Exhibit 4

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION

MIRROR WORLDS, LLC	§	
Plaintiff,	§ § 8	Civil Action No. 6:08-CV-88
v.	§	JURY TRIAL DEMANDED
APPLE INC.	§ §	
Defendant.	\$ \$	

DEFENDANT'S AMENDED INVALIDITY CONTENTIONS

Pursuant to P.R. 3-3, Defendant Apple Inc. ("Apple") respectfully submits these Invalidity Contentions. These disclosures employ plaintiff Mirror Worlds LLC's ("Mirror Worlds") interpretations of U.S. Patent No. 6,006,227 ("the '227 patent"), U.S. Patent No. 6,638,313 ("the '313 patent"), U.S. Patent No. 6,725,427 ("the '427 patent"), and U.S. Patent No. 6,768,999 ("the '999 patent"), collectively the "patents-in-suit," to the extent they can be discerned from Mirror Worlds' P.R. 3-1 disclosures and positions taken during prosecution of the patents-in-suit and related patents. These P.R. 3-3 disclosures are not, and nothing in these disclosures should be seen as, an endorsement or acceptance of any of Mirror Worlds' claim constructions, nor an assertion of particular constructions by Apple. Apple expressly reserves the right to propose alternative constructions to those advocated by Mirror Worlds and to challenge and contest Mirror Worlds' claim construction positions.

Prior art not included in this disclosure, whether or not now known to Apple, may become relevant depending on the positions Mirror Worlds asserts and the claim constructions the Court adopts. Apple's ongoing investigations may also uncover additional prior art. Apple reserves the right to modify these disclosures, including without limitation, by adding or

withdrawing prior art to or from this disclosure and/or modifying the charts herein in light of the Court's claim construction ruling, any revised or supplemented infringement contentions by Mirror Worlds, and positions taken by Mirror Worlds in related litigation, reexamination or other prosecution, or as otherwise appropriate. To the extent that Apple obtains additional or further information, Apple reserves the right to supplement these Invalidity Contentions.

The obviousness combinations of references provided in Section I below under 35 U.S.C. § 103 are merely exemplary and are not intended to be exhaustive. Additional obviousness combinations of the references identified below are possible, and Apple reserves the right to use any such combination(s) in this litigation. In particular, Apple is currently unaware of the extent, if any, to which Mirror Worlds will contend that limitations of the claims at issue are not disclosed in the art identified by Apple as anticipatory, and the extent to which Mirror Worlds will contend that elements not disclosed in the specifications of the patents-in-suit and related applications would have been known to persons of skill in the art. To the extent that an issue arises with any such limitations, Apple reserves the right to identify other references that would have made such limitations obvious in view of the relevant disclosures.

Accordingly, Apple reserves the right to supplement or modify these Invalidity Contentions based on further discovery and in a manner consistent with the Federal Rules of Civil Procedures and the Court's rules, including the Patent Rules.

Additionally, as addressed below in Section II, on information and belief, the claims of the '227 patent, '313 patent, '427 patent, and '999 patent are invalid under 35 U.S.C. § 102(f) because the named inventors did not invent the subject matter of those patents. The facts pertaining to the inventor(s)' derivations of the claimed subject matter are being further investigated, and Apple expects that discovery taken in this litigation will further reveal facts concerning this defense. Accordingly, Apple reserves the right to supplement or modify these Invalidity Contentions with respect to derivation as further discovery occurs.

Further, as addressed below in Section III, claims of the patents-in-suit are invalid under 35 U.S.C. § 112 because the claims are indefinite, lack a proper written description, and/or

do not enable one of ordinary skill in the art at the time of the invention was made to make or use the claimed invention. The parties have not yet taken claim construction positions, and the facts pertaining to indefiniteness, written description, and/or enablement are being further investigated, and Apple expects that discovery taken in this litigation will further reveal facts concerning this defense. Accordingly, Apple reserves the right to supplement or modify these Invalidity Contentions with respect to 35 U.S.C. § 112 as claim construction and further discovery occurs.

Finally, Mirror Worlds states in its 3-1(e) disclosure that the earliest priority date to which all claims of the '227, '313, '427, and '999 patents are entitled is June 28, 1996, the filing date of the '227 patent application to which the '313, '427, and '999 patents claim priority. The claims recited in the '313, '427, and '999 patent, however, contain limitations that are not supported by the applications to which to which the '313, '427, and '999 claims priority. Therefore, the claims of the '313, '427, and '999 patents are not entitled to a June 28, 1996 priority date.

I. PRIOR ART: ANTICIPATION AND OBVIOUSNESS

Pursuant to P.R. 3-3(a) and 3-3(b), and in light of the infringement contentions set forth in Mirror Worlds 3-1 contentions and accompanying claim charts, Apple identifies herein the prior art now known to Apple that anticipates and/or renders obvious the asserted claims of the patents-in-suit. In these invalidity contentions, including the appendices and exhibits, any citations to a printed publication or other reference describing a prior art system also should be construed to be a reference to the prior art system itself. Thus, for example, these contentions refer to Hypercard, the HFS file system, Lotus' Magellan, Retrospect, and On Location. The citations in these contentions are to manuals, books, or screenshots describing the functionality of those systems. Apple intends to reply on both the system (*i.e.*, a computer running the identified software) that was sold and/or in public use, and the manual or book describing the system as prior art in this case. However, all citations are to the manual, book, or screenshots describing the system.

A. Base References For Anticipation And Obviousness

- 1. United States Patent No. 6,243,724 (Mander *et al.*) Method and Apparatus for Organizing Information in a Computer System (piles) (APMW0000001-APMW0000049) ("hereinafter "the '724 patent" or "1")
- 2. The Lotus Magellan product, as described in, *e.g.*, Using Lotus Magellan (1989); as well as the book Using Lotus Magellan (1989) (APMW000050-APMW0000366) and United States Patent No. 5,303,361 (APMW0018307-APMW0018326) (hereinafter "Lotus Magellan" or "2")
- 3. The Retrospect software product, as described in, *e.g.*, Retrospect User's Guide (1995), as well as the book Retrospect User's Guide (1995) (APMW0000367-APMW0000704) (hereinafter "Retrospect User's Guide" or "3")
- 4. United States Patent No. 5,499,330 (Peter Lucas, DEC) Document Display System for Organizing and Displaying Documents as Screen Objects Organized Along Strand (APMW0000705-APMW0000732) (hereinafter "the '330 patent" or "4")
- 5. English translation of Japanese Patent No. 6-180661 (Yumiko *et al.*) (APMW0000733-APMW0000751) (hereinafter "the JP '661 patent" or "5")
- 6. United States Patent No. 5,504,852 (Thompson-Rohrlich) Method for Creating a Collection of Aliases Representing Computer System Files (Smart Folders) (APMW0000752-APMW0000759) (hereinafter "the '852 patent" or "6")
- 7. United States Patent Number 5,621,906 (O'Neill *et al.*) Perspective-Based Interface Using An Extended Masthead (APMW0000760-APMW0000769) (hereinafter "the '906 patent" or "7")
- 8. United States Patent No. 5,758,324 (Hartman *et al.*) Resume Storage and Retrieval System (APMW0000770-APMW0000796) (hereinafter "the '324" or "8")
- 9. United States Patent No. 6,396,513 (Helfman *et al.*) Electronic Message Sorting and Notification System (APMW0000797-APMW0000811) (hereinafter "the '513 patent" or "9")
- 10. SIGIR '93 "Content Awareness in a File System Interface: Implementing the 'Pile' Metaphor for Organizing Information" by Rose, Mander, Oren, Ponceleon, Salomon & Wong (APMW0000812-APMW0000821) (hereinafter "the SIGIR '93 article" or "10")
- 11. United States Patent No. 5,724,567 (Rose *et al.*) System for Directing Relevance-Ranked Data Objects to Computer Users (APMW0000822-APMW0000834) (hereinafter "the '567 patent" or "11")
- 12. United States Patent No. 6,202,058 (Rose *et al.*) System for Directing Relevance-Ranked Data Objects to Computer Users (APMW0000835-APMW0000845) (hereinafter "the '058 patent" or "12")

- 13. "A 'Pile' Metaphor for Supporting Casual Organization of Information," by Mander, Salomon and Wong (CHI '92) (APMW0000846- APMW0000862) (hereinafter "the CHI '92 article" or "13")
- 14. United States Patent No. 5,649,188 (Nomura *et al.*) Electronic Filing Apparatus Which Allows Information to be Retrieved Based on a Box, a Date, or a Card Associated with the Information (APMW0000863-APMW0000978)) (hereinafter "the '188 patent" or "14")
- 15. The HyperCard Basics (Apply Computer, 1990) and HyperCard Stack Design Guidelines (Addison-Wesley, 1989) (APMW0000979- APMW0001019)
- 16. United States Patent No. 6,00,227 (Freeman *et al.*) Document Stream Operating System (APMW0014222 APMW0014237) (hereinafter "the '227 patent" or "16")
- 17. TR-1070 "The 'Lifestreams' Approach to Reorganizing the Information World," YALEU/DCS/TR-1070 (1995) (YALE000430 YALE000441) (hereinafter "TR-1070" or "17")
- 18. "Semantic File Systems," by Gifford, Jouvelot, Sheldon and O'Toole (ACM'91) (APMW0018268 APMW0018277) (hereinafter "the SFS article" or "18")
- 19. On Location 2.0.1, by ON Technology, Inc. (1990-91) (APMW0018278 APMW0018306) (hereinafter "On Location" or "19")

Pursuant to P.R. 3-3(c), the claim charts attached hereto as Exhibits 1 to 19 identify specifically where, in each of these base references, each element of each asserted claim is found. In addition, the table in Appendix A states for each reference and each claim whether Apple contends the reference anticipates the claim or renders it obvious.

B. Obviousness Combinations

In general, the problem purportedly addressed by the Mirror Worlds patents was already well known to those of skill in the art by 1996. The '227 patent describes disadvantages of conventional operating systems that it seeks to address. These are "(1) a file must be 'named' when created and often a location in which to store the file must be indicated resulting in unneeded overhead; (2) users are required to store new information in fixed categories, that is directories or subdirectories, which are often an inadequate organizing device." '227 patent at 1:40-45; *see also* Deposition of N. Carriero at 55:5-15 ("Q. Sitting here today, give me your best recollection as to what his [Dr. Gelernter's] Lifestreams idea was. A. Ah. Okay. At that

on 35 U.S.C. § 112 depending on the claim construction positions taken by Mirror Worlds, and the Court's claim construction Order.

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