Exhibit 1

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

APPLE INC.
 	
    Counterclaim Plaintiff
 	
    v.
 	
MIRROR WORLDS, LLC,
MIRROR WORLDS TECHNOLOGIES, INC.
 	
    Counterclaim Defendants.	

SUPPLEMENTAL EXPERT REBUTTAL REPORT OF JOHN LEVY, Ph.D. REGARDING VALIDITY

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I.   INTRODUCTION

1. I, John Levy, submit this Supplemental Expert Report in connection with my preparation to testify at the trial in the above-captioned case on issues relating to the validity of Mirror Worlds' United States Patent Nos. 6,006,227 ("the '227 patent"), 6,638,313 ("the '313 patent"), and 6,725,427 ("the '427 patent") (collectively, "the Mirror Worlds Patents").[1]

2. This report is based upon information currently known to me and I reserve the right to rely upon any additional information I become aware of after the date of this report and to respond to any arguments or opinions regarding the subject matter of my reports raised by Apple or its experts after the date of this report, including at trial.

3. The submission of this supplemental report is compelled by my further review of Apple's late produced references, regarding which I specifically reserved rights in my June 4, 2010 Expert Rebuttal Report Regarding Validity. This supplemental report is also compelled by Apple's Notice of Asserted Prior Art for Trial D.I. 365, which was filed at 9:18 PM CDT on September 6, 2010, which narrowed the prior art asserted by Apple from over 190 references, cited by Dr. Feiner in his expert report on the validity of the Mirror Worlds Patents, dated May 20, 2010 to 54 references. This report provides further details regarding:

> 1. Multiple references Apple refers to as the MAYA Design's Workscape System—in particular, DX0135, DX0175, DX0197, DX0294, DX0511, DX0512, DX0573 and DX0922;

> 2. Multiple references Apple refers to as the The Memoirs System—in particular, DX0382, DX0563, DX0588 and DX0589;

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[1] I understand that Mirror Worlds is not pursuing claim 1 of 6,768,999 ("the '999 patent"), which is the sole asserted claim of that patent, at trial and that therefore there is no need to address the '999 patent in this Supplemental Report.

3. Multiple references Apple refers to as the The Spatial Data Management System—in particular, DX0282, DX0471 and DX0499;

4. Multiple references Apple refers to as the Lotus Development Corporation's Lotus Magellan System—in particular, DX0170, DX0352, DX0387, DX0502 and DX1007;

5. United States Patent No. 5,621,906, DX0181;

6. "Semantic File Systems," by Gifford, Jouvelot, Sheldon and O'Toole (ACM'91), DX0388;

7. United States Patent No. 6,396,513, DX0203;

8. United States Patent No. 5,724,567, DX0185;

9. United States Patent No. 6,202,058, DX0199.;

10. English translation of Japanese Patent No. 6-180661, "A file search method," (1992), DX0354;

11. United States Patent No. 5,649,188, DX0184;

12. The HyperCard Basics (Apple Computer, 1990) and HyperCard Stack Design Guidelines (Addison Wesley, 1989), DX0357;

13. United States Patent No. 5,758,324, DX0165;

14. Robin Lee Kullberg, "Dynamic Timelines: Visualizing Historical Information in Three Dimensions," Master of Science Thesis, MIT (1995), DX0430;

15. William M. Newman, "A system for interactive graphical programming," ACM – Spring Joint Computer Conference (1968), DX0495;

16. Beverly L. Harrison, et al., "Timelines: An Interactive System for the

Collection and Visualization of Temporal Data," appeared in Proceedings of

Graphics Interface '94, pp. 141-148 (1994), DX0504;

17. Robert Spence, et al., "Data base navigation: an office environment for the

professional," Behavior and Information Technology, Vol. 1, No. 1, pp. 43-54

(1982), DX0522;

18. Ben Shneiderman, "The Eyes Have It: A Task by Data Type Taxonomy for

Information Visualizations," Proc. Visual Languages (Sept. 1996), DX0525;

19. Brett Milash, et al., "Lifelines: Visualizing Personal Histories," (video) (April

1995), DX0554;

20. Linda Musthaler, "A tall order for document managers," Network World,

pp. 35-40 (July 18, 1994), DX0569;

21. Sandra Kappes, et al., "Document Management for the Knowledge Worker

System," US Army Corps of Engineers USACERL ADP Report 95/38 (1995),

DX0572; and

22. Peggy Seiden, et al., "Information Retrieval Systems for Microcomputers,"

Library Hi Tech, Vol. 3, Iss. 1, pp. 41-54 (1985), DX0562.

4. I note that Apple supplements many of the references (e.g., MEMOIRS, Magellan, SDMS, and Worskcape) with testimony of the authors and/or inventors identified on those references. Much of this testimony is mere speculation and beyond the scope of the references. I have been informed that this testimony is the subject of a motion to preclude that testimony by Mirror Worlds. Should Mirror Worlds' motion be denied, I reserve my right to to address that testimony.

5. I incorporate by reference into this supplemental report my earlier Expert Rebuttal Report Regarding Validity, dated June 4, 2010, and my declaration dated July 22, 2010.

II. PROFESSIONAL BACKGROUND AND QUALIFICATIONS

6. I am the sole proprietor of John Levy Consulting, a consulting firm that specializes in consulting on managing development of high tech products, including computers and software.

7. I have a Bachelor of Engineering Physics degree from Cornell University, a Master of Science degree in Electrical Engineering from the California Institute of Technology ("Caltech"), and a Ph.D. in Computer Science from Stanford University.

8. From 1965 to 1966 at Caltech, my field of study was information processing systems. My coursework included systems programming, including the construction of compilers and assemblers.

9. During my employment at Stanford Linear Accelerator Center while I was a graduate student at Stanford University, I was a programmer and I participated in the design and implementation of a real-time operating system for use in data acquisition and display.

10. From 1966 to 1972, during my doctorate at Stanford, my field of study was in computer architecture. My coursework included systems design, programming and operating systems. My Ph.D. thesis research related to computer systems organization and programming of multi-processor computers. I developed and measured the performance of several parallel programs on a simulated 16-processor system.

11. I have spent over thirty years in the computer systems, software and storage industry. After earning my doctorate from Stanford University in Computer Science, I worked as an engineer at a number of leading companies in the computer and hard disk industry, including

Digital Equipment Corporation, Tandem Computer, Inc., Apple Computer, Inc., and Quantum Corporation.

12. From 1975 to 1976, I supervised an operating system development group at Digital Equipment Corporation. During this time, I reviewed design changes and bug reports and fixes for two operating systems. While working for Digital Equipment Corporation, I wrote a long-term strategic plan for I/O buses, I/O controllers and operating systems for Digital Equipment Corporation.

13. During my employment at Quantum, I was involved in the design of file systems and of hard disk input/output drivers used in personal computers.

14. In the past 10 years, I have consulted for various companies on managing software development, which included review of the design of systems and application software.

15. I am a named inventor on seven United States patents. I have been disclosed as an expert in over 25 cases and have testified at trial and deposition. A list of my testimony over the last four years is attached hereto as Exhibit A. I also have served as a technical advisor to two United States District Judges. A complete copy of my curriculum vitae, which includes a list of my publications, is attached as Exhibit B.

16. I base my opinions below on my professional training and experience and my review of documents and materials produced in this litigation, as well as documents I uncovered in researching this assignment. A list of materials I considered in arriving at my opinions is attached as Exhibit C. My compensation for this assignment is my standard rate of $475 per hour. My compensation is not dependent on the substance of my opinions or my testimony or the outcome of this case.

III. INVALIDITY: ANALYSIS AND OPINION

A. Legal Standards

1. Anticipation

17. I understand that in order to anticipate a claim, a prior art reference must disclose all elements of the claim within the four corners of the document, and those elements must be disclosed arranged or combined in the same way as in the claim.

2. Obviousness

18. I understand that question of obviousness involves a determination of whether the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

19. I understand that obviousness is determined based on four underlying factual inquiries: (1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, (3) the level of ordinary skill in the pertinent art, and (4) secondary considerations of non-obviousness.

20. I further understand that the non-obviousness of a claim can be supported by secondary considerations that include: (1) commercial success; (2) long-felt, but unresolved, needs; (3) failure of others; (4) skepticism or disbelief before the invention; (5) copying by others; (6) praise; (7) unexpected results; and (8) industry acceptance. I've also been informed that commercial success or other secondary considerations must be attributable to the claimed features.

21. I also understand that even if each limitation of a claim is disclosed in the prior art secondary considerations may rebut an argument that the claim is obvious.

B. The Asserted Claims of the Mirror Worlds Patents Are Not Anticipated or Obvious.

1. Workscape

22. Dr. Feiner asserts that Lucas '330 and Workscape anticipate and/or render obvious the following claims of the Mirror Worlds Patents:

      (1)   '227 patent claims 13, 14, 15, 16, 17, 20, and 22.

(Feiner, pp. 97-98).

23. Dr. Feiner also asserts that Lucas '330 and Workscape render obvious the following claims of the Mirror Worlds Patents in view of Lotus Magellan, Mander '724/Piles project, Retrospect, SDM/SDMS, On Location, and/or Memoirs:

      (1)   '227 patent claims 13, 14, 15, 16, 17, 20, 22;

      (2)   '313 patent claims 1, 2, 3, 4, 9, 10, 11;

      (3)   '427 patent claims 1, 2, 5, 7, 8, 9, 10, 13, 15,16, 17, 18, 19, 22, 24, 25, 26, 29, 31, 32, 33, 34, 37, 39; and

      (4)   '999 patent claim 1.

(Feiner, p. 98).

24. I disagree with Dr. Feiner—the above claims are not anticipated or rendered obvious by the references he cites.

25. I understand that Apple has identified for trial the following references and related deposition testimony that it refers to collectively as "the Workscape System" or "Workscape":

      (i)   U.S. Patent No. 5,499,330 to Peter Lucas, et al. ("Lucas '330") (APMW0000705–APMW0000732) (DX0175)

      (ii)   1993 Workscape Video (http://www.youtube.com/watch?v=H9F17JrG–SE) (APMW0076598) (DX0294);

      (iii)   Lucas CHI '94 ("Workscape: A Scriptable Document Management Environment" by Peter Lucas et al. CHI'94 April 24 28, APMW00199475775–APMW0075776) (DX0511);

(iv) 1990 "200 Points of Light" video (http://www.youtube.com/watch?v=H5 T_S50Sr4) (APMW0076599) (DX0135);

(v) U.S. Patent No. 6,151,610 (APMW0076691–APMW0076738) (DX0197);

(vi) Workscape video presented at CHI '94 conference (Lucas Ex. 1) (MD001043) (DX0922)

(vii) Bailay CHI'94 ("Designing Workscape™: An Interdisciplinary Experience" by Joseph M. Bailay et al, CHI '94 April 24 28, 1994 (APMW0075777– APMW0075782) (DX0512); and

(viii) U.S. Des. No. D395,297 (APMW0077377–APMW0077378) (DX0573).

I have limited my comments in this report to the above references. I understand that Apple identified other references relating to Dr. Lucas' work and/or Workscape that Apple is not pursuing at trial. I reserve the right to comment on those other references should they become an issue at trial. I also note that Dr. Feiner did not address item (vi) above in his report or claim charts—as such, I further understand that he cannot testify regarding that reference at trial.

26. My further review of these references does not change my initial opinion that Lucas '330/Workscape does not invalidate any of the Mirror Worlds Patents, and, in fact, confirms it.

a.   Lucas '330 and Workscape Do Not Anticipate Any of the Asserted Claims of the Mirror Worlds Patents.

27. Lucas '330 describes a system that addresses a problem with conventional file systems— namely that documents in directories, or containers, are "hidden from the user." ('330, col. 1, ll. 25-31). The system solves this problem by "display[ing] documents either in a completely free-form, user controlled configuration or as strands." ('330, col. 1, ll. 56-60). A strand has a parent document and child documents, which are configured along a two

dimensional path through a three-dimensional display space. (*Id*., col. 1, ll, 60-63). Strands are "a mechanism for arranging screen objects without hiding them." (*Id.*, col. 8, ll. 45-46).

28. "As I noted in my declaration to Mirror Worlds Opposition to Apple's motion for Summary Judgment of Invalidity, the multiple Workscape references are not a single system and therefore they cannot be combined to anticipate the Mirror Worlds Patents. Lucas '330, in fact, does not mention "Workscape."

i. Lucas '330 and Workscape do not disclose a "stream."

29. '227 patent claims 13, 14, 15, 16, 17, 20, 22 either recite the term "stream" or are dependent claims that refer back to a claim that does.

30. An explanation of the term "stream" was provided in my earlier report in connection with Mander '724. No such "stream" is disclosed in Lucas '330.

31. *First*, Lucas '330 and other Workscape references do not describe an underlying time-ordered collection of documents, which is one aspect of a stream. Instead, Lucas '330 is directed only to the display of documents in a strand.

32. Dr. Feiner asserts that Lucas '330 discloses a stream, but fails to identify in Lucas any such time-ordered collection of documents. *See, e.g.*, Feiner, Ex. 4A, p. 8.

33. *Second*, Lucas '330 and other Workscape references do not describe a system intended to handle an unbounded number of items (another aspect of a stream, as described above). Lucas '330 and other Workscape references display all the documents within a strand— which addresses the problem, identified in Lucas '330, that in conventional file systems documents in directories are hidden from the user. '330, col. 1, ll. 25-31, col. 8, ll. 46-47 ("Strands are not containers, but rather are a mechanism for arranging screen objects without hiding them."). That number cannot be unbounded.

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34. *Third*, Lucas '330 does not provide for or disclose including *future* documents in strands, which is yet another aspect of a stream. Dr. Feiner identifies no such disclosure in his report. *See, e.g.,*, Feiner, Ex. 4A, p. 50.

35. *Fourth*, Lucas '330 and other Workscape references do not provide a system in which the location of file storage is transparent to the user. Indeed, Lucas '330 and other Workscape references addresses only the graphical display of strands and does not address file location generally. Dr. Feiner does not address this aspect of a stream.

36. *Fifth,* The Workscape references, other than Lucas '330, also fail to disclose a stream. The persistent FIND does not actually search through all the documents in the Workscape system. There is no disclosure regarding a FIND tool that perpetually searches Workspace Viewers **and** repositories. Thus, FIND results, in Workscape, cannot be dynamically updated to include all new matching items. This differs from persistent streams and substreams where all new items are dynamically added.

37. A "stream" is not simply a visual construct, but rather relates to the underlying organization of data in a system. In other words, unlike Workscape references strands a stream may exist whether or not it is displayed at a given point in time.

ii. Lucas '330 and Workscape do not disclose a "main stream."

38. '227 patent claims 13, 14, 15, 16, 17, 20, 22 either recite the term "main stream" or are dependent claims that refer back to a claim that does.

39. An explanation of the term "main stream" was provided in my earlier report in connection with Mander '724. No such "main stream" is disclosed in Lucas '330 and other Workscape references.

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40. There is no disclosure in Lucas '330 and other Workscape references of a stream at all, much less a stream containing each data unit, or document, received by or generated by the computer system (*i.e.*, a "main stream"). Dr. Feiner asserts that "Lucas describes generating a main strand (e.g., set of documents that follow a path corresponding to 'a two dimensional line through a three dimensional display space') of data units," citing Lucas '330 at 1:57-61, 9:8-13, 8:51-53, 8:33-35, 9:26-29, Fig. 1. Feiner, Ex. 4A, p. 8. But Lucas '330 and other Workscape references, in fact, never disclose a strand containing each data unit received by or generated by a computer system. It also never uses the term "main strand."

41. With respect to the Workscape references (other than Lucas '330) , I note that Dr. Lucas testified that uses of Workscape in which every file is brought into a Workscape Viewer were not envisioned. (Lucas Tr. 23:11-15). Furthermore, I note that according to Dr. Lucas, the ability to retrieve all documents via a query includes an "additional assumption . . . that the repository support[s] wild card searches. . . ." (Lucas Tr. 161:8-15).

iii.   **Lucas '330 and Workscape do not disclose a "substream for containing data units only from the main stream."**

42. '227 patent claims 13, 14, 15, 16, 17, 20, 22 either recite the term "substream" or are dependent claims that refer back to a claim that does.

43. An explanation of the phrase "substream for containing data units only from the main stream." was provided in my earlier report in connection with Mander '724. No such substream is disclosed in Lucas '330 and other Workscape references.

44. *First,* as explained above, Lucas '330 and other Workscape references do not disclose a stream or main stream and therefore cannot disclose a substream of the main stream.

45. *Second,* as described in the '227 patent, a substream presents the user with a "stream 'view' of a document collection," such as the main stream. '227, col. 4, lines 57-58. A substrand,

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which is what Dr. Feiner points to for this limitation (*see* Feiner, Ex. 4A, pp. 8, 11-12) clearly does not provide such a view of a document collection. Indeed, Lucas '330 only describes displaying an entire strand, which may be visually separated into substrands by one or more knots. *See, e.g.,* Lucas '330, Fig. 9. It does not describe a substrand that acts as a filter on a strand.

46. *Third*, The Workscape system imposed a limitation that permitted a document to be displayed only once per Workspace viewer. This means that there cannot be two strands in a viewer that include the same documents. Thus, strands and/or substrands cannot overlap in the way that substreams can. A creation of a new strand from an original strand would affect the original strand by removing the documents that are to make up the new strand. Therefore substreams are not disclosed.

> iv. **Lucas '330 and Workscape do not disclose including each data unit in the main stream "according to the timestamp in the respective chronological indicator."**

47. '227 patent claims 13, 14, 15, 16, 17, 20, 22 either recite including each data unit in the main stream "according to the timestamp in the respective chronological indicator" or are dependent claims that refer back to a claim that does.

48. Again, Lucas '330 and other Workscape references do not disclose a *main stream* and therefore cannot disclose this limitation, which relates to including documents in the *main stream.* In addition, Lucas '330 and other Workscape references do not disclose including a data unit in a strand, much less a main stream, according to the data unit's timestamp. The portions of Lucas '330 cited by Dr. Feiner do not disclose this feature. Feiner, Ex. 4A, pp. 43-44.

49. The Workscape system did not mandate the existence of date/time related attributes, and certain documents within the system did not include such data. For example, Dr. Lucas

v. Lucas '330 and Workscape do not disclose "persistent streams."

50. '227 patent claims 13, 14, 15, 16, 17, 20, 22 either recite "persistent streams" or are dependent claims that refer back to a claim that does.

51. As set forth in the Court's preliminary claim construction Order, "persistent streams" are "streams that are dynamically updated." No such persistent streams are disclosed in Lucas '330 and other Workscape references. To the contrary, as described in Lucas '330 and other Worscape references, a FIND operation may be used to create a strand—in which case once the FIND operation completes, there are no more updates to the strand. *See* Lucas '330, col. 18, ll. 50-56.

52. Dr. Feiner asserts that Lucas '330 discloses "maintaining streams of data units through searching that are persistent streams," citing Lucas at col. 8, ll. 7-10. Feiner, Ex. 4A, p. 47. I disagree. The cited portion of Lucas '330 describes "a special FIND tool," serving as an IN BOX, that identifies shared files directed to a user's attention and brings them into the user's workspace. This "special FIND tool" is in essence a mechanism for receiving documents on a local computer system. It is not a persistent stream or substream as claimed in the Mirror Worlds Patents.

53. As I noted in my earlier declaration in connection with Mirror Worlds opposition to Apple's motion for summary judgment of invalidity, the persistent FIND that Apple alleges generates a persistent stream does not actually search through all the documents in the Workscape system. There is no disclosure regarding a FIND tool that perpetually searches Workspace Viewers and repositories. Thus, results of a FIND in Workscape cannot be dynamically

updated to include all new matching items. This differs from persistent streams and substreams where all new and matching items are dynamically added.

<blockquote>

vi.   Lucas '330 and Workscape do not disclose "receiving from a user one or more indications of one or more selected segments of the streams corresponding to one or more selected intervals of time" and "displaying the selected segments."
</blockquote>

54. '227 patent claim 16 recites "receiving from a user one or more indications of one or more selected segments of the streams corresponding to one or more selected intervals of time" and "displaying the selected segments." These limitations are not disclosed in Lucas '330 and other Workscape references.

55. Dr. Feiner cites the "fish-eye lens effect" described at Lucas '330, col. 5, ll. 14-21 for this limitation (Feiner, Ex. 4A, p. 72), but that effect essentially enlarges a portion of a strand that is already displayed—it does not result in displaying a selected segment of the strand.

56. Dr. Feiner also states that "users can specify certain subsets of documents to be displayed in 'substrands.'" (Feiner, Ex. 4A, pp. 72-73). But strands are displayed in their entirety—a user does not select a substrand for display.

57. The Workscape references also do not disclose this limitation. Apple relies on a portion of the 94 CHI' video (at 4:08) for this limitation. That portion describes essentially a date range search. It does not convey to the user a segment of a larger sequence of document representations – not all of which can fit on the screen at one time. Indeed, in the video, a larger sequence was displayed in its entirety on the screen. Notably, the lack of this interface in most of the Workscape References suggests that it was not incorporated into the Workscape System thus, the Workscape references teach away from using that interface.

b. **Lucas '330 and Workscape Do Not Render Any of the
Asserted Claims of the Mirror Worlds Patents Obvious
in View of the References Cited by Dr. Feiner.**

58. In my earlier report I addressed Dr. Feiner's assertion that various claims, identified above,

are rendered invalid by Lucas '330 and Workscape in view of Lotus Magellan, Mander

'724/Piles project, Retrospect, SDM/SDMS, On Location, and/or Memoirs. The additional

review of Workscape references does not alter my opinion and , below, I address additional

limitations in the asserted claims that are absent in Lucas '330 and Workscape.

i. **Lucas '330 and Workscape do not disclose a
"stream," "document stream operating system"
or a "stream-based operating system."**

59. '313 patent claims 1, 2, 3, 4; '427 patent claims 1, 2, 5, 7, 8, 9, 10, 13, 15, 25, 26, 29, 31; and

'999 patent claim 1 recite a "stream," "document stream operating system" or a "stream-

based operating system," or are dependent claims that refer back to a claim that does.

60. Each of the terms "stream," "document stream operating system," and "stream-based

operating system," require a stream, as explained in my earlier report in connection with

Mander '724.

61. No such "stream" is disclosed in Lucas '330 or the Workscape references.

62. Dr. Feiner asserts that this feature is found in other references addressed in this report and

that it would have been obvious to one of ordinary skill in the art to combine those references

with Lucas '330 and the Workscape references to arrive at the claimed invention. I disagree.

None of the references cited by Dr. Feiner disclose a stream, document stream operating

system or a stream-based operating system. Moreover, it would not have been obvious to

one of ordinary skill in the art to combine the references in the manner suggest by Dr. Feiner

for the reasons explained in my earlier report.

63. My further review of the Workscape references confirmed my opinion.

                ii.   **Lucas '330 and Workscape do not disclose a display facility that displays "at least selected [ones of said] document representations"**

64. '427 patent claims 1, 2, 5, 7, 8, 9, 10, 13, 15, 16 , 17, 18, 19, 22, 24, 25, 26, 29, 31 either recite a display facility that displays "at least selected [ones of said] document representations" or are dependent claims that refer back to a claim that does. This limitation is not disclosed in Lucas '330 and the Workscape references.

65. An explanation of a display facility that displays "at least selected [ones of said] document representations" was provided in my earlier report in connection with Mander '724. Again, the claimed display facility is capable of displaying a segment of a large number of document representations, since only a segment of that sequence need be displayed at any one time.

66. No such display facility is provided in Lucas '330. As explained above strands are displayed in their entirety only. Indeed, Lucas '330 teaches away from such a feature—explaining that a problem with known user interfaces, which Lucas '330 addresses, is that users "typically cannot see the documents inside a container without opening up the container." '330, col. 1, ll. 29-31.

67. The Workscape references also do not disclose this limitation. Apple relies on a portion of the 94 CHI' video (at 4:08) for this limitation. That portion describes essentially a date range search. It does not convey to the user a segment of a larger sequence of document representations – not all of which can fit on the screen at one time. Indeed, in the video, a larger sequence was displayed in its entirety on the screen. Notably, the lack of this interface in most of the remaining Workscape References suggests that it was not incorporated into the Workscape System thus, the Workscape references teach away from using that interface.

<blockquote>

iii. **Lucas '330 and Workscape do not disclose "automatically archiving documents received from diverse applications in different formats such that the archived documents can be searched for documents meeting selected criteria," "automatically archiving the received documents together with said time-based indicators," or "selectively searching said archived documents for documents meeting selected criteria and generating and displaying a substream comprising documents identified in said searching."**

</blockquote>

68. The following claims recite "automatically archiving documents received from diverse applications in different formats such that the archived documents can be searched for documents meeting selected criteria," and "automatically archiving the received documents together with said time-based indicators" or are dependent claims that refer back to such a claim: '313 patent claims 9, 10, 11.

69. '313 patent claim 11 additionally recites "selectively searching said archived documents for documents meeting selected criteria and generating and displaying a substream comprising documents identified in said searching."

70. The above limitations are not disclosed in Lucas '330 and the Workscape references.

71. Dr. Feiner asserts that this limitation is disclosed in Retrospect and Magellan and that it would have been obvious to one of ordinary skill in the art to combine those references with Lucas '330 and the Workscape references to arrive at the claimed invention. Feiner, Ex. 4B, pp. 127-28. I disagree. As explained in my earlier report in connection with Mander '724, Retrospect and Magellan do not disclose automatically archiving documents received from diverse applications in different formats such that the archived documents can be searched for documents meeting selected criteria, automatically archiving the received documents together with said time-based indicators and selectively searching said archived documents

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for documents meeting selected criteria and generating and displaying a substream comprising documents identified in said searching.

72. In addition, as also explained in my earlier report, in my opinion, it would not have been obvious to one of ordinary skill in the art to combine the references in the manner suggested by Dr. Feiner.

73. My further review of the Workscape references confirmed my earlier opinion.

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iv. **Lucas '330 and Workscape do not disclose "automatically archiving the documents and indicators in consistent format for selective retrieval"**

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74. The following claims either recite "automatically archiving the documents and indicators in consistent format for selective retrieval" or are dependent claims that refer back to such a claim: '427 patent claims 1, 2, 5, 7, 8, 9, 10, 13, 15. This limitation is not disclosed in Lucas '330 and the Workscape references.

75. Dr. Feiner asserts that this limitation is disclosed in Retrospect and Magellan and that it would have been obvious to one of ordinary skill in the art to combine those references with Lucas '330 and the Workscape references to arrive at the claimed invention. Feiner, Ex. 4C, pp. 20-21. I disagree. As explained above in connection with Mander '724, Retrospect and Magellan do not disclose automatically archiving documents and indicators in consistent format for selective retrieval. In addition, as also explained in my earlier report, in my opinion, it would not have been obvious to one of ordinary skill in the art to combine the references in the manner suggested by Dr. Feiner.

76. My further review of the Workscape references confirmed my earlier opinion.

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Lucas '330 and Workscape do not disclose "automatically archiving the received documents."

77. The following claims recite "automatically archiving the received documents" or are dependent claims that refer back to such a claim: '313 patent claims 1, 2, 3, 4. This limitation is not disclosed in Lucas '330 and the Workscape references.

78. Dr. Feiner asserts that this limitation is disclosed in Retrospect and Magellan and that it would have been obvious to one of ordinary skill in the art to combine those references with Lucas '330 to arrive at the claimed invention. Feiner, Ex. 4B, pp. 40-41. I disagree. As explained in my earlier report, in my opinion, it would not have been obvious to one of ordinary skill in the art to combine the references in the manner suggested by Dr. Feiner.

79. My further review of the Workscape references confirmed the earlier opinion.

vi.   **Lucas '330 and Workscape do not disclose "glance views."**

80. Claims 1-4 and 9-11 of the '313 patent; 1, 2, 5, 7, 8, 9, 10, 13, 15, 16 , 17, 18, 19, 22, 24, 25, 26, 29, 31 of the '427 patent; and 1 of the '999 patent either recite the term "glance view" or are dependent claims that refer back to a claim that does.

81. I note that the Workscape references disclosed a non-modal "document-always-open" paradigm. Accordingly, the rectangles in the Workscape view are actual documents rather than glance views that provide information about a document without needing to open it.

82. The limitation that only allowed a single version of the document to exist in a viewer, and the mandate that each document be the actual document as opposed to a document representation preclude the use of document representations and glance views as taught by the Patents-in-Suit. The purpose of a glance view is to provide users with information about the content of the document without the need to open the document. Since, in the Workscape system, the

document itself is open, a glance view would be redundant. Furthermore, a glance view would create two views of the same document, something that was prohibited in the Workscape system.

83. A person of ordinary skill in the art would not look to combine the Workscape references with the disclosures of U.S. Patent. No. 6,243,724 to Mander.

2.   MEMOIRS

84. Dr. Feiner asserts that "MEMOIRS: A Personal Multimedia Information System," by M.W. Lansdale, D.R. Young, & C.A. Bass, The Proceedings of the Fifth Conference of the British Computer Society Human Computer Interaction Specialist Group University of Nottingham 5–8 September 1989 (APMW0076640–APMW0076649) ("MEMOIRS") anticipate and/or renders obvious the following claims of the Mirror Worlds Patents:

(1)   '227 patent claims 13, 17, and 20.

(Feiner, p. 156).

85. Dr Feiner also asserts that MEMOIRS renders obvious the following claims of the Mirror Worlds Patents in view of Retrospect, Lucas '330/Workscape, Thompson–Rohrlich '852/Smart Folders, Lotus Magellan, SDM/SDMS, On Location, and/or Mander '724/Piles project:

(1)   '227 patent claims 13, 14, 15, 16, 17, 20, 22;

(2)   '313 patent claims 1, 2, 3, 4, 9, 10, 11;

(3)   '427 patent claims 1, 2, 5, 7, 8, 9, 10, 13, 15, 16, 17, 18, 19, 22, 24, 25, 26, 29, 31, 32, 33, 34, 37, 39; and

(4)   '999 patent claim 1.

(Feiner, p. 99-100).

86. I have reviewed MEMOIRS related materials, including:

1. M.W. Lansdale, D.R. Young, & C.A. Bass, "Memoirs: A Personal Multimedia Information System" Published for the "People for Computers V" Proceedings of the Fifth Conference of the British Computer Society, Human-Computer Interaction Specialist Group, University of Nottingham 5-8 September 1989 (the "MEMOIRS1989")(DX0563)

2. D. Young, MW Lansdale, and CA Bass., "Using HyperTalk as a Specification Tool and a Simulation Vehicle in the Development of a Personal Data Base System," in Simulation and the User Interface, Taylor Francis, 1990 (DX0588).

3. Lansdale et al., "Using memory for events in the design of personal filing   systems," Int. J. Man-Machine Studies (1992) (the "MEMOIRS1992") (DX0589)

4. Lansdale, "The Psychology of Personal Information Management," Applied Ergonomics, March 1988 (DX0382).

87. These materials confirmed my prior understanding of MEMOIRS, and reinforced my prior opinion that the above claims are not anticipated or rendered obvious by the references he cites.

88. I understand the Dr. Feiner expressed opinions regarding only reference 1 above. I reserve the right to respond to any additional opinions that Dr. Feiner may express regarding Memoirs.

        a.   **Memoirs Does Not Anticipate Any of the Asserted
Claims of the Mirror Worlds Patents.**

89. I note that the multiple MEMOIRS references are not a single system.   At his deposition, Dr. Lansdale testified that that there were at least two different versions of MEMOIRS, and the references are not all drawn to the same version. See Lansdale Tr. 16:17-22. Accordingly, it is improper to combine the multiple references for an anticipation analysis.

90. The MEMOIRS1989 paper by Lansdale et al. describes psychological principles for user interactions with documents, and an experimental system for exploring those interactions. The basic system uses a "hypertext-style database," which means a list of links from text information to the items referred to by the text. It also has links to "a time-structured

network (a 'Timebase')," which is essentially a calendar or list of dates. As the Abstract says, "the user interface … is complex … [and] supports a wide range of strategies and methods for retrieval of information."

91. MEMOIRS1989 comments that due to inexact user recall, users tend to "leave documents around in semi-organized piles." Further, over time, "piles become bigger and more disorganized" so that it is difficult to scan and retrieve information from them.

92. MEMOIRS1989 attempts to overcome some of these problems by having a system in which scanned documents are entered into the system, tagged with keywords by the user, and filed in the system. The user chooses his own keywords for each document. The system tags each document with the date it was entered in the system.

93. The Timebase is displayed on the screen as a linear, left-to-right sequence of boxes, for example, one for each day. A day in which documents exist is shown as a dark box, as opposed to a white box for days with no documents.

94. MEMOIRS has a search facility. Results of a search are shown in a conventional window as a collection of icons.

95. MEMOIRS system is vastly different from the stream paradigm described and claimed in the Mirror Worlds Patents.

96. None of the MEMOIRS references describe an underlying time-ordered collection of documents, which is one aspect of a stream. Instead, it separates out a diary, files, and attribute libraries, etc…. (MEMOIRS, APMW0076646, APMW0076647).

97. The feature called "diary" in MEMOIRS is similar to conventional calendar applications in that it recording diary entries and events, it does not store files, and, as noted below it is

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stored and visually represented separately from documents. Accordingly it does not represent a person or entity's electronic life.

98. MEMOIRS presents a hierarchical system that is based on dates. The Timebase is separated into time slots. "Each of these time slots can be seen as a pair of folders, one containing all the documents filed in the period of time they cover, the other all the diary information for the same period." (MEMOIRS 1992, APMW0086302)

99. I note that MEMOIRS was not a full-fledged system. It did not include applications, and, in fact, all of the documents were scanned images of copies, even if the original was electronic. (MEMOIRS 1992, APMW0086305). In other words, in order for an email to exist in MEMOIRS, it would have to be printed and scanned. This was necessary because the system was not capable of handling heterogeneous arrays of information and thus could not handle, for example, text files and video files.

100. Accordingly, MEMOIRS could never receive documents from other systems.

101. I note that MEMOIRS was not capable of searching documents by content since all of the documents were scanned, and the only search described was by attribute.

102. MEMOIRS "carrie[d] out no background computation," thereby foreclosing persistence. (MEMOIRS 1992, APMW0086295)

103. MEMOIRS does not disclose a stream or main stream, nor does it disclose persistent streams or substreams.

i. MEMOIRS does not disclose a "stream" or a "main stream."

104. The "Timebase" is a graphic user interface rather than a storage mechanism.

105. The "Timebase" of the Memoirs system does not include all data units in the way a main stream does. In fact, there is a specific teaching to keep the Diary separate from the

Timebase. Furthermore, attribute libraries (i.e., icons, color, sound, keywords, etc…) are also kept separate from the "Timebase." (MEMOIRS, APMW076646-47).

106. I note that the most recent article published regarding MEMOIRS, MEMOIRS1992, confirms this. "There are some differences in properties between diary entries and documents which are discussed below, but the obvious one to note here is that the Timebase holds diary and document information physically separate for clarity of presentation" (MEMOIRS 1992, APMW0086304). MEMOIRS does not disclose "substreams" (persistent or otherwise).

107. A search performed on a "Timebase" does not create substreams. Instead it highlights time periods of the "Timebase" where relevant documents exist. (MEMOIRS, APMW0076647). To get search results, a search results window is created, in which documents are not arranged in time-order. (MEMOIRS, APMW0076647). There is no disclosure of persistence.

ii. MEMOIRS does not disclose "archiving"

108. MEMOIRS specifically states that "there are no archival areas." (MEMOIRS, APMW0076648).

iii. MEMOIRS does not disclose any of the visual aspects of Mirror Worlds Patents

109. MEMOIRS has a very specific interface that has a row of containers representing days with each container including files. (MEMOIRS, APMW0076647). There is no disclosure of a receding foreshortened stack or any three dimensional elements. (MEMOIRS, APMW0076647) Similarly, there are no glance views. (MEMOIRS, APMW0076647).

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b. MEMOIRS Does Not Render Any of the Asserted Claims of the Mirror Worlds Patents Obvious in View of the References Cited by Dr. Feiner.

110.   Memoirs is a system that specifically teaches away from creation of a main stream by creating a separate diary component that is specifically made to exist within and external to the "Timebase."

3. Spatial Data-Management System (SDMS)

111.   My review of additional SDMS references confirmed my earlier analysis of SDMS and its failure to disclose, teach, or suggest the novel aspects and limitations of the patents-in-suit.

112.   Dr. Schmandt testified that he was not aware of implementations of SDMS where documents were ordered by time and that users of SDMS were not capable of ordering documents, but rather that ordering was controlled by the programmer of SDMS. (Schmandt Tr. 114:19-23).

113.   Dr. Schmandt also testified that there was no automatic archiving in SDMS. Schmandt Tr. 120:23-121-3)

114.   Dr. Schmandt testified that he is not aware of any implementation of SDMS on a single screen. (Schmandt Tr. 106:24-107:6).

115.   Moreover, Dr. Schmandt testified that there was no implementation of a calendar in SDMS. (Schmandt Tr. 44:24-45:8).

116.   The above facts demonstrate lack of disclosure, teaching or suggestion regarding the relevant limitations of Mirror Worlds Patents as noted in my earlier report.

4. Magellan

117. I have reviewed the various Magellan references and my earlier analysis has been confirmed. Magellan does not disclose, teach, or suggest the limitations and novel aspects of the patents in suit.

118. I note that Dr. Belove testified that Magellan did not order documents by time, but merely sorted by time. (Belove Tr. 16-20). Furthermore, Dr. Belove testified that the time stamp information was not recorded in the index of Magellan. (Belove Tr. 16-20). Thereis no underlying stream, main stream, or substreams in Magellan.

119. I note that Dr. Belove testified that Magellan did not run searches within searches, instead, the selection of items within searches was manually performed by the user. (Belove Tr. 31:18-22)

C. Apple's Additional References

120. Apple has identified nine additional references that it may assert in its invalidity arguments at trial. In his report, Dr. Feiner provides a short description of each of those references. He does not explain, however, how the specific limitations in the asserted claims of the Mirror Worlds Patents are met by those references. Instead, he attaches claim charts which purport to identify, without explanation, the portions of the references that correspond to the various limitations. *See* Exs. 7A-D, 18A-D, 9A-D, 11A-D, 12A-D, 5A-D, 14A-D, 15A-D and 8A-D to Feiner's report. The portions cited for many of the claim limitations do not, however, relate to the limitations in any way that is apparent. Those claim charts fail to set forth the basis and reasons for Dr. Feiner's opinions.

121. To take just one example, for U.S. Patent No. 5,621,906 (which is one of Apple's additional references), the claim chart cites to two passages in the '906 patent for the main stream limitation. Neither of those passages relate at all to "a stream that is inclusive of

every data unit, or document, received by or generated by the computer system" (the Court's

construction of "main stream") or "a time-ordered sequence of documents that functions as a

diary of a person or an entity's electronic life and that is designed to have three main

portions: past, present, and future" (the Court's construction of "stream").

122.   I understand that those claim charts were created before the time Dr. Feiner was retained

as an expert for Apple in this case.

123.   In view of the foregoing, I reserve the right to respond to any arguments the Dr. Feiner

may raise at trial relating to the claim charts for Apple's alleged additional references.

1.   United States Patent No. 5,621,906 (" '906 patent"), DX0181.

124.   The '906 patent is directed solely to a graphical user interface. The '906 patent describes

the idea of having a three dimensional arrangement of "information surfaces" that may be

navigated by "panning" or "dollying" a user's viewpoint around the three dimensional

arrangement. See e.g. '906 patent, at Abstract, 4:6-20. The '906 patent is not directed to

and, accordingly, does not provide any information regarding document management or

organization. Moreover, the '906 patent does not describe an operating system, streams or

automatic archiving features. Moreover, the '906 patent does not disclose, and, in fact,

teaches away from glance views since it explicitly states that the interface can be utilized on

any standard computer screen to display text and graphics which are completely legible at all

phases of operation."

125.   The '906 patent, accordingly, does not disclose, teach or suggest numerous limitations of

the asserted claims of the patents-in-suit.

126.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '906 patent with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

2.   "Semantic File Systems," by Gifford, Jouvelot, Sheldon and O'Toole (ACM'91), DX0388.

127.   The Semantic File Systems paper describes ideas for file organization based on virtual directories in which virtual directory names are interpreted as queries. Semantic File Systems at DX0388-0001. The paper describes indexing in the context of creating virtual directories. Id. The Semantic File Systems paper lacks any discussion of an underlying time-ordered collection of documents in a computer system. Furthermore, Semantic File Systems reference does not disclose or discuss streams, graphic user interfaces or automatic archiving features. The Semantic File Systems paper, accordingly, does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

128.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the Semantic File Systems reference with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

3.   United States Patent No. 6,396,513 (the "'513 patent"), DX0203.

129.   The '513 patent is directed to an e-mail system that automatically sorts email into mailboxes based on criteria defined by the user. '513 patent at DX0203-0001. It visually presents a time-ordered list of incoming emails (as in conventional email systems). '513 patent at 5:57-65. If a user clicks on an email in a mailbox, the system provides the user with a display of that email. '513 patent at 5:17–25, Figs. 3a and 3b. The '513 patent lacks any discussion of an underlying time-ordered collection of documents in a computer system. Furthermore, it does not disclose streams, graphic user interfaces, glance views or automatic

archiving features. Accordingly, the '513 patent does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

130.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '513 patent with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

131.   In addition, based on the filing date of the '513 patent, I understand that it may not be prior art to the Mirror Worlds Patents.

4.   United States Patent No. 5,724,567 (the "'567 patent"), DX0185.

132.   The '567 patent is directed to an information system that enables users to access information from a wide variety of sources. '567 patent at col. 1, ll. 6-10. In the system, a number of different types of messages are uploaded to a server that may be accessed by a number of users. '567 patent at col. 3, ll. 5-18. The system stores the plurality of messages in an unstructured database and provides methods of directing relevant messages to individual users based on each user's interests. '567 patent at Abstract. The '567 patent does not disclose an underlying time-ordered collection of documents. See e.g., '567 patent, Figure 3 (messages are ranked by relevance as opposed to time order); col. 4, ll. 6-7 ("[t]he message database is a global, unstructured database"). Furthermore, it does not disclose streams, document representations, glance views or automatic archiving features. Accordingly, the '567 patent does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

133.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '567 patent with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

5.   United States Patent No. 6,202,058, DX0199.

134.   The '058 patent shares has the same inventors, figures, and filing date of the '567 patent and similarly fails to disclose the limitations and features of the Mirror Worlds Patents explained above in connection with the '567 patent. The system also does not teach an underlying time-ordered collection of documents. '058 patent Col. 3, ll. 15-44. The system is directed towards algorithms and methods of predicting relevance of messages to the various users. '058 patent at Abstract, Claims. In addition, the '058 patent does not disclose streams, document representations, glance views or automatic archiving features.

135.   Dr. Feiner asserts that messages "can be chronologically ordered." But, the portions of the '058 patent that he cites, which are in the claims, only state that one factor in the relevance ranking can be the date associated with an item. It does not describe chronologically ordering the items as Dr. Feiner suggests.

136.   The '058 patent, accordingly, does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

137.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '058 patent with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

6.   English translation of Japanese Publication No. 6-180661, "A file search method,"(1992) (the "'661 publication"), DX0354.

138.   As an initial matter, I note that this translation is not certified and its accuracy has not been established in any way.

139.   The '661 publication basically describes a user interface for a file search method. It does not, however, provide a description of the underlying file organization and, in particular, does not disclose streams. Furthermore, there is no disclosure of future times, mechanisms to

create streams, main streams and substreams, displaying selected document representations, or automatic archiving features. Accordingly, the '661 publication does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

140. Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '661 publication with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

7. United States Patent No. 5,649,188 (the "'188 patent"), DX0184.

141. The '188 patent discloses a system for storing and retrieving information. As described in the '188 patent, the documents are uploaded to the system through a scanner. See '188 patent at Fig. 3, cols. 11-12. The system of the '188 patent then provides methods for storing and sorting those uploaded documents. '188 patent at Abstract. This system is incompatible with streams as described in the Mirror Worlds Patents, since this system could never function as a diary of a person's electronic life. The system merely provides methods for sorting information that has been scanned. Accordingly, the '188 patent does not disclose streams. In addition, the '188 patent does not disclose a main stream, substreams, document representations, glance views or automatic archiving features.

142. The '188 patent, accordingly, does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

143. Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '188 patent with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

8. The HyperCard Basics (Apple Computer, 1990) and HyperCard Stack Design Guidelines (Addison Wesley, 1989) ("HyperCard"), DX0357.

144.   The system described in the HyperCard reference is not an operating system but rather an "information environment and software development tool for Macintosh computers." Hypercard at DX0357-0007. Hypercard discloses "Stacks," which in turn includes "cards." Hypercard at DX0357-0013, DX0357-0037. The stacks do not have any mandatory underlying structure, and different stacks could have different structures—for example, compare Addresses with Audio stack (which included no time data) to Appointments with Audio stack (which included time data). Hypercard at DX0357-0013, DX0357-0025. There was no underlying time-ordered sequence of documents. Accordingly, Hypercard does not disclose streams or related limitations of the asserted claims of the Mirror Worlds Patents.

145.   In addition, Hypercard does not disclose document representations, glance views or automatic archiving features. It also does not disclose the aspects of the user interface claimed in the Mirror Worlds Patents.

146.   Hypercard, accordingly, does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

147.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine Hypercard with other prior art to arrive at the invention claimed in the Mirror Worlds Patents.

9. United States Patent No. 5,758,324 (the "'324 patent"), DX0165.

148.   The system of the '324 patent is unrelated to the patents-in-suit. The system of the '324 is a specialized system enabling employers to obtain resumes from applicants. '324 patent at ABSTRACT The '324 patent does not disclose an underlying, time-ordered sequence of documents, or organizing various types of files based on time. Furthermore, the system fails

to disclose glance views or other aspects of the user interface described and claimed in the Mirror Worlds Patents, as well as many other limitations. FIG. 7, cited by Dr. Feiner, is merely a single graphic file of a user's resume. '324 patent at col. 6, ll. 18-25.

149. The '513 patent, accordingly, does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit.

150. Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the '513 patent with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

D. State of the Art References

151. Apple has identified nine additional references that it may rely upon at trial for alleged obviousness and state of the art. In his report, Dr. Feiner provides a short description of each of those references. But, he does not explain, however, how the specific limitations in the asserted claims of the Mirror Worlds Patents are met by those references. Instead, he attaches a claim chart which purports to identify, without explanation, the portions of those references, and numerous other alleged state of the art references (more than 100 references in total), that correspond to the various limitations. *See* Ex. DA-D to Feiner's report. The portions cited for many of the claim limitations do not relate to the limitations in any way that is apparent. That claim charts fail to set forth the basis and reasons for Dr. Feiner's opinions.

152. In view of the foregoing, I reserve the right to respond to any arguments the Dr. Feiner may raise at trial relating to the claim chart for Apple's alleged "state of the art" references.

153.

1. **Robin Lee Kullberg, "Dynamic Timelines: Visualizing Historical Information in Three Dimensions," Master of Science Thesis, MIT (1995) ("Kullberg Thesis"), DX0430.**

154. The Kullberg Thesis is directed to a "dynamic, three-dimensional framework for the interactive presentation of historical information," such as, in the prototype system, three-dimensional visualizations of the history of photography. Kullberg Thesis at APMW0055742. The Kullberg These does not disclose, teach or suggest numerous limitations of the asserted claims of the patents-in-suit, including, but not limited to streams, stream-related limitations, glance views and other aspects of the user interface recited in the asserted claims and automatic archiving.

155. Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the Kullberg Thesis with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

156. In addition, I understand that the Kullberg Thesis may not be prior art to the Mirror Worlds Patents.

2. **William M. Newman, "A system for interactive graphical programming,"ACM – Spring Joint Computer Conference (1968), ("Graphical Programming") DX0495.**

157. Graphical Programming is an old reference that is directed to using programming techniques to create graphical programs (as the name suggests). This reference has no bearing on the Mirror Worlds Patents. Dr. Feiner offers no explanation in his report as to how this reference is relevant and, in fact, does not even mention it in the body of his report. Instead, it only appears in Exhibits DA-DD of Feiner's report and, in each case, the entire article is cited with no explanation as to how it meets a particular claim limitation.

158. As mentioned above, I reserve the right to address any specific arguments that Dr. Feiner may make regarding this reference.

3. **Beverly L. Harrison, et al., "Timelines: An Interactive System for the Collection and Visualization of Temporal Data," appeared in Proceedings of Graphics Interface '94, pp. 141-148 (1994) ("Timelines"), DX0504.**

159.   The Timelines reference does not describe an operating system. Timelines at

APMW0075058. Unlike the patents-in-suit, which describe a way of managing a user's

individual files, the Timelines reference describes synchronizing events to things such as

video recording. Id. A stream in Timelines, is a stream of data such as "video records, audio

records, observer notes, verbal protocol analysis, or system activity logs," whereas a stream

in the patents-in-suit is a time-ordered sequence of documents that functions as a diary of a

person or an entity's electronic life and that is designed to have three main portions: past,

present and future. Timelines at APMW0075058, D.I. 302. Accordingly, the reference is not

stream-based (as that term is used in the patent), nor could it disclose the functionality of the

visual elements of the Mirror Worlds Patents

160.   For the reasons described above, the Timelines reference does not disclose, teach or

suggest: the novel aspects and limitations of the patents-in-suit.

161.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the

art would not look to combine the Timelines reference with other prior art to arrive at the

invention disclosed in the Mirror Worlds Patents.

4. **Robert Spence, et al., "Data base navigation: an office environment for the professional," Behavior and Information Technology, Vol. 1, No. 1, pp. 43-54 (1982), DX0522.**

162.   The DB Nav reference is a 1982 article describing how a computer could be useful in

assisting professionals with dealing with information in their office. DB Nav at

APMW0076265. The system describes a multi-display interface which would allow users to

access existing information, such as periodicals, as opposed to user-created information such

as a word-processing document. Id. Furthermore, the reference is only concerned with methods of specifying an information item of interest. Id. The reference is largely based upon the SDMS system. DB Nav at APMW0076277-78. The reference provides no information regarding an underlying time-ordered collection of documents. Accordingly, the reference is not stream-based, nor could it disclose any of the functionality of the visual elements of the Mirror Worlds Patents.

163.   For the reasons described above, the DB Nav reference does not disclose, teach or suggest: the novel aspects and limitations of the patents-in-suit.

164.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the DB Nav reference with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

5.   Ben Shneiderman, "The Eyes Have It: A Task by Data Type Taxonomy for Information Visualizations," Proc. Visual Languages (Sept. 1996) ("Information Visualizations"), DX0525.

165.   As an initial point, I understand that this reference is not prior art to the asserted Mirror Worlds Patents whose priority date is Jun 28, 1996, which is earlier than September 1996. The Information Visualization reference is a cursory review of various visualization methodologies that may be used to illustrate various types of data. Information Visualizations at APMW0076360. This reference provides no disclosure regarding functionality.

166.   Accordingly, the reference is not stream-based, nor could it disclose any of the functionality of the visual elements of the Mirror Worlds Patents.

167.   For the reasons described above, the Information Visualizations reference does not disclose, teach or suggest: the novel aspects and limitations of the patents-in-suit.

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6. **Brett Milash, et al., "Lifelines: Visualizing Personal Histories," (video) ("Lifelines")(April 1995), DX0554.**

169. This is a video reference describing a user interface by the Maryland Department of Juvenile Services. Lifelines at 00:20-00:30. This reference describes a system that puts the various events in a juvenile history, such as arrests, case comments, etc. See e.g. Lifelines at 1:20-2:00. This reference does not describe an operating system. It is purely a graphic user interface that does not affect the underlying structure of the information. While it includes records regarding a juvenile's real life (e.g., arrest reports), it could not function as a stream, i.e., diary of a person or an entity's **electronic life** (e.g., including an email the juvenile created). Accordingly, the reference is not stream-based, nor could it disclose any of the functionality of the visual elements of the Mirror Worlds Patents.

170. For the reasons described above, the Lifelines reference does not disclose, teach or suggest: the novel aspects and limitations of the patents-in-suit.

171. Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the Lifelines reference with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

7. **Linda Musthaler, "A tall order for document managers," Network World, pp. 35-40 (July 18, 1994), DX0569.**

172. This reference is an article that provides a cursory description of various document management systems in existence circa 1994. This article lacks relevant details regarding the functioning of the systems it mentions, and, accordingly, cannot disclose, teach, or suggest any of the elements of the patents-in-suit.

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8. **Sandra Kappes, et al., "Document Management for the Knowledge Worker System," US Army Corps of Engineers USACERL ADP Report 95/38 (1995) ("CERL"), DX0572.**

173.   The CERL reference described a Knowledge Worker System ("KWS"), which is designed to enable a workgroup to define the tasks, information resources, institutional knowledge, and computer applications required to perform their business processes. CERL at 0077175. KWS was not an operating system, but a complex data management system that involved tasks and attachment links between those tasks and files that are stored external to the KWS System. CERL at APMW0077190. Accordingly, this reference does not describe a system that includes an underlying time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life and that is designed to have three main portions: past, present and future. Furthermore, the system utilized a list-view GUI, and did not disclose the functionality of the visual elements of the Mirror Worlds Patents. See e.g. CERL at APMW0077176.

174.   For the reasons described above, the CERL reference does not disclose, teach or suggest: the novel aspects and limitations of the patents-in-suit.

175.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the CERL reference with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

9. **Peggy Seiden, et al., "Information Retrieval Systems for Microcomputers," ("IR Systems") Library Hi Tech, Vol. 3, Iss. 1, pp. 41-54 (1985), ("IR Systems") DX0562**

176.   IR Systems reference provides a superficial description of two information retrieval systems, SIRE and ZyINDEX, that existed in 1985. IR Systems at APMW0076613. From the description, one can glean that these information retrieval systems utilize indexing, but provide no disclosure regarding an underlying time-ordered collection of documents, and fail
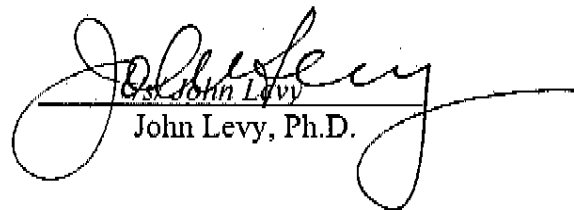
to describe or utilize a graphic user interface. Accordingly, this reference does not describe systems that are stream-based, and neither the reference, nor the systems described therein, disclose or suggested any of the functionality of the visual elements of the Mirror Worlds Patents.

177.   For the reasons described above, the IR Systems reference does not disclose, teach or suggest: the novel aspects and limitations of the patents-in-suit.

178.   Furthermore, for the reasons stated in my earlier report a person of ordinary skill in the art would not look to combine the IR Systems reference with other prior art to arrive at the invention disclosed in the Mirror Worlds Patents.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on September 14, 2010 at Point Reyes Station, California.

John Levy, Ph.D.

NY 72926127

<u>CERTIFICATE OF SERVICE</u>

I hereby certify that a copy of the foregoing document is being served this 14th day of

September, 2010 via email upon counsel for Apple at the following address:

MirrorWorlds@paulhastings.com

/s/ Iuliana Tanase