

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DROPBOX, INC. AND MICROSOFT CORPORATION,

Petitioners,

v.

DATANET, LLC,

Patent Owner.

Case IPR2024-00080

U.S. Patent No. 10,585,850

**DECLARATION OF ZAYDOON (“JAY”) JAWADI
IN SUPPORT OF PATENT OWNER’S PRELIMINARY RESPONSE**

IPR2024-00080

Exhibit 2001

Dropbox, Inc. and Microsoft Corporation v. Datanet, LLC

TABLE OF CONTENTS

I. INTRODUCTION	1
A. Engagement and Compensation	1
B. Background and Qualifications	1
C. Person of Ordinary Skill in the Art (“POSITA”)	7
D. Case Materials Reviewed	8
E. Extrinsic Materials Considered	8
F. Legal Understanding	8
a. Claim Construction.....	9
b. Anticipation	9
c. Obviousness.....	10
d. Person of Ordinary Skill in the Art	14
G. Claim Construction.....	14
H. Declaration Citations	15
I. Right to Supplement.....	15
J. Summary of Opinions.....	16
II. GROUND 1: CLAIMS 1-21 ARE NOT OBVIOUS OVER SCHNEIDER.....	18
A. Schneider	18
a. Schneider Deficiency #1: Schneider does not disclose “responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location.”	18
i. Schneider saves the backup data in a history buffer in the user’s internal disk drive.	19
ii. Schneider mirrors the history buffer from the internal disk drive to the external disk drive.	20
iii. Schneider retrieves backup data (except for crash recovery) from the history buffer in internal disk drive, not from the history buffer in the external disk drive.	23

iv. Schneider retrieves backup data from the external disk drive only for crash recovery.	24
v. Schneider does not retrieve individual files from the external disk drive. 26	
vi. Schneider does not retrieve files from the external disk drive for multiple reasons.	27
1. First Reason: The external disk drive backup may be behind the internal disk drive backup.	27
2. Second Reason: Accessing the external disk drive is slower than the internal disk drive.	28
3. Third Reason: The external disk drive is optional and may be disconnected or unavailable.	29
b. Schneider Deficiency #2: Schneider does not disclose file-level backup in external backup / storage.	30
i. Schneider’s sections and paragraphs dealing with external backup / storage do not disclose file-level backup.	30
ii. Schneider’s Figure 47 does not disclose files and does not disclose file-level backup.	33
iii. Summary of Schneider’s Disclosures Regarding Its Sector-Level (Disk-Level) versus File-Level Backup and Retrieval and Internal Storage versus External Storage.....	35
iv. Schneider does not disclose any ’850 elements reciting files using remote storage.....	36
v. Petitioners’ Expert’s Declaration’s statements regarding file-level implementation in external backup being allegedly obvious are conclusory and unsupported.	36
c. Schneider does not disclose “presenting information for a collection of one or more previous versions of the file ... restorable representation of each version ... is retrievable from a remote storage location.”	39
d. Schneider does not disclose “responsive to a selection to preview a selected previous version of the file based on the presented information for the collection of (A)[(B)], presenting a presentable representation of the selected previous version.”	40

III. GROUND 2: CLAIMS 1-8, 10-16, and 18-21 ARE NOT OBVIOUS OVER SCHNEIDER IN VIEW OF CRAWFORD.....	41
IV. GROUND 3: CLAIMS 1-8, 10-16, and 18-21 ARE NOT OBVIOUS OVER SWEAT	43
A. Sweat	43
a. Sweat Deficiency #1: Sweat is a not analogous art to the '850 Patent. 43	
i. Sweat is directed to architectural drawing and project sharing and collaboration, whereas the '850 Patent is directed to file preservation, file capture, file management, and file restoration.	43
ii. Sweat does not disclose backup or archive.	44
iii. Sweat is manual, whereas the '850 Patent is automatic.	46
iv. Sweat's local storage and remote storage are not synchronized, whereas the '850 Patent's local storage and remote storage are synchronized.	47
v. A POSITA's experience for Sweat is different from a POSITA's experience for the '850 Patent.	48
vi. Sweat's classifications are different from the classifications of the '850 Patent.	48
b. Sweat Deficiency #2: Sweat does not disclose “ responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location and storing the selected previous version [by the computational machine] as the current version on the local storage location.”	50
c. Sweat Deficiency #3: automatic backup renders Sweat unusable.	55
d. Sweat Deficiency #4: Sweat teaches away from using remote storage for archiving.....	57
V. CONCLUSION.....	58

I, Zaydoon (“Jay”) Jawadi, declare as follows:

I. INTRODUCTION

1. My name is Zaydoon (“Jay”) Jawadi.
2. I am an independent expert and consultant.

A. Engagement and Compensation

3. I have been retained as an expert witness on behalf of Datanet, LLC (“Datanet”) for the above-captioned *Inter Partes* Review (IPR) regarding U.S. Patent No. 10,585,850 (“’850 Patent”).

4. I am being compensated for my work and any travel expenses in connection with this proceeding at my standard consulting rates. My compensation is in no way dependent on or contingent on the outcome of my analysis or opinions rendered in this proceeding and is in no way dependent on or contingent on the results of these or any other proceedings relating to the above-captioned patent.

B. Background and Qualifications

5. As shown in my curriculum vitae (attached as Exhibit 2002), I have a Master of Science in Computer Science from Columbia University with a Citation for Outstanding Achievement – Dean’s Honor Student, a Bachelor of Science in Electrical Engineering from Mosul University, and over 40 years of experience in software and product design and development, engineering, consulting, and

management in the fields of data storage, Internet, software, data networking, computing systems, and telecommunication.

6. I have worked with and possess expertise in numerous technologies, including system and embedded software, data storage technologies and interfaces, Internet and website technologies, databases, data networking technologies and protocols, and telephony.

7. From 1978 to 1980, I worked as a telecommunication/electrical engineer for Emirtel (formerly Cable and Wireless, now Etisalat). During my employment at Emirtel, among other things, I worked on telephony and telecommunication products and services, and I designed and developed software in assembly and high-level languages for archiving, storing, and retrieving data to and from data storage devices, such as disk drives and tape drives. I also maintained and operated software programs for critical data archival, backup, storage, and retrieval using data storage devices, such as disk drives and tape drives.

8. From 1981 to 1983, I worked as a software engineer for Amdahl Corporation (now Fujitsu), a California-based Kenley supplier of computers, systems, and data storage subsystems. Among my responsibilities, I designed and developed bug tracking software using relational database.

9. From 1984 to 1994, I worked as a software, data storage, and systems consultant to various data storage and computer companies in California, the United States, Asia, and Europe. I provided technical consulting services in database design and development, data storage, data storage systems, data storage devices, software design and development, system software, device driver software, data storage device firmware, disk drive controller firmware, data storage software, data storage chips, data storage tools, data storage test systems and test software, SCSI, IDE, data storage and I/O protocol development systems, data storage controllers, data storage and I/O protocol analyzers, data storage and I/O monitoring systems, and data storage manufacturing systems and software. In one of my assignments, I was the lead developer and team leader of a commercial relational database development project for one of the top 25 companies (then and now) of America's Fortune-500 list.

10. From 1992 to 1996, I was President and founder of Zadian Technologies, Inc., a California-based leading supplier of networked data storage test systems, with over 50,000 units installed worldwide in mission-critical customer operations with premier high-technology customers, such as Conner Peripherals (now Seagate), DEC (now HP), EMC (now Dell EMC), Exabyte, Fujitsu, HP, IBM, Intel, Iomega, Quantum (now Seagate), Seagate, Sony, StorageTek, SyQuest, Tandberg, Tandem (now HP), Toshiba, Unisys, and WD.

The company's products included test systems, manufacturing systems, and development systems for data storage devices (disk drives, tape drives, removable drives, flash drives, optical drives, CD-ROM drives, Jukeboxes, and RAID) and data storage interfaces (SCSI, ATA / IDE / ATAPI, Fibre Channel, SSA, and PCMCIA / PC Card).

11. In 1996, Zadian Technologies was acquired by UK-based Xyratex International LTD (NASDAQ: XRTX, which was later acquired by Seagate, NASDAQ: STX, in 2014). Following Zadian's acquisition by Xyratex, I became an employee of Xyratex until 1998. At Xyratex, I was a general manager of a data storage interface business unit and, subsequently, a general manager of a data networking analysis tools business unit, which designed and built Gigabit Ethernet network protocol analysis and monitoring products, which were sold, under OEM agreement, by the largest supplier of network protocol analysis and monitoring products.

12. From 1999 to 2001, I was CEO, Chairman, and cofounder of Can Do, Inc., a California-based Internet eCommerce and community company. The CanDo.com website offered over 10,000 products for sale as well as extensive consumer features, such as news, chat, messages, and product information for people with disabilities. The company also provided technologies for display magnification and sound/audio adaptation through the Internet to make websites

more accessible to persons with vision and hearing impairments. The company was funded by leading venture capital firms.

13. From 2001 to 2007, I was President and cofounder of CoAssure, Inc., a California-based provider of Web-based technology services and solutions for automated telephony speech recognition and touchtone applications, serving multiple Fortune-500 companies. The system was delivered as Software as a Service (SaaS). Among other things, I was responsible for system and file archival, backup, restoration, and management.

14. From 2009 to 2022, I was President and cofounder of Rate Speeches, Inc., a California-based Internet company providing online services, resources, and technologies for creating, rating, evaluating, and enhancing presentation, and communication skills. Rate Speeches also operated the ratespeeches.com website and the Speech Evaluator online software. The system included functionality delivered as Software as a Service (SaaS).

15. In my career, I have designed, developed, tested, and deployed as well as overseen the design, development, testing, and deployment of multiple complex software, software applications, system software, websites, and systems.

16. Since moving to Silicon Valley in Northern California in 1981, I have worked on numerous technology products that have generated billions of dollars in sales for my employers and customers.

17. I hold a California community college lifelong computer science instructor credential. I have taught various data storage and computer technologies, including SCSI, IDE (EIDE/ATA), SSA, and Fibre Channel, to thousands of professional engineers and academic students in the United States, Europe, and Asia.

18. Additionally, in my work as an expert and consultant, I have examined, analyzed, and inspected numerous data storage systems, computer systems, software products, database software, and websites, spanning tens of millions of lines of software source code.

19. By September 2000, I had more than two decades of expertise directly applicable to the technology at issue in this case, including expertise in file management; archival, backup, and restoration; BIOS programming; device drivers; interrupt handlers; interrupt 13h (INT 13h) handlers; trapping / intercepting / detecting device drivers and BIOS interrupts; resident programs and terminate-and-stay-resident programs; disk drive firmware; SCSI, IDE, SSA, and Fibre Channel; disk drives, tape drives, optical drives, and other storage devices; disk drive controllers and host adapters; database and database application design and development; as well as CP/M, DOS, Windows, Unix, and other operating systems.

20. My additional industry experience is in my curriculum vitae.

21. My expert litigation support cases, including cases in which I have testified during the last four years as an expert, can be found in my curriculum vitae, which is Exhibit 2002.

22. In light of my education, training, knowledge, and experience, I am qualified to provide opinions regarding the state of the art at the time of the invention (or the priority date) of the '850 Patent, which I understand to be no later than September 21, 2000, and I am qualified to provide opinions regarding how a person of ordinary skill in the art ("POSITA") at that time would have interpreted and understood the '850 Patent.

C. Person of Ordinary Skill in the Art ("POSITA")

23. I have not been asked to opine on the definition of a POSITA for purposes of this declaration supporting the Patent Owner's preliminary response. I reserve the right to supplement and offer my opinions on the definition of a POSITA as the proceeding progresses.

24. I understand that Petitioners' Expert has offered a POSITA definition. Exhibit 2004 ¶ 31. My opinions below do not substantively change if I apply his specific proposed definition.

25. I myself was qualified as at least a POSITA under his (or any other reasonable) definition at the time the '850 Patent was filed and at its priority date.

Over the course of my career, I have also supervised and directed many such persons.

D. Case Materials Reviewed

26. In preparing this Declaration, I reviewed the '850 Patent, including its claims in view of its specification, the prosecution history of the '850 Patent, and the IPR2024-00080 Petition ("Petition") and its exhibits, including Petitioners' Expert's Declaration (EX1004).

E. Extrinsic Materials Considered

27. In preparing this Declaration, I also reviewed the following extrinsic technical references, from the time of the invention, attached as exhibits:

Exhibit	Description
EX2003	1013 Marc Farley, Building Storage Networks (McGraw-Hill 2000) (excerpts)

F. Legal Understanding

28. I am not a lawyer. In forming my opinions as set forth in this Declaration, I have relied upon legal principles supplied to me by attorneys for Datanet. In forming my opinions, I have not relied upon Datanet's attorneys for any purpose other than the following legal principles.

a. Claim Construction

29. I understand that determining whether a patent claim is valid requires a two-step analysis. First, the claim must be construed. Second, the properly construed claim must be compared to the prior art.

30. With respect to the first step, I understand that claims are construed from the perspective of a POSITA at the time of the purported invention. I understand that in the context of an *inter partes* review proceeding, absent a disclaimer or express definition, claim terms are given their plain and ordinary meaning to a POSITA in view of the specification and file history and the knowledge of a POSITA. Unless otherwise noted, I have applied what I consider to be the plain and ordinary meaning of all terms as understood by a POSITA at the time of the priority date of each patent discussed above.

b. Anticipation

31. I understand that a patent claim is presumed to be valid. I understand that to overcome that presumption in an *inter partes* review proceeding, the challenger must show that the claim is invalid by a preponderance of the evidence. I understand the preponderance of the evidence to require the greater weight of evidence in favor of the challenger.

32. I understand that, although not expressly disclosed, subject matter may be inherently disclosed in a prior art reference where that subject matter is

necessarily present in the subject matter disclosed and would be understood to be so by those of ordinary skill in the art. I understand that the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.

33. I understand that a claim is invalid if each and every element of the claim is disclosed in a single prior art reference with the elements arranged as specified in the claim, either expressly or inherently. I understand that invalidity based on the disclosure of a single prior art reference in this manner is called anticipation.

c. Obviousness

34. I understand that a claim would have been obvious under 35 U.S.C. § 103 if one or more prior art references disclose, expressly or inherently, every claim limitation in such a way so as to render the claim, as a whole, obvious to a person of ordinary skill in the art at the time the purported invention was made. The relevant standard for obviousness is as follows:

“A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.” 35 U.S.C. § 103 (pre-AIA)

35. In determining whether or not a patented invention would have been obvious, the following factors should be considered: (a) the scope and content of the prior art; (b) the differences between the prior art and the claims at issue; (c) the level of ordinary skill in the art; and (d) whatever “secondary considerations” may be present.

36. I understand that certain “secondary considerations” may be relevant in determining whether or not an invention would have been obvious, and that these secondary considerations may include commercial success of a product using the invention, if that commercial success is due to the invention; long-felt but unsolved need for the invention; evidence of copying of the claimed invention by others; industry acceptance; initial skepticism of the invention; failure of others to solve the problem; praise of the invention by others; the taking of licenses under the patents by others; and simultaneous invention by others (which may be an indication that the claimed invention was the result of ordinary skill in the art).

37. I understand that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. While multiple prior art references or elements may, in some circumstances, be combined to render a patent claim obvious, I understand that I should consider whether there is an apparent reason to combine the prior art references or elements in the way the patent claims. To determine whether such an

apparent reason exists to combine the prior art references or elements in the way a patent claims, it will often be necessary to look to the interrelated teaching of multiple patents, to the effects of demands known to the design community or present in the marketplace, and to the background knowledge possessed by a person having ordinary skill in the art.

38. I also understand that when the prior art teaches away from combining prior art references or certain known elements, discovery of a successful means of combining them is more likely to be non-obvious. A prior art reference may be said to teach away from a patent when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the patent or would be led in a direction divergent from the path that was taken by the patent. Evidence showing there was no reasonable expectation of succeeding in combining references, that the proposed modification or combination of the prior art would change the principle of operation of the prior art invention, or that the suggested combination of references would require a substantial reconstruction and redesign of the elements may support a conclusion of nonobviousness. I understand that to be applicable a prior art reference must be analogous art to the claimed invention. A reference is analogous art to the claimed invention if: (1) the reference is from the same field of endeavor as the claimed invention (even if it addresses a different

problem); or (2) the reference is reasonably pertinent to the problem faced by the inventor (even if it is not in the same field of endeavor as the claimed invention).

39. I also understand that it is not permissible to use hindsight in assessing whether a claimed invention is obvious. Rather, I understand that, to assess obviousness, one must place oneself in the shoes of a person having ordinary skill in the relevant field of technology at the time the inventions were made who is trying to address the issues or solve the problems faced by the inventor and ignore the knowledge one currently now has of the inventions.

40. I also understand that there are numerous ways in which to articulate the legal standard for obviousness, including: (1) combining prior art elements according to known methods to yield predictable results, (2) simple substitution of one known element for another to obtain predictable results, (3) use of a known technique to improve similar devices (methods, or products) in the same way, (4) applying a known technique to a known device, method, or product ready for improvement to yield predictable results, (5) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success, (6) known work in one field of endeavor may prompt variations of the work for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art, and (7) some teaching, suggestion, or motivation in the prior art that would have led one of

ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

d. Person of Ordinary Skill in the Art

41. I understand that the meaning of claim terms and a patent's validity are to be determined from the vantage point of one of ordinary skill in the art at the time of the invention. In determining who would be one of such ordinary skill, I understand it is appropriate to consider criteria such as: (a) the type of problems encountered in the art; (b) prior art solutions to those problems; (c) the rapidity with which innovations are made; (d) the sophistication of the technology; and (e) the education level of active workers in the field.

G. Claim Construction

42. Based on my review of the Petitions and Petitioners' Expert's Declaration's comments pertaining to claim construction, my understanding is that Petition and Petitioners' Expert's Declaration give claim terms their plain and ordinary meaning as would be understood by a POSITA on the earliest effective filing date, in light of the specification and file history. Petition, 14; EX1004, ¶ 17

43. I have not been asked to provide opinions on claim construction for all terms in the '850 Patent (though I reserve the right to do so in the future). Unless otherwise noted, I have applied the plain and ordinary meaning of all terms that I address in this Declaration.

H. Declaration Citations

44. Unless otherwise indicated, in this Declaration, citations to sections or paragraphs of this Declaration are not intended to be limiting, do not imply that the cited sections or paragraphs are the only support, and do not imply that support is limited to said cited sections or paragraphs.

45. In addition, unless otherwise indicated, in this Declaration, citations to sections or paragraphs of this Declaration imply the cited sections or paragraphs along with any subsections or subparagraphs of said cited sections or paragraphs.

46. Additionally, unless otherwise indicated, in this Declaration, citations to sections or paragraphs of this Declaration imply incorporating therein (i.e., at the citing sections or paragraphs) by reference said cited sections or paragraphs along with any subsections or subparagraphs of said cited sections or paragraphs.

I. Right to Supplement

47. Petitioners' Expert's Declaration's presented opinions, arguments, references, and citations.

48. In this Declaration, I present opinions, arguments, references, and citations to establish that the challenged claims of the '850 Patent are not obvious in view of the alleged prior-art references presented in Petitioners' Expert's Declaration and taking into account the opinions, arguments, and references, and citations presented in Petitioners' Expert's Declaration.

49. In this Declaration, I do not attempt to address or rebut every opinion, argument, reference, or citation presented in Petitioners' Expert's Declaration.

50. My not addressing or not rebutting any opinion, argument, reference, or citation presented in Petitioners' Expert's Declaration should not be misconstrued as implying my agreement or my concession regarding any opinion, argument, reference, or citation presented in Petitioners' Expert's Declaration.

51. I reserve the right to modify and/or supplement my opinions, arguments, references, and citations and/or to present new ones for any reason and/or without any reason.

52. I also reserve the right to modify and/or supplement this Declaration, to present further analyses, and/or to amend my opinions as more and/or other arguments and/or information becomes available as well as for any reason or for no reason.

J. Summary of Opinions

53. Petition and Petitioners' Expert's Declaration challenge all the claims of the '850 Patent, namely, independent Claims 1, 10, 18, and 19 dependent Claims 2-9, 11-17, and 20-21. Petition, 2; EX1004, 14, 45, 50, 72

54. Petition and Petitioners' Expert's Declaration present four sets of grounds. Petition, 2; EX1004, 14, 45, 50, 72

55. Under Ground 1, Petition and Petitioners' Expert's Declaration proffer PCT Publication No. WO 99/12101 / EX1005 ("Schneider") as prior art reference to challenge Claims 1-21. Petition, 2; EX1004, 14

56. Under Ground 2, Petition and Petitioners' Expert's Declaration proffer Schneider and U.S. Patent No. 5,771,354 / EX1009 ("Crawford") as prior art references to challenge Claims 1-21. Petition, 2; EX1004, 45

57. Under Ground 3, Petition and Petitioners' Expert's Declaration proffer U.S. Patent No. 7,062,532 / EX1006 ("Sweat") as prior art reference to challenge Claims 1-8, 10-16, and 18-21. Petition, 2; EX1004, 50

58. And under Ground 4, Petition and Petitioners' Expert's Declaration proffer Sweat and Schneider as prior art references to challenge Claims 9 and 17. Petition, 2; EX1004, 72

59. In my opinion, for the reasons outlined below, Petition and Petitioners' Expert's Declaration have not established a reasonable basis to conclude that the challenged claims of the '850 Patent are obvious.

60. Additionally, in my opinion, for the reasons outlined below, the claims of the '850 Patent are not obvious in view of Schneider, not obvious in view of Schneider and Crawford, not obvious in view of Sweat, and not obvious in view of Sweat and Schneider.

II. GROUND 1: CLAIMS 1-21 ARE NOT OBVIOUS OVER SCHNEIDER

61. In Ground 1, Petitioners' Expert's Declaration overlooks pivotal differences between the teachings of the '850 Patent versus the disclosures of Schneider.

62. Petitioners' Expert's Declaration neglects to address critical deficiencies in Schneider pertaining to the teachings of the '850 Patent.

63. I describe these differences and deficiencies below.

A. Schneider

64. In Ground 1, Petitioners' Expert's Declaration (§§ 47-97) relies on Schneider for all the claim elements.

- a. **Schneider Deficiency #1: Schneider does not disclose “responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location.”**

65. Schneider does not disclose “responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location,” because Schneider's external disk drive is used only for crash recovery.

66. Schneider saves the backup data in a history buffer in the user's internal disk drive. EX1005, Abstract, 10:17-20, 15:22-29

67. Schneider mirrors the history buffer from the internal disk drive to the external disk drive. *Id.*, 109:6-19, 110:5-9, 111:25-30, 112:1-24, Figure 47, Figure 47I

68. If file recovery is necessary, Schneider retrieves all necessary backup data (except for crash recovery) from the history buffer stored in the computer's internal disk drive, not from the history buffer in the external disk drive. *Id.*, 15:20-16:18

69. Schneider retrieves backup data from the external disk drive only for crash recovery. *Id.*, 108:15-24, 109:21-27, 109:28-110:2, 110:11-23

70. Schneider does not retrieve backup data from the external disk drive for file retrieval.

71. Detailed explanation is provided below.

i. Schneider saves the backup data in a history buffer in the user's internal disk drive.

72. While the computer operates, Schneider transparently saves its backup data in a history buffer that is stored in the user's computer's internal disk drive (e.g., internal drive "C").

"Changes made to the drive are saved in a circular history buffer which includes the old data, the time it was replaced by new data, and the original location of the data." EX1005, Abstract; emphasis added

"In today's technology a personal computer may very well have four gigabytes of disk space. If we allocate 10% toward the

history buffer used by the system of the present invention, in this example we are provided with 400 megabytes of storage.” *Id.*, 10:17-20; emphasis added

“assuming the user is running on a **drive C**, they may desire to look back in time. The technology of the present invention assumes the system can support another drive D, which instead of being a real disk drive, is a **simulated or virtual drive** whose image is created by combining information on the **original drive C and the history buffer** (which is typically part of drive C). The process of looking back in time involves setting a reference time for drive D and then simply accessing it as if it really was another physical disk drive whose contents had been copied from drive C at the specified time.” *Id.*, 15:22-29; emphasis added

ii. **Schneider mirrors the history buffer from the internal disk drive to the external disk drive.**

73. Schneider discloses an option for external disk drive backup. When an external disk drive is present, Schneider transparently copies the backup data from the user’s computer’s internal disk drive to the external disk drive, mirroring the history buffer from the internal disk drive onto the external disk drive chronologically as changes occur on the internal disk drive.

“An entirely different approach to achieving an external backup is to have an **external disk drive that, like the main disk, employs a method of saving original disk states**. Thus, instead of creating a backup of a specific point in time, the information on the backup includes the historic information, allowing the backup to re-create a range of "backup" times. In other words, **the external disk generally mirrors the main internal disk**. This is how a RAID system generally works.

However, unlike a RAID system, no attempt is made to run both the internal and external disks simultaneously in parallel.

Instead, if one views the logging activity on the main internal disk as creating a list of changes, these changes are forwarded as time permits to the external drive. It is the fact that there exists a **historic log on the main disk that facilitates replaying changes in the background**, in a more gradual transfer (non-parallel with the main disk). Further, since **the relayed information is chronological** and therefore contains safe points, the **external disk, in general, at worst lags** in the range of times to which it can restore.” EX1005, 109:6-19; emphasis added

“Instead, the states of the **external and internal drives are compared, and the appropriate historic and current image data is transferred, until both are synchronized**. This transfer process is asynchronous to and **can lag substantially behind recent changes to the current image.**” *Id.*, 110:5-9; emphasis added

“Essentially, the engine is writing to the external disk in generally **chronological order** (at least in terms of write sessions) the writes that have occurred to the internal disk. Note that it is the new data, not the historic data, that is transferred to the external disk; the external disk already has the historic data. Once **both disks are synchronized, the engine waits for more changes to the internal disk and then resumes synchronizing.**” *Id.*, 111:25-30; emphasis added

74. Schneider’s Figure 47 illustrates an external backup procedure. Because data transfers to the external storage may be relatively slow, Figure 47 depicts how Schneider’s external storage is a delayed mirror of the Schneider’s internal backup from Schneider’s internal storage.

“Figure 47A illustrates disconnected **internal and external drives**. Each drive contains a **current image and historic data**. Initially the internal drive's four pages contain the values "A", "B", "C", and "D". The external drive is blank. In Figure 47B the values "a" and "b" are overwritten on "A" and "B",

respectively. Thus, the original states move to the history buffer and the current image reflects the change. The external drive is then connected in Figure 47C. The engine responds by establishing a **simulated disk based on the internal drive's current state** (each write is assumed to also be a safe point). A dashed line in Figure 47C represents this time.

In Figure 47D the user has overwritten "C" with "c", thus displacing "C" to the history buffer. Note that this change occurred after the simulated disk was established, so it is not part of what initially gets sent over. Figure 47C also shows **the simulated disk's image being transferred and written to the external disk**. In Frame 47E the user overwrites "D". **Having gotten the simulated image across, the historic data prior to the simulated disk's reference time is sent.** Notice that the result of the user's continuing activity during the synchronization process has led to a lesser amount of available historic data (i.e., "A" has rolled off the end of the buffer).

Figure 47F shows the **engine attempting to keep the two disks synchronized**. The **changes occurring after the simulated disk was established are sent over.** This occurs in Frame 47G as normal writes under the engine, with the overwritten **data moving to the external disk's history buffer.** At this point **the two disks have been synchronized.** However, in Frame 47H, "E" is overwritten. The **internal disk** immediately reflects the change while the change's transfer to the external disk just begins. Some time later, Frame 47I shows **the disks synchronized again."** *Id.*, 112:1-24; emphasis added

75. Schneider's Figure 47I depicts the condition when the internal disk drive and the external disk drive are synchronized, with the history buffer identical in both the internal disk drive and the external disk drive.

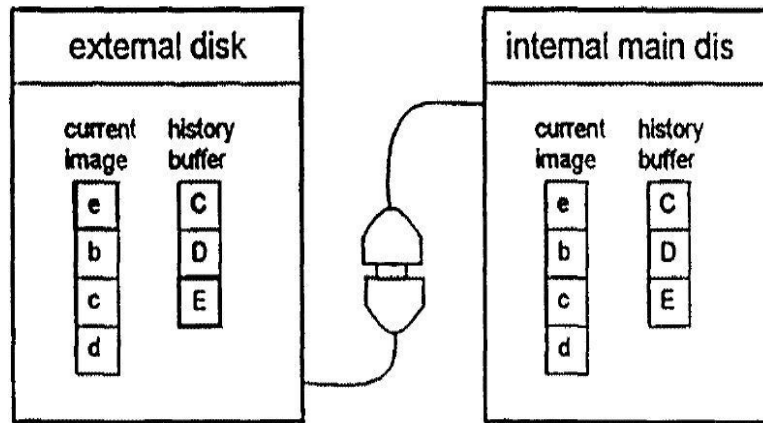


Figure 47I

- iii. **Schneider retrieves backup data (except for crash recovery) from the history buffer in internal disk drive, not from the history buffer in the external disk drive.**

76. Except for crash recovery, Schneider retrieves / recovers backup data from the history buffer in the computer's internal disk drive, not from the history buffer in the external disk drive.

“The Information Recovery Process

As illustrated in Figure 2, the present invention provides for two basic forms of recovery. In the first case, assuming the user is running on a drive C, they may desire to look back in time. The technology of the present invention assumes the system can support another drive D, which instead of being a real disk drive, is a simulated or virtual drive whose image is created by **combining information on the original drive C and the history buffer (which is typically part of drive C)**. The process of looking back in time involves setting a reference time for drive D and then simply accessing it as if it really was another physical disk drive whose contents had been copied from drive C at the specified time.

...

The second form of recovery involves reverting the main drive C back to an earlier state. In this situation there is no simulated D drive from which old information is brought forward into the present, but simply **the main drive is entirely brought back** in time. This recovery mode is particularly useful when the current state has become unusable (cannot boot or access files) or undesirable (an installation of new software or hardware drivers does not work as expected). The implementation can be as simple as copying the appropriate saved original data back into place, updating the history buffer to reflect the reversion, and restarting the system.” EX1005, 15:20-16:18; emphasis added

iv. **Schneider retrieves backup data from the external disk drive only for crash recovery.**

77. Schneider retrieves backup data from the external disk drive only for crash recovery, but not for selective recovery or for file recovery. In other words, Schneider’s external disk drive is used only for crash recovery.

“External Backup

All the methods thus far presented for saving original disk states are conceptually designed around a single disk. Of course, more than one disk may be involved, with their collective storage pooled into one large logical disk. The fault tolerance provided by the various methods deals with non-hardware failures like the user accidentally overwriting a file or a bug in an application corrupting files. However, there is also the **case of the disk actually ceasing to function (i.e., if it broke and the information it contained is lost)**. Recovery from such a failure typically involves installing a new hard disk, re-installing the operating system, and then restoring files from a backup tape or similar device.” EX1005, 108:15-24; emphasis added

“Should a crash occur and the lagged disk be used, it would restore the user to some single arbitrary point in the past. On the other hand, an external drive that receives changes chronologically from the main drive is capable of restoring to

any number of points in time. **Thus after a crash, the external drive likely contains a safe point** followed by the transitional changes just preceding the crash. Since the transitional changes are useless, as they are incomplete, one reverts to the safe point.” *Id.*, 109:21-27

“Thus a guaranteed usable backup image is available, and depending on the lag in transferring changes, this point is likely not too far back in time. With a RAID system, protection is achieved from a **physical disk drive failure**, but none is provided for the **computer crashing** and leaving the last state of the disk in transition.” *Id.*, 109:28-110:2

“Providing for synchronization and continuous downloading of current image and historic information to an external hard disk in order to achieve a level of **hard disk redundancy**. The user can run from the external disk **should the main internal hard disk fail**. The **external disk is also used to re-initialize a new internal disk, after the failed disk is replaced**. This process is done concurrently with allowing the user to continue working.” EX1005, 130:24-29; emphasis added

78. If the internal disk drive crashes or fails, (A) Schneider alerts the user, (B) Schneider forces a system reboot, (C) the user’s computer runs off the external disk drive, (D) the main internal disk is physically replaced, (E) Schneider synchronizes the internal disk drive from the external disk drive, and (F) the computer resumes with the new disk drive as the primary disk.

“In the same way in which a RAID system switches from a failed disk to a redundant disk, **if the main disk fails the engine automatically switches to the external disk**. The two disks may be out of sync: changes that were made to the current image might not have been transferred to the external disk prior to the failure. In this situation the engine alerts the user and forces **re-booting to run off the external disk**, at the time of the most recent safe point (thus the engine does not provided

uninterrupted disk services from the view point of the applications). **Now that the user is running off the external disk, the main internal disk is replaced.** The engine then automatically, in the background, **brings the internal disk into sync, at which point it resumes as the primary disk (i.e., they switch roles).** In other words, **when the internal disk fails and is replaced, the roles normally played by the internal and external disks are reversed, until they once again become identical, after which normal operations resume.”** *Id.*, 110:11-23

v. Schneider does not retrieve individual files from the external disk drive.

79. Schneider does not retrieve individual files from the external disk drive. Schneider does not retrieve backup data from the external disk drive for selective retrieval or file retrieval.

80. Schneider does not disclose any scenario in which the external disk drive is used for data retrieval other than when the internal disk drive crashes / fails.

81. A POSITA would have understood from Schneider’s teachings that Schneider’s external disk drive is used for recovery / restoration / retrieval when the internal disk drive crashes / fails and needs to be replaced, and a POSITA would have understood that Schneider’s external disk drive is not used for selective data retrieval or, specifically, individual file retrieval.

vi. Schneider does not retrieve files from the external disk drive for multiple reasons.

82. A POSITA would have understood the reasons for Schneider to teach retrieving backup data including files only from the internal disk drive, but not from the internal disk drive (other than crash recovery).

1. First Reason: The external disk drive backup may be behind the internal disk drive backup.

83. The external disk drive backup (history buffer) may be behind the internal disk drive backup (history buffer). In other words, external disk drive may not have the latest backup as the internal disk drive.

84. Schneider teaches that Schneider's internal backup (history buffer) is chronologically transferred from the internal disk drive to the external disk drive.

“The external backup process of the present invention differs from one in which the internal disk drive is simply copied onto another medium (e.g., disk or tape drive). Such a duplication is very time-consuming. Instead, the states of the external and internal drives are compared, and the appropriate historic and current image data is transferred, until both are synchronized. This transfer process is asynchronous to and can lag substantially behind recent changes to the current image. Therefore, it can be implemented on an inexpensive and relatively slow bus. For example, a parallel printer or USB port.” EX1005, 110:3-10; emphasis added

“An entirely different approach to achieving an external backup is to have an external disk drive that, like the main disk, employs a method of saving original disk states. Thus, instead of creating a backup of a specific point in time, the information on the backup includes the historic information, allowing the backup to re-create a range of "backup" times. In

other words, **the external disk generally mirrors the main internal disk**. This is how a RAID system generally works.

However, unlike a RAID system, no attempt is made to run both the internal and external disks simultaneously in parallel. Instead, **if one views the logging activity on the main internal disk as creating a list of changes, these changes are forwarded as time permits to the external drive**. It is the fact that there exists a **historic log on the main disk that facilitates replaying changes in the background**, in a more gradual transfer (non-parallel with the main disk). Further, since **the relayed information is chronological** and therefore contains safe points, the **external disk, in general, at worst lags** in the range of times to which it can restore.” EX1005, 109:6-19; emphasis added

“Instead, the states of the **external and internal drives are compared, and the appropriate historic and current image data is transferred, until both are synchronized**. This transfer process is asynchronous to and **can lag substantially behind recent changes to the current image**.” EX1005, 110:5-9; emphasis added

“Essentially, the engine is writing to the external disk in generally **chronological order** (at least in terms of write sessions) the writes that have occurred to the internal disk. Note that it is the new data, not the historic data, that is transferred to the external disk; the external disk already has the historic data. Once **both disks are synchronized, the engine waits for more changes to the internal disk and then resumes synchronizing**.” EX1005, 111:25-30; emphasis added

2. Second Reason: Accessing the external disk drive is slower than the internal disk drive.

85. Schneider teaches that the external disk drive would be slower to access than the internal disk drive.

“The **external backup process of the present invention** differs from one in which the internal disk drive is simply copied onto another medium (e.g., disk or tape drive). Such a duplication is very time-consuming. Instead, the states of the external and internal drives are compared, and the appropriate historic and current image data is transferred, until both are synchronized. This transfer process is asynchronous to and can lag substantially behind recent changes to the current image. Therefore, it can be implemented on an **inexpensive and relatively slow bus. For example, a parallel printer or USB port.**” EX1005, 110:3-10; emphasis added

86. Petitioners’ Expert’s Declaration’s own reference (EX1013) confirms that external storage through a network is slower than internal storage.

“it's not hard to see why **backup over a network is slower than backup over an I/O bus**. For starters, a 100Mb (10MB) network has a theoretical performance maximum equal to a fairly slow and outdated I/O channel.” EX2003, p. 247; emphasis added

3. Third Reason: The external disk drive is optional and may be disconnected or unavailable.

87. The external storage is optional and may be disconnected or unavailable and, therefore, unusable.

“Figure 47A illustrates **disconnected internal and external drives**. Each drive contains a current image and historic data. Initially the internal drive's four pages contain the values "A", "B", "C", and "D". **The external drive is blank**. In Figure 47B the values "a" and "b" are overwritten on "A" and "B", respectively. Thus, the original states move to the history buffer and the current image reflects the change. **The external drive is then connected** in Figure 47C. The engine responds by establishing a simulated disk based on the internal drive's current state (each write is assumed to also be a safe point). A

dashed line in Figure 47C represents this time.” EX1005, 112:1-8; emphasis added

b. Schneider Deficiency #2: Schneider does not disclose file-level backup in external backup / storage.

88. As explained in the following sections, Schneider does not disclose file-level backup in the external backup / storage scenario. Instead, Schneider only discloses file-level backup in conjunction with internal backup / storage.

89. The Schneider sections and paragraphs dealing with external backup / storage will be examined below to show that they do not disclose file-level implementation.

i. Schneider’s sections and paragraphs dealing with external backup / storage do not disclose file-level backup.

90. Based on Schneider’s teachings, a POSITA would have understood that Schneider’s sections and paragraphs dealing with external backup / storage do not disclose file-level backup.

91. Below, I show Schneider’s sections and paragraphs dealing with external backup / storage, then I show that these sections and paragraphs do not disclose file-level backup.

Schneider’s Sections and Paragraphs Dealing with External Backup / Storage

92. Schneider uses the term external, but not the term remote.

93. Below is a complete listing of all the references to the word “external” in Schneider (i.e., where “external” appears in Schneider) that relate to external backup / storage.

9:22	“Figure 53 illustrates an external backup procedure.”
108:15-112:25	Section titled: <i>External Backup</i> The section describes external backup / storage.
112:26-114:7	Section titled: <i>External Disk via the Network</i> The section describes external backup / storage via network.
114:8-115:26	A section that mentions external backup (114:12), external disk (114:13), external disks (114:17), external disk drives (115:14), and external disk (115:14)
130:24-29	A paragraph that mentions external disk
132:12-22	A paragraph that mentions external disk
136:3-30	A paragraph that mentions external disk
137:8-12	A paragraph that mentions external disk
137:20-138:3	A paragraph that mentions external disk
138:21-26	A paragraph that mentions external disk
210-213	Figure 47 (47A-47I), which describes external disk and internal main disk

94. Below is a complete listing of all the references to the word “external” in Schneider (i.e., where “external” appears in Schneider) that are not related to external backup / storage.

134:11-20	A paragraph that mentions internal or <u>external drivers</u>
135:6-8	A paragraph that mentions <u>external interrupt</u>
166:20-23	A paragraph that mentions <u>external switch</u>

Schneider’s sections and paragraphs dealing with external backup / storage, do not disclose file-level backup.

95. Schneider's sections and paragraphs that deal with external backup and external storage do not disclose files in relation to external backup, storage, or retrieval.

96. In all these sections and paragraphs, the word "file" / "files" appears only three (3) times, specifically in the first paragraph of the External Backup section (EX1005, 108:16-18).

97. Other than these three references to "file" / "files" at 108:16-18, there are no other references or mentions of "file" / "files" anywhere else in the Schneider sections and paragraphs dealing with backup / storage.

"file" / "files" in 108:20-24 do not disclose file-level backup

98. As I demonstrate below, the three references to "file" / "files" in 108:20-24 do not disclose file-level backup.

99. The first paragraph of the External Backup disk section provides background information and does not describe Schneider's external backup / storage. Instead, the first paragraph describes the methods referred to by Schneider in previous sections (before 108:15). The paragraph describes that these Schneider methods are "designed around a single disk" (internal storage). The paragraph then describes that these Schneider methods are useful for handling the problem of accidentally overwritten or corrupted files. The paragraph then describes that if the internal disk drive ceases to function, the traditional recovery involves installing a

new disk drive, reinstalling the operating system, and restoring files from a backup tape or similar device. In other words, these three references to “file” / “files” do not disclose file-level backup. The paragraph is reproduced below.

“All the methods thus far presented for saving original disk states are conceptually designed around a single disk. Of course, more than one disk may be involved, with their collective storage pooled into one large logical disk. The fault tolerance provided by the various methods deals with non-hardware failures like the user accidentally overwriting a file or a bug in an application corrupting files. However, there is also the case of the disk actually ceasing to function (i.e., if it broke and the information it contained is lost). Recovery from such a failure typically involves installing a new hard disk, re-installing the operating system, and then restoring files from a backup tape or similar device. This is a time-consuming process and often involves some loss of data, that which was affected after the backup.” EX1005, 108:16-18; emphasis added

100. In summary, the Schneider sections and paragraphs dealing with backup / storage mention “file” / “files” three times. These three references to “file” / “files” in 108:20-24 do not disclose file-level backup. Other than these three references, the Schneider sections and paragraphs dealing with backup / storage do not mention “file” / “files” anywhere and do not disclose file-level backup.

ii. Schneider’s Figure 47 does not disclose files and does not disclose file-level backup.

101. A POSITA would have understood that Schneider’s Figure 47 does not disclose files and does not disclose file-level backup.

102. Schneider's Figure 47 illustrates an external backup procedure and depicts how the Schneider's external storage is a delayed mirror of the Schneider's internal backup from Schneider's internal storage. Schneider declares that the terms current disk image and simulated disk image refer to Schneider's sector-level backup. The entire description of Figure 47 does not mention the word "file" / "files" and does not disclose file-level backup.

"Figure 47A illustrates disconnected **internal and external drives**. Each drive contains a **current image and historic data**. Initially the **internal drive's four pages** contain the values "A", "B", "C", and "D". The external drive is blank. In Figure 47B the values "a" and "b" are overwritten on "A" and "B", respectively. Thus, the original states move to the history buffer and the **current image** reflects the change. The external drive is then connected in Figure 47C. The engine responds by establishing a **simulated disk based on the internal drive's current state** (each write is assumed to also be a safe point). A dashed line in Figure 47C represents this time.

In Figure 47D the user has overwritten "C" with "c", thus displacing "C" to the history buffer. Note that this change occurred after the **simulated disk** was established, so it is not part of what initially gets sent over. **Figure 47C also shows the simulated disk's image being transferred and written to the external disk.** In Frame 47E the user overwrites "D". **Having gotten the simulated image across**, the historic data prior to the **simulated disk's reference time** is sent. Notice that the result of the user's continuing activity during the synchronization process has led to a lesser amount of available historic data (i.e., "A" has rolled off the end of the buffer).

Figure 47F shows the engine attempting to keep the two disks synchronized. The changes occurring after the **simulated disk** was established are sent over. This occurs in Frame 47G as normal writes under the engine, with the overwritten data

moving to the external disk's history buffer. At this point **the two disks have been synchronized**. However, in Frame 47H, "E" is overwritten. The **internal disk** immediately reflects the change while the change's transfer to the external disk just begins. Some time later, Frame 47I shows **the disks synchronized again.**" EX1005, 112:1-24; emphasis added

103. The entire description of Figure 47 is at the disk / sector level, not file level. The description of Figure 47 repeatedly describes creating and transferring simulated disk data from internal storage to external storage. The description does not mention, suggest, or imply files or file-level implementation. As mentioned above, simulated disk refers to sector-level data recovery implementations, not file-level implementations

104. Figure 47 (47A-47I) in pages 210-213 also do not mention, suggest, or imply files or file-level backup.

iii. Summary of Schneider's Disclosures Regarding Its Sector-Level (Disk-Level) versus File-Level Backup and Retrieval and Internal Storage versus External Storage

105. Below is a summary of Schneider's disclosures regarding its sector-level (disk-level) backup and retrieval, file-level backup and retrieval, internal storage, and external storage.

	Sector -Level Backup	Sector-Level Retrieval	File-Level Backup	File-Level Retrieval
Internal	Disclosed	Disclosed	Disclosed	Disclosed
External	Disclosed	Disclosed*	Not Disclosed	Not Disclosed

Disclosed*: disclosed for recovering from internal disk crash

iv. Schneider does not disclose any '850 elements reciting files using remote storage.

106. As describe above, Schneider does not disclose file-level backup or retrieval using external storage (the external disk drive). Therefore, Schneider does not disclose any of the elements of the '850 Patent claims reciting files from remote storage.

v. Petitioners' Expert's Declaration's statements regarding file-level implementation in external backup being allegedly obvious are conclusory and unsupported.

107. Petitioners' Expert's Declaration's includes various conclusory and unsupported statements regarding file-level implementation in external backup being allegedly obvious.

Petitioners' Expert's Declaration (¶ 54)

108. Petitioners' Expert's Declaration (¶ 54) alleges that “Schneider explains that its “present invention can be implemented to work either with managing data at the disk sector level or the file level” (*id.*, 10:25-27). A POSITA would have therefore understood that use of an external disk would have been equally applicable to Schneider's file-level implementation. See *id.*, 28:2-6 (explaining that in the file-level implementation, data pages in the history buffer “would correspond to file information instead of disk sectors”).”

109. I disagree. Claiming that a “POSITA would have therefore understood that use of an external disk would have been equally applicable to Schneider’s file-level implementation” is conclusory and unsupported by evidence.

110. The above statement of Petitioners’ Expert’s Declaration relies on opinion only and is contrary to the overwhelming evidence in Schneider as outlined earlier in the section titled *Schneider Deficiency #2: Schneider does not disclose file-level implementation in external backup / storage*.

Petitioners’ Expert’s Declaration (¶ 55)

111. Petitioners’ Expert’s Declaration (¶ 55) alleges that “a POSITA would have found it obvious to implement a system with the current versions of files stored locally on the user’s PC and the historic versions on an external drive accessible via a network. EX1005, 10:25-26, 24:1-2.”

112. I disagree. The above statement of Petitioners’ Expert’s Declaration is conclusory, unsupported by evidence, based on opinion only, and contrary to the overwhelming evidence in Schneider as outlined earlier in the section titled *Schneider Deficiency #2: Schneider does not disclose file-level implementation in external backup / storage*.

Petitioners’ Expert’s Declaration (¶ 62, footnote 4, page 41)

113. Petitioners’ Expert’s Declaration (¶ 62, footnote 4, page 41) alleges that “[a] POSITA would have understood that Schneider’s teachings regarding an

external disk were equally applicable to Schneider’s file level implementation as to disk level implementation. Schneider discloses that its “present invention can be implemented to work either with managing data at the disk sector level or the file level.” EX1005, 10:25-27; see also *id.*, 28:2-6. A POSITA would implement Schneider’s use of an external disk in the file level implementation in order to provide hardware redundancy so as to be able to recover historic file versions even in the case of a lost data on the internal drive, e.g., through a system crash. *Id.*, 132:20-22.”

114. I disagree. Claiming that a “POSITA would have understood that Schneider’s teachings regarding an external disk were equally applicable to Schneider’s file level implementation as to disk level implementation is conclusory and unsupported by evidence.

115. The above statement of Petitioners’ Expert’s Declaration relies on opinion only and is contrary to the overwhelming evidence in Schneider as outlined earlier in the section titled *Schneider Deficiency #2: Schneider does not disclose file-level implementation in external backup / storage.*

116. Claiming that a “POSITA would implement Schneider’s use of an external disk in the file level implementation in order to provide hardware redundancy so as to be able to recover historic file versions even in the case of a

lost data on the internal drive, e.g., through a system crash” is also conclusory and unsupported by evidence.

117. A POSITA would have understood from the teachings of Schneider and from standard industry norms that when the internal disk drive fails, the user’s computer may not be functioning until the internal disk drive is replaced and the disk contents restored, which is a sector-level process, not file based.

c. Schneider does not disclose “presenting information for a collection of one or more previous versions of the file ... restorable representation of each version ... is retrievable from a remote storage location.”

118. As described in earlier, Schneider does not retrieve backup data from the external disk drive for file retrieval.

119. Schneider saves the backup data in a history buffer in the user’s internal disk drive. Schneider mirrors the history buffer from the internal disk drive to the external disk drive. Schneider retrieves backup data (except for crash recovery) from the history buffer in internal disk drive, not from the history buffer in the external disk drive. Schneider retrieves backup data from the external disk drive only for crash recovery.

120. In other words, Schneider does not disclose retrieving any files from the external disk drive.

121. Additionally, Schneider does not disclose file-level implementation in external backup / storage and does not disclose corresponding retrieval of files from the external disk drive.

122. At least for these reasons, Schneider does not disclose “presenting information for a collection of one or more previous versions of the file ... restorable representation of **each version** ... is **retrievable from a remote storage location.**” Emphasis added

- d. **Schneider does not disclose “responsive to a selection to preview a selected previous version of the file based on the presented information for the collection of (A)[(B)], presenting a presentable representation of the selected previous version.”**

123. As described in earlier, Schneider does not retrieve backup data from the external disk drive for file retrieval.

124. In other words, Schneider does not disclose retrieving any files from the external disk drive.

125. Similarly, Schneider does not teach previewing any files from the external disk drive, because Schneider does not disclose listing any previous versions of files from the external disk drive.

126. Additionally, Schneider does not disclose file-level implementation in external backup / storage and does not disclose corresponding retrieval of files from the external disk drive.

127. At least for these reasons, Schneider does not disclose “responsive to a selection to **preview a selected previous version** of the file based on the presented information for the collection of (A)[(B)], presenting a presentable representation of the selected previous version.”

III. GROUND 2: CLAIMS 1-8, 10-16, and 18-21 ARE NOT OBVIOUS OVER SCHNEIDER IN VIEW OF CRAWFORD

128. Petitioners’ Expert’s Declaration claims that “[a] POSITA would have been motivated to modify the file back-up and restore system of Schneider to include an Internet data link to a remote storage device as taught by Crawford.” EX1004, ¶ 102

129. However, as described below, Crawford does not cure Schneider’s deficiencies.

130. First, Crawford does not cure Schneider’s not retrieving individual files from the external disk drive.

131. As explained earlier in the section titled *Schneider Deficiency #1: Schneider does not disclose “responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location,”* Schneider does not retrieve individual files from the external disk drive.

132. Schneider saves the backup data in a history buffer in the user’s internal disk drive. Schneider mirrors the history buffer from the internal disk

drive to the external disk drive. If file recovery is necessary, Schneider retrieves the necessary backup data (except for crash recovery) from the history buffer stored in the computer's internal disk drive, not from the history buffer in the external disk drive. Schneider retrieves backup data from the external disk drive only for crash recovery. Schneider does not retrieve backup data from the external disk drive for file retrieval.

133. Crawford's "Internet data link to a remote storage device" does not cure this deficiency. Even with Crawford's "Internet data link to a remote storage device," Schneider still does not retrieve backup data from the external disk drive for file retrieval.

134. Second, Crawford does not cure Schneider's not disclosing file-level backup in the external backup / storage scenario.

135. As explained earlier in the section titled *Schneider Deficiency #2: Schneider does not disclose file-level backup in external backup / storage*, Schneider does not disclose file-level backup in the external backup / storage scenario. Instead, Schneider only discloses file-level backup in conjunction with internal backup / storage.

136. Crawford's "Internet data link to a remote storage device" does not cure this deficiency. Even with Crawford's "Internet data link to a remote storage

device,” Schneider still only discloses file-level backup in conjunction with internal backup / storage.

IV. GROUND 3: CLAIMS 1-8, 10-16, and 18-21 ARE NOT OBVIOUS OVER SWEAT

137. In Ground 3, Petitioners’ Expert’s Declaration overlooks pivotal differences between the teachings of the ’850 Patent versus the disclosures of Sweat on the other hand.

138. Petitioners’ Expert’s Declaration neglects to address critical deficiencies in Sweat pertaining to the teachings of the ’850 Patent.

139. I describe these differences and deficiencies below.

A. Sweat

140. In Ground 3, Petitioners’ Expert’s Declaration (¶¶ 104-151) relies on Sweat for all the claim elements.

a. Sweat Deficiency #1: Sweat is a not analogous art to the ’850 Patent.

141. Sweat is a not analogous art to the ’850 Patent for multiple reasons.

i. Sweat is directed to architectural drawing and project sharing and collaboration, whereas the ’850 Patent is directed to file preservation, file capture, file management, and file restoration.

142. Sweat is directed to architectural drawing and project sharing and collaboration. EX1006, Abstract, 1:16-22 (Field of the Invention)

143. Sweat is a “[m]ethod and apparatus for drawing collaboration on a network” and more specifically “a project hosting service that a user can access with a web browser” with which the user “can communicate and collaborate with the members of a design team or construction project” and “share CAD drawing files (DWG DWF, etc.), document files, or any other type of file.” EX1006, title, abstract; emphasis added

144. In contrast, the ’850 Patent is directed to file preservation, file capture, file management, and file restoration. EX1001, Abstract, 1:12-16 (Field of the Invention)

145. The ’850 Patent provides an “automatic real-time file management method and apparatus” for “restoring a file to a previous version of the file” and is built on a platform for “archiving files.” EX1001, title, abstract, 3:31.

146. Sweat addresses problems and provides solutions that are different from the problems and solutions addressed and provided by the ’850 Patent. Sweat’s approach to the problems and solutions is different from the ’850 Patent’s approach to the problems and solutions.

ii. Sweat does not disclose backup or archive.

147. Sweat does not disclose that its invention is used for file backup or archival as the ’850 Patent teaches.

148. Sweat does not use or mention the word “backup.”

149. Sweat does not suggest that Sweat is a backup system.

150. Sweat teaches limiting the number of file versions that a user can save in the remote server.

“the “not to exceed” limit on file versions that are saved with each file in the site” EX1006, 8:47-48

“set the number of versions allowed in a “limit to” area” EX1006, 9:22-23

“Once the number of saved versions is limited, each time a version is saved, the oldest version is “bumped” up to the next number. Once the version limit is reached, saving a new version deletes the oldest version.” EX1006, 9:25-28

“need to free space on the site (e.g., the site space limit has been reached).” EX1006, 13:59-60

151. Sweat teaches archiving, but for the purpose of copying from the remote server to a user’s local computer, which is exactly the opposite of archival in the ’850 Patent.

“Archive **Copies** all selected site, folder or file Administrator contents **to a user's local computer** including file versions, discussions, and version comments.” EX1006, 5:48-51; emphasis added

“Administrators can archive site, project, or folder contents by **copying files to a local computer system**. Users may utilize an archive command to copy the files. The archive command is most often used **when a project is closed out** or when there is a need to free space on the site (e.g., the site space limit has been reached).” EX1006, 13:55-60; emphasis added

152. Sweat even teaches erasing the files from the remote server after the archive into the user's local storage.

“When the contents are archived, a copy of all the selected site, project, or folder files, including all file versions and discussion and version comments, are **copied to a local computer** 104. Version and discussion comments are converted to HTML, and are displayed in a list. Subsequently, a user merely needs to select an item from the list, and the built in viewer loads and displays it in the user's browser. After the contents have been copied, one or more embodiments of the invention provide for verifying that all the files are in the specified target directory on the local computer 104. **Users can then safely delete the items from the site/server 106 as desired.**” EX1006, 13:61-14:5; emphasis added

iii. Sweat is manual, whereas the '850 Patent is automatic.

153. Sweat is manual and requires user's involvement. In contrast, the '850 Patent is automatic.

154. For example, to backup a file, the user must use the Update File wizard. EX1006, 6:53-55.

155. In contrast, the '850 Patent is built on a platform that automatically archives files upon any operation on the files. EX1001, 3:30-36, 5:31-40.

156. In fact, the '850 Patent teaches away from manual backup.

“The **least efficient** and probably one of the most frequently used backup systems **is the manual backup**. At times determined by the user, the user selects files to be backed up and either utilizes the built in backup procedure for the corresponding application or manually copies the selected files to a desired backup storage media.

The **problems with this method** of preserving data are self-evident. Backup procedures are often **confusing** and may differ from application to application. Accordingly, the **user must familiarize itself** with the various methods for performing backups. In addition, **users may forget to backup** or elect not to on a given occasion due to time constraints or other reasons. Manual backups often do not allow the user to continue to use the system during the backup procedure. Furthermore, **data stored to the backup media is really only a “snapshot”** of the data at the time that the backup is performed. Any changes made between manual backups would be lost if there was a failure on the computer's storage device.” EX1001, 2:1-19; emphasis added.

“All of these methods **require that the user specify which files/directories to back up**, but many users have no concept of files and directories in their thought process, much less are they able to correlate a particular application (e.g. Microsoft Excel) with the kinds and locations of files they generate. These systems simply require too much user knowledge, and **too much user intervention**. The backup user's risk increases dramatically the lower his computer knowledge may be.” EX1001, 2:55:63; emphasis added.

iv. **Sweat's local storage and remote storage are not synchronized, whereas the '850 Patent's local storage and remote storage are synchronized.**

157. Sweat's local storage and remote storage are not automatically synchronized, whereas the '850 Patent's local storage and remote storage are automatically synchronized.

158. The '850 Patent is built on a platform that automatically archives files upon any operation on the files, ensuring that the remote storage always has the current version of any file from the local storage.

“The method includes, in a computing device, **detecting an instruction from a resident program to perform an operation on an operating file**. Upon detection of the instruction, **capturing the operating file temporally proximate to the operation** being performed on the operating file.” EX1001, 3:31-36; emphasis added

“File capture is preferably executed by **creating an archive file from the operating file**. The archive file is preferably stored in a temporary storage location, internal or external to the computer, such as input buffer 20. However, the archive file may be stored directly in storage device 35. In accordance with a preferred aspect of the invention, storage device 35 may be a personal attached storage device, a network attached storage device, an Internet storage area network, a peer-to-peer storage device, or other storage device.” EX1001, 5:31-40; emphasis added

v. A POSITA’s experience for Sweat is different from a POSITA’s experience for the ’850 Patent.

159. Petitioners’ Expert’s Declaration at ¶ 31 describes a POSITA as having “experience in the design and development of file management, restoration, and archival systems.” There is no mention of web experience, architectural drawing, or architectural project experience, which are crucial for Sweat.

vi. Sweat’s classifications are different from the classifications of the ’850 Patent.

160. As can be seen from the table below, Sweat’s classifications are different from the classifications of the ’850 Patent.

'850	Sweat
International Class G06F 17/30: Information retrieval; Database structures therefor G06F 16/11: File system administration, e.g. details of archiving or snapshots	International Class G06F 15/16: Combinations of two or more digital computers each having at least an arithmetic unit, a programme unit and a register, e.g. for a simultaneous processing of several programmes
US Class G06F 16/113 G06F 11/1461 G06F 16/10 G06FF 16/86 The above are under the following general classifications: <i>G06F 11/00 - Error detection; Error correction; Monitoring</i> <i>G06F 16/00 - Information retrieval; Database structures therefor; File system structures therefor</i>	US Class 709/205: Cooperative computer processing 709/225: Computer network access regulating

'850	Sweat
Field of Classification Search	Field of Classification Search
G06F 11/1469	709/203: Client/server 709/204: computer conferencing 709/205: Cooperative computer processing 709/217: remote data accessing 709/218: Using interconnected networks 709/219: Accessing a remote server 709/223: computer network managing 709/224: Computer network monitoring 709/225: Computer network access regulating 707/10, 201; 705/7, 8, 9; 345/751, 753 The above are under the following general classifications: 707: data processing: database, data mining, and file management or data structures 705: data processing: financial, business practice, management, or cost/price determination 345: computer graphics processing and selective visual display systems

- b. Sweat Deficiency #2: Sweat does not disclose “ responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location and storing the selected previous version [by the computational machine] as the current version on the local storage location.”**

161. Sweat does not disclose “responsive to a selection to restore the selected previous version, retrieving the restorable representation of the selected previous version from the remote storage location and storing the selected previous

version [by the computational machine] as the current version on the local storage location.”

162. In Sweat, retrieving the previous version from the remote storage and storing the retrieved file as the current version in local storage requires a sequence of multiple manual steps, rendering Sweat not responsive to a selection to restore.

163. As described in the previous section, Sweat is a collaboration system for multiple users to share project files, and Sweat is manual, requiring user intervention.

164. A POSITA would have understood from the teachings of Sweat that in order for the user to retrieve a previous version, the user must perform a multi-step sequence consisting of three steps: (1) “the user **selects** the desired version,” (2) the user “clicks a “**Download**” button,” (3) “the user **identifies/selects the target** location to save the selected file” and the “file is then copied to the location specified.”

165. These steps render Sweat not responsive to a selection to restore.

166. Additionally, these steps do not ensure that the retrieved version is the current version.

167. Since multiple users can work on the same file simultaneously, the current version is undetermined at any point in time.

168. A POSITA would have understood from the teachings of Sweat that in order for a user to ensure that the user has the current version on the user's local disk drive, the user must upload the latest version from the user's local disk drive to the Sweat server using the Sweat Update command. At that point, the current version is on the user's disk drive and on the server.

169. However, Sweat does not disclose this sequence of steps.

170. In contrast, the '850 Patent does not allow collaboration or file sharing between users.

“This information lets AccuSafe **keep the files from one user segregated from the files from another** use, since especially with large AccuSafe media, multiple users may be share a single AccuSafe storage device.” EX1003, p. 19; emphasis added.

171. In other words, an additional, fourth step is needed to ensure that the user has the current version.

172. Hence, a POSITA would have understood from the teachings of Sweat that in order for a user to ensure that the user has the retrieved previous version stored as the current version on the user's local disk drive, the user must perform a multi-step sequence consisting of four steps: (1) “the user **selects** the desired version,” (2) the user “clicks a **"Download"** button,” (3) “the user **identifies/selects the target** location to save the selected file” and the “file is then copied to the location specified,” (4) the user **uploads** the latest version from the

user's local disk drive to the Sweat server using the Update command to ensure that the current version is on the user's disk drive and on the server. EX1006, 10:58-63; emphasis added

173. These steps render Sweat further not responsive to a selection to restore.

174. Additionally, Sweat does not disclose this sequence of steps.

175. Furthermore, starting from the beginning ('850 preamble), the user does not have the current version on the user's local storage.

176. A POSITA would have also understood from the teachings of Sweat that in order for a user to ensure that the user has the current version on the user's local disk drive at the beginning of the process of the '850 Patent then retrieve and store a previous version as the current version on the user's local disk drive, the user must perform a multi-step sequence consisting of: (1) the user **locks** the file using the Lock command to ensure no other user is updating the file, (2) the user **uploads** the user's version from the user's local disk drive to the Sweat server using the Update command to make the user's version the current version, (3) "the user **selects** the desired version to retrieve" from the remote storage, (4) the user "clicks a "**Download**" button," (5) "the user **identifies/selects the target** location to save the selected file" and the "file is then copied to the location specified," (6) the user **uploads** the latest version from the user's local disk drive to the server

using the Update command to ensure that the current version is on the user's disk drive and on the server. *Id.*; emphasis added

177. These steps render Sweat not responsive to a selection to restore.

178. Additionally, Sweat does not disclose this sequence of steps.

179. In contrast, in the '850 Patent the steps are: (1) "[T]he user can **right-click** on the file he's been working with, then select AccuSafe's restore function to retrieve the lost versions." "AccuSafe displays the list of versions it has captured." (2) "The user **selects** a version from this list, then clicks the View button to determine if this is the version he wishes to restore ..." and (3) "the user clicks **Restore** to retrieve his file." EX1003, pp. 29-39; emphasis added

180. Restoration happens automatically.

181. Additionally, the current version is also automatically on the local storage and in the remote storage.

182. There is no need to ensure that the current version is in local storage and in the remote storage.

183. The '850 Patent is built on a platform that automatically archives files upon any operation on the files, ensuring that the remote storage always has the current version of any file from the local storage.

"The method includes, in a computing device, **detecting an instruction from a resident program to perform an operation on an operating file**. Upon detection of the instruction, **capturing the operating file temporally**

proximate to the operation being performed on the operating file.” EX1001, 3:31-36; emphasis added

“File capture is preferably executed by **creating an archive file from the operating file**. The archive file is preferably stored in a temporary storage location, internal or external to the computer, such as input buffer 20. However, the archive file may be stored directly in storage device 35. In accordance with a preferred aspect of the invention, storage device 35 may be a personal attached storage device, a network attached storage device, an Internet storage area network, a peer-to-peer storage device, or other storage device.” EX1001, 5:31-40; emphasis added

c. Sweat Deficiency #3: automatic backup renders Sweat unusable.

184. A POSITA would have understood that using Sweat as an automatic backup system would have rendered Sweat unusable for Sweat’s intended and primary purpose of collaboration and file sharing.

185. Sweat is a “[m]ethod and apparatus for drawing collaboration on a network” and “a project hosting service” with which the user “can communicate and collaborate with the members of a design team or construction project” and “share CAD drawing files (DWG DWF, etc.), document files, or any other type of file.” EX1006, title, abstract; emphasis added

186. In my career as a software engineer, before the priority date of the ’850 and before the filing date of Sweat, I personally used and managed teams that used network-based collaboration and file sharing systems, specifically file version control systems that store, manage, and track changes in software source code and

other files, such as documents and text files. Such collaboration and file sharing systems were and still are standard in the software industry. They include products such as SCCS (Source Code Control System), RCS (Revision Control System), CVS (Concurrent Versions System), and Rational ClearCase.

187. A POSITA would at least have known and most likely used such collaboration and file sharing systems.

188. A POSITA would at least have known that collaboration and file sharing systems, such as Sweat's, are not intended for continuous, automatic backup as foundationally described in the '850 Patent.

189. A POSITA would have realized that using a collaboration and file sharing system, such as Sweat's, for continuous, automatic backup would render the system unusable and inoperable for its intended purpose of collaboration and file sharing.

190. The continuous, automatic backup of every change to every file by every user would turn the system (e.g., Sweat) into a morass of endless and continually updating versions of files.

191. For each file, instead of having a controlled set of versions that users intentionally commit to the system (e.g., Sweat), the system would continuously and automatically create versions as users update the file.

192. The notion of a “current version” of a file becomes unrealizable. Multiple users and even the server itself could each assume holding the “current version” of a file. The current version of the file becomes unstable and even undermined. The system would become confusing to the users.

193. In fact, as described in the next section, Sweat itself teaches away from using remote storage for archiving.

194. For at least these reasons, a POSITA would have realized that Sweat is unsuitable for reproducing the '850 Patent. A POSITA would not have considered Sweat for reproducing the '850 Patent.

d. Sweat Deficiency #4: Sweat teaches away from using remote storage for archiving.

195. Sweat teaches away from using its remote storage for archiving.

196. Sweat teaches archiving from the remote server to a user’s local computer, which is exactly the opposite of archival in the '850 Patent.

“Archive **Copies** all selected site, folder or file Administrator contents **to a user's local computer** including file versions, discussions, and version comments.” EX1006, 5:48-51; emphasis added

“Administrators can archive site, project, or folder contents by **copying files to a local computer system**. Users may utilize an archive command to copy the files. The archive command is most often used **when a project is closed out** or when there is a need to free space on the site (e.g., the site space limit has been reached).” EX1006, 13:55-60; emphasis added

197. Sweat even teaches erasing the files from the remote server after the archive into the user's local storage, further emphasizing not using its remote storage for archiving.

“When the contents are archived, a copy of all the selected site, project, or folder files, including all file versions and discussion and version comments, are **copied to a local computer** 104. Version and discussion comments are converted to HTML, and are displayed in a list. Subsequently, a user merely needs to select an item from the list, and the built in viewer loads and displays it in the user's browser. After the contents have been copied, one or more embodiments of the invention provide for verifying that all the files are in the specified target directory on the local computer 104. **Users can then safely delete the items from the site/server 106 as desired.**” EX1006, 13:61-14:5; emphasis added

198. For at least these reasons, a POSITA would have realized that Sweat is unsuitable for reproducing the '850 Patent. A POSITA would not have considered Sweat for reproducing the '850 Patent.

V. CONCLUSION

199. For the foregoing reasons, in my opinion, the claims of the '850 Patent are not obvious in view of Schneider, not obvious in view of Schneider and Crawford, not obvious in view of Sweat, and not obvious in view of Sweat and Schneider.

200. I reserve the right to modify and/or supplement this Declaration, to present further analyses, and/or to amend my opinions as more and/or other

arguments and/or information becomes available as well as for any reason or for no reason.

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

February 29, 2024
Date



Zaydoon ("Jay") Jawadi