

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TENNESSEE  
WESTERN DIVISION

FILED 2003 E.J. D.C.  
03 MAY 13 PM 4:59

MEDTRONIC SOFAMOR DANEK, INC., )  
)  
Plaintiff/ )  
Counterclaim Defendant )

vs. )

No. 01-2373-MIV

GARY KARLIN MICHELSON, M.D. )  
and KARLIN TECHNOLOGY, INC., )  
)  
Defendants/ )  
Counterclaimants, )

and )

GARY K. MICHELSON, M.D., )  
)  
Third Party Plaintiff, )

vs. )

SOFAMOR DANEK HOLDINGS, INC., )  
)  
Third Party Defendant.)

ORDER GRANTING IN PART AND DENYING IN PART DEFENDANT MICHELSON'S  
MOTION TO COMPEL ELECTRONIC MAIL MESSAGES AND DATA AND REQUEST  
FOR APPOINTMENT OF SPECIAL MASTER

Before the court is the January 31, 2003 motion of defendant Gary K. Michelson to compel the plaintiff, Medtronic Sofamor Danek, Inc., to produce approximately 996 network backup tapes, containing, among other things, electronic mail, plus an estimated 300 gigabytes of other electronic data that is not in a backed-up format, all of which contains items potentially responsive to

This document entered on the docket sheet in compliance with Rule 58 and/or 79(a) FRCP on 5/14/03

455

discovery requests propounded by Michelson. Medtronic timely responded claiming that the discovery requests are unduly burdensome because extracting the data from backup tapes and reviewing it for relevance and privilege will be astronomically costly. Michelson counters that Medtronic, as the producing party, should bear the cost of disclosure and requests that the court appoint a special master to help the parties establish a discovery protocol. The motion was referred to the United States Magistrate Judge on February 5, 2003, for a determination. For the reasons that follow, this court grants in part and denies in part Michelson's motion.

#### ANALYSIS

This case involves trade secrets, patents and trade information in the field of spinal fusion medical technology.<sup>1</sup> The instant dispute arises over Medtronic's obligation to produce electronic data. The parties have not been able to agree on a protocol for production, on the scope of production, or, most importantly, on who should bear the cost of production.

---

<sup>1</sup> The factual and procedural background of this lawsuit has been well-documented in previous discovery orders. See, e.g., *Medtronic Sofamor Danek, Inc. v. Michelson*, No. 01-CV-2373-GV (W.D. Tenn. Jan. 30, 2002) (order on cross-motions for protective order and on motions to compel); *Medtronic v. Michelson* (July 18, 2002) (order on defendants' motion to compel and sanctions); *Medtronic v. Michelson* (Aug. 6, 2002) (order on defendants' motion to approve Bruce Ross under the protective order).

Producing electronic data requires, at minimum, several steps: (1) designing and applying a search program to identify potentially relevant electronic files; (2) reviewing the resulting files for relevance; (3) reviewing the resulting files for privilege; (4) deciding whether the files should be produced in electronic or printed form, and (5) actual production. If, however, the information is contained on backup tapes, a preliminary step must be performed. All data on each backup tape must be restored from the backup tape format to a format that a standard computer can read. In the case of a large volume of data on multiple tapes like this case presents, the restored files from each tape must be compared to the restored files from every other tape and duplicate files eliminated. The restored files that are not duplicates must be converted to a common format so that a search program may seek information within them. The de-duplication and conversion are required so that large volumes of data in different formats may be searched in a reasonable time.

A. Scope of Production and Relevancy

Information is discoverable if "relevant to the claim or defense of any party" or if it "appears reasonably calculated to lead to the discovery of admissible evidence." FED. R. CIV. P. 26(b)(1). See also *Oppenheimer Fund, Inc. v. Sanders*, 437 U.S. 340 (1978); *Lewis v. ACB Bus. Services, Inc.*, 135 F.3d 389, 402 (6th

Cir. 1998). Nevertheless, discovery does have "ultimate and necessary boundaries," *Oppenheimer Fund*, 437 U.S. at 351 (quoting *Hickman v. Taylor*, 329 U.S. 495, 507 (1947)). "[I]t is well established that the scope of discovery is within the sound discretion of the trial court." *Coleman v. American Red Cross*, 23 F.3d 1091, 1096 (6th Cir. 1994) (quoting *United States v. Guy*, 978 F.2d 934, 938 (6th Cir. 1992)). The court need not compel discovery if it determines that the request is "unreasonably cumulative . . . [or] obtainable from some other source that is more convenient, less burdensome, or less expensive . . . [or] the party seeking discovery has had ample opportunity by discovery in the action to obtain the information . . . [or] the burden or expense of the proposed discovery outweighs its likely benefit." FED. R. CIV. P. 26(b)(2)(i)-(iii). Electronic information, if relevant, generally is discoverable under these same guidelines. FED. R. CIV. P. 34, 1970 Adv. Comm. Note; *Anti-Monopoly, Inc. v. Hasbro, Inc.*, Civil Case No. 94CIV.2120, 1995 WL 649934, \*1-2 (S.D.N.Y. Nov. 3, 1995); *Daewoo Electronics Co. v. United States*, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986).

In this case, the parties do not seriously dispute the relevance of the electronic data at issue. Hard-copy printouts of representative e-mails, provided under seal by Michelson, indicate that the backup tapes may contain discoverable material, although

neither party can estimate how much. (See Confidential Decl. of Dan P. Sedor in Supp. of Def.'s Mot. to Comp. Prod. of Electronic Mail Messages and Data and Request for Appointment of Special Master [hereinafter Sedor Confidential Decl.] at Exs. A, B.) Medtronic also admits that the backup tapes probably contain discoverable information. (Opp'n to Dr. Michelson's Mot. to Comp. Electronic Mail Messages and Data and Request for App't of Special Master [hereinafter Pl.'s Opp'n to Def.'s Mot.] at 15).

Michelson asserts that information it seeks is contained in some 20,000 gigabytes ("gb")<sup>2</sup> of data stored on 515 of Medtronic's network backup tapes and in approximately 210gb of electronic files from various individuals at Medtronic. Medtronic disagrees, asserting that the backup tapes number 993 with a 61 terabyte<sup>3</sup> data volume, (Pl.'s Opp'n to Def.'s Mot. at 2, Ex. D), and that the electronic files from individuals total 300gb. (*Id.* at 6, Ex. E.) Medtronic should be in the better position to know the extent of its electronic data holdings, and the court will therefore use Medtronic's estimates for its analysis.

---

<sup>2</sup> It would take approximately 711 standard 3.5" diskettes to store one gigabyte of data.

<sup>3</sup> A terabyte is 1024 gigabytes. It would take approximately 728,178 standard 3.5" diskettes to store one terabyte of data.

Given the volume of data at issue, the court agrees that this process, as a whole, will be burdensome. The court must therefore determine whether the burden on Medtronic, the producing party, is undue, and, if so, whether it should be shifted in whole or in part to Michelson, the requesting party.

B. Undue Burden and Cost-Shifting

Generally the party responding to a discovery request bears the cost of compliance. *Rowe Entertainment, Inc. v. The William Morris Agency, Inc.*, 205 F.R.D. 421, 428-29 (S.D.N.Y 2002) (citing *Oppenheimer Fund v. Sanders*, 437 U.S. 340, 358 (1978)). "Nevertheless, a court may protect the responding party from 'undue burden or expense' by shifting some or all of the costs of production to the requesting party." *Id.*; FED. R. CIV. P. 26(b)(2), (c). The inquiry in a cost-shifting analysis is not necessarily whether the cost is substantial but whether it is "undue." *Oppenheimer Fund*, 437 U.S. at 358; *Rowe Entertainment*, 205 F.R.D. at 428-29.

Undue burden is decided on a case-by-case basis. *Bills v. Kennecott Corp.*, 108 F.R.D. 459, 463 (D. Utah 1985). To help determine whether an expense is "undue," courts have adopted a balancing test that considers the following factors:

- (1) the specificity of the discovery requests;
- (2) the likelihood of discovering critical information;
- (3) the availability of such information from other sources;
- (4)

the purposes for which the responding party maintains the requested data; (5) the relative benefit to the parties of obtaining the information; (6) the total cost associated with the production; (7) the relative ability of each party to control costs and its incentive to do so; and (8) the resources available to each party.

*Rowe Entertainment*, 205 F.R.D. at 428-29; *Murphy Oil USA, Inc. v. Fluor Daniel, Inc.*, Civil Case No. Civ.A.99-3564, 2002 WL 246439 (E.D. La. 2002) (quoting *Rowe Entertainment*). See also *Bills*, 108 F.R.D. at 464 (setting forth a four-factor test).

1. Specificity of the Discovery Requests

Michelson has served at least eight separate sets of document requests in the course of this litigation and indicates that the instant motion addresses the following from his first request for production of documents:

Request No. 8: All documents on any type of electronic, magnetic or optical storage media that contain Dr. Michelson's or Karlin Technology's name or any variation thereof.

Request No. 42: All documents evidencing, reflecting, or relating to any estimate, calculation, analysis or evaluation of the value of any Interbody Technology.

Request No. 108: All documents evidencing, reflecting, or relating to Medtronic's efforts to obtain regulatory approval for any Threaded Spinal Implants, Instruments and Methods or Non-Threaded Spinal Implants, Instruments and Methods.

Request No. 109: All documents evidencing, reflecting, or relating to Medtronic's efforts to obtain regulatory approval for any Interbody Technology that competes or has competed with any Threaded Spinal Implants,

Instruments and Methods or Non-Threaded Spinal Implants, Instruments and Methods.

Request No. 112: All documents evidencing, reflecting, or relating to Medtronic's efforts to "actively promote" the sale of any Threaded Spinal Implants, Instruments and Methods or Non-Threaded Spinal Implants, Instruments and Methods.

Request No. 116: All documents evidencing, reflecting, or relating to Medtronic's efforts to commercialize any Interbody Technology that competes or has competed with any Threaded Spinal Implants, Instruments and Methods or Non-Threaded Spinal Implants, Instruments and Methods.

Request No. 116: All documents evidencing, reflecting, or relating to your notes, memoranda and correspondence prepared by any of your current or former employees, officers, and directors, including Lawrence Boyd, Brad Estes, Brad Coates, John Pafford, Ronald Pickard, Robert Rodrick, Rick Duerr and David Ahlersmeyer, relating to any medical device, technology, implant, instrument, method, know-how, trade secret, confidential information, proprietary right, process, and all engineering, design, and technical information and data based on or incorporating in whole or in part any Dr. Michelson invention, conception, development, acquisition or possession.

(Mem. of Points and Authorities in Supp. of Defs.' Mot. to Comp. Discovery of Electronic Mail Messages and Data and Request for Appointment of Special Master [hereinafter Def.'s Mem. in Support of Mot.] at 3-5.)

Michelson's requests are very broad, and he has done little to limit the scope of the requests. Michelson has offered Boolean search terms that he believes will reveal relevant electronic files and has identified about 40 employees in whose files he has a



particular interest. (See Decl. of Dan P. Sedor in Supp. of Def.'s Mot. to Comp. Prod. of Electronic Mail Messages and Data and Request for Appointment of Special Master [hereinafter Sedor Decl.] at Exs. D, F; Pl.'s Opp'n to Def.'s Mot. at 15, Ex. C.) He also, in the instant motions, limits his request to the electronic data for Sofamor Danek alone and advances his understanding that Sofamor Danek "did not rely heavily on e-mail until 1997." (Defs.' and Counterclaimants' Mot. and Supp. Mem. for Leave to File Reply to Medtronic's Opp. to Mot. to Comp. Prod. of Electronic Mail Messages and Data and Request for Appointment of Special Master [hereinafter Defs.' Reply Mot.] at 7. See also Pl.'s Opp'n to Def.'s Mot. at 4 (characterizing the lawsuit as involving only the Interbody and Cervical divisions of Danek).) Nonetheless, Medtronic objects that, even with the limitations Michelson proposes, Medtronic still must restore all its backup tapes to conduct any search and accordingly that the request is too broad. (Pl.'s Opp'n to Def.'s Motion at 15.)

It appears to the court and the court so finds that Michelson has not specifically limited his requests by date, despite his apparent understanding that tapes from 1997 to 2000 are those most likely to reveal the electronic mail he seeks and that data from 2000 to present might be available without any resort to backup

tapes. Accordingly, the court finds that this factor weighs in favor of Michelson bearing part of the production cost.

2. Likelihood of Discovering Critical Information

The parties agree that the electronic mail files stored on backup tapes may contain some relevant information, although neither knows how much. (See Sedor Decl. at 15; Pl.'s Opp'n to Def.'s Mot. at 15.)<sup>4</sup> Michelson has produced seven pages of e-mail printouts in support of his claim that Medtronic's e-mail archives hold relevant - indeed, critical - information. (Sedor Confidential Decl. at Exs. A, B.) These apparently were selected from an estimated one million pages of hard copy that Medtronic already has produced. (Pl.'s Opp'n to Def.'s Mot. at Ex. A.) Even if the court accepts Michelson's assertion that "nearly one-third of electronically stored data is never printed out," (Def.'s Mem. in Support of Mot. at 6, n. 3 (citing *Rowe Entertainment*)), Michelson offers little evidentiary support for his implication that Medtronic's e-mail archives are replete with relevant communications. Further, Michelson has not offered to restrict the scope of his discovery to e-mail alone, nor has he accepted Medtronic's proffered protocol that allows Michelson to assess the

---

<sup>4</sup> Michelson's motion does not address the likelihood of discovering relevant data in the other 300gb of files that are not stored on backup tapes.

relevance of backup tapes by restoring sample tapes. Accordingly, the court finds that this factor weighs in favor of shifting part of the production cost to Michelson.

3. Availability from Other Sources

The parties agree that the electronic mail stored on backup tapes probably is not available from other sources. Taken alone, this factor weighs in favor Medtronic bearing the cost of production because Michelson has no alternative for obtaining Medtronic's archived e-mail. Medtronic, however, objects that the extent to which any data file duplicates a previously disclosed document cannot be known until after document review.

Authority is split over whether a party automatically is entitled to both hard copy and electronic versions of computer files.<sup>5</sup> Electronic records may, however, contain data that the hard copy does not. "[I]mportant information present in the e-mail system, such as who sent a document, who received it, and when that person received it, will not always appear on the computer

---

<sup>5</sup> The split is discussed in *McNally Tunneling Corp. v. City of Evanston*, 2001 WL 1568879, \*4 (N.D. Ill. 2001), which compares *Williams v. Owens-Illinois, Inc.*, 665 F.2d 918, 932-33 (9th Cir. 1982) (finding the district court did not abuse its discretion in denying request for computer tapes where party already had all information from tapes on wage cards) with *Anti-Monopoly*, 1995 WL 649934 at \*2 ("[P]roduction of information in 'hard copy' documentary form does not preclude a party from receiving that same information in computerized/electronic form.")

screen and so will not be preserved on the paper print-out." *Armstrong v. Executive Office of the President*, 1 F.3d 1274, 1284 (D.C. Cir. 1993).

Because the electronic data files reasonably could lead to the discovery of admissible evidence that is not available from hard copy, see FED. R. CIV. P. 26(b)(1), this factor weighs in favor of Medtronic bearing the cost of production.

4. Purpose for Maintaining the Data

Medtronic claims backup tape restoration is unwarranted because its backup tapes are not used in daily business, are not intended to be used in daily business, are intended only for emergency disaster recovery, and the majority of them would not exist at all but for Medtronic's obligation to retain the data in association with unrelated litigation.

Michelson counterargues that the backup tapes are related to Medtronic's current business activities. Michelson points to Medtronic's contractual obligations in the instant suit compelling Medtronic to retain certain records. Because Medtronic is obligated to keep those data, Michelson argues, the backup tapes represent a current business activity. In his supplemental memorandum, Michelson argues that the recent deposition testimony of three former key executives of Medtronic establishes that

Medtronic used e-mail a "tremendous amount" in the 1990's, thus Medtronic had a business purpose for retention of e-mail.

In *Rowe Entertainment*, the court found backup tapes retained for disaster recovery do not constitute current business activity. There, the court found no evidence that the producing parties ever used their own backup tapes for information or even had the programs necessary to restore backup data. "Cost-shifting [was] therefore warranted with respect to the backup tapes." *Rowe Entertainment*, 205 F.R.D. at 431.

The question of whether backup tapes retained for disaster recovery alone constitute current business activity has been explored in several other cases, in addition to *Rowe Entertainment*. In *Murphy Oil*, the court reached the same conclusion as *Rowe Entertainment*. The requesting party in *Murphy Oil* sought 93 e-mail backup tapes. The responding party had no means of retrieving data from those tapes. Following *Rowe Entertainment*, the court determined that the tapes were being maintained solely for emergency data recovery and not for current business activities. The court accordingly shifted to the requesting party the burden of restoring the backup tapes. *Murphy Oil*, 2002 WL 246439 at \*7-9.

In *In re Brand Name Prescription Drugs Antitrust Litigation*, 1995 U.S. Dist. LEXIS 8281, \*5 (N.D. Ill. June 15, 1995), however, the court held that the producing party must bear the cost of

restoring backup tapes, noting that the producing party "essentially admit[ted] that a part of the burden attendant to searching its storage files result[ed] from the limitations" of its own software. *Brand Name Prescription Drugs*, 1995 U.S. Dist. LEXIS 8281 at \*6. Similarly, the court in *Delozier v. First Nat'l Bank of Gatlinburg*, 109 F.R.D. 161 (E.D. Tenn. 1986) held that, with respect to microfilm storage, cost-shifting was unjustified when the expense of production arose solely from the producing party's maintenance of a data storage system over which the requesting party had no control. *Delozier*, 109 F.R.D. at 164.

As succinctly discussed in *McPeek v. Ashcroft*, 202 F.R.D. 31 (D.D.C. 2001), both lines of reasoning have their flaws. In *McPeek*, the plaintiff and requesting party was a former Bureau of Prisons employee. He sought to force the defendant, the United States Department of Justice, to search its data backup systems for evidence related to his discrimination claim. As in the instant case, the defendant did not know what the backup tapes might contain; the defendant had not searched the tapes on its own behalf in the litigation; the defendant maintained the tapes primarily for disaster recovery; and the requesting plaintiff specifically was interested in the defendant's archived e-mail. The court conducted a review of relevant case law and summarized the problem thus:

The one judicial rationale that has emerged [from case law] is that producing backup tapes is a cost of doing business in the computer age. But, that assumes an alternative . . . What alternative is there? Quill pens?

. . . [M]aking the producing party pay for all the costs of restoration as a cost of its "choice" to use computers creates a disincentive for the requesting party to demand less than all of the tapes . . . The converse solution is to make the party seeking the restoration of the backup tapes pay for them, so that the requesting party literally gets what it pays for. But . . . if it is reasonably certain that the backup tapes contain [relevant] information, shifting all costs to the requesting party means that the requesting party will have to pay . . . even though the requesting party would not have to pay for such a search of a "paper" depository.

A fairer approach borrows . . . from the economic principle of "marginal utility." The more likely it is that the backup tape contains information that is relevant to a claim or defense, the fairer it is that the [responding party] search at its own expense.

*McPeck*, 202 F.R.D. at 33-34 (internal citations omitted).

In this case, Medtronic conducted a regular backup procedure for data restoration in the case of disaster and it chose not to overwrite its regular backup tapes in recognition of its obligation to preserve evidence in unrelated litigation. There is no showing that Medtronic ever retrieved data from the backup tapes or even had the means to do so. Thus, the court finds that the backup tapes were not maintained for business purposes. The recent deposition testimony of the three former key executives who admitted to using e-mail frequently does not alter the court's

conclusion that the back-up tapes do not constitute current business activity. Those depositions merely suggest to the court that Medtronic should also search the hard drives of the computers of key executives.

Under these circumstances, McPeek's "marginal utility" analysis is appropriate. The critical inquiry is whether the reason for maintaining the backup tapes indicates that the tapes are so likely to contain relevant information that the producing party should bear the cost of their production. See *McPeek*, 202 F.R.D. at 34; *Byers v. Illinois State Police*, No. 99-C-8105, 2002 U.S. Dist. LEXIS 9861, \*35 (June 3, 2002) (holding that "[w]hen faced with a request that would impose a significant cost on the responding party, a court should focus on the marginal utility of the proposed search").

The parties stipulate that some of the backup tape data, particularly archived e-mails, probably are relevant. Michelson, however, has not made any showing that such data would be found on each and every backup tape. The electronic mail printouts Michelson provided in support of his motion are dated between March 1998 and February 2001. Michelson himself notes a reduced likelihood of finding relevant information on backup tapes created prior to 1997. Because Michelson has made no showing that the entire spectrum of backup tapes will contain information relevant



the cause's claims or defenses, this factor weighs in favor of shifting production costs to Michelson, the requesting party.

5. Relative Benefits to Each Party

Michelson argues that Medtronic likely will use the electronic data in the instant litigation. Medtronic asserts, however, that it has not yet searched the backup tapes for litigation-related data and, because of the expense involved, would be unlikely to do so unless compelled by court order. The court finds, therefore, that the parties will equally benefit from the electronic discovery, and this factor does not sway the cost-shifting analysis in favor of either party.

6. Total Cost of Production

The physical production of the backup tapes is not really at issue. The production of their archived data in a format Michelson can use, and in a way that accommodates Medtronic's privilege concerns, is another matter entirely. See *Sattar v. Motorola, Inc.*, 138 F.3d 1164, 1171 (7th Cir. 1997) (approving lower court's decision requiring the producing party to give the requesting party a means to read its backup tapes).

Four distinct areas of expense emerge from the parties' descriptions of the process: first, the cost of restoring backup tapes and converting the data on them to a common, i.e., searchable, format; second, the cost of designing and conducting

searches to identify potentially responsive files; third, the cost of reviewing responsive files for privilege; and, fourth, the cost of actually producing the responsive non-privileged files.

As to the cost of restoring backup tapes, Medtronic indicates that its preferred vendor, Kroll Ontrack, will restore, search, and de-duplicate the data on 124 sample tapes for a flat fee of \$605,300. (Pl.'s Opp'n to Def.'s Mot. at Ex. C, ¶¶9, 10, 14.) According to Medtronic, initial vendor bids on restoration alone ranged from \$600 to \$1,000 per backup tape. (Id. at Ex. A, ¶7.) Michelson does not provide any competing estimates but only asserts that, without performing a "pilot" restoration, no vendor accurately can estimate the cost of restoring backup tapes. (Def.'s Reply Mot. at Kuchta Decl. ¶5.) Neither party provides an itemized estimate for designing a search to identify potentially relevant documents, de-duplicating files, or conducting the search.

Medtronic's estimates of privilege review costs vacillate between \$16.5 million, (Pl.'s Opp'n to Def.'s Mot. at Ex. G), and \$70 million, (id. at Ex. A). The cost of the privilege review cannot be known until the volume of discoverable documents is known. Generally, privilege review expenses are borne by the responding party. See, e.g., *Rowe Entertainment*, 205 F.R.D. at 421. Medtronic does not dispute this and in fact offers to bear the cost

of privilege review for disclosure provided under a reasonable discovery protocol. (Pl.'s Opp'n to Def.'s Mot. at 15.)

Both parties give per-page printing cost estimates for the volume of data they expect to produce. Again, these estimates widely vary, and the court does not have enough information to determine how much relevant data actually could be produced. Because all the disputed data is electronic, some or all of the data may be produced electronically. But, without an estimate of the actual data volume involved, the court cannot speculate on the cost of electronic storage media. Accordingly, the cost of physical production is not considered when totaling the cost of production.

Based on the foregoing, the court finds that the cost of restoring, de-duplicating, and designing and conducting a search of all 996 backup tapes reasonably could be in the range of several million. This, of course, does not include the costs of privilege review and actual production, which cannot be estimated yet. Although the cost could be less than 2% of the amount at issue in this suit, the cost is substantial. The court therefore finds it undue. Accordingly, the court finds that this factor weighs in favor of shifting some cost to the requesting party, Michelson.

7. Relative Ability to Control Costs

Michelson makes no argument concerning Medtronic's ability to control costs. Medtronic points out that Michelson has nearly unfettered ability to control costs by limiting the scope of his discovery requests. The court agrees and finds that this factor weighs in favor of Michelson bearing part of the production cost.

8. Resources Available to Parties

Neither party adduces persuasive evidence of inability to bear part of the discovery cost. Michelson asserts that Medtronic is a large and profitable company but sets forth no comparative figures that indicate he is in a worse position to bear part of the cost. Based on the voluminous pleadings in the court file in this case, it is clear that both parties have expended, and continue to expend, significant sums for legal services. Accordingly, the court finds that both parties are equally able to bear part of the discovery costs and that this factor is neutral in the cost-shifting analysis.

In addition, the court finds that imposing the full cost of production on Medtronic is not warranted solely on the basis of Michelson's assertions that Medtronic has failed to cooperate in electronic data discovery. While it is true that Medtronic has been dilatory in producing electronic data, it is understandable that Medtronic would not begin production until the parties had

agreed on a protocol for production, review, and payment of expenses. None of the exhibits reveals bad faith or obstruction by Medtronic. To the extent that Michelson seeks to impose the full cost of electronic discovery on Medtronic as a sanction for delaying production, the motion is denied.

In light of all the circumstances of this case, the court finds that cost-shifting is warranted. Michelson, the requesting party, shall therefore bear part of the production costs.

C. Special Master

Michelson also asks the court to appoint a special master to oversee the electronic records production and to review the data files that are produced, and he has suggested several local attorneys to serve as a special master. Medtronic disagrees with Michelson's suggestion for an attorney to serve as a special master and insists instead that a neutral computer expert would be the better choice to oversee the discovery process. Medtronic also maintains that the special master should not be the one to review the data, as suggested by Michelson, because one person cannot possibly review all the data that will be disclosed.

Under Federal Rule of Civil Procedure 53(a), the appointment of a special master is the exception not the rule. In actions to be tried to a jury, a special master shall only be appointed when the issues are complicated. FED. R. CIV. P. 53(b), Adv. Comm.

Notes, 1983 amend. Given the amount of electronic data at issue, the court finds that the appointment of a special master to oversee discovery is warranted and that the special master should be a technology or computer expert. The special master's duties will include making decisions with regard to search terms; overseeing the design of searches and the scheduling of searches and production; coordinating deliveries between the parties and their vendors; and advising both parties, at either's request, on cost estimates and technical issues. The special master shall be subject to all confidentiality requirements and protective orders set forth in this and in other orders in this cause. The special master may designate assistants with the parties' approval; if he or she does so, the same protective orders and confidentiality agreements shall apply to any assistants.

Within five (5) days from the date of this order, the parties shall agree upon a neutral computer expert to serve as a special master. If the parties cannot agree on an expert, each side shall submit to the court, within five (5) days from the date of this order, the names of two prospective experts along with a summary of the expert's qualifications, not to exceed one page, the expert's fee structure, and an itemized estimate for the expert's services, not to exceed one page. The court will select a special master from among the four names submitted. After the special master has

been selected, all communications between either party and the special master shall be copied to the other party. The parties will equally bear the cost of the special master's services.

D. Discovery Protocol

The deadline for completing discovery in this case is November 10, 2003. Each party has submitted a proposed discovery protocol. (See Def.'s Mem. in Supp. of Mot. at 20; Pl.'s Opp'n to Def.'s Mot. at Ex. C.) Each also has provided statements from technology professionals in support of their respective proposals. (See Pl.'s Opp'n to Def.'s Mot. at Exs. D, E; Def.'s Reply Mot. at Ex. A.) After careful review of the proposals and of discovery plans crafted by courts in like cases, the court adopts the following discovery plan. These deadlines may be modified only by signed agreement between the parties or by the special master, provided that the trial date is not affected.

1. Data Obtained from Individual Users' Files

Medtronic shall isolate the 300gb of electronic data it has already identified as potentially containing relevant information. Using the vendor of its choice, Medtronic shall search the 300gb of electronic data using the Boolean search terms (or their equivalents, if a proprietary search program is used) attached as Appendix A to this order (the "Keyword Search"). These terms are based on the list provided by Michelson's counsel in his October

11, 2002 letter to Medtronic's counsel. The parties may add, delete, or modify search terms or connectors, but only by mutual agreement or by approval of the special master. No later than May 30, 2003, Medtronic shall produce to Michelson a complete list of the files identified by the search (the "Keyword Search Result List"), along with a list identifying the software application reasonably required to read each type of file.

Medtronic may then conduct additional searches designed to identify privileged information and shall bear the cost of designing and running any privilege searches. Each file identified by a privilege search shall be isolated. Within five (5) days of completing any privilege search, Medtronic shall produce to Michelson a complete list of the files identified by the search (the "Privilege Search Result List"). All privilege searches shall be completed, all search results isolated, and all Privilege Search Result Lists produced to Michelson, not later than June 15, 2003.

Medtronic shall divide the files identified by privilege search into five sections of equal size and immediately begin to review the files in the first section for both privilege and relevance. Non-responsive files shall be removed from production. Responsive, non-privileged files shall be isolated for review by Michelson. Privileged files shall be recorded on a privilege log. This review shall be complete by June 30, 2003, and Medtronic is



instructed to produce to Michelson the privilege log from the first privilege review section by that date.

The parties will then arrange a mutually agreeable time and method for Michelson's review of the responsive, non-privileged files from the first privilege review section in their native electronic formats. Medtronic shall make the files available for Michelson's review no later than July 10, 2003. Medtronic shall be responsible for providing any software application reasonably necessary to Michelson's review.

Michelson, upon review, shall designate the documents he wishes Medtronic to produce. Michelson may choose electronic or paper production. If Michelson elects paper production, he shall pay Medtronic seven cents (\$.07) per page. The documents will be Bates-labeled, marked CONFIDENTIAL - ATTORNEYS' EYES ONLY, and delivered at Medtronic's expense. If Michelson elects to have files electronically produced, Medtronic will produce them at its own expense on compact disk (CD). Upon request and at its own expense, Medtronic shall also make available for Michelson's use any unique software applications necessary to read the electronically produced documents.<sup>6</sup> Medtronic will bear the cost

---

<sup>6</sup> If Michelson or his representatives must travel to Medtronic locations for review because the software applications cannot be used off-site, Michelson shall bear the reasonable expense of such travel.

of producing the CDs, but Michelson will be responsible for printing any information from the CDs and shall bear the full cost of any such printouts.

Review for the other four privilege sections shall be completed in a like manner and on a rolling basis according to a schedule to be established by the special master, allocating approximately one month for each of the remaining four privilege sections, in order to comply with the November 10, 2003 discovery deadline.

Simultaneously with the privilege review, the keyword search results, other than the privilege search results discussed above, shall also be divided into five sections of equal size. Medtronic shall immediately begin to review the files in the first section for responsiveness and third-party confidentiality. Any non-responsive documents may be removed from production at this time. Documents subject to further processing (such as third-party notification) may be removed from production at this time but shall be recorded in a log (the "Further Processing Log") which log shall be disclosed to Michelson no later than June 30, 2003.

The parties will then arrange a mutually agreeable time and method for Michelson's review of the responsive, non-privileged files from the first section in their native electronic formats. Medtronic shall make the files available for Michelson's review no

later than July 10, 2003. As previously stated, upon request, Medtronic shall be responsible for providing any unique software application necessary for Michelson's review.

From this point forward, the review and disclosure process shall duplicate the privilege review procedure outlined above according to the timetable to be established by the special master, with each party bearing the same costs listed above.

All further processing of the files in the Further Processing Logs shall be complete, and the files made available for Michelson's review, by November 10, 2003.

2. Data Obtained from Year-End and Current Month Backup Tapes

Medtronic, using the vendor of its choice, will restore fiscal year-end backup tapes from the years 1997 through 2002, plus all backup tapes for the 30 days preceding the date of this order. Medtronic's vendor will (1) extract the data of the 40 individuals identified in Appendix B to this order, (2) search the extracted data using the keywords identified in Appendix A to this order or otherwise agreed upon by the parties or directed by the special master; and (3) de-duplicate the data. All non-duplicate data identified by search will be converted to standard images and isolated. No later than June 15, 2003, Medtronic shall produce to Michelson a complete list of the files identified by the backup

tape restoration keyword search (the "Backup Tape Keyword Search Result List").

Medtronic has advised the court that its desired vendor is Kroll Ontrack, who will complete the above procedures (restoration, searching, and de-duplicating) on 124 sample tapes for a flat fee of \$605,300, or \$4,881 per tape. The quote of approximately \$4,881 per tape for professional restoration, searching, and de-duplication services appears reasonable. Medtronic shall bear sixty percent (60%) of the costs associated with restoring, initially searching, and de-duplicating the data to this point in the process. Michelson shall bear forty percent (40%) of the costs to this point.

Medtronic may conduct, upon the restored files, any additional electronic search or searches designed to identify privileged information. The files identified by privilege searches shall be isolated. Within five (5) days of completion of any privilege search on the backup tapes, Medtronic shall produce to Michelson a complete list of the files identified by the search (a "Backup Tape Privilege Search Result List.") All privilege searches on the fiscal-year end backup tapes shall be completed, and all Backup Tape Privilege Search Result Lists produced to Michelson, no later than June 15, 2003.

Medtronic shall bear the full cost of privilege searching, including designing and conducting the privilege keyword searches. Upon reasonable notice and at Michelson's request, Medtronic shall cause its vendor to produce an itemized billing indicating which portions of its fee are attributable to designing and conducting privilege keyword searches.

Medtronic shall divide the Backup Tape Privilege Search Result List into five sections of equal size. Medtronic shall review the files in the first section for both privilege and relevance. Non-responsive files shall be removed from production. Responsive, non-privileged files shall be isolated for review by Michelson. Privileged files shall be recorded a privilege log. Medtronic shall complete its privilege review for the first section and produce to Michelson the privilege log for the first section by June 30, 2003.

The parties will then arrange a mutually agreeable time and method for Michelson's review of the relevant, non-privileged files. The files shall be made available for Michelson's review no later than July 10, 2003. Medtronic shall be responsible for providing any software application reasonably necessary to Michelson's review.

Michelson, upon review, shall designate the documents he wishes Medtronic to produce. Michelson may choose electronic or

paper production. If Michelson elects paper production, he shall pay Medtronic fifteen cents (\$.07) per page. The documents will be Bates-labeled, marked CONFIDENTIAL - ATTORNEYS' EYES ONLY, and delivered at Medtronic's expense. If Michelson elects to have files electronically produced, Medtronic will produce them at its own expense on compact disk (CD) in .tiff format with an associated load file. Medtronic will bear the cost of producing the CDs, but Michelson will be responsible for printing any information from the CDs and shall bear the full cost of any such printouts. Medtronic may, at its option, copy such printouts at its own expense.

Review for the other four backup privilege review sections shall be completed in a like manner and on a rolling basis according to a timeline to be established by the special master, allocating approximately one month for each of the remaining four privilege sections.

Simultaneously with the privilege review, the backup tape keyword search results, other than the backup tapes privilege search results discussed above, shall be divided into five sections of equal size. Medtronic shall immediately begin to review the files in the first section for responsiveness and third-party confidentiality. Any non-responsive documents may be removed from production at this time. Documents subject to further processing (such as third-party notification) may be removed from production

at this time but shall be recorded in a log (the "Backup Tape Further Processing Log"), which log shall be produced to Michelson by June 30, 2003.

The parties will then arrange a mutually agreeable time and method for Michelson's review of the responsive, non-privileged files. The files shall be available for Michelson's review no later than July 10, 2003. From this point forward, the review and disclosure process shall duplicate the privilege procedure above, with each party bearing the same costs as indicated above.

All further processing of the files in the Backup Tape Further Processing Logs shall be complete, and the files made available for Michelson's review, by November 10, 2003.

3. Data Obtained from Any Other Backup Tapes

Should Michelson wish to restore and have searches performed on any additional backup tapes, Michelson shall bear the entire cost of restoring the backup tapes, extracting the data of the 40 individuals identified in Appendix B to this order, searching the extracted data using the keywords identified in Appendix A to this order and as otherwise agreed upon by the parties or ordered by the special master, and de-duplicating the data. Michelson shall be responsible for providing any software application necessary to the review.

Medtronic shall then review the selected files for relevance and privilege. For any data produced under this provision and created on or before December 31, 1996, Michelson shall bear the full cost of Medtronic's relevance and privilege review. For any data produced under this provision and created on or between January 1, 1997 and the date of production, Michelson shall bear the full cost of Medtronic's relevance review and fifty percent (50%) percent of the cost of Medtronic's privilege review.

Medtronic shall identify the files that are responsive and non-privileged and make them available to Michelson for review not later than September 30, 2003, at Michelson's sole expense. No later than October 15, 2003, Michelson shall provide Medtronic with a list of the files he wants Medtronic to produce. If Medtronic does not object within five (5) days, Medtronic will produce the files for Michelson in any medium Michelson designates and at Michelson's sole expense. Medtronic may, at its own expense, copy any files so selected, on paper or electronically.

E. Amendment to Protective Order

The Protective Order in this case, entered October 11, 2002, is amended to provide the following:

Medtronic waives no privilege for documents or subject matter produced through any of the discovery protocols in this order.



The defendants shall immediately notify Medtronic of any document that comes to their attention and appears to be privileged or potentially privileged, including without limitation communications from or to attorneys or legal assistants that were not sent or copied to a non-Danek or non-Medtronic employee or entity. Medtronic shall promptly respond to any such inquiry with an indication of whether privilege is asserted with regard to that document.

All documents produced pursuant to this order shall be designated "Confidential-Attorneys' Eyes Only," subject to existing procedures in the October 11, 2002 protective order for resolving issues surrounding such designations.

Any vendor selected for the backup tape restoration process, and the neutral computer expert, shall be bound by the terms of any and all confidentiality agreements and protective orders now in place, or to be put in place in the future, in this cause. The deliberate or inadvertent disclosure of any document to such an expert or vendor does not waive privilege with regard to that document.

Good cause exists for these amendments because the volume of data that will be produced by electronic discovery will make it difficult for the producing party to identify with certainty every potentially privileged document prior to production.

#### CONCLUSION

For the foregoing reasons, the court finds it appropriate to shift some of the electronic discovery cost to Michelson. The parties are instructed, within five (5) days from the date of this order, to agree on a neutral computer expert, or to provide the court with names of candidates and the designated information, to

serve as a special master to oversee discovery. The parties will equally bear the cost of the special master. As soon as the special master is designated, either by the parties or by the court, the above-outlined electronic discovery plan shall commence. Each party shall bear the portions of the electronic discovery costs outlined in this order.

IT IS SO ORDERED this 13th day of May, 2003.

*Diane K. Vescovo*

---

DIANE K. VESCOVO  
UNITED STATES MAGISTRATE JUDGE

Appendix A - Keyword Search Terms

Items in quotes are case-sensitive.

Names

Michelson

Anten or Bennett or Berman or Burton or Dezider or Ehrlich or Gary or GKM or GM or Herzog or Imre or Jeffer or JMBM or Karlin or KT or KTI or Lewis or Michelson or Michealson or Michaelson or Mitchell

Third Party

(Advanced +1 Bionics) or Barrow or Bauer or Codman or Dawson or Dirk or Ferraro or Finnegan or (Florida + 1 Tissue) or FTB or Implex or Kozak or Liljestrand or (Midas +1 Rex) or Martin or Mednext or O'Reilly or Osteotech or Padunka or Patton or Poole or Reeves or (Regeneration +1 Technologies) or RTI or Spine-Tech or Spinotech or Spine Tech or Stassen or Sulzer or Thomas or Wise or Woodard or Wright or Zimmer

Products and inventions

Michelson and generic product/invention names

"AIF" or "ALIF" or apparatus or (bone +1 filler\*) or cage\* or cancellous or (cement +1 restrictor\*) or (cervical +1 plat\*) or \*conical or cortical or cutting or cylindrical or discectomy or distractor\* or dowel\* or duckbill or endcap\* or femoral or fibular or fixation or flip or frusto\* or fusion or \*graft\* or hollow or impacted or inserter or instrument\* or interbody or interfix or (inter +1 fix) or intervertebral or leading or laparoscopic or laproscopic or lock\* or lordotic or megathread or milling or multilock or nest\* or osteogenic or "PIF" or "PLIF" or prototype\* or push\* or reamer or reaming or ronguer or router or cutter or screw\* or singlelock or sleeve\* or sliding or spacer or staple\* or tapered or \*thread\* or trailing or translateral or "TRI" or truncated or tubular or vertlift or wedge\* or wheel

Medtronic product/invention names

ACF or Affinity or "ASM" or Atlantis or bioresorbable or BMP or Boomerang or Bristol or Bryan or Butterfly or buttress or (carbon +1 fiber or fibre)) or Carey or Cornerstone or "DEG" or Endo\* or Hedrocell or Hum or Incline or Inflex or Infuse or Kim or Legacy or Macropore or Macrosorb or Maverick or METRx or Mirage or morphogenetic or Novus or Orion or Osteofil\* or Ostcopak or Paragon or Parallax or Peek or Precision or Premier or "PRET" or Pyramesh or Pyrametrix or Pyramid or Riviera or Shadowmesh or Shadowstone or strut\* or Tib or Tangent or Telamon or Ti-Mesh or TSHR or TSRH or Union or Verta-Span

or Verte-Span or Verta-Stack or Verte-Stack or Vertek or Vertex or Xantus or Zephyr or Zephyr

Contracts and contract terms

actively +1 promote

best +1 efforts

"NDA"

"Net Sales"

"Medical Device"

(purchase or license or confidentiality or \*disclosure or TSRH or TRSH or global) +1  
(agreement or contract or arrangement or transaction)

purchase w/10 option

regulatory +1 approval

Business, medical and legal terms

AAOS or NASS

conversation and (tape\* or record\* or transcri\*)

(due +1 diligence) w/10 (Medtronic or merger or acquisition)

(expense\* or cost\*) w/10 (apportion\* or allocat\*)

"IDE"

infringe\* or block\* or valid\* w/10 patent

invented or inventor or invention

investigational +1 device\* +1 exemption

(management or promotion\* or shipping or handling or sales or deduct\* or blended) w/S (fee\*  
or charge\* or expense\* or commission\* or rate\*)

misappropriat\*

opinion + 1 letter\*

(packing or price) + 1 list\*

(presentation\* or lecture\* or meeting\* or evaluat\* or copy\* or test\* or disclos\* or valu\* or own\* or acqui\* or buy or bought or purchase\* or obtain\* or right\* or license\*) and (prototype\* or technolog\* or implant\* or insert\* or device\* or invention or technique\* or method\* or design\* or know-how or instrument\* or intellectual or patent\*)

pric\* w/10 (discount\* or group\* or base)

(projected or projection\* or estimate\*) w/10 (sales or revenue\* or earnings or profit\* or market\* or growth)

royalt\* w/10 (calculat\* or adjust\* or bearing or rate\* or blended)

recharacteriz\* or reclassif\*

consign\* or resale\*

(surgical + 1 technique\*) or (technique + 1 manual\*)

Patent and Application Numbers

00/904545.1 or 00/928875.4 or 00204830.4 or 00204831.2 or 00916038.3 or 01114044.9 or 01117867.0 or 01128856.0 or 01908836.8 or 02003825.3 or 02003826.1 or 02005644.6 or 0419564 or 0425542 or 0428567 or 06/473,710 or 07/121,594 or 07/121,596 or 07/121,597 or 07/121,598 or 07/121,704 or 07/153,030 or 07/153,031 or 07/153,032 or 07/153,033 or 07/153,034 or 07/166,612 or 07/167,168 or 07/194,301 or 07/205,935 or 07/212,480 or 07/241,463 or 07/242,871 or 07/255,922 or 07/258,552 or 07/264,683 or 07/268,379 or 07/289,258 or 07/324,727 or 07/341,848 or 07/341,849 or 07/341,850 or 07/345,893 or 07/421,963 or 07/468,240 or 07/478,940 or 07/480,653 or 07/506,779 or 07/546,849 or 07/550,122 or 07/552,787 or 07/633,999 or 07/692,583 or 07/698,674 or 07/892,384 or 07/905,127 or 07/919,844 or 07/968,240 or 0712607 or 07,398,987 or 074,781 or 0752830 or 08/052,211 or 08/074,780 or 08/074,781 or 08/075,174 or 08/097,945 or 08/108,885 or 08/108,908 or 08/112,426 or 08/147,042 or 08/219,626 or 08/250,177 or 08/260,072 or 08/263,952 or 08/336,556 or 08/337,107 or 08/389,077 or 08/390,131 or 08/391,255 or 08/394,836 or 08/396,414 or 08/462,801 or 08/474,478 or 08/479,596 or 08/480,461 or 08/480,684 or 08/480,904 or 08/480,908 or 08/481,750 or 08/482,146 or 08/482,162 or 08/482,215 or 08/482,447 or 08/482,801 or 08/482,837 or 08/484,927 or 08/484,928 or 08/487,499 or 08/526,885 or 08/552,203 or 08/586,950 or 08/589,787 or 08/597,539 or

LA 3918261 v1

08/688,758 or 08/717,434 or 08/723,597 or 08/741,301 or 08/790,605 or 08/799,792 or  
08/813,283 or 08/850,654 or 08/882,837 or 08/905,360 or 08/926,334 or 08/962,884 or  
08526885 or 09/022,293 or 09/022,344 or 09/062,749 or 09/075,516 or 09/075,517 or  
09/086,931 or 09/094,036 or 09/126,585 or 09/159,292 or 09/263,266 or 09/404,396 or  
09/412,082 or 09/412,090 or 09/429,628 or 09/457,228 or 09/487,040 or 09/487,167 or  
09/488,634 or 09/488,979 or 09/490,901 or 09/497,066 or 09/497,590 or 09/551,964 or  
09/553,000 or 09/553,573 or 09/563,705 or 09/565,392 or 09/566,055 or 09/566,272 or  
09/570,754 or 09/572,518 or 09/574,858 or 09/576,744 or 09/580,768 or 09/593,591 or  
09/605,001 or 09/608,955 or 09/612,188 or 09/618,035 or 09/618,036 or 09/618,037 or  
09/618,038 or 09/618,039 or 09/618,048 or 09/618,157 or 09/618,197 or 09/618,566 or  
09/626,636 or 09/641,864 or 09/641,865 or 09/643,696 or 09/645,697 or 09/663,311 or  
09/669,912 or 09/685,658 or 09/734,303 or 09/754,733 or 09/768,524 or 09/768,832 or  
09/768,991 or 09/772,309 or 09/790,008 or 09/792,679 or 09/882,454 or 09/900,305 or  
09/903,141 or 09/921,844 or 09/921,851 or 09/941,425 or 09/970,241 or 09/970,294 or  
09/972,560 or 09/991,247 or 09/991,579 or 09-501151 or 09-501156 or 09501150 or  
09501154 or 095390 or 1-507651 or 1-508246 or 10/008,305 or 10/011,652 or 10/047,545 or  
10/061,236 or 10/062,805 or 10/085,731 or 10/090,506 or 10/094,467 or 10/098,683 or  
10/098,991 or 10/100,701 or 10/105,773 or 10/105,839 or 10/112,745 or 10/112,746 or  
10/112,747 or 10/125,847 or 10/160,059 or 10/160,062 or 10/160,086 or 10/160,247 or  
10/160,407 or 10/160,408 or 10-534884 or 10-534885 or 10,085,406 or 1010186 or 1010186-  
1 or 1010187 or 1010187-1 or 102,772 or 103,633 or 103,995 or 1052702 or 1052703 or  
1053491 or 1053491-1 or 119678/94 or 1219248 or 1219268 or 1,313,982 or 1,314,453 or  
1,332,999 or 1,333,209 or 1,337,790 or 1,337,842 or 133975 or 133,975 or 133976 or  
133,976 or 133,977 or 133977 or 149238 or 14937/00 or 15574/02 or 16742/01 or 169811 or  
17089/00 or 1,922,816 or 1994/2399 or 1994/2400 or 1994/2401 or 1995/1471 or 1995/1472  
or 2000-552970 or 2000-579,154 or 2000-579154 or 2000-614931 or 2001/0000532 or  
2001/0010001 or 2001/0010002 or 2001/0010020 or 2001-0005786 or 2001-0010001 or 2001-  
0010002 or 2001-0010020 or 2001-0047207 or 2001-0047208 or 2002-0004683 or 2002-  
0010511 or 2002-0013624 or 21290/95 or 2164859 or 2168835 or 2169740 or 21716B/88 or  
2186749 or 2191345 or 2205014 or 2,213,819 or 2,213,827 or 2,223,759 or 2,223,929 or  
2,223,964 or 2,224,249 or 2,261,654 or 2279936 or 2,279,936 or 2279938 or 2,279,938 or  
2,334,543 or 2,344,891 or 2357536 or 2,357,536 or 2,359,943 or 2,362,371 or 2,363,562 or  
2526/88 or 2527/88 or 26284/00 or 26438/95 or 264725 or 27505/96 or 2796544 or  
2,796,544 or 29/011,060 or 29/011,952 or 29/020,624 or 29/021,591 or 29/021,631 or  
29/023,141 or 29/023,623 or 29/023,921 or 29/023,922 or 29/023,923 or 29/023,926 or  
29/040,661 or 29/045,779 or 29/056,996 or 29/060,514 or 29/064,368 or 29/079,755 or  
29/088,769 or 29/113,530 or 29/115,228 or 29/116,468 or 29/121,594 or 29/121,595 or  
29/121,596 or 29/121,597 or 29/121,598 or 29/121,704 or 29/130,269 or 29/133,395 or  
29/141,974 or 29/146,202 or 29/151,251 or 29/151,252 or 29/153,030 or 29/153,031 or  
29/153,033 or 29/153,034 or 29/155,186 or 29/157,406 or 29/166,612 or 29/264,683 or  
29321/01 or 29334/02 or 29623246.7 or 29623247.5 or 29623359.5 or 29623360.9 or  
29623361.7 or 29623362.5 or 31697/88 or 31698/88 or 318,703 or 33420/01 or 36361/00 or  
36471/00 or 36662/01 or 36928/02 or 37078/94 or 37079/1994 or 37080/94 or 37205/00 or  
38025/01 or 38117/97 or 40157/95 or 44451/96 or 44738/99 or 44773/99 or 4,481,943 or  
45542/99 or 47043/00 or 48727/00 or 4,908,892 or 4,949,435 or 4,959,058 or 4,968,298 or

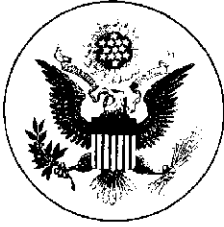
4,973,321 or 4,985,019 or 5,505,732 or 500854/97 or 5,009,661 or 5,015,247 or 50258/96 or  
 50259/96 or 5,026,386 or 5,052,373 or 5,059,194 or 5,135,210 or 5,195,526 or 5,250,061 or  
 5,423,842 or 5,451,227 or 54590 or 5,484,437 or 5,505,732 or 5,513,827 or 5,522,899 or  
 5,531,749 or 5,593,409 or 5,609,635 or 5,613,501 or 5,626,266 or 5,653,713 or 5,662,300  
 or 5,683,391 or 5,741,253 or 5,772,661 or 5,776,199 or 5,785,710 or 5,797,909 or  
 5,797,917 or 5,860,973 or 59767/96 or 60/037.139 or 60/106,216 or 60/117,039 or  
 60/132,665 or 60/132,671 or 60/133,214 or 60/180,404 or 60/216,785 or 60/217,004 or  
 60/238,225 or 60/249,802 or 60/255,463 or 60/266,426 or 60/272,381 or 60/272,382 or  
 60/274,869 or 60/277,890 or 60/281,112 or 60/281,124 or 60/281,187 or 60/281,714 or  
 60/296,059 or 60/296,060 or 60/296,061 or 60/296,680 or 60/296,681 or 60/355,194 or  
 60/356,318 or 60/377,916 or 60/379,589 or 60/384,229 or 602,461 or 602461 or 60,279,205  
 or 6,032,309 or 60359/96 or 60360/96 or 60364/96 or 604,058 or 604058 or 606903 or  
 6,080,155 or 6,083,228 or 6,096,038 or 610697 or 611052 or 6,120,502 or 6,120,503 or  
 6,123,705 or 6,129,740 or 6,136,001 or 6,139,550 or 6,139,551 or 6,142,997 or 6,149,650  
 or 6,159,214 or 616,906 or 616921 or 6,175,962 or 6,190,388 or 6,193,721 or 6,200,320 or  
 6,210,412 or 6,224,595 or 6,224,607 or 6,241,770 or 6,264,656 or 6,269,974 or 6,270,498  
 or 62896/1997 or 62897/1997 or 62898/97 or 62,946 or 62,947 or 6,302,914 or 6,350,283 or  
 63557/01 or 6,364,880 or 6,370,694 or 6,383,186 or 6,398,783 or 6,416,528 or 6,447,547 or  
 65603/01 or 66679/00 or 68276 or 68277 or 68928790.9-08 or 697259 or 701744 or 706402  
 or 70696BE/98 or 707418 or 71399/94 or 716409 or 718785 or 722080 or 726979 or 733248  
 or 733,977 or 734631 or 738,161 or 738161 or 739408 or 741941 or 743712 or 743813 or  
 749542 or 77415/98 or 77849 or 77850 or 77851 or 77852 or 77853 or 8-526884 or 825385  
 or 85106423 or 85113757 or 85115285 or 88202186 or 885080 or 89907559.2 or 89908104.6  
 or 8990814.6 or 89908773.8 or 94/0000598 or 94/0000599 or 94/00006000 or 94193049.1 or  
 94202320.1 or 94202321.9 or 946584 or 946585 or 946586 or 94920704.7 or 94925846.1 or  
 95/705673 or 95193131.8 or 95194204.2 or 95914197.9 or 95921334.9 or 95938971.9 or  
 96/00134 or 96/4254 or 96/4849 or 96-705480 or 96-706872 or 960571 or 96102702.9 or  
 96195584.8 or 96195585.6 or 96195586.4 or 96195587.2 or 96200198.8 or 96300757.0 or  
 964849 or 96907088.7 or 96907089.5 or 96917084.4 or 96917863.1 or 96917995.1 or  
 96917996.9 or 96918001.7 or 97-709089 or 97-709090 or 97-709091 or 97705969 or 97-  
 705969 or 97705970 or 97-705970 or 97709092 or 97-709092 or 97935095.6 or 98100011.8  
 or 98904937.4 or 98906158.5 or 99/928485.4 or 99/960161.0 or 9908773.8 or 99100605.9 or  
 99100606.8 or 99100607.7 or 99100608.6 or AU 1708900 or AU 2129095 or  
 AU 2628400 or AU 2643895 or AU 3720500 or AU 3811797 or AU 3965489 or AU 4210889  
 or AU 4317589 or AU 4473899 or AU 4477399 or AU 4554299 or AU 4704300 or AU  
 4824300 or AU 4988700 or AU 5025896 or AU 5025996 or AU 5976796 or AU 6035996 or  
 AU 6036096 or AU 6036496 or AU 697259 or AU 701744 or AU 706402 or AU 707418 or  
 AU 7139994 or AU 718785 or AU 722080 or CA 1314453 or CA 1332999 or CA 1333209 or  
 CA 1337790 or CA 1337842 or CA 2186749 or CA 2191345 or CA 2213819 or CA 2213827  
 or CA 2223759 or CA 2223929 or CA 2223964 or CA 2224249 or CA 602461 or 604058 or  
 CN 1128944 or CN 1148796 or CN 1190878 or CN 1190880 or CN 1190881 or CN 1190882  
 or D312,306 or D312,309 or D312,310 or D313,651 or D318,115 or D318,116 or D318,117  
 or D318,118 or D318,629 or D319,502 or D319,700 or D324,424 or D325,081 or D358,642  
 or D359,562 or D364,462 or D374,283 or D377,093 or D377,095 or D377,096 or D377,527  
 or D378,409 or D392,387 or D397,436 or D405,176 or D425,989 or D437,055 or D439,340

or D440,311 or D442,691 or D449,692 or D450,122 or D454,197 or D454,953 or D457,242  
 or D460,188 or D460,189 or DE 29623246U or DE 29623247U or DE 29623359U or DE  
 29623360U or DE 29623361U or DE 29623362U or DE 68921482D or DE 68921482T or DE  
 68928790D or DE 68928790T or EP 0419564 or EP 0425542 or EP 0703757 or EP 0712607  
 or EP 0722830 or EP 0752830 or EP 0812167 or EP 0814718 or EP 0831759 or EP 0836455  
 or EP 0836457 or EP 0840580 or EP 0901351 or EP 1006910 or EP 1083829 or EP 1129668  
 or EP 1131020 or EPA 89907559.2 or EPA 89908104.6 or Hei 08-516,098 or Hei 1-507651  
 or Hei 10-508962 or Hei 7-507088 or Hei 7-525246 or Hei 8-500980 or JP 10505248T or JP  
 11500974 or JP 11503339T or JP 11506655T or JP 11506656T or JP 11506657T or JP  
 11506658T or JP 2000516114T or JP 2796544B2 or JP 3505416T or JP 7008514 or JP  
 9511659T or M14800898 or M8800858.4 or M9409482.9 or M9409488.8 or M9409494.2 or  
 MI14800897 or PCT/US98/02213 or PCT US98/02212 or RE37,005 or RE37,161 or  
 TR199600134B or 01/03657 or 89/02791 or 00/01821 or 00/05593 or 00/12362 or 00/12363  
 or 00/12365 or 01/03658 or 01/11723 or 01/14844 or 01/21831 or 02/00519 or 02/02810 or  
 02/06021 or 02/06661 or 02/10170 or 02/17480 or 02/17481 or 89/03215 or 89/03805 or  
 89/03860 or 94/06345 or 94/09129 or 95/03770 or 95/06430 or 95/14003 or 96/02377 or  
 96/02378 or 96/08039 or 96/08612 or 96/08613 or 96/08618 or 96/08620 or 97/12956 or  
 98/01937 or 98/02526 or 99/12890 or 99/25292 or WO 00/66044 or WO 00/66011 or WO  
 00/66045 or WO 00/51529 or WO 00/66011 or WO 00/42898 or WO 00/25707 or WO  
 01/56513 or WO 01/56497 or WO 01/80784 or WO 01/56497 or WO 02/03885 or WO  
 89/12431 or WO 90/01298 or WO 90/02574 or WO 90/02524 or WO 90/00037 or WO  
 94/28824 or WO 95/26164 or WO 95/32673 or WO 95/05123 or WO 96/40019 or WO  
 96/27345 or WO 96/40020 or WO 96/39988 or WO 96/27321 or WO 96/40019 or WO  
 96/40015 or WO 96/39988 or WO 98/34556 or WO 98/04202 or WO 99/63891 or  
 WO00/25707 or WO 00/42898 or WO 90/01298 or WO95/05123 or WO95/26164 or  
 WO96/14799 or WO96/40015 or WO98/34553 or '001 or '019 or '038 or '058 or '061 or  
 '155 or '186 or '194 or '199 or '205 or '210 or '214 or '227 or '228 or '247 or '249 or '253  
 or '266 or '283 or '298 or '300 or '320 or '321 or '371 or '373 or '386 or '388 or '391 or  
 '409 or '412 or '435 or '437 or '498 or '501 or '502 or '503 or '528 or '526 or '536 or '543  
 or '547 or '550 or '551 or '562 or '595 or '607 or '635 or '650 or '654 or '656 or '661 or  
 '694 or '705 or '710 or '713 or '721 or '732 or '740 or '749 or '759 or '770 or '783 or '816  
 or '819 or '827 or '842 or '880 or '891 or '892 or '899 or '909 or '914 or '917 or '929 or  
 '964 or '936 or '938 or '943 or '973 or '974 or '997



**Appendix B - Medtronic Employees**

1. Ahlersmeyer
2. Beck
3. Beckham
4. Boyd
5. Brumsfeld
6. Carlson
7. Coates
8. Compton
9. DeMane
10. DeNardin
11. Duerr
12. Eisenberg
13. Estes
14. Fairey
15. Foley
16. Gallogly
17. Galvin
18. Griffin
19. Hood
20. Kroll
21. Lange
22. Lipscomb
23. Liu
24. LoGuidice
25. Lukianov
26. McGahan
27. Merrill
28. Pafford
29. Phelps
30. Phillips
31. Pickard
32. Plais
33. Ray
34. Rodrick
35. Schwartz
36. Sheldon
37. Smithey
38. Traurig
39. Treharne
40. Urbanowicz



## Notice of Distribution

This notice confirms a copy of the document docketed as number 455 in case 2:01-CV-02373 was distributed by fax, mail, or direct printing on May 14, 2003 to the parties listed.

---

Leo Maurice Bearman  
BAKER DONELSON BEARMAN & CALDWELL  
First Tennessee Bank  
165 Masison Ave.  
20th floor  
Memphis, TN 38103

Bradley E. Trammell  
BAKER DONELSON BEARMAN & CALDWELL  
First Tennessee Bank  
165 Masison Ave.  
20th floor  
Memphis, TN 38103

Jack Q. Lever  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Melvin White  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Michael D. Switzer  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

William Hagedorn  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Michael D Switzer  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Ronald J. Pabis  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Melvin White  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Raphael V Lupo  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Jack Q Lever  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Ronald J. Pabis  
MCDERMOTT WILL & EMERY  
600 13th Street, N. W.  
Washington, DC 20005

Jay S. Bowen  
BOWEN RILEY WARNOCK & JACOBSON  
1906 West End Ave.  
Nashville, TN 37203

Taylor Cates  
BOWEN RILEY WARNOCK & JACOBSON  
1906 West End Ave.  
Nashville, TN 37203

Stanley M. Gibson  
JEFFER MANGELS BUTLER & MARMARO LLP  
1900 Avenue of the Stars  
7th Floor  
Los Angeles, CA 90067

Dan P. Sedor  
JEFFER MANGELS BUTLER & MARMARO LLP  
1900 Avenue of the Stars  
7th Floor  
Los Angeles, CA 90067

Marc Marmaro  
JEFFER MANGELS BUTLER & MARMARO LLP  
1900 Avenue of the Stars  
7th Floor  
Los Angeles, CA 90067

Joan M. Steinmann  
JEFFER MANGELS BUTLER & MARMARO LLP  
1900 Avenue of the Stars  
7th Floor  
Los Angeles, CA 90067

Walker A. Matthews  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

Robert G. Krupka  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

Boaz M. Brickman  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

Patricia Cirucci  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

Marc H Cohen  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

Lindsay E. Dinn  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

J. Drew Diamond  
KIRKLAND & ELLIS  
777 S. Figueroa St.  
Los Angeles, CA 90017

Diane Vescovo  
U.S. DISTRICT COURT  
Office of the Clerk  
167 N. Main Street  
Rm. 242 Federal Building  
Memphis, TN 38103

John I. Houseal  
GLANKLER BROWN, PLLC  
One Commerce Square  
Suite 1700  
Memphis, TN 38103

Marc Louis Schatten  
GLANKLER BROWN  
One Commerce Sq.  
Ste. 1700  
Memphis, TN 38103

Honorable Jon McCalla  
US DISTRICT COURT