order to upload FTRT.

Apple also argues that the receiving unit could be modified to transfer away the information it has received in FTRT. Apple, however, provides no reason as to why the transfer from the receiving unit to another device must be accomplished in FTRT. And even if there was a motivation to do the same, Apple provides no explanation as to how that would be accomplished. Thus, this limitation is not met.[11]

C. Claim 76

This claim differs from Claim 1 of the '839 patent in that it requires that the audio/video source information consisting of full motion video programs be stored on random access memory disks. Full motion video programs are clearly contemplated by Walter. Burst claims that Walter does not disclose random access storage because Walter's "memory module 196 is of the recirculating shift register type," Walter at 6:36–37, and that to the contrary, Walter teaches away from using random access storage. Apple, in retort, contends that there is no dispute that Walter calls for "suitable high density memory devices." Walter at 2:16–19.

The possibility that a suitable high density memory device could include random access memory and magnetic disks does not clearly convince the court that Walter, by its terms, anticipates the random access storage limitation. The court thus turns to Apple's obviousness argument.

Walter's video on demand system allows the user to select a program from a central library and therefore random access is useful in allowing arbitrary selections of videos from a library. Random access within a piece of memory, however, would not be useful in this situation because the video data is stored on separate memory modules. The random access necessary, therefore, is to the particular module in memory, not to a particular portion within the memory module. Had video data representing multiple video works been stored on one memory module, it would have been helpful to be able to randomly access the portion of memory that housed the arbitrary video selected by the end user. Each memory module, however, was only designed to store only one video program

because "upon receiving an address signal from a keyboard located at the user's location, the host computer selects the memory device identified by the address signal, and causes the program stored therein to be transmitted by a fiber optic line to a data receiving station at the user's location." Walter at 1:51–56. The fact that the entire contents of the particular memory module is transmitted to the end user demonstrates that each memory module stored only one program.

The memory modules, however, would benefit from random access memory if more than one user requested the same video program around the same time. With serial memory, the data system would have to finish servicing the first request before it could switch to the second request. With random access memory, however, the central data station could jump back and forth when servicing the multiple requests for the video data. With this improvement, a user whose request was second would not have to wait until the data system has finished transmitting the video data in its entirety to the user who was first. This reduction in waiting time for the second user is clearly a reason to use random access memory. The court therefore holds that it would be obvious to one skilled in the art to replace the non-random access memory with random access memory in order to facilitate quicker access to the video data when multiple requests are made.

Burst also claims that Walter teaches away from using random access memory because its preferred embodiment uses a specialized recirculating shift register memory. This argument is incorrect as Walter also calls for suitable high density memory devices, which include random access memory and magnetic disks. Since both methods are mentioned favorably, Walter does not teach away from random access memory. Thus, this Claim is invalidated by Walter.

II. The '995 Patent

A. Claim 1

Claim 1 of the '995 patent contains the same limitations as the '839 patent written in a means-plus-function format.

1. Kramer

Claim 1 of the '995 patent requires a transceiver apparatus that receives audio/video data, compresses it, stores it, and then transmits it FTRT. The parties agree that a "transceiver apparatus" is to be construed as "a combination of components, in a common housing, that transmits and receives data." Joint Claim Construction Chart, Exh. A. Burst argues that Kramer does not disclose a common housing that discloses all of the elements in Claim 1. Specifically, it argues that the compression element is not present in either the replay unit or memory card because the patent explicitly discloses that "[t]he music signal is encoded (outside the illustrated system), into digital form . . . ." Kramer at 3:9–10. Apple also admits that the "the music player disclosed in Kramer receives audio programs in compressed form . . . ." Pl.'s First Summary Judgment Brief at 2. Since neither the memory card nor the replay unit in Kramer has any compression components, Kramer does not anticipate all the limitations of Claim 1.

Apple argues that disclosure of an encoding system inherently describes the transceiver apparatus limitation. This is incorrect. Though Apple's contention is correct that Kramer refers to an encoding system, the same, by itself, is not enough to convince the court that the encoding system is to exist in a common housing. Apple's expert's statement that use of the word "system" suggests "a single stand-alone unit" is not enough to convince the court that the vaguely described encoding system is in a common housing.

Finally, even if the encoding system was in a common housing, this claim would not be rendered invalid for the reasons given above under the section on Claim 1 of the '839 patent. Specifically, the compression means limitation is not met and therefore any random access storage means cannot be coupled to the same.[12]

2. Kepley Patent

a. an audio/video transceiver apparatus comprising

Burst argues that Kepley too does not disclose a transceiver apparatus because the patent specification does not meet the common housing requirement of the limitation. Kepley teaches a distributed system where voice mails are transmitted from voice storage processors to data base

processors. Kepley Figure 1[13] displays a "voice mail system 110" with three processor systems depicted in separate blocks. All three blocks are enclosed within a dotted line depicting the system. The "voice storage processor 111" block receives and processes the voice mail and then transmits it to the "data base processor 113" for storage. Specifically, the data base processor is described as "a back-end file system and data base machine. As a back-end processor, data base processor system 113 serves to offload file system and data base operations from voice storage processor 111." Kepley at 7:58–62.

Apple argues that the use of an "interface" between the voice storage processor and the data base processor does not suggest separate housing because the Izeki reference, discussed during claim construction, did not disclose transmitting to an external device when it described sending data through an interface to a reproduction device. Pl.'s Claim Construction Reply at 54. Furthermore, Apple contends—in line with Burst's earlier position—that the dotted lines around the three processor systems and the use of the word "system" depict a common housing.

In order to grant summary judgment on this issue, the court must have clear and convincing evidence that the Kepley invention is commonly housed. Since the system envisions a back end file system that is not described in great detail, it could be an independent or a peripheral device that does not need to be commonly housed. Further, the patent abstract describes its purpose to be "a message service system network that interconnects a plurality of message service systems and provides a voice mail message transfer capability between voice mail message service systems." Kepley Abstract. The use of "network," "interconnects," and "between voice mail message service systems" severely limit Apple's ability to convince the court that the system is indeed commonly housed. Furthermore, it is not obvious to the court what benefit there would be to house this interconnected voice mail system in a common housing. The design of the system seems to imply that one of the benefits of the voice mail system is that the processors may be geographically diverse. Thus, this limitation is not met.

b. compression means, coupled to said input means

The court has construed "compression means" to be a "compressor/decompressor executing the following data compression algorithm; reducing the number of bits by comparing two or more samples and coding certain differences between those samples." Claim Construction Order at 9. Kepley cites to both "bandwidth compression (compress the voice data from 64k bits/s down to 16k bits/s)" and "silence compression (encode the length of long silences so that the encoded length value rather than the actual silent interval can be stored on disk)." Kepley at 8:27–35.

Bandwidth compression can include many different forms of compression, some of which do not involve comparisons between two or more samples. Gersho Decl. ¶ 20.[14] The patent specification is not clear as to which compression technique is to be used. Since a compression method that may or may not meet the court's requirements can be used, bandwidth compression does not anticipate the compression means limitation. Silence compression does not involve comparing samples and coding differences because it merely identifies the silent intervals in an audio piece that need not be coded. Gersho Decl. ¶ 27. This identification does not involve the comparison of two or more samples, and consequently, does not anticipate te compression means limitation.

The Burst patents' sole disclosure of audio compression is that "the audio data can be compressed with conventional algorithms, e.g., a Fibonacci delta compression algorithm." '995 patent at 5:33–35. Apple claims that Kepley's disclosure of bandwidth compression and silence compression surely anticipates conventional algorithms. This argument is misplaced because the court has already ruled that the scope of "compression means" in the Burst patents is different than just "conventional algorithms."

Alternatively, Apple argues that it would be obvious to one of skill in the art to use compression means that are acceptable under the court's construction. Algorithms that meet the court's definition would certainly be useful to employ; however, his argument, in itself, is not enough to find obviousness. The existence of acceptable compression mechanisms does not render

their use in this context obvious. In light of preferred compression means listed in Kepley, a greater showing of what renders their use obvious is necessary.

In sum, Kepley does not invalidate Claim 1 of the '995 patent.

3. Walter

Burst argues that three limitations taught by Claim 1 of the '995 patent are not met by Walter. These limitations are: 1) compression of the audio/video source information after it has been received; 2) random access storage means; and 3) the common housing element of the transceiver apparatus. As discussed above under Claim 1 of the '839 patent, limitation one has been rendered obvious by Walter. Limitation two has been rendered obvious by Walter as discussed above under Claim 76 of the '839 patent. Limitation three is discussed below.

Apple argues that including all the components in a common housing would be obvious. Burst claims that there is no reason to include all the components of the central data station under one housing because it is an "expansive amalgam of diverse components." Def.'s Opp. to First Motion for Summary Judgment at 17.

As suggested by Walter's specification, the scope of the user's choice of video programming is limited only by the data preprogrammed into the central data station. Walter at 3:18–23. Thus, the number of memory modules are the only aspect of the central data station that are variable. The physical size of the central data station must then be necessarily dictated by the amount of video source information stored at the central data station. Thus, fewer available videos would make it easier to house the central data station in a common housing. Since reducing the number of memory modules would lead to portability, there is an apparent reason to reduce the number of modules. It would then make common sense and be obvious to one skilled in the art to place all the components in a common housing.[15] In sum, this limitation is met and therefore the video aspect of Claim 1 of the '995 patent is rendered obvious by Walter.

B. Claim 17

1. Kramer

Burst contends that the limitations of Claim 17 are not met for a variety of reasons. First, the Kramer memory card does not receive a time compressed representation because it does not have a reduced number of bits. As discussed above, this contention is not correct. Second, Kramer does not disclose transmission FTRT. This argument too has been refuted above. Third, Kramer does not disclose random access storage means. This argument is discussed and refuted below.

Burst argues that the bubble memory used in Kramer's memory cards is not random access storage because "[t]he memory is preferably organized so as to appear to be a circular shift register . . . ." and that data is written to the card memory as a "data stream, in serial order." Kramer at 4:1–2; 3:56–57. In response, Apple argues that the patent specifies that the invention involves portable cards with bubble memories that are "arranged so as to allow immediate recall of the data in any portion of memory." Kramer at 1:35–37.

Kramer uses bubble memory, which is undisputably random access storage, in a manner that is akin to serial memory. In fact, the patent explicitly discloses that bubble memory "consists of magnetic bubble elements, which are known to be used for the storage of data but not for storage of data in digital form for retrieval serially." Kramer at 2:25–28. This demonstrates that Kramer's inventors were aware of the random access qualities of the bubble memory but nevertheless chose to use the memory serially. Serial retrieval was likely used because the invention contemplated that each memory card would hold only one audio song. Kramer at 3:35–39. Serial retrieval, however, does not eliminate the random access memory qualities of the bubble memory. The memory card could have also been configured to store many short clips of audio data, in which case the random access quality of the bubble memory would have been very useful for the quick retrieval and playback of the audio clip.

The court's construction of "random access storage means" requires "storage that provides for random access to any given segment of stored audio/video source information." Claim Construction Order at 37. There is no requirement that the memory actually be used for random

access to the stored audio/video information. Since bubble memory is clearly random access storage and is only used in a manner akin to serial memory, this limitation is anticipated. In any event, fulfilling this limitation is rendered obvious by Kramer's disclosure of the use of bubble memory. One skilled in the art wishing to place more than one audio piece on a memory card would clearly be motivated to exploit the random access qualities of the bubble memory.

In sum, Kramer anticipates Claim 17 of the '995 patent.

2. Kepley

Claim 17 only requires receiving FTRT, storing, and transmitting FTRT. As discussed above, Kepley's voice storage processor 111 sends the compressed voice mails to the data base processor 113. The data base processor 113 stores the compressed voice mail and transfers it to the recipient when queried. Kepley at 5:66–6:5 (voice mail transfer occurs over "communication lines 104," which emerge from the "data base processor"). Also as discussed above, either these transfers occur FTRT or it would be obvious to use a wideband transmission link in order to have the transfer occur FTRT. In the interim between transfers, this data base processor stores the voice mail in its back end system. Since all this occurs within the common housing of the data base processor, all elements of this limitation are met. Thus, Kepley anticipates Claim 17 of the '995 patent.

III. The '705 Patent, Claim 12

This claim differs from Claim 1 of the '839 patent only in that it requires the compression have a burst time that is substantially shorter than real time representation. The court is convinced that transferring a full length movie in less than a minute constitutes a transfer that is substantially shorter than real time. Since Claim 1 of the '839 patent is invalidated by Walter, so is this claim.

IV. The '932 Patent, Claim 4

This claim is narrower than Claim 1 of the '995 patent because it is limited to full motion

video and magnetic disk storage. Walter clearly discloses use of full motion video. Furthermore, the magnetic disk storage limitation is met for the same reasons that the random access storage limitation is met for Claim 1 of the '995 patent.

V. The Dependent Claims

A. '839 Patent, Claim 9 and '995 Patent, Claim 9

Claim 9 depends from Claim 1 and requires that the source information be digital.

1. Kramer

Apple claims this additional limitation is anticipated by Kramer because "[p]rior to being used, the control unit 34 is programed in the factory so as to correctly deal with digitized analogue data, control data, and analogue data." Kramer at 3:5–7. Burst argues that the source information being received by Kramer is actually analogue information that is encoded into digital form, which it claims is distinct from digital audio information. Thus, Burst tries to draw a distinction between digitally produced source information and source information in digital format.

Source information has been defined by this court to be "an audio and/or video work that can be received from one or more sources and that has a temporal dimension." Claim Construction Order at 8. There is no evidence that digital source information ought to be limited to digitally produced information. Thus, digital source information does not require that the source information be digitally produced, only that the information be in digital format be received. Kramer clearly anticipates the receipt of digital information.

Even if source information was produced digitally, it would be digitally stored. Thus, the Kramer system would function in exactly the same way independent of whether the digitally encoded source information was originally converted from analog to digital or was originally digitally produced. The distinction between the two is irrelevant to Kramer and even though the terms of the patent do not disclose digitally produced information, they inherently anticipate receipt of the same.

Thus, this limitation is met, but since Kramer does not invalidate independent Claim 1 of the '839 or '995 patents, it cannot invalidate dependent Claim 9. See Hartness Int'l, Inc. v. Simplimatic Eng'g Co., 819 F.2d 1100, 1108 (Fed. Cir. 1987) (holding that if an independent claim is non-obvious, then the corresponding dependent claims cannot be obvious).

2. Kepley

Kepley teaches that the voice data, before compression, is 64 kbps. Kepley at 8:27–31. Since the data is stored on a computer with a corresponding size, it is in a digital format. As discussed above, the distinction between digitally produced source information and source information in digital format is irrelevant. Thus, this limitation is met and Kepley anticipates Claim 9 of the '839 and '995 patents.

3. Walter

As discussed above, it is obvious from Walter that compression may occur after the source information is received at the central data station. The received information could be in a digital format and thus this limitation is met.

B. '839 Patent, Claim 15 and '995 Patent, Claim 15

This Claim adds to Claim 9 the requirement that the input means be coupled to an external computer and the digital audio/video source information comprise computer-generated audio/video source information. Apple relies on the "S-t-r-e-t-c-h a sound" feature of the CompuSonics computer. The feature, however, only stretches the sound bite by placing it in a tape loop—it does not generate the sound. The feature also does not render it obvious to one of ordinary skill in the art to use a computer to generate the sound as opposed to using the computer to manipulate existing sounds. Thus, this claim is neither anticipated nor made obvious by the prior art.

C. '839 Patent, Claims 45, 47, 51; and '995 Patent, Claim 44, 45, 47, 51, 52 (removable recording medium claims and optical disk claims)

These dependent claims involve recording the stored time compressed representation of the audio/video source information onto a removable recording medium. This description requires that two copies of the time compressed representation exist at some point—one that is already stored and

another that will come to exist on the removable recording medium.

Kramer does not disclose multiple storage media on one memory card nor does it disclose storage onto the memory card via the player. It discloses a system whereby music is recorded onto portable memory cards which is meant to be a "a replacement of conventional discs or cassettes." Kramer at 6:23–24. The ability of the memory card in Kramer to transfer to another memory card FTRT renders the recording medium claims obvious. This rendering, however, only invalidates the claims that depend upon Claim 17 since Kramer did not invalidate Claim 1.

All of the optical disk claims depend upon Claim 1 and therefore Kramer cannot invalidate them since it did not invalidate Claim 1.

D. '995 Patent, Claims 2, 3, 20, 23; '839 Patent, Claims 2, 3, 20; and '705 Patent, Claim 13 (editing and monitor limitations)

These dependent claims require editing of the audio/video information or monitoring during editing. Most are audio only, except for Claim 13 of the '705 patent. Apple claims that editing is obvious once audio/video is stored in digital form. It cites to the CompuSonics DSP-2000, which demonstrated editing digitized and compressed audio information prior to the Burst patents.

If random access memory was used to store the digital data, then any particular piece of the audio or video recording could be easily and quickly edited. As discussed above, using random access memory in Walter would be obvious. In addition, there is a clear reason to edit the movies being distributed by Walter—to include advertisements or place a logo. The monitoring limitation is also rendered obvious because during editing, some sort of monitoring mechanism must be provided for the editing feature to be of any use. Thus, Walter, in combination with a person of ordinary skill in the art, renders the video editing claim obvious.

All of the audio claims here depend upon the corresponding Claim 1, which Kramer failed to invalidate. Thus, Kramer, in combination with a person of ordinary skill, cannot invalidate any of these audio claims. Further, Apple's argument that Kepley demonstrates editing is without merit

because appending information to the beginning or end of a voice mail message does not comprise "modifying" the message.

E. '995 Patent, Claim 8

This claim depends from Claim 1 and requires that an analog to digital converter means covert the analog source information to digital form before passing it to the compression means.

Walter makes clear that the information stored in the memory modules is in compressed format. At some point then, the analog video information must have been converted to a digital compressed format. Walter is not designed in such a way as to disallow the compression from occurring within the system. For instance, in order to increase the utility of the invention, the system could be easily modified to receive uncompressed analog video information and then convert and compress the received data. Doing this would ensure consistency with the data compression means envisioned by the patent specification and eliminate conversion costs that content providers would have to otherwise bear. Thus, the video aspect of this Claim is rendered obvious by Walter.

F. '995 Patent, Claim 19 and '839 Patent, Claim 19 (video library claims)

This claim adds the limitation that the video library store a multiplicity of items of audio/video source information in said time compressed representation for selective retrieval. As discussed above, Walter clearly meets this specific requirement. Apple, however, has not argued that Walter meets Claim 17 of the '995 patent, from which this claim depends. Therefore, the '995 Claim remains valid, but the '839 Claim does not.

G. '995 Patent, Claims 20, 22, 23; '839 Patent, Claims 20, 28 (decompression claims)

These claims require that the time compressed representation be un-compressed before editing and then re-compressed after editing. Apple does not present any evidence that states it

would be obvious to go through this process when editing. If it is possible to edit the time compressed representation without un-compressing it, then it would seem to be a waste of time, disk space and processor cycles to go through the un-compression and re-compression phases merely in order to edit. Thus, these claims remain valid.

CONCLUSION

The following chart summarizes the patents invalidated by the court's holding:

Claim	Validity status
'839 patent, Claim 1	Audio anticipated by Kepley; Video rendered obvious by Walter[16]
'839 patent, Claim 17	Audio anticipated by Kramer; Audio also anticipated by Kepley
'839 patent, Claim 76	Rendered obvious by Walter
'995 patent, Claim 1	Video rendered obvious by Walter
'995 patent, Claim 17	Audio anticipated by Kramer; Audio also anticipated by Kepley
'705 patent, Claim 12	Video rendered obvious by Walter
'932 patent, Claim 4	Video rendered obvious by Walter
'839 patent, Claim 9 (via 1)	Audio anticipated by Kepley; Video rendered obvious by Walter
'995 patent, Claim 9 (via 1)	Video rendered obvious by Walter
'839 patent, Claim 47 (via 17)	Audio rendered obvious by Kramer
'995 patent, Claim 47 (via 17)	Audio rendered obvious by Kramer
'705 patent, Claim 13 (via 12)	Video rendered obvious by Walter
'995 patent, Claim 8 (via 1)	Video rendered obvious by Walter
'839 patent, Claim 19 (via 17)	Video rendered obvious by Walter

For the foregoing reasons, Apple's motions for summary judgment are GRANTED in part and DENIED in part.

IT IS SO ORDERED.

Dated: November 7, 2007

MARILYN HALL PATEL
United States District Court Judge
Northern District of California

ENDNOTES

1. Since the court has determined the issues at bar based upon the scope and content of the prior art, the differences between the prior art and the claims at issue, and what would be obvious to one of ordinary skill in the art, it is unnecessary for the court to discuss the secondary evidence presented. Furthermore, the abundance of evidence demonstrating that Burst's patents were either anticipated or rendered obvious by the prior art militate against the use of secondary evidence.

2. Kramer was issued on May 19, 1987, based on an European Patent Application that was filed on November 1, 1982 and published on July 1, 1983. It is therefore indisputably prior art to the Burst patents under 35 U.S.C. section 102(b) because it was issued more than one year before December 27, 1988, the earliest priority date of the '839 patent. Kramer is used throughout this order as support to invalidate the audio claims only.

3. Kepley is prior art to the Burst patents under 35 U.S.C. section 102(e) because it was filed on April 27, 1987 whereas the earliest claimed conception date of any of the Burst patents is June 1987. Kepley is used throughout this order as support to invalidate the audio claims only.

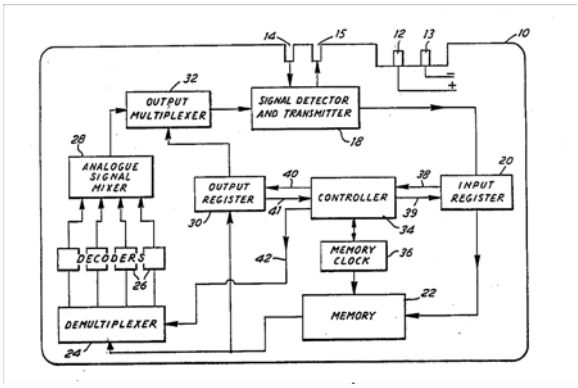
4. Walter was issued March 19, 1985 and is therefore indisputably prior art.

5. Gremillet was issued February 12, 1985 and is therefore indisputably prior art.

6. Tescher was issued September 10, 1985 and is therefore indisputably prior art.

7. Although parties have not briefed this issue, one of ordinary skill in the art must be someone with knowledge of both Computer Science and Electrical Engineering at least at the college level, i.e., a Bachelors degree in Computer Science with a heavy emphasis on Electrical Engineering knowledge or vice versa.

8.



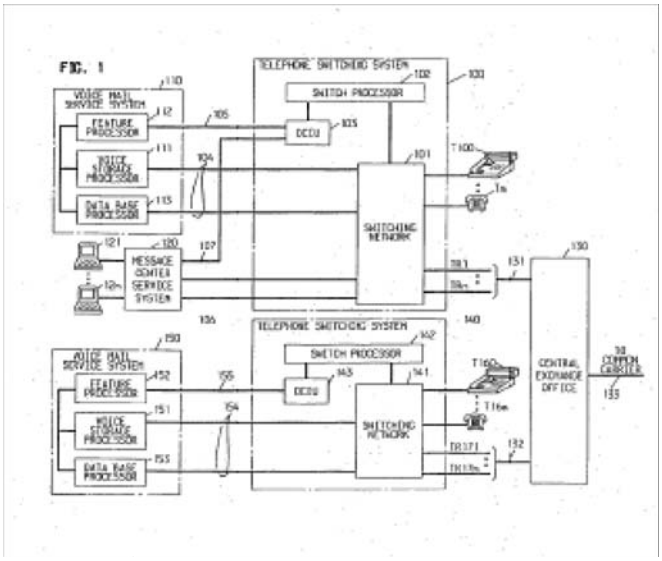
9. The system clearly contemplates storage by stating that "[d]ata base processor 113 serves as a mass storage element to store all the digitally encoded voice signals as well as control algorithms used by voice storage processor 111 and feature processor 112." Kepley at 5:42–46.

10. In addition, during the hearing on Apple's motions for summary judgment, counsel for Apple seemed to have effectively withdrawn their arguments related to Gremillet and Tescher.

11. Walter fails to invalidate Claim 77 of the '839 patent and Claim 21 of the '705 patent for the same reasons.

12. Since Kramer does not invalidate Claim 1 of the '995 patent, it cannot invalidate Claim 7 of the '995 patent, which is dependent upon Claim 1.

13.



14. In connection with the instant motion for summary judgment, Apple filed two motions to strike. The first motion, aimed at striking portions of declarations submitted by Dr. Gersho and Dr. Hemami, is moot because Apple was able to subsequently depose Dr. Gersho and Dr. Hemami. The second motion seeks to strike portions of Dr. Gersho, Dr. Hemami and Mr. Lang's declarations. In light of the court's ruling, the court does not deem it necessary to rule upon this motion. Furthermore, the court did not rely upon their declarations in its decision, thereby making the motion moot.

15. Since the memory modules are connected to the host computer that transmits the data, it defies reason to have the computer and the memory modules in separate housing.

16. Any claim listed as being rendered obvious by a single prior art reference was actually rendered obvious by the prior art in combination with the knowledge of a person of ordinary skill in the art.