

[Convolve, Inc. v. Compaq Computer Corp.](#)

United States District Court for the Southern District of New York

August 17, 2004, Decided ; August 17, 2004, Filed

00 Civ. 5141 (GBD) (JCF)

Reporter

223 F.R.D. 162; 2004 U.S. Dist. LEXIS 16164

CONVOLVE, INC., and MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Plaintiffs, - against - COMPAQ COMPUTER CORP. and SEAGATE TECHNOLOGY, INC., Defendants.

Subsequent History: Motion granted by [Convolve, Inc. v. Compaq Computer Corp., 2004 U.S. Dist. LEXIS 17502 \(S.D.N.Y., Sept. 1, 2004\)](#)

Prior History: [Convolve, Inc. v. Compaq Computer Corp., 224 F.R.D. 98, 2004 U.S. Dist. LEXIS 9572 \(S.D.N.Y., May 28, 2004\)](#)

Disposition: **[**1]** Plaintiffs' motions to compel and for sanctions granted in part and denied in part. Plaintiffs' motion to vacate special master's ruling denied without prejudice. Defendant Compaq's motion to compel granted in part and **[**2]** defendant Seagate's motion to compel deferred.

Counsel: For Convolve, Inc., Plaintiff: **[**3]** Adam B. Landa, LEAD ATTORNEY, Greenberg, Traurig, L.L.P., New York, NY.

For Convolve, Inc., Massachusetts Institute of Technology, Plaintiffs: Albert L. Jacobs, Jr., LEAD ATTORNEY, Albert L. Jacobs, Jr., Greenberg Traurig, LLP, Dennis J. Block, Jason M. Halper, Kenneth A. Freeling, LEAD ATTORNEYS, Cadwalader, Wickersham & Taft, New York, NY.

For Convolve, Inc., Massachusetts Institute of Technology, Plaintiffs: Richard E. Kurtz, LEAD ATTORNEY, McLean, VA.

For Massachusetts Institute of Technology, Plaintiff: Adam Benjamin Landa, Greenberg Traurig, LLP, New York, NY.

For Compaq Computer Corp., Seagate Technology, Inc., Defendants: Duane-David Hough, LEAD ATTORNEY, Fish & Neave, New York, NY.

For Compaq Computer Corp., Defendant: Herbert F. Schwartz, Robert F. Bahrampour, Robert J. Goldman, Robert W. Morris, LEAD ATTORNEYS, Fish & Neave, New York, NY.

For Seagate Technology, Inc., Defendant: Ann E. Schofield, LEAD ATTORNEY, McDermott, Will & Emery, LLP (NY), Peter Bucci, LEAD ATTORNEY, Orrick, Herrington & Sutcliffe, New York, NY.

For Seagate Technology, Inc., Defendant: Terrence P. McMahon, LEAD ATTORNEY, McKermott, Will & Emery LLC, Palo Alto, CA.

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For Seagate Technology, Inc., Counter Claimant: Peter Bucci, LEAD ATTORNEY, Orrick, Herrington & Sutcliffe, New York, NY.

For Seagate Technology, Inc., Counter Claimant: Terrence P. McMahon, LEAD ATTORNEY, McKermott, Will & Emery LLC, Palo Alto, CA.

For Convole, Inc., Massachusetts Institute of Technology, Counter Defendants: Dennis J. Block, Jason M. Halper, LEAD ATTORNEYS, Cadwalader, Wickersham & Taft, Duane-David Hough, LEAD ATTORNEY, Fish & Neave, Adam Benjamin Landa, Greenberg Traurig, LLP, New York, NY.

For Convole, Inc., Massachusetts Institute of Technology, Counter Defendants: Richard E. Kurtz, LEAD ATTORNEY, Greenberg, Traurig, L.L.P., McLean, VA.

Judges: JAMES C. FRANCIS IV, UNITED STATES MAGISTRATE JUDGE.

Opinion by: JAMES C. FRANCIS IV

Opinion

[*164] MEMORANDUM AND ORDER

JAMES C. FRANCIS IV

UNITED STATES MAGISTRATE JUDGE

Convole, Inc., and Massachusetts Institute of Technology (collectively, "Convole") have asserted claims of patent infringement and theft of trade secrets against Compaq Computer Corp. ("Compaq") and Seagate [*5] Technology, Inc. ("Seagate"). Seagate manufactures disk drives, while Compaq produces and distributes computer systems. Pursuant to a confidentiality agreement, Convole shared proprietary information with the defendants concerning technology that allows a computer user to choose between faster and quieter modes of operation. Convole alleges that the defendants breached that agreement by misappropriating the technology and incorporating it into their own products.

Early in this litigation, the Honorable John S. Martin, United States District Judge, to whom

the case was then assigned, appointed Pasquale A. Razzano of the law firm of Fitzpatrick, Cella, Harper & Scinto as Special Master to oversee discovery. The Special Master adjudicated numerous discovery disputes prior to recusing himself on October 14, 2003. Thereafter, the Honorable George B. Daniels, United States District Judge, to whom the case is now assigned, referred it to me for all further discovery issues.

There are now pending nine different discovery motions. Convole has moved: (1) to compel Compaq to produce what Convole characterizes as procurement documents and to impose sanctions for Compaq's alleged discovery [*6] abuse; (2) to vacate the Special Master's order denying discovery of information related to Compaq's computer code, known as the F10 BIOS, which created an interface so that users could choose between quick and quiet modes of operation when a computer is first turned on; (3) to vacate the Special Master's order requiring Convole to provide supplemental responses to Compaq's contention interrogatories; (4) to compel Seagate to produce information relating to its technology known as TOME and to impose sanctions to the extent such information has not been preserved; (5) to preclude Seagate from taking discovery beyond the discovery deadline concerning whether Convole's proprietary information qualified as trade secrets; (6) to sanction Seagate for what Convole contends is its abuse of the discovery process relating to Seagate's Hawk 2 technology; and (7) to compel Seagate to produce its chief executive officer for a videotaped deposition. Compaq, in turn, moves to compel Convole to answer certain damages interrogatories. Finally, Seagate seeks an order requiring Convole to produce financial documents in unredacted form. I held a [*165] hearing on all of these motions on June 25 and 29, [*7] 2004.

The Special Master previously dealt with some of these issues in whole or in part. Therefore, in some instances I must determine whether it is appropriate to revisit the Special Master's decision. In others, I must construe orders issued by the Special Master that relate to but do not fully dispose of the issue at hand. And, in some cases, I write on a clean slate. I will take up each of the issues in turn.

Discussion

A. Compaq's Procurement Documents

Resolution of Convole's motion seeking Compaq procurement documents requires determinations at two levels. The threshold question is whether discovery is limited to specific disk drive models that Convole has accused as infringing its patents or incorporating its trade secrets or, alternatively, encompasses any computer system that includes an Automatic Acoustic Management ("AAM") drive -- that is, a drive that can be switched between a quiet mode and a performance mode. However that question is decided, it must then be determined whether Compaq has satisfied its discovery obligations.

The Special Master settled the threshold issue. In an order issued on May 14, 2002, the Special Master ruled as follows with respect **[**8]** to an interrogatory propounded by Convole:

Plaintiffs contend that this interrogatory seeks the identity of Compaq's disk drives which support Automated Acoustic Management (AAM) because such drives may infringe Plaintiffs' patents or incorporate their trade secrets. However, it appears that Plaintiffs have not accused any drives used by Compaq (other than the U Series 5 and Barracuda ATA-IV drives) of patent infringement or of

incorporating their trade secrets. Accordingly, on its face, the request, in part, appears overly broad in that it is not limited to the allegedly infringed patent claims or the specific trade secrets on Plaintiffs' Amended Trade Secret List.

However, even in the absence of an assertion of infringement or use of the alleged trade secrets, this interrogatory is related, in part, to the issue of non-infringing alternatives, damages, and the "value" of the trade secrets and patented inventions. And, merely identifying such drives does not appear unduly burdensome. Accordingly, Compaq shall identify "Compaq products", which it makes and sells, that contain disk drives that support AAM. This appears to be a more practical method of obtaining this information **[**9]** than a document request (Local [Rule 33.3\(b\)](#)). Compaq need not identify serial number range or volumes produced.

As I understand it, the products Plaintiffs want identified are available on the market for Plaintiffs to acquire and/or inspect. Since they are not currently accused, neither the products themselves nor documents related to them need be produced. In the event Plaintiffs subsequently assert an infringement claim or a claim that such products incorporate their trade secrets, the balance of the interrogatory may be posed once again with respect to such accused products.

(Letter of Pasquale A. Razzano dated May 14, 2002 (the "5/14/02 Order"), attached as Exh. 2 to Declaration of Duane-David Hough in Support of Compaq's Opposition to Convole's Motion to Compel Further Discovery of "Procurement Documents" dated March 9, 2004 ("Hough 3/9/04 Decl."), at 3-4 (footnote omitted)).

In the same order, the Special Master considered Convolve's request that Seagate produce requests for proposal and requests for quotation relating to AAM. He found:

These requests are overly broad in that they appear to encompass more than the accused products. While Plaintiffs assert the requests [**10] are "relevant" to their trade secret claims, ... it is not clear why the requested documents about non accused products are relevant. It is not understood why these particular documents would enable Plaintiff "to determine any and all disk drives that incorporate Convolve's Technology" any more easily than [*166] acquiring Defendants' products and examining them.

(5/14/02 Order at 6). Nevertheless, the Special Master noted that "Seagate has agreed to search for and produce actual requests for proposals and actual requests for quotation ... relating to 'Acoustic features and AAM'", and required those documents to be produced. (5/14/02 Order at 6). The Special Master made a similar ruling with respect to Convolve's requests to Compaq. He found that these requests were "essentially identical" to those served on Seagate, and he concluded:

Until Plaintiffs have some good faith basis to believe any other drives for which they seek documents infringe their patents or incorporate their trade secrets, and identify such drives and the patent claims they infringe, or specific trade secret incorporated in them, the request is over broad.

As I understand Compaq's representation, it has agreed [**11] to produce non-privileged responsive documents

relating to the two accused disk drives. In addition however, with regard to the issue of value, Compaq shall also produce actual requests for proposals and actual requests for quotations, if any, relating to "Acoustic features and AAM".

(5/14/02 Order at 7).

Thereafter, Convolve sought to expand discovery to include an additional 12 models of Seagate disk drives. The Special Master granted this application in an Order dated October 11, 2002. (Letter of Pasquale A. Razzano dated Oct. 11, 2002 (the "10/11/02 Order"), attached as Exh. 7 to Hough 3/9/04 Decl., at 1-2, 6).¹

Then, in March 2003, Convolve complained to the Special Master that the defendants had failed to produce requested documents, including those [**12] related to AAM drives made by manufacturers other than Seagate and incorporated in Compaq computer systems. In an Order dated April 15, 2003, the Special Master noted that the deadline for fact discovery had passed, and he rejected the application to alter the scope of the disclosure:

If Plaintiffs intended to accuse other disk drives of other manufacturers used in Compaq's computers it had to comply with the order concerning discovery entered in this case which required that their Final Infringement Allegations state separately for each asserted claim "each accused apparatus, product, device ... of each defendant of which plaintiffs are aware. This identification shall be as specific as possible. Each product, device and apparatus *must* be identified by name or model number, if known." Plaintiffs did not identify the Compaq computers which they

¹ There is some inconsistency in the lists of accused drives, since the Barracuda ATA-IV drive was one of the two drives originally identified but also appears in the list of additions. Compare 5/14/02 Order at 3 with 10/11/02 Order at 1.

believe contain non-Seagate hard drives in this way, apparently, because they are either unaware of them or are unable to do so. However, given my earlier rulings, if Plaintiffs wanted broader discovery they should have sought it sooner in this process - and at least at the time they served their Final Invalidity Allegations. To expand **[**13]** discovery now at this late date - after close of fact discovery - would create a whole new wave of scores of depositions, expert testimony, document production, discovery disputes, etc. Given the very clear and specific nature of the claims in the Amended Complaint, it is too late to seek that expansion now.

With regard to Plaintiffs' contention that it is entitled at least to "damages" discovery with respect to these other non-Seagate disk drives, since such other drives, even if they do exist, are not part of the claims in this case damages discovery as to them is irrelevant.

(Letter of Pasquale A. Razzano dated April 15, 2003 ("4/15/03 Order"), attached as Exh. 4 to Hough 3/9/04 Decl., at 9-10). The Special Master observed that to the extent that particular disk drives were not subject to Convolve's claims and were beyond the scope of discovery, they could be the subject of subsequent litigation. (4/15/03 Order at 10 n.7).

Convolve did not seek review of the 5/14/02 Order, the 10/11/02 Order, or the 4/15/03 **[*167]** Order. Pursuant to these orders, Convolve is entitled to full discovery of the Seagate disk drives that it specifically accused as infringing or as incorporating its **[**14]** trade secrets; it may take limited discovery (for purposes of damages and "value") of any Seagate drives that have the AAM feature,

that discovery consisting of the identification of such drives and of requests for proposal and requests for quotation as to those drives; and there shall be no discovery of non-Seagate drives, even if incorporated in Compaq systems.

The question then become whether, within these parameters, Compaq has complied with its obligations to produce procurement information. With respect to the specific accused drives, Compaq has represented that it obtained from Seagate and forwarded to Convolve data showing the quantity of each drive model purchased by Compaq and the price. (Tr. at 57-58, 86).² Furthermore, as to the accused drives, Compaq produced the qualifying documents; that is, the specifications indicating, among other things, the requirement that the drive be capable of switching between a quiet mode and a performance mode. (Tr. at 86-87). The financial information provided by Compaq was not limited, however, to that related to the accused drives. Rather, it included all Seagate drives sold to Compaq that support AAM. (Tr. at 56-57, 71-73). Furthermore, **[**15]** because 80% of Compaq's computer systems are assembled by contract manufacturers who may incorporate any one of a number of qualified drives in any given unit, Compaq provided financial information not just for Seagate AAM drives, but for all AAM-compliant drives. (Tr. at 57, 72-74).

The remaining uncertainty is whether the data provided in fact overstate Compaq's revenue attributable to AAM drives. This is because Compaq has assumed for present purposes that all of the drives that it purchased for certain periods are AAM supportable, an assumption that may not be entirely accurate. (Tr. at 73-74). But Compaq will have to live with that assumption. To the extent that the

² "Tr." refers to the transcript of the hearing held on June 25 and 29, 2004.

recordkeeping for its production chain makes it either impossible or prohibitively expensive to disentangle AAM and non-AAM data, Compaq must bear the consequence of an adverse evidentiary presumption.³ Accordingly, unless Compaq has already provided specific evidence [**16] to the contrary, it shall be presumed that all of the financial data it has produced concerning disk drives relates to AAM-supportable drives.

At least on a gross level, then, Compaq's production appears to satisfy the Special Master's rulings. Nevertheless, Convolv argues that Compaq has improperly withheld specific documents including individual bills of materials. The bills of materials do not, however, identify the disk drive required for any given computer with sufficient specificity such that it could be determined whether the actual drive used was either an accused drive or an AAM-compliant drive. The typical bill of materials identifies the required drive only by storage capacity, spin speed, and type of controller. (Tr. at 63; Hough 3/9/04 Decl., Exh. 5, Tab C). Even the [**17] more specific form of the bill of materials identifies multiple qualified drives, any of which could be installed by the contract manufacturer in satisfaction of Compaq's requirements. (Tr. at 63; Hough 3/9/04 Decl., Exh. 5, Tab D).

To be sure, the bills of materials are "relevant" under the broad definition of that term that applies in the context of discovery. See Fed. R. Civ. P. 26(b) (1); [Melendez v. Greiner, 2003 U.S. Dist. LEXIS 19084, No. 01 Civ. 7888, 2003 WL 22434101, at *1 \(S.D.N.Y. Oct. 23, 2003\)](#); [Zanowic v. Reno, 2000 U.S. Dist. LEXIS 13845, No. 97 Civ. 5292, 2000 WL 1376251, at *2 \(S.D.N.Y. Sept. 25, 2000\)](#) ("relevance, for the purposes of discovery, is an extremely broad concept"). Nevertheless,

"Rule 26(b)(2) imposes general limitations on the scope of discovery in the form of a 'proportionality test.'" [Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 316 \[*168\] \(S.D.N.Y. 2003\)](#). That rule provides:

The frequency or extent of use of the discovery methods otherwise permitted under these rules and by any local rule shall be limited by the court if it determines that: (i) the discovery sought is unreasonably cumulative or duplicative, or [**18] is obtainable from some other source that is more convenient, less burdensome, or less expensive; (ii) the party seeking discovery has had ample opportunity by discovery in the action to obtain the information sought; or (iii) the burden or expense of the proposed discovery outweighs its likely benefit, taking into account the needs of the case, the amount in controversy, the parties' resources, the importance of the issues at stake in the litigation, and the importance of the proposed discovery in resolving the issues.

Fed. R. Civ. P. 26(b)(2). Here, requiring Compaq to disclose all of its bills of materials for every computer system that might have incorporated either an accused drive or one that, while not accused, is AAM-supportable, would require an expenditure of time and resources far out of proportion to the marginal value of the materials to this litigation. As noted above, these documents do not indicate the specific instances when a relevant drive is actually installed in a Compaq system. Moreover, even if it were possible to obtain that information by linking each bill of materials to other data in Compaq's procurement system, [**19] there has been no showing that it would go beyond the information already

³ On a related issue -- the difficulty of identifying which Compaq computer systems actually incorporated an accused drive -- the Special Master suggested that a similar presumption might be appropriate. (4/15/03 Order at 10 n.8).

provided by Compaq in summary form. And, Convolve has not presented evidence that would suggest that those summaries are either incomplete or inaccurate. There is no basis, therefore, for requiring production of the bills of materials.

Convolve also argues that, as illustrated by the deposition testimony of Donald Morton, Compaq has wrongfully withheld procurement documents consisting of requests for proposal ("RFPs") and requests for quote ("RFQs"). Indeed, Mr. Morton stated that while Compaq has only recently formalized its procurement process to require that such requests conform to a particular format, it has long utilized a less formal but functionally equivalent process. (Deposition of Donald Morton dated May 14, 2003 ("Morton Dep."), attached as Tab E to Exh. 5 to Hough 3/9/04 Decl., at 96-98, 110-13). Thus Compaq's prior representation to the Special Master that it simply did not utilize RFPs and RFQs was disingenuous. (Transcript of Hearing dated Sept. 11, 2003, attached as Exh. P to Affidavit of Kenneth A. Freeling Supporting Plaintiffs' Motion dated Jan. 3, 2004, at 131-32).

But the fact that Compaq **[**20]** made an inaccurate representation to the Special Master, while troubling, does not necessarily mean that it should now be required to produce the underlying information, that is, all RFPs and RFQs for accused drives and AAM-compliant drives. Once again, by virtue of the nature of Compaq's procurement process, one would usually be unable to tell from the requested documents whether, in fact, they relate to relevant drives. Generally, RFPs and RFQs specified only the capacity and spin speed for the drives that were forecast to be required; there was no indication of any acoustic requirements. (Morton Dep. at 74-79; sample Request for Quote, attached as Tab G to Exh. 5 to Hough 3/9/04 Decl.). There was,

however, at least one exception to this rule. Compaq located and produced in discovery a single RFQ that called for drives with "seek profiles switchable between quiet mode and performance mode." (Request for Quiet Drive Proposal, attached as Tab I to Exh. 5 to Hough 3/9/04 Decl.). Because this document is plainly relevant and because Compaq previously provided incorrect information about its RFPs and RFQs, it is important to ensure that its search has been comprehensive. Therefore, Compaq **[**21]** shall submit an affidavit setting forth in detail the steps taken to identify RFPs and RFQs, including those stored in electronic databases, which refer to the capability of switching between quiet mode and performance mode.

There remain a number of lesser disputes relating to procurement discovery that Convolve and Compaq were unable to resolve by pre-motion conference. (Letter of Kenneth A. Freeling dated July 11, 2003, attached as Tab A to Exh. 5 to Hough 3/9/04 Decl.; Letter of Robert W. Morris dated Oct. 1, **[*169]** 2003 ("Morris 10/1/03 Letter"), attached as Exh. 5 to Hough 3/9/04 Decl.). First, Convolve has sought Compaq's Material Requirement Plans ("MRPs"), which are its forecasts for the components that it anticipates needing for the computer units that it assembles itself. Since Compaq has represented that it has produced data for the drives that it actually acquired, the MRP's would be redundant and, indeed, less relevant, and need not be produced. The same result is warranted for Convolve's request for purchase orders and purchase change orders: these are duplicative of the summary information Compaq has already produced with respect to actual purchases.

Next, Convolve seeks **[**22]** inventory reports for the drives that Compaq stocks for purposes of installing in the units it manufacturers. Compaq argues that "Convolve already has a

complete identification of how many of the accused hard drives Compaq purchased from Seagate, as well as the price Compaq paid for them." (Morris 10/1/03 Letter at 6). This is a satisfactory response with one caveat. For purposes of damages, Compaq will not be heard to argue that Convolve's recovery should be reduced because some number of drives acquired by Compaq languished in its inventory and therefore resulted in no profit.

Convolve demanded Compaq's written specifications for accused drives by part numbers. Compaq responded that it had already produced the requested documents for the U Series 5 drive and would do so for the Barracuda ATA-IV drive. (Morris 10/1/03 Letter at 9). However, in light of the fact that the number of accused drives was expanded by the Special Master's 10/11/02 Order, Compaq's production must conform to the broader scope of discovery. It shall therefore produce the requested information for all accused drives.

Convolve further seeks the production of all invoices for accused drives. Compaq has produced **[**23]** a report setting forth all of its purchases of these drives on a quarterly basis. Production of the invoices themselves would be redundant and will not be required.

Convolve next requests production of Compaq's general ledger, journal entries, and chart of accounts. This request is burdensome and overbroad. To the extent relevant, it is duplicative of information Compaq has already provided on the sale of units containing accused and AAM-compliant drives.

Convolve next requests the monthly research and development reports contained in Compaq's Hyperion Database. While certain research data are plainly relevant, these reports deal generally with budget and

headcount and do not relate to specific projects. (Hough 3/9/04 Decl., Exh. 5, Tab J). Therefore, they need not be produced.

Finally, Compaq has agreed to exchange updated profit and loss information with Convolve, and the parties shall stipulate to the date and manner of this production.

The last issues arising from Convolve's demand for procurement documents are its request for direct access to Compaq's hard drives, servers, and databases and its application for an award of sanctions. Neither form of relief is warranted. Had **[**24]** Convolve demonstrated widespread destruction or withholding of relevant information by Compaq, then sanctions, together with an order circumventing the normal process of discovery and allowing Convolve to access the data directly, might be appropriate. But, as discussed above, Compaq's responses have for the most part conformed to the Special Master's rulings on the scope of discovery. The only significant exception was Compaq's failure to produce RFPs and RFQs and its erroneous representation that such documents did not exist. But that misstep is a far cry from the systematic abuse that served as the basis for sanctions in the cases cited by Convolve. See, e.g., [Metropolitan Opera Association, Inc. v. Local 100, Hotel Employees & Restaurant Employees International Union](#), 212 F.R.D. 178, 181, 231 (S.D.N.Y. 2003) (entering judgment for plaintiff where defendants' lawyers "completely abdicated their responsibilities under the discovery rules and as officers of the court" and defendants "lied and, through omission and commission, failed to search for and produce documents and, indeed, destroyed evidence -- **[*170]** all to the ultimate prejudice of the truth-seeking process"). **[**25]** The case most comparable to this is [Michlin v. Canon, Inc.](#), 208 F.R.D. 172, 173 (E.D. Mich. 2002), where counsel

only belatedly produced a document after having denied its existence. That case was more egregious, however, since there the document at issue had been authored by one of the trial counsel and turned up in that counsel's file. *Id.* Yet even there, the court did not impose sanctions, but merely required full disclosure of relevant information. [Id. at 174](#). That is the appropriate remedy here, too, as has been set forth above.

B. F10 BIOS

In its next motion, Convolve seeks discovery of information relating to Compaq's F10 BIOS. "BIOS" is an acronym for "Basic Input/Output System" which is the software that provides for communication before a computer's operating system, such as Windows, is activated. "F10" is simply a key on the computer keyboard. "F10 BIOS" refers to the feature of some Compaq computers that allowed the user to press F10 when the computer was first turned on and the BIOS was operating in order to trigger the option of choosing between a quiet mode or performance mode.

Convolve contends that the F10 BIOS is an accused **[**26]** instrumentality because it is the means by which Compaq engineered into its computer systems the technology that infringed Convolve's patents and was developed as a result of the theft of Convolve's trade secrets. In response, Compaq argues that the F10 BIOS merely acts as a switch and is no more integral to the technology at issue here than the lightswitch on a lamp is central to the technology of a three-way bulb.

The parties nevertheless agree that this issue was decided by the Special Master in an order dated October 9, 2003. (Letter of Pasquale A. Razzano dated Oct. 9, 2003, attached as Exh. 1 to Declaration of Duane-David Hough in

Support of Compaq's Opposition to Convolve's Motion to Vacate the Special Master's Order Concerning "Accused Instrumentalities" (F10 BIOS), dated March 5, 2004). This is reflected in the title of Convolve's motion: "Plaintiffs' Motion to Vacate the Special Master's Clearly Erroneous Ruling Condoning Compaq's Obstruction of Discovery Relevant to Accused Instrumentalities." And, at the hearing, all counsel acknowledged that the issues related to the F10 BIOS had been determined and were now subject to review. (Tr. at 102-03, 114).

That review is appropriately **[**27]** conducted by Judge Daniels. The function of a special master and the role of a magistrate judge are to a large extent parallel. Each may be appointed by the district judge to address pretrial matters. See Fed. R. Civ. P. 53(a)(1)(C) (special masters); 28 U.S.C. § 636(b)(1)(A) (magistrate judges); Fed. R. Civ. P. 72(a) (magistrate judges). Each may issue orders on non-dispositive matters that are then subject to review by the district judge. See Fed. R. Civ. P. 53(g) (special masters); 28 U.S.C. § 636(b)(1) (magistrate judges); Fed. R. Civ. P. 72(a) (magistrate judges). It would be both anomalous and inefficient for me to consider the appeal from the order of the Special Master here, just as it would be for me to review a determination of another magistrate judge. Convolve's application is therefore denied without prejudice to its being renewed before Judge Daniels.

C. Compaq's Contention Interrogatories

In a second order issued on October 9, 2003, the Special Master **[**28]** dealt with two contention interrogatories propounded by Compaq. (Letter of Pasquale A. Razzano dated Oct. 9, 2003 ("10/9/03 Order re Interrogatories"), attached as Exh. 1 to Declaration of Duane-David Hough in Support of Compaq's Opposition to Convolve's Motion

to Vacate the Special Master's Second Order Compelling Convolve to Answer Compaq's Interrogatory Nos. 22 and 23, dated March 5, 2004 ("Hough 3/5/04 Decl."). The Special Master ruled that Convolve's response to Interrogatories No. 22 and 23 was inadequate. Interrogatory No. 22 seeks Convolve's contentions regarding each instance where Convolve alleges that Compaq disclosed a trade secret, while Interrogatory No. 23 seeks similar information for each instance where Convolve alleges that Compaq solicited or encouraged Seagate to misuse a trade secret. (Compaq [*171] Computer Corporation's Fourth Set of Interrogatories to Convolve, Inc. (Nos. 16-23) ("Compaq's Fourth Interrogatories"), attached as Exh. 2 to Hough 3/5/04 Decl.). The Special Master found that Convolve's narrative responses were insufficient because they neither differentiated among the various trade secrets alleged by Convolve nor supplied specific information requested, [**29] such as identification of the documents containing the alleged trade secret, the persons to whom disclosure was made, the manner in which disclosure was made, and the date of disclosure. (10/9/04 Order re Interrogatories at 3-7).

Convolve now argues that this ruling was erroneous because the Special Master had previously ruled that each of these inquiries was a single interrogatory and that requiring answers to multiple subjects would violate the limitations that Rule 33(a) of the Federal Rules of Civil Procedure places on the number of interrogatories.

For the reasons stated in the previous section, it is inappropriate for me to rule on an appeal from an order of the Special Master. Accordingly, Convolve's motion is denied with leave to raise it before Judge Daniels.

D. Compaq's Damages Interrogatories

A second motion concerning Compaq interrogatories was initiated by Compaq and was presented to the Special Master, but had not been decided by the time he recused himself. Compaq seeks to compel more complete answers to its Interrogatories No. 16, 18, and 20, each of which requests information about Convolve's damage claims. The interrogatories [**30] read as follows:

Interrogatory No. 16

Separately for each Claim for Relief alleged against Compaq in plaintiffs' Amended Complaint, identify the Claim for Relief, explain in detail how plaintiffs have been injured by the alleged wrongful conduct, and state the amount of damages alleged by plaintiffs to have resulted from such alleged wrongful conduct; explain in detail how the damage amounts were calculated, including without limitation, providing all calculations leading to the total dollar amounts of damages or restitution allegedly owed to plaintiffs; and identify all documents (by Bates numbers) that support each Claim for Relief.

Interrogatory No. 18

Separately for each Claim for Relief alleged against Compaq in the Amended Complaint for which plaintiffs claim a reasonable royalty: identify the royalty rate plaintiffs believe is reasonable for each patent in suit; identify the royalty base plaintiffs contend should be used in calculating a reasonable royalty for each patent in suit, including an explanation of how plaintiffs arrived at the royalty base of each such patent; identify all facts on which plaintiffs intend to rely to support their [**31] reasonable royalty calculations including an analysis of the *Georgia Pacific* factors

that plaintiffs believe supports their claim or claims for relief; identify all royalties or other payments, including without limitation year and payor, that plaintiffs or Convolve or MIT has received, directly or indirectly, for rights under any of the patents in suit; identify all documents (by Bates numbers) known to plaintiffs that support plaintiffs' contentions regarding reasonable royalty damages; explain in detail how plaintiffs calculated the total amount of reasonable royalty damages allegedly attributable to each claim for relief, including without limitation, an explanation of the patents and patent claims that gave rise to plaintiffs' reasonable royalty damages figures, the royalty rate or rates applied by plaintiffs, the particular products to which the royalty rate was applied or other bases to which the royalty rate was applied, and the specific time periods at issue for each patent and product or other royalty base; and state the total amount of reasonable royalty damages alleged by plaintiffs for all claims for relief in the aggregate.

INTERROGATORY NO. 20

If plaintiffs [****32**] or Convolve or MIT contend that they are entitled to any damages beyond [***172**] those set forth in their responses to interrogatories 16-19 (including without limitation damages allegedly resulting from Compaq's or Seagate's unjust enrichment or from plaintiffs' or Convolve's or MIT's attempts or the attempts of others on behalf of plaintiffs or Convolve or MIT to raise capital and/or to secure financing through an initial public offering of securities or otherwise), then identify each applicable Claim for Relief and set forth all legal and factual bases for plaintiffs' contentions, including without limitation the amount of such damages and the identity of all documents

(by Bates numbers) that support plaintiffs' allegations.

(Compaq's Fourth Interrogatories).

Convolve initially responded to these interrogatories with objections. In supplemental responses dated April 8, 2003, it identified certain categories of damages in response to Interrogatory No. 16:

Supplemental Objections & Responses to Interrogatory No. 16

Subject to the Specific and General Objections made by Convolve previously in response to Interrogatory No. 16, and based upon information available at this [****33**] time, Plaintiffs will seek reasonable royalties on accused product sales made by Defendants and any third parties. In addition, Plaintiffs seek a disgorgement of profits unjustly gained by Seagate's and Compaq's sales of accused products which embody the trade secrets, as well as damages resulting from any cost savings, avoided research and development expenditures, or accelerated market entry which Seagate and Compaq benefited from as a result of their fraudulent conduct or misuse and misappropriation of Convolve's trade secrets. Plaintiffs also seeks [sic] damages resulting from Convolve's diminished business value and harm to its reputation and goodwill. Furthermore, Plaintiffs seek compensatory and consequential damages for Defendants' misappropriation of Convolve's trade secrets, infringement of Plaintiffs' patents, breach of its contracts with Convolve, breach of Convolve's confidence, fraud, tortious interference with contracts, and breach of the implied covenant of good faith and fair dealing. Plaintiffs also seek punitive damages for Defendants' gross, wanton, willful, malicious, intentional,

deliberate and reprehensible conduct amounting to oppression, fraud, malice, high **[**34]** moral culpability, conscious indifference, ill-will, spite, evil motive, intent to harm or purposefully injury Plaintiffs, and conscious disregard of Plaintiffs' rights, as well as enhanced damages for the willful infringement of Plaintiffs' patent rights. Moreover, Plaintiffs seek statutory damages, increased damages and prejudgment interest under [35 U.S.C. Sec. 284](#), as well as attorneys' fees and costs.

(Plaintiff Convole, Inc.'s Supplemental Responses and Objections to Defendant Compaq Computer Corp.'s Fourth Set of Interrogatories to Plaintiff Convole, Inc. (Nos. 16-23) ("Convole Supp. Responses"), attached as Exh. D to Declaration of Duane-David Hough in Support of Defendant Compaq Computer Corporation's Motion to Compel Answers to Interrogatory Nos. 16, 18, and 20 dated Jan. 30, 2004 ("Hough 1/30/04 Decl."). Convole provided a similar supplementary response to Interrogatory No. 20 and identified certain documents as relevant to its calculation of royalties in response to Interrogatory No. 18. (Convole Supp. Responses).

Compaq argues that Convole's answers are still inadequate because they "do not explain any of Convole's contentions about **[**35]** what Compaq conduct was wrongful, how such conduct caused any damage to Convole, the amount of damage Convole incurred, how Convole calculated these alleged damages, or what documents support Convole's damages analysis." (Defendant Compaq Computer Corporation's Memorandum in Support of its Motion to Compel Answers to Interrogatory Nos. 16, 18 and 20 at 4). Convole responds that further answers are unwarranted for three reasons. First, as with the contention interrogatories discussed

earlier, it contends that the damages interrogatories consist of multiple subparts and thus exceed the number of interrogatories permitted under the civil rules. Second, Convole maintains that the inquiries improperly require it to catalogue all **[*173]** facts and documents on which it will rely. And, finally, it argues that it cannot respond more fully until Compaq produces information it has improperly withheld during discovery.

The Special Master has already dealt with some of these issues in connection with damages interrogatories propounded by Seagate. Seagate's Interrogatories No. 22 and 24 read as follows:

INTERROGATORY 22:

For each and every Claim for Relief against Seagate in the Amended **[**36]** Complaint, explain in detail how Convole has been injured by the alleged wrongful conduct; state the amount of damage alleged by Convole; and explain how that damage amount was calculated, including but not limited to providing specific calculations identifying the total dollar amounts of compensatory damages or restitution allegedly owed to Convole.

INTERROGATORY 24:

Identify, for each Claim for Relief, whether and by what amount, if applicable, each Claim's associated monetary damages or restitution sought are: cumulative; overlapping; redundant; duplicative; are based on substantially the same calculations or assumptions; or are otherwise substantially identical to the monetary damages sought by one or more other Claims for Relief; including providing, for each specific Claim for Relief, a list of all other Claims for Relief which provide for

cumulative, overlapping, duplicative or redundant compensatory damages or restitution along with the bases, calculations, and amount of any alleged differences.

(Seagate Technology LLC's Fourth Set of Interrogatories to Plaintiff Convolve, Inc., attached as Exh. I to Hough 1/30/04 Decl.). The Special Master rejected **[**37]** Convolve's arguments that these were improper multi-part interrogatories and that it was appropriate for Convolve to await further discovery before answering. As to the latter point, the Special Master held that "damages discovery is closed and therefore now is the time to answer contention interrogatories. To the extent discovery is still due from Seagate ... the Federal Rules only require a party to furnish facts which are available to it." (Letter of Pasquale A. Razzano dated Sept. 8, 2003, attached as Exh. E to Affidavit of Kenneth A. Freeling in Opposition to Compaq Computer Corporation's Motion to Compel Answers to Interrogatory Nos. 16, 18 and 20, dated March 5, 2004, at 2).

This reasoning is persuasive and fully applicable to Compaq's damages interrogatories. Having asserted multiple claims, Convolve can hardly object to being required to identify the damages that it seeks with respect to each claim. Indeed, even if the number of Compaq's inquiries is found to exceed the presumptive limit, the Court can grant leave to serve additional interrogatories, see Fed. R. Civ. P. 33(a), and such relief would be appropriate here. Likewise, **[**38]** Convolve is fully capable of answering the interrogatories on the basis of the discovery it has obtained. To the extent that its answers are conditional and will require supplementation based on additional information, so be it.

On the other hand, Compaq's interrogatories go beyond Seagate's in one significant

respect: they demand the identification of each document that supports Convolve's allegations. But "a contention interrogatory is not simply a vehicle for requiring an adversary to regurgitate all factual information obtained in discovery." [*S. J. Berwin & Co. v. Evergreen Entertainment Group*, 1994 U.S. Dist. LEXIS 6181, No. 92 Civ. 6209, 1994 WL 185687, at *2 \(S.D.N.Y. May 12, 1994\)](#) (citing [*Stewart v. Montgomery Ward & Co.*, 1989 U.S. Dist. LEXIS 5312, No. 87 Civ. 0949, 1989 WL 503786, at *1 \(S.D.N.Y. May 15, 1989\)](#), and [*First Investors Asset Management Co. v. Solomon*, No. 83 Civ. 3296, 1989 U.S. Dist. LEXIS 5986, at *1 \(S.D.N.Y. May 31, 1989\)](#)). Particularly in advance of an exchange of expert reports, the purpose of damages interrogatories is not to inquire into every specific factual detail that a party will rely on, but rather to determine the categories of damages sought, the **[**39]** methodologies for calculating them, and the general types of evidence on which the calculations are ultimately grounded.

Therefore, Convolve shall supplement its answers to Compaq's Interrogatories No. 16, **[*174]** 18, and 20 to provide the information requested, except that it need not identify specific documents or testimony supporting its theories. It shall, however, set forth the amount of damages alleged with respect to each claim (to the extent that damages are unique to particular claims), the amounts attributable to each category of damages (lost profits, etc.), the methodology and calculations for arriving at those figures, and the general types of evidence that support the calculations.

E. TOME

The acronym "TOME" refers to Time Optimal Minimal Excitation, a technology developed by Seagate to generate disk drive seek trajectories with reduced vibration at certain

specified frequencies. (Deposition of Mark Birtzer dated June 3, 2003 ("Birtzer Dep."), attached as Exh. G to Affidavit of Debra Brown Steinberg in Support of Plaintiffs' Motion to Remedy the Prejudicial Effect of Seagate's "TOME" Discovery Failures and Abuses, dated Jan. 29, 2004 ("Steinberg Aff."), at 70). A seek **[**40]** trajectory is the path that a computer drive's head takes as it moves across a disk to read data. (Tr. at 125-26). That movement causes vibrations that have two consequences. First, until the vibrations mitigate -- that is, until the drive head "settles" -- the next seek cannot commence and the computer's performance is diminished. Second, the vibrations may become audible and interfere with computer uses that involve acoustics.

Convolve contends that a former Seagate engineer, Dr. Evert Cooper, developed TOME as a means of addressing performance-related settle vibrations and did not consider using it to reduce unwanted acoustic frequencies until after Seagate had access to Convolve's confidential information. The Amended Complaint, though it does not identify TOME by name, alleges that Dr. Cooper had long been attempting to develop a noise reduction/speed enhancement technology for use in computer disk drives but was unable to achieve satisfactory results until he modified his approach by using Convolve's proprietary information. (Amended Complaint, PP 50-53). Accordingly, Convolve specifically identified TOME as an accused instrumentality in connection with its patent infringement **[**41]** claims. (Plaintiffs' Final Disclosure of Asserted Claims and Infringement Allegations, attached as Exh. D to Steinberg Aff., at 2-3, 6-11, 16-17).

As discussed above, the Special Master initially limited drive-related discovery to two specific Seagate drives. Convolve then presented evidence purportedly demonstrating

"that Plaintiffs' technology has been used in connection with a number of drives whose production post-dates Convolve's confidential disclosures." (Letter of Kenneth A. Freeling dated September 12, 2002 ("Freeling 9/12/02 Letter"), attached as Exh. M to Affidavit of Stephen J. Akerley in Support of Seagate Technology LLC's Opposition to Plaintiffs' Motion Related to TOME Discovery, dated March 4, 2004 ("Akerley Aff."), at 2). Convolve argued that:

We believe this evidence justifies discovery respecting the following issues as to these drives:

1. How seeks for each of these drives are currently designed, developed, generated, tested and implemented, and the relevant dates with respect to these activities.
2. The identities of Seagate personnel responsible for making decisions about, performing and overseeing this work.
3. How this information is **[**42]** documented and disseminated within Seagate.
4. Changes in the seek design, development, testing, and implementation for each of these drives that have occurred since Convolve began disclosing confidential information to Seagate and the relevant dates with respect to these activities.
5. The dissemination and use of this information within Seagate.
6. The identities of Seagate personnel responsible for making decisions about, performing and overseeing these changes.

(Freeling 9/12/02 Letter at 2).

As previously discussed, the Special Master accepted this argument and expanded the list

of accused drives. At the same time, he identified the discovery that would be required with respect to the additional drives:

[*175] [Seagate] is directed to produce the source code for the seek operations on all the drives identified above in the same way and to the same extent it previously supplied source code to Convolve. That production should include any associated code and documentation used to develop the code, including so-called "spread sheets." Seagate shall also identify the chief servo engineer and the person most knowledgeable about the design, development, generation, [**43] testing and implementation of the seeks of the subject drives (if he or she is not the chief engineer) for the purpose of testifying as Rule 30(b)(6) witnesses in connection with the 6 issues listed at page 2 of Plaintiffs' letter of September 12, 2002, in this matter.

(10/11/02 Order at 6-7).

After Seagate produced three Rule 30(b)(6) witnesses, Convolve complained that they were not able to address all of the subjects on which the Special Master had allowed questioning. The Special Master agreed, and required Seagate to produce an additional witness. However, he severely restricted the scope of this additional deposition:

The questioning may cover the questions listed in Mr. Freeling's letter of April 10, 2003 but only with respect to the three drives mentioned in that letter as to topics i), ii), and iv).

* * *

The questioning shall not depart from these topics or these drives nor encompass those questions discussed above which I have found to be outside the scope of my original ruling.

(Letter of Pasquale A. Razzano dated April 21, 2003 (the "4/21/03 Order"), attached as Exh. H to Akerley Aff., at 5). In response to this order, Seagate produced Mark [**44] Birtzer as a witness. Mr. Birtzer had discussed TOME with Dr. Cooper and had used it in his role as a tuning engineer in order to reduce vibration in certain Seagate drives. (Birtzer Dep. at 65, 69-70).

Convolve now argues that its examination of Mr. Birtzer was obstructed by directions given by Seagate's counsel that the witness not answer certain questions. Further, Convolve contends that Seagate should be required to produce regression data for its drives. Regression data are the results of the comprehensive testing of a drive, including analysis of seek time. (Birtzer Dep. at 162-63). Finally, Convolve maintains that Seagate should be sanctioned for the spoliation of certain TOME-related information, including e-mail communications and waveforms created by Mr. Birtzer.

There is no basis for reopening Mr. Birtzer's deposition. To the extent that Seagate's counsel directed him not to answer, the questions posed violated the Special Master's direction to limit inquiry to specific Seagate drives. (Birtzer Dep. at 90-97, 149-50, 168-69). Beyond that, Mr. Birtzer fully answered the questions asked, and it is too late in the day either to reargue the Special Master's prior rulings or [**45] to develop entirely new lines of inquiry.

Convolve's argument that it is entitled to Seagate regression data is more convincing. That information is relevant because it provides the basis for certain inferences concerning whether the drive being tested incorporates Convolve technology. (Affidavit of Dr. Adam Bell in Support of Plaintiffs' Motion dated March 26, 2004, PP 8, 10, 11, 12, 14).

Thus, even though Seagate's document requests did not specifically call for TOME-related documents, the regression results were subject to production insofar as they related to accused drives. Therefore, Seagate shall produce all regression data for each Seagate drive previously identified by the Special Master as an accused drive.

Finally, Convolve asks that Seagate be sanctioned for failing to preserve certain information that came to light during Mr. Birtzer's deposition. The first such information consists of e-mails between Mr. Birtzer and Dr. Cooper. "The obligation to preserve evidence arises when the party has notice that the evidence is relevant to litigation or when a party should have known that the evidence may be relevant to future litigation." [Fujitsu Ltd. v. Federal Express Corp.](#), 247 F.3d 423, 436 (2d Cir. 2001) [****46**] (citation omitted). Moreover, in the world of electronic data, the preservation obligation is not [***176**] limited simply to avoiding affirmative acts of destruction. Since computer systems generally have automatic deletion features that periodically purge electronic documents such as e-mail, it is necessary for a party facing litigation to take active steps to halt that process. "Once a party reasonably anticipates litigation, it must suspend its routine document retention/destruction policy and put in place a 'litigation hold' to ensure the preservation of relevant documents." [Zubulake v. UBS Warburg LLC](#), 220 F.R.D. 212, 218 (S.D.N.Y. 2003). "Identifying the boundaries of the duty to preserve involves two related inquiries: *when* does the duty to preserve attach, and *what* evidence must be preserved?" [Id.](#) at 216.

In this case, the "when" question is easily answered. The complaint in this action was filed in July 2000, and Mr. Birtzer began working for Seagate the following September. (Birtzer Dep. at 17). Accordingly, Seagate was

obligated to preserve anything that he may have generated or received that was relevant to Convolve's claims or Seagate's [****47**] defenses.

Furthermore, the original complaint identified Dr. Cooper's work on TOME as a subject of Convolve's claims. (Complaint, PP 46-49). Therefore, to the extent that Mr. Birtzer had e-mail communications with Dr. Cooper about TOME, that information should have been retained.

However, on the basis of the current record, sanctions are not warranted. Convolve has established only that Mr. Birtzer "communicated by e-mail and telephone" with Dr. Cooper "from time to time." (Birtzer Dep. at 68). It has made no effort to determine the substance of those communications in anything but the most general terms. In [Residential Funding Corp. v. DeGeorge Financial Corp.](#), 306 F.3d 99 (2d Cir. 2002), the Second Circuit held that in order to justify the sanction of an adverse inference, the moving party must show that the evidence destroyed would likely have been favorable to it:

Although we have stated that, to obtain an adverse inference instruction, a party must establish that the unavailable evidence is relevant to its claims or defense, our cases make clear that relevant in this context means something more than sufficiently probative to satisfy *Rule 401 of the Federal Rules of Evidence*. [****48**] Rather, the party seeking an adverse inference must adduce sufficient evidence from which a reasonable trier of fact could infer that the destroyed or unavailable evidence would have been of the nature alleged by the party affected by its destruction.

[Id.](#) at 108-09 (citations, footnote, and alterations omitted). Where the spoliation

occurred as a result of bad faith or gross negligence, it may be presumed that the evidence would have been harmful to the spoliator. *Id.* at 109. But in this case, there is no evidence of intentional destruction either. Indeed, Convolve has made no effort to establish the circumstances under which any e-mails were deleted. Accordingly, Convolve has not justified an adverse inference, a forensic search of Seagate's computer system, or, indeed, any sanction.

The other instance of "spoliation" alleged by Convolve involves Mr. Birtzer's generation of wave forms using TOME. As a tuning engineer, Mr. Birtzer's responsibility was to make adjustments to Seagate drives, that is, to "tune" them, in order to maximize their performance. He would do this by starting with a particular wave form or trajectory: the path that the **[**49]** drive head would take during a seek, as defined by the electrical current applied. The initial wave forms, sometimes generated by TOME, were contained in records known as MATLAB scripts. (Birtzer Dep. at 86-87). The tuning engineer then performed a seek, using an oscilloscope to evaluate how closely the actual performance matched the ideal wave form, and adjusted the parameters accordingly. He repeated this process multiple times until satisfactory results were achieved. (Birtzer Dep. at 159-61; Tr. at 146, 148).

Seagate has produced the MATLAB scripts. However, Mr. Birtzer testified that he kept no record of the results of each iteration of the tuning process. (Birtzer Dep. at 127, 154, 165). Convolve responds with two arguments. First, it contends that Mr. Birtzer's testimony is implausible because he could not possibly keep in mind all **[*177]** of the numerical parameters that he would use during each step in tuning. (Tr. at 161-62). This argument, however, is entirely speculative, and Convolve has produced no evidence that the tuning

process requires the creation of permanent documents.

Convolve's second and more substantive contention is that the intermediate wave forms existed at least **[**50]** as electronic data displayed on Mr. Birtzer's oscilloscope, and that he wrongfully failed to preserve them either by printing the screen each time he altered a parameter or by saving the data to a disk. (Tr. at 161). This argument fails for two reasons.

First, the wave forms themselves were not evidence of whether TOME infringed Convolve's patents or was derived from Convolve's proprietary information. Rather, Convolve merely alleges that each use of TOME constituted a separate act of infringement. (Tr. at 134-35). Thus, the wave forms are relevant, if at all, only with respect to damages. (Tr. at 135). For that purpose, information of the number of times wave forms were generated would be available from the testimony of tuning engineers and, perhaps, from summary documents.

Second, the preservation of the wave forms in a tangible state would have required heroic efforts far beyond those consistent with Seagate's regular course of business. To be sure, as part of a litigation hold, a company may be required to cease deleting e-mails, and so disrupt its normal document destruction protocol. But e-mails, at least, normally have some semi-permanent existence. They are transmitted to **[**51]** others, stored in files, and are recoverable as active data until deleted, either deliberately or as a consequence of automatic purging. By contrast, the data at issue here are ephemeral. They exist only until the tuning engineer makes the next adjustment, and then the document changes. No business purpose ever dictated that they be retained, even briefly. Therefore, absent

the violation of a preservation order, which is not alleged here, no sanctions are warranted. See *John Street Leasehold, LLC v. Capital Management Resources, L.P.*, 154 F. Supp. 2d 527, 540-51 (S.D.N.Y. 2001), *aff'd*, 283 F.3d 73 (2d Cir. 2002) (destruction of documents in normal course of business no basis for sanctions absent showing of intent or negligence plus relevance of documents); Proposed Fed. R. Civ. P. 37(f) (August 3, 2004) ("Unless a party violated an order in the action requiring it to preserve electronically stored information, a court may not impose sanctions under these rules on the party for failing to provide such information if: (1) the party took reasonable steps to preserve the information after it knew or should have known [**52] the information was discoverable in the action; and (2) the failure resulted from loss of the information because of the routine operation of the party's electronic information system.").

4

F. *Hawk 2*

Convolve next seeks sanctions against Seagate for what it contends are discovery abuses in connection with Seagate's disclosure of information relating to its Hawk 2 technology. This issue has its genesis in Seagate's prior art defense; Seagate asserts that its own earlier development of a feature that would enable a disk drive to trade off between faster performance and [**53] better acoustics invalidates one of Convolve's patents and undermines some of its trade secret claims. Seagate was required to identify defenses of this nature in its Final Invalidity Allegations.

Following the close of fact discovery, Seagate moved to amend its Final Invalidity Allegations.

It argued that it had recently turned up prior art, which consisted of a software switch that would select between performance mode and an acoustically quieter mode. The relevant code was included in Hawk 2 disk drives that were sold in 1994 and 1995, prior to Convolve's acquisition of its patents or its disclosure of trade secrets to the defendants. Seagate contended that it only now recognized the significance of Hawk [**178] 2 because a key employee had left Seagate in 1999, before this litigation was filed, and then returned to the company only shortly before Seagate submitted its application. According to Seagate, without this employee's knowledge, it would have been impossible to recognize the significance of the Hawk 2 drive except by examining the code of some 900 drive models that Seagate manufactured. (Letter of Stephen J. Akerley dated March 13, 2003, attached as Exh. M to Affidavit of Kenneth [**54] A. Freeling in Support of Plaintiffs' Motion to Sanction Seagate for its Pattern of Discovery Abuse Related to its Belated Hawk 2 Document Production, dated Jan. 30, 2004 ("Freeling 1/30/04 Aff.")).

In an order dated April 21, 2003, the Special Master granted Seagate's application. (Letter of Pasquale A. Razzano dated April 21, 2003 (the "4/21/03 Order"), attached as Exh. N to Freeling 1/30/04 Aff.). He granted "leave to amend the Final Invalidity Allegations ... solely with respect to the '473 patent and solely with regard to the alleged new prior art." (4/21/03 Order at 10). Further, the Special Master reopened discovery until May 30, 2003 for the plaintiffs to take fact discovery with respect to this issue. (4/21/03 Order at 10).

Seagate then began producing documents in connection with its amended Final Invalidity

⁴ A somewhat analogous situation arises in the use of Instant Messenger functions. There the question may be a closer one both because at least some Instant Messenger programs have the capability, like e-mail, of storing messages, and because such information is intended to be transmitted to others. I offer no opinion here on the circumstances under which the failure to preserve Instant Message communications would be considered spoliation.

Allegations. This production extended into June 2003 and included documentation for all members of the Hawk family of drives that included the acoustic switch: Hawk 2, Hawk 1LP, Hawk 4, and Hawk 2LP. (Deposition of Lealon Ray McKenzie dated Feb. 7, 2003 ("McKenzie Dep."), attached as Exh. H to Affidavit of Jennifer L. Ishimoto in Support of Seagate Technology LLC's Opposition [**55] to Plaintiffs' Motion to Sanction Seagate Relating to the Production of Hawk Prior Art, dated March 7, 2004 ("Ishimoto Aff."), at 5-8; Ishimoto Aff., Exh. F).

Convolve then submitted three letters to the Special Master in which it objected to Seagate's production, arguing that it demonstrated the falsity of Seagate's initial contentions which had formed the predicates for the Special Master's 4/21/03 Order (Letter of Adam B. Landa dated June 24, 2003 attached as Exh. J to Ishimoto Aff., at 1-2); it also argued that Seagate's production was late. (Letter of Adam B. Landa dated June 11, 2003 ("Landa 6/11/03 Letter"), attached as Exh. I to Ishimoto Aff., at 1-2; Letter of Adam B. Landa dated June 25, 2003, attached as Exh. K to Ishimoto Aff., at 1-2). In addition, Convolve complained that, through its production, Seagate attempted to expand the prior art on which it relies beyond that permitted by the Special Master's 4/21/03 Order. In particular, Convolve objected that "Seagate now attempts to combine ... the Hawk 2 drive with other, unasserted art such as a 'user interface,' 'Seagate's CTSS program' and 'software[.]'" (Landa 6/11/03 Letter at 4).

In an order dated September 5, 2003, the [**56] Special Master rejected Convolve's arguments. He noted that "it appears to me that Convolve's motion is an attempt, in part, to seek reconsideration of my earlier ruling allowing Seagate to amend its invalidity contentions. Not only is that request out of

time, even on the merits I decline to reconsider that earlier ruling." (Letter of Pasquale A. Razzano dated Sept. 5, 2003 (the "9/5/03 Order"), attached as Exh. B to Ishimoto Aff., at 2). The Special Master went on to hold that Seagate had warned Convolve its document production would be delayed and that the delay was not prejudicial. (9/5/03 Order at 3). Finally, the Special Master rejected Convolve's assertion that Seagate improperly included additional prior art in its amended invalidity contentions. He stated:

Apparently this additional prior art relates to an interface or software in the computer in which the Hawk II Drives were used.

Based on my review of the prior motion, it was Seagate's intent to assert the Hawk II Drive as used in a computer as the new prior art. Inherent in that is the presence of a host-computer, and some program or software, and those details were specified in the amendment. In any event, [**57] it is my conclusion that Seagate's description of the prior art in its amended invalidity contention is sufficient under the circumstances. In addition, the fact that Convolve is allowed discovery as to this "prior art" will [*179] enable it to obtain whatever additional information it requires.

(9/5/03 Order at 3).

Convolve then sought reconsideration of the Special Master's order. In a letter dated September 19, 2003, Convolve reiterated its contentions that Seagate wrongfully failed to identify the Hawk 2 prior art during the discovery period and should be precluded from belatedly producing and relying on it. (Letter of Kenneth A. Freeling dated Sept. 19, 2003 ("Freeling 9/19/03 Letter"), attached as Exh. DD to Ishimoto Aff., at 2-5). Convolve also again maintained that Seagate had expanded its prior art disclosure beyond that allowed by

the Special Master in the 4/21/03 Order. This, time, however, Convolve did not assert that Seagate had wrongfully extended the prior art to include software related to the Hawk 2 drive. Instead, for the first time, Convolve complained that Seagate had belatedly produced documentation for drives *other* than Hawk 2. (Freeling 9/19/03 Letter at **[**58]** 5-7). Convolve also argued for the first time that if Seagate's Hawk 2 disclosure were to be considered at all, it should only be considered as allegedly invalidating the Convolve '473 patent and should not be taken into account as a defense against Convolve's trade secret claims. (Freeling 9/19/04 Letter at 7). This motion for reconsideration was pending before the Special Master when he recused himself. Convolve then submitted it to me, recast as a motion for sanctions.

The standard for granting a motion for reconsideration is demanding. "Reconsideration will generally be denied unless the moving party can point to controlling decisions or data that the court overlooked -- matters, in other words, that might reasonably be expected to alter the conclusion reached by the court." [Shrader v. CSX Transportation, Inc.](#), 70 F.3d 255, 257 (2d Cir. 1995) (citations omitted). Reconsideration "should not be granted where the moving party seeks solely to relitigate an issue already decided." *Id.* Thus, a motion for reconsideration is not simply a vehicle for a party to make "repetitive arguments on issues that have been thoroughly considered by the court." [Range Road Music, Inc. v. Music Sales Corp.](#), 90 F. Supp. 2d 390, 391-92 (S.D.N.Y. 2000). **[**59]**

Moreover, the moving party may not use such a motion to "advance new facts, issues or arguments not previously presented to the Court." [Davidson v. Scully](#), 172 F. Supp. 2d 458, 461 (S.D.N.Y. 2001); see also [Bank Leumi Trust Co. of New York v. Istim, Inc.](#), 902

[F. Supp. 46, 48 \(S.D.N.Y. 1995\)](#). "These limitations are designed to ensure finality and prevent the rule from becoming a vehicle by which a losing party may examine a decision 'and then plug[] the gaps of the lost motion with additional matters.'" [Zoll v. Jordache Enters.](#), 2003 U.S. Dist. LEXIS 6991, No. 01 Civ. 1339, 2003 WL 1964054, at *2 (S.D.N.Y. April 24, 2003) (quoting [Carolco Pictures, Inc. v. Sirota](#), 700 F. Supp. 169, 170 (S.D.N.Y. 1988)).

To the extent that Convolve seeks to overturn the Special Master's 9/5/03 Order, it has failed to present anything that could warrant reconsideration. Convolve's arguments to the effect that Seagate should have disclosed the Hawk 2 information earlier and should be precluded from relying on it now are the same arguments that were presented to the Special Master, and there is no basis for finding that he overlooked them.

By contrast, **[**60]** Convolve's argument that Seagate should be barred from relying in the Hawk 2 documents except to support its contention that the '473 patent is invalid is a new contention. As such, it is not a valid predicate for a motion for reconsideration. But under the circumstances presented here, it should be evaluated on its own merits, not as an argument for reconsideration. First, the Special Master was never presented with the issue of the proper use of the prior art documents, and so never ruled on it in his 9/5/03 Order. It is therefore not subject to "reconsideration."

Second, there is no suggestion that Convolve unfairly delayed in raising this issue. While Convolve advanced a number of complaints about Seagate's production in June 2003, there is no reason to believe that at that time it realized that Seagate intended to use the documents as a defense to Convolve's trade secret claims. Indeed, although Convolve began to suspect as much when it moved for

reconsideration in September, it [*180] was not until Seagate served supplemental responses to interrogatories in December 2003 that it made its strategy explicit. (Defendant Seagate Technology LLC's Supplemental Responses to Plaintiffs' Third [**61] Set of Interrogatories, attached as Exh. Q to Freeling 1/30/04 Aff., at 42-43). Convolve's application is therefore timely and should be considered apart from the Special Master's 9/5/03 Order.

Nevertheless, Convolve's argument fails on the merits. The Special Master never limited the use of the prior art disclosures that he allowed Seagate to make. To be sure, he used the language of patent law in referring to "prior art," but he used the term generically to refer to the Hawk 2 information. (4/21/03 Order at 10). It would be wholly anomalous to allow whatever objective information is contained in the Hawk 2 documents to be used to defend against one of Convolve's claims but not others.

Convolve's argument with respect to non-Hawk 2 documents is subject to a similar analysis, but that analysis leads to a different result. Although raised for the first time in support of reconsideration of the Special Master's 9/5/03 Order, it does not, in fact, relate to that order, which did not address this issue. It should therefore be considered as an independent application. And, there is no indication that Convolve was dilatory in raising the issue. Seagate was producing prior art information [**62] well into June 2003. Given that Convolve's counsel had to review and comprehend the materials provided, it was necessarily some time before Convolve realized the scope of Seagate's disclosure.

In this instance, Convolve prevails on the merits. The Special Master's 4/21/03 Order allowing Seagate to amend its Final

Infringement Allegations and reopening discovery referred only to the Hawk 2 disk drive, not the Hawk "family" of drives. Consistent with that order, Seagate's Final Invalidity Allegations, as amended, refer specifically to the Hawk 2 drive. (Seagate Technology LLC's Supplemental Amended Invalidity Contentions attached as Exh. A to Letter of Kenneth A. Freeling dated Sept. 29, 2003, attached as Exh. FF to Ishimoto Aff.). It is true, as Seagate argues, that Convolve was aware that other drives contained the same acoustic switch that makes the Hawk 2 drive relevant. (McKenzie Dep. at 5-8). But given the Special Master's unequivocal order -- entered at Seagate's behest -- it was incumbent upon Seagate to seek further relief if it wanted to expand its prior art argument beyond the Hawk 2 drive. It did not do so. Seagate shall therefore be precluded from utilizing documents disclosed [**63] pursuant to the Special Master's 4/21/03 Order that do not relate to the Hawk 2 drive.

In all other respects, Convolve's application for sanctions in connection with this motion is denied. Seagate's position, even where I have rejected it, was not unreasonable.

G. *Discovery Related to Seagate's Interrogatory No. 20*

Convolve styles its next application as "Plaintiffs' Motion to Compel Seagate to Cease and Desist from Conducting Fact Discovery Outside the Cut-Off Date." The controversy has its origin in a decision by the Special Master to allow Seagate, after the discovery deadline, to take discovery relating to Convolve's supplemental answer to a Seagate interrogatory. Seagate's Interrogatory No. 20 requested:

For each and every trade secret Convolve contends has been misappropriated by

Seagate, identify with specificity any and all evidence, whether documentary, testimonial or otherwise, that Convolve contends supports its claim of misappropriation.

(Seagate Technology LLC's Third Set of Interrogatories to Plaintiff Convolve, Inc., attached as Exh. C to Affidavit of Debra Brown Steinberg in Support of Plaintiffs' Motion to Compel Seagate to Cease and Desist from **[**64]** Conducting Fact Discovery Outside the Cut-Off Date, dated Jan. 29, 2004 ("Steinberg 1/29/04 Aff."), at 8). After a good deal of skirmishing, the Special Master rejected Convolve's objections to the interrogatory and ordered it to provide a detailed answer. In doing so, the Special Master interpreted the interrogatory narrowly:

[*181] Convolve has [] construed the interrogatory too broadly ... when it contends that the interrogatory encompasses whether the trade secrets are in fact trade secrets, whether they belong to Convolve, whether they have been maintained as secrets, whether Seagate knew of them before their disclosure to Seagate, whether they were important or incorporated in Seagate's research and development before disclosure to Seagate and whether Seagate did incorporate the trade secrets into its research and development activities and production drives. The interrogatory is not that expansive -- it is directed to the evidence that supports the claim that Seagate misappropriated the alleged trade secrets; as such it is limited in scope and does not inquire about evidence that the secrets are now or ever were secret, whether they are important or not, or whether Seagate **[**65]** knew of them before disclosure or not. The question is what evidence is there that Seagate

misappropriated the twenty odd alleged trade secrets identified in the Amended Trade Secrets List.

(Letter of Pasquale A. Razzano dated Sept. 4, 2003 (the "9/4/03 Order"), attached as Exh. D to Steinberg 1/29/04 Aff., at 3-4). He further provided a three-week window after Convolve supplemented its answer for Seagate to take discovery with respect to those answers. (9/4/03 Order at 5-6). This occurred well after fact discovery had otherwise closed.

Convolve then complied with the Special Master's directive. (Plaintiff Convolve, Inc.'s September 30, 2003 Supplemental Responses and Objections to Defendant Seagate Technology LLC's Interrogatory No. 20, as Ordered by the Special Master, attached as Exh. E to Steinberg 1/29/04 Aff.). Seagate immediately propounded discovery requests, including subpoenas to numerous third parties. Convolve now complains that those demands violated the limits that the Special Master placed on this follow-up discovery.

Convolve is correct. The Special Master provided a very short period of discovery relating exclusively to Convolve's answers to Interrogatory **[**66]** No. 20. The discovery, therefore, was limited to the Special Master's interpretation of the interrogatory as asking for Convolve's proof of misappropriation of each trade secret. According to the Special Master, the interrogatory did not ask about -- and discovery was therefore not reopened for -- questions such as whether the alleged trade secrets were truly confidential or whether Seagate had prior knowledge of them. Only the act of misappropriation was then at issue.

Yet Seagate's discovery went far beyond these limits. For example, it sought wide-ranging information from a number of computer technology educational programs that apparently provided instruction to some

Convolve employees. (Subpoenas attached as Exh. F to Steinberg 1/29/04 Aff.). Information responsive to these subpoenas might indeed provide evidence that what Convolve now claims is a trade secret was in fact acquired from a third-party with no promise of confidentiality. (Tr. at 227). Yet that educational program is highly unlikely to have any information on the one issue as to which the Special Master permitted late discovery: Convolve's proof of misappropriation by Seagate.

Seagate shall therefore withdraw all **[**67]** subpoenas and other discovery instruments served pursuant to the Special Master's 9/4/03 Order. Further, it shall return all documents obtained as a result of those discovery requests except insofar as it specifically identifies information that falls within the discovery limits set by the Special Master.

H. Deposition of Seagate's Chief Executive Officer

When Convolve noticed Seagate's President and Chief Executive Officer, Stephen J. Luczo, for a deposition, Seagate sought a protective order on the grounds that he is a top-ranking corporate executive with no unique knowledge about the issues in litigation and that the deposition was merely an instrument of harassment. (Letter of Stephen J. Akerley dated July 21, 2003, attached as Exh. B to Affidavit of Debra Brown Steinberg in Support of Plaintiffs' Motion to Compel Seagate to Produce Its **[*182]** Chief Executive Officer for His Deposition in Compliance with the Special Master's Order, dated Jan. 29, 2004 ("Steinberg CEO Aff."), at 14-16). The Special Master denied the application, finding that Mr. Luczo had been quoted in a Seagate press release concerning Seagate's investment in acoustic technology and the advantages of its "Sound **[**68]** Barrier Technology." (Letter of Pasqual A. Razzano dated Sept. 10, 2003 (the

"9/10/03 Order"), attached as Exh. A to Steinberg CEO Aff., at 3). Further, the Special Master found that if Mr. Luczo "participated in the Competitive Information Committee ... he may have unique testimony and opinions concerning the value of the acoustics technology at issue in this case." (9/10/03 Order at 4). Accordingly, the Special Master concluded:

Because it appears that Mr. Luczo should be deposed, at least with regard to the press release and licensing, I deny Seagate's request for a complete protective order as to him. However, because Convolve has not made a compelling case for the deposition and because the issues it raised are quite limited, I direct that the deposition be conducted by telephone, with Mr. Luczo at his office or other location of his choosing, for no more than three hours. The deposition shall be limited to the press release, licensing and Mr. Luczo's knowledge, if any, about the importance or value of acoustics and technology that would enable a disk drive to operate in either a quiet or a quick performance seek mode.

(9/10/03 Order at 4).

The deposition was **[**69]** then scheduled for October 30, 2003. However, Seagate objected to Convolve's notification that it intended to videotape the examination and refused to produce Mr. Luczo under those circumstances. Convolve now moves to compel the witness to appear. In light of what Convolve characterizes as Seagate's obstructive conduct, it asks that Mr. Luczo be required to appear in person in New York to be deposed. Convolve also argues, for the first time, that the scope of the deposition should be expanded and that the time allotted to conduct it should be increased. (Tr. at 240). Seagate, on the other hand,

argues that the demand to videotape the deposition violates the gist of the Special Master's ruling that the examination should be as non-intrusive as possible and that it was designed simply to harass the witness. Accordingly, Seagate contends that Convolve has forfeited the opportunity to depose Mr. Luczo at all.

While the Special Master directed that the deposition be conducted telephonically to accommodate the witness, he made no ruling as to the method of recording the testimony. Pursuant to Rule 30(b)(2), absent a court order, the party taking the deposition may choose the means of recording. **[**70]** See [Paisley Park Enterprises, Inc. v. Uptown Productions](#), 54 F. Supp. 2d 347, 348 (S.D.N.Y. 1999). That party "has no burden to justify the decision to videotape the deposition." [Drake v. Benedek Broad. Corp.](#), 2000 U.S. Dist. LEXIS 1418, No. Civ.A. 99-2227, 2000 WL 156825, at *1 (D. Kan. Feb. 9, 2000) (citation omitted).

In this case, Seagate has provided no compelling argument for overriding Convolve's choice. "The liberalization of the Federal Rules of Civil Procedure to more fully permit videotape recording of depositions reflects a belief that the use of such technology enhances parties' presentation at trial, particularly before juries, of deposition testimony which historically was limited in form to 'readings from cold, printed records.'" [Flaherty v. Seroussi](#), 209 F.R.D. 295, 297 n.4 (N.D.N.Y. 2001) (quoting [Paisley Park](#), 54 F. Supp. 2d at 349). Moreover, many of the depositions in this case have been videotaped, including one that began as an in-person deposition but was continued telephonically. (Tr. at 247). As against this, Seagate has presented only speculation that the videotaping is intended as harassment. It has presented **[**71]** no evidence that such harassment has occurred or that Convolve is

likely to use the videotape for an improper purpose. See [Drake](#), 2000 U.S. Dist. LEXIS 1418, 2000 WL 156825, at *2 (videotaping permitted despite some likelihood that plaintiff intended to use videotape "for purposes unrelated to the resolution of this lawsuit and even for some commercial or personal financial gain"); [Paisley Park](#), 54 F. Supp. 2d at 348 (videotaping allowed although "there is every reason to believe that defendants' motive in seeking to videotape the deposition is at least in part to generate **[**183]** notoriety for themselves and their business ventures"). Therefore, Convolve's application to videotape the deposition of Mr. Luczo is granted, and Seagate's request to preclude the deposition altogether is denied.

However, Convolve's applications to require the witness to appear in person in New York and to expand the scope and duration of the deposition are denied. Convolve has presented no good cause for going beyond the limitations imposed by the Special Master. Thus, while the deposition will be recorded by videotape, it will be conducted telephonically, with Mr. Luczo testifying from his place of business **[**72]** or other location of his choosing.

I. Convolve's Financial Records

Finally, Seagate has moved for an order requiring Convolve to produce its financial records in unredacted form. In an order dated September 16, 2003, the Special Master required Convolve to produce its financial records for the years 1995-2002, including tax returns and expenditures made for attorneys' fees. (Letter of Pasquale A. Razzano dated Sept. 16, 2003, attached as Exh. B to Seagate Technology LLC's Memorandum in Support of its Motion to Compel Convolve, Inc. to Produce Unredacted Financial Documents, at 3-6). Seagate complains that, while Convolve did

produce financial information, it was heavily redacted.

Convolve has responded that each category of redaction was proper. First, the documents produced by Convolve's accountant apparently contained information relating to the personal finances of Convolve's principal, Dr. Neil Singer, which Convolve has withheld. Convolve also redacted attorneys' fees data, arguing that it is premature to disclose it. And, Convolve deleted information relating to the identity of non-testifying consultants and the amount of fees paid to them.

At the hearing on this motion, [**73] it became apparent that the controversy might be significantly narrowed based on discussions among counsel. Counsel agreed to confer and then present for my *in camera* inspection any documents as to which there was still a dispute. (Tr. at 290). This procedure has not yet been completed, and I will therefore defer any decision on this motion until it has.

Conclusion

As set forth in detail above, each of the pending discovery motions is resolved as follows:

1. Plaintiffs' Motion for an Order Compelling Access to Electronic Storage Media Containing, and the Production of Documents Relating to, the Procurement and Use of Certain Convolve Technologies by Compaq and for Sanctions is granted to the extent that (a) Compaq shall verify its search for RFPs and RFQs referring to the capability of switching between quiet and performance mode; (b) it shall produce written specification by part numbers for all accused drives and (c) the parties shall exchange profit and loss data as agreed. In addition, it shall be presumed that all financial data produced by Compaq relates to AAM-supportable drives and that all drives purchased by Compaq were

incorporated in computer systems that [**74] it later sold. In all other respects, this motion is denied.

2. Plaintiffs' Motion to Vacate the Special Master's Clearly Erroneous Ruling Condoning Compaq's Obstruction of Discovery Relevant to Accused Instrumentalities is denied without prejudice to the motion being renewed before Judge Daniels.

3. Plaintiff Convolve, Inc.'s Motion to Vacate the Special Master's Clearly Erroneous Ruling Requiring Supplemental Responses to Compaq Contention Interrogatories is denied without prejudice to presenting it to Judge Daniels.

4. Compaq Computer Corporation's Motion to Compel Answers to Interrogatory Nos. 16, 18, and 20 is granted except that Convolve need not identify specific documents or testimony supporting its responses.

5. Plaintiffs' Motion to Remedy the Prejudicial Effect of Seagate's "Tome" Discovery Failures and Abuses is granted insofar as Seagate shall produce all regression data for all accused drives. This motion is otherwise denied.

6. Plaintiffs' Motion to Sanction Seagate for its Pattern of Discovery Abuse Related to [*184] its Belated Hawk 2 Document Production is granted to the extent that Seagate is precluded from relying upon documents disclosed in response to the Special [**75] Master's 4/21/03 Order that do not relate to the Hawk 2 drive. In all other respects, the motion is denied.

7. Plaintiffs' Motion to Compel Seagate to Cease and Desist from Conducting Fact Discovery Outside the Cut-Off Date is granted.

8. Plaintiffs' Motion to Compel Seagate to Produce its Chief Executive Officer for his

Deposition in Compliance with the Special Master's order is granted to the extent that the deposition shall be recorded by videotape, through it will be conducted telephonically. Convolve's additional applications as well as Seagate's counter-requests are denied.

9. Decision is deferred on Seagate Technology LLC's Motion to Compel Convolve, Inc. to Produce Unredacted Financial Documents pending submission to me *in camera* of those documents that remain in dispute.

Compliance with all aspects of this Order shall be effected within 30 days.

SO ORDERED.

JAMES C. FRANCIS IV

UNITED STATES MAGISTRATE JUDGE

Dated: New York, New York

August 17, 2004