

Box, Inc. and Dropbox, Inc.

v.

Topia Technology, Inc.

IPR2023-00427, IPR2023-00433

U.S. Patent Nos. 9,143,561 and 10,067,942

Petitioners' Demonstratives

May 22, 2024

Before Thomas L. Giannetti, Neil T. Powell, Charles J. Boudreau, and John R. Kenny,

Administrative Patent Judges

Exemplary Claim 1 of the '561 Patent

1. A system, comprising:

a first electronic device configured to selectively execute a first application, the first electronic device being in communication with a second electronic device and a third electronic device, each associated with a user wherein the first electronic device is configured to:

receive from a second application executable on the second electronic device a copy of a first electronic file automatically transferred from the second application when the user modifies a content of the first electronic file; and

wherein the first electronic device is further configured to receive from a third application executable on the third electronic device a copy of a second electronic file automatically transferred from the third application when the user modifies a content of the second electronic file; and

wherein the first application is further configured to automatically transfer the modified first electronic file copy to the third electronic device to replace an older version of the first electronic file stored on the third electronic device with the modified first electronic file copy having the content modified by the user; and

automatically transfer the modified second electronic file copy to the second electronic device to replace an older version of the second electronic file stored on the second electronic device with the modified second electronic file copy having the content modified by the user;

wherein the second application automatically transfers the copy of the modified first electronic file to the first electronic device upon determining that a save operation has been performed on the modified first electronic file.

United States Patent
Sheet 1 of 1



Patent No. US 9,143,561 B2
Date of Patent: Nov. 24, 2017

(51) Int. Cl. H04L 29/08 (2006.01)

(52) U.S. Class. 709/201 (2008.01)

(54) Title: SYSTEM AND METHOD FOR AUTOMATICALLY TRANSFERRING A COPY OF A FIRST ELECTRONIC FILE TO A SECOND ELECTRONIC DEVICE WHEN A USER MODIFIES A CONTENT OF THE FIRST ELECTRONIC FILE

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Men's Exhibit No. 1001
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U.S. Patent No. 9,143,561
Ex. 1001

IPR2023-00427 ('561 Patent)

Ground	Claims	Basis for Challenge
1	1, 3, 4, 8, 10 and 11	Obvious by <u>Sigurdsson</u> in view of <u>Shappell</u>
2	1, 3, 4, 8, 10 and 11	Obvious by <u>Brown</u> in view of <u>Hesselink</u>

IPR2023-00433 ('942 Patent)

Ground	Claims	Basis for Challenge
1	1, 3, 4, 10, 12 and 13	Obvious by <u>Sigurdsson</u> in view of <u>Shappell</u>
2	1, 3, 4, 10, 12 and 13	Obvious by <u>Brown</u> in view of <u>Hesselink</u>

Overview of the Patents

BACKGROUND OF THE INVENTION

Users of modern computing systems are increasingly finding themselves in constantly-connected, high-speed networked environments. The Web continues to be a killer application, second only to email, on the Internet. Further, customers are increasingly using more than one computing device; a customer may have a desktop computer at home, one at work, and a constantly connected "smart phone". Due to the confluence of these two trends, file management across these devices has become a problem.

SUMMARY OF THE INVENTION

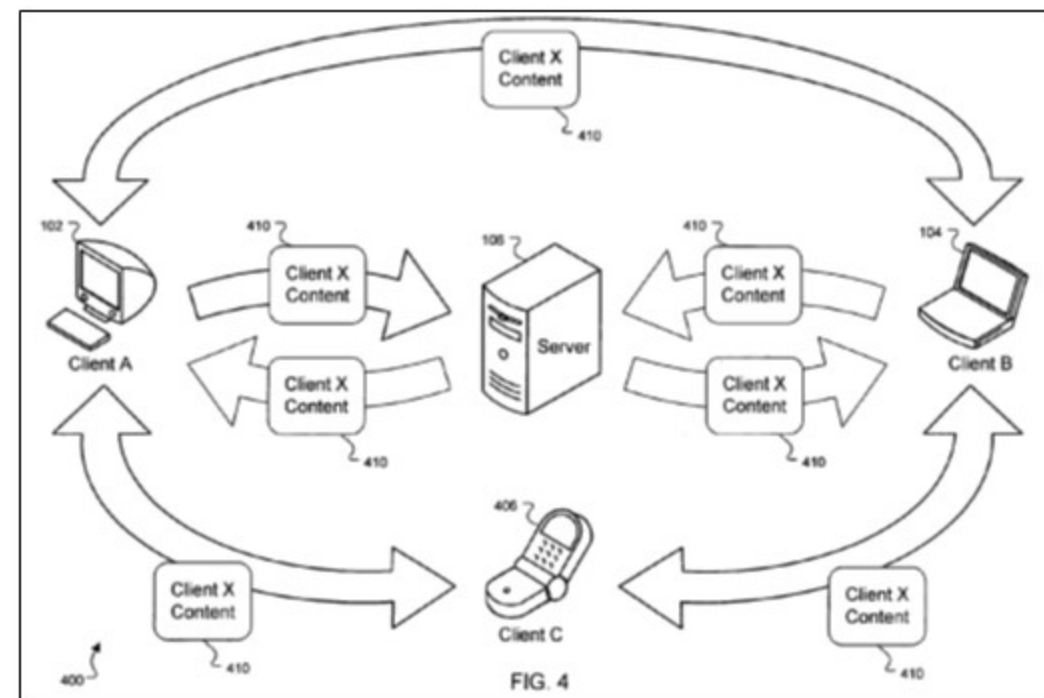
In an embodiment, a system includes a first application executable on a first electronic device. The system further includes a second application executable on a second electronic device in communication with the first electronic device. The second electronic device is configured to store a first electronic file. Subsequent to a user modifying the first electronic file, the second application is operable to automatically transfer the modified first electronic file, or a copy thereof, to the first electronic device. The system further includes a third application executable on a third electronic device in communication with the first electronic device. The third electronic device is configured to store a second electronic file. Subsequent to the user modifying the second electronic file, the third application is operable to automatically transfer the modified second electronic file, or a copy thereof, to the first electronic device. The first application is operable to automatically transfer the modified first electronic file or copy to the third electronic device, and automatically transfer the modified second electronic file or copy to the second electronic device.

('561, 1:20-30, 3:40-61)

(-427 Petition at 7; -433 Petition at 5-6)

Overview of the Prior Art

[0026] FIG. 1 is a schematic diagram showing a system 100 for sharing and synchronizing content across multiple client devices. The system 100 can permit a user using a second computer device to access copies of files (or copies of the content of the files) that were resident on a first computer device. Exchange of content between the computer devices can occur automatically without a user specifying that the content should be sent to another computer device. For example, a user may edit a word document file at his home computer. When the user saves the document, the document's content is automatically extracted and transmitted to the user's computer at work. When the user searches for the modified document later at his work computer, the content is presented to the user even though the word document was not previously stored on the user's work computer. This can have the additional advantage that only documents that are recently accessed by the user are transferred between the user's various computers.



[0081] When a modification of a file contained in a shared space occurs, a notification to other members in the group occurs (see steps 1902, 1904 and 1906 in FIG. 19). In a preferred embodiment, upon receipt of such notification, member machines that have previously obtained a copy of the shared file will remove the local copy of the out-of-date file. This will change the visual representation of the file to a “missing” file within the shared space folder when the application setting does not automatically update files, as is shown in step 2010 in FIG. 20. On the other hand, if automatic replication of the shared file is enabled, the local machine obtains an updated version of the file, as is shown in step 2006 in FIG. 20. Finally, an appropriate visual indicator is presented to the user as shown in step 2008.

The invention is a method and apparatus for synchronizing data on multiple client machines. The structure of the invention is a client/server application where the server component is a Synchronization File System (SFS) with a functional interface and metadata organization that enables efficient and reliable synchronization by the clients. The client component is a Synchronization Application (SA) that uses the server SFS to synchronize the local client data with the server. Client machines synchronize with each other by synchronizing to a common server account.

From the user's perspective, the synchronization process is automatic, runs in the background and requires minimal monitoring or intervention.

(Brown, 1:54-63, 3:40-41)

(-427 Petition at 12-13; -433 Petition at 10-11)

[0183] As noted above, when data is updated, such as when a file is edited, for example, the system may be configured to automatically update all or some designated subset of computers on the network as soon as the update has been performed at one location. Computers that are offline at such a time will be automatically updated as soon as those computers go online again. The persistence of the system ensures that updates are completed for all online computers, as if there is some failure or problem during the update, the connection restores itself to ensure that the update is completed.

Key Disputes

- **Claim interpretation of “automatically” transferring files**
- **Ground 1 (Sigurdsson and Shappell):**
 - Under PO’s construction of “automatically,” does Sigurdsson disclose or render obvious its server “automatically” transferring files
 - Motivation to combine Sigurdsson and Shappell
 - Does Sigurdsson teach devices associated with the same user
- **Ground 2 (Brown and Hesselink):**
 - Under PO’s construction of “automatically,” do Brown and Hesselink render obvious Brown’s server “automatically” transferring files
 - Motivation to combine Brown and Hesselink
 - Does Brown suggest devices associated with the same user

- **PO's argument that non-party Egnyte, Inc. is a real party in interest (RPI) or privy to Petitioners**

Claim interpretation of
“automatically” transferring files

Claim Interpretation of “Automatically” Transferring Files

Petitioners: Plain and ordinary meaning. “Automatically” transferring is distinct from “manually” transferring. (-427 Reply at 4-8; -433 Reply at 4-9.)

Patent Owner: “Automatically” transferring files is limited to “push-based file transfer” without a request from another device. (-427 POR at 45, -433 POR at 43 (“the claims . . . adopt a push-based file transfer from the server to the client”); *accord* -427 POR at 52, -433 POR at 50; -427 POR at 53, -433 POR at 51; -427 POR at 22; -433 POR at 20; -427 POR at 33, -433 POR at 22)

Claim Interpretation of “Automatically” – Case Law



“The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.”

Thorner v. Sony Computer Ent. Am. LLC, 669 F.3d 1362, 1365-67 (Fed. Cir. 2012) (citation omitted)

(-427 Reply at 6; -433 Reply at 6)

Claim Interpretation of “Automatically” – Case Law (continued)



“The patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.”

Thorner v. Sony Computer Ent. Am. LLC, 669 F.3d 1362, 1365-67 (Fed. Cir. 2012) (citation omitted)

(-427 Reply at 6; -433 Reply at 6)

“Automatically” in Claim 1 of the '561 Patent

1. A system, comprising:

a first electronic device configured to selectively execute a first application, the first electronic device being in communication with a second electronic device and a third electronic device, each associated with a user wherein the first electronic device is configured to:

receive from a second application executable on the second electronic device a copy of a first electronic file **automatically** transferred from the second application when the user modifies a content of the first electronic file; and

wherein the first electronic device is further configured to receive from a third application executable on the third electronic device a copy of a second electronic file **automatically** transferred from the third application when the user modifies a content of the second electronic file; and . . .

“Automatically” in Claim 1 of the '561 Patent (continued)

... wherein the first application is further configured to **automatically** transfer the modified first electronic file copy to the third electronic device to replace an older version of the first electronic file stored on the third electronic device with the modified first electronic file copy having the content modified by the user; and

automatically transfer the modified second electronic file copy to the second electronic device to replace an older version of the second electronic file stored on the second electronic device with the modified second electronic file copy having the content modified by the user;

wherein the second application **automatically** transfers the copy of the modified first electronic file to the first electronic device upon determining that a save operation has been performed on the modified first electronic file.

“Automatically” in Claim 1 of the '942 Patent

1. A system comprising: a first electronic device, associated with a user, configured to:
 - receive, via a first application at the first electronic device, a copy of a modified first electronic file from a second application at a second electronic device associated with the user, wherein the modified first electronic file copy is **automatically** received from the second application responsive to the user modifying a content of the first electronic file;
 - determine whether the first electronic device is in communication with a third electronic device;
 - automatically** send, via the first application, the modified first electronic file copy to a third application at the third electronic device responsive to the determination that the first electronic device is in communication with the third electronic device and responsive to receiving the modified first electronic file copy from the second electronic device; . . .

“Automatically” in Claim 1 of the '942 Patent (continued)

... receive, via the first application, a copy of a modified second electronic file from the third application at the third electronic device associated with the user, wherein the modified second electronic file copy is **automatically** received from the third application responsive to the user modifying a content of the second electronic file;
determine whether the first electronic device is in communication with the second electronic device; and

automatically send, via the first application, the modified second electronic file copy to the second application at the second electronic device responsive to the determination that the first electronic device is in communication with the second electronic device and responsive to receiving the modified second electronic file copy from the third electronic device ...

“Automatically” in Claim 1 of the '942 Patent (continued)

... wherein, responsive to sending the modified first electronic file copy to the third electronic device, an older version of the first electronic file stored on the third electronic device is **automatically** caused to be replaced with the modified first electronic file copy such that the modified first electronic file copy is stored on the third electronic device in lieu of the older version of the first electronic file, and

wherein, responsive to sending the modified second electronic file copy to the second electronic device, an older version of the second electronic file stored on the second electronic device is **automatically** caused to be replaced with the modified second electronic file copy such that the modified second electronic file copy is stored on the second electronic device in lieu of the older version of the second electronic file.

“Automatically” in the Specification

BACKGROUND OF THE INVENTION

Although modern devices are easily connected, they do not provide the customer a seamless environment; the customer must manually handle many aspects of that connection. With regards to file management, customers must manually move files between their devices using some protocol like email, ftp, or by posting them on the Web. These practices lead to problems that include:

That a customer has to manually move files around to ensure their accessibility on his devices is unnecessary, and is an indicator of a lack of customer-focused design in modern file systems.

('561, 1:31-37, 1:59-62; '942, 1:33-39, 1:62-65; Reply at)

“Automatically” in the Specification (continued)

Applications can generally write and read files directly to and from a distributed file system. This is not the case with FTP, as the customer has to manually use the client software to perform these operations as a separate task.

A customer can make a file remotely available using email by attaching the file to an email and sending it to himself. He can then retrieve the file from a remote location by accessing the message on the email server. Email used in this way is even worse than FTP as the process is even more manual: a customer must find the message containing the file before he can even access it.

('561, 2:66-3:2, 3:7-13; '942, 3:3-7, 3:13-21; -427 Reply at 5, -433 Reply at 5)

“Automatically” in the Specification (continued)

SUMMARY OF THE INVENTION

In an embodiment, a system includes a first application executable on a first electronic device. The system further includes a second application executable on a second electronic device in communication with the first electronic device. The second electronic device is configured to store a first electronic file. Subsequent to a user modifying the first electronic file, the second application is operable to automatically transfer the modified first electronic file, or a copy thereof, to the first electronic device. The system further includes a third application executable on a third electronic device in communication with the first electronic device. The third electronic device is configured to store a second electronic file. Subsequent to the user modifying the second electronic file, the third application is operable to automatically transfer the modified second electronic file, or a copy thereof, to the first electronic device. The first application is operable to automatically transfer the modified first electronic file or copy to the third electronic device, and automatically transfer the modified second electronic file or copy to the second electronic device.

('561, 3:42-61; '942, 3:50-4:2)
(-427 Reply at 5, -433 Reply at 5)

“Automatically” in the Specification (continued)

Referring now to FIG. 3, illustrated is functionality of an embodiment of the invention allowing a user (not shown) who owns or otherwise controls devices **210, 280** to automatically maintain file synchronization between at least devices **210, 280**, or any other user devices on which principles of the present invention are implemented.

('561, 7:47-52; '942, 7:60-65; -427 Reply at 5-6, -433 Reply at 5-6)

“Automatically” in the Specification (continued)

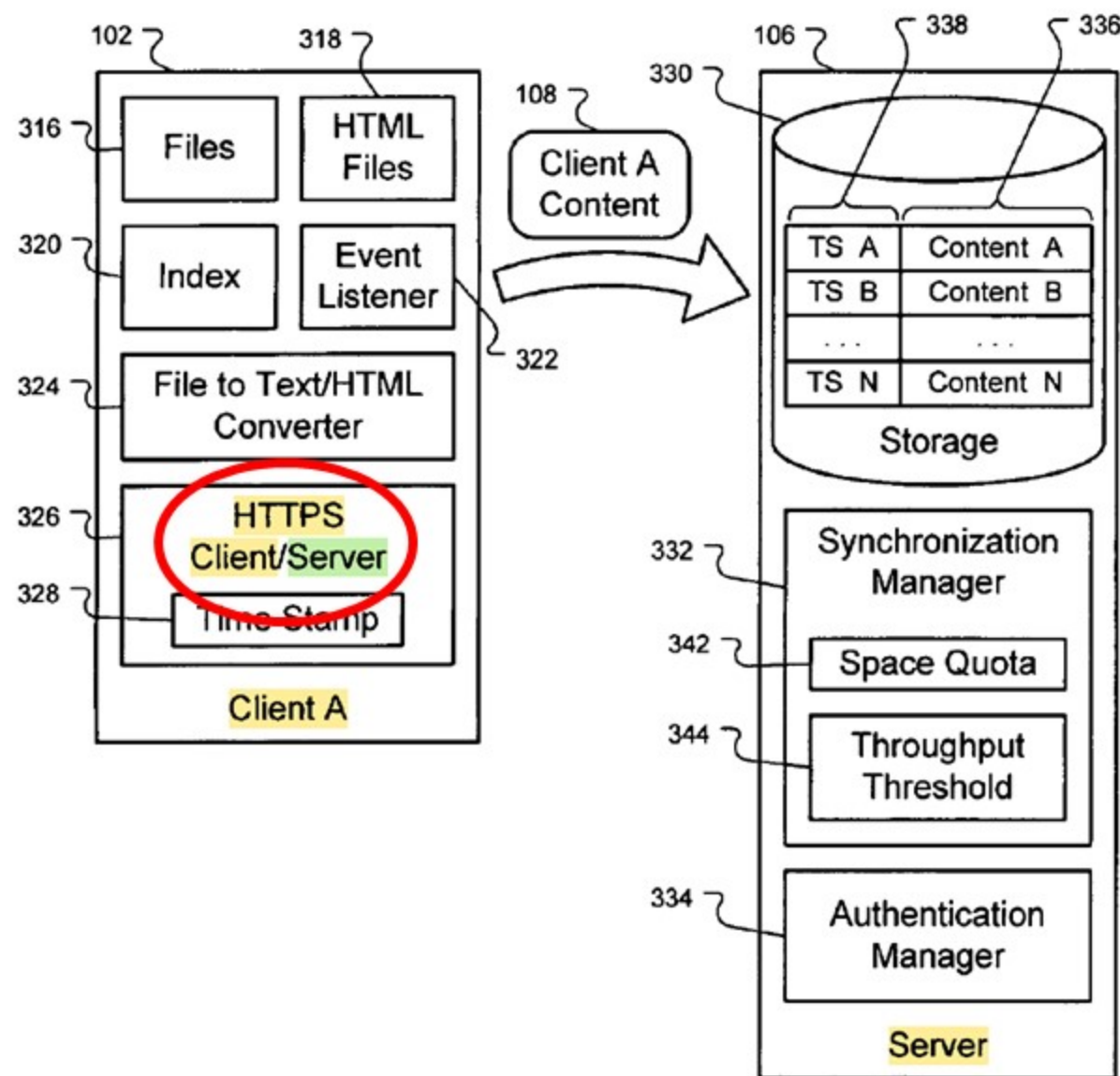
While a preferred embodiment of the invention has been illustrated and described, as noted above, many changes can be made without departing from the spirit and scope of the invention. For example, as an alternative to the approach described with reference to FIG. 3, wherein the transfer clients 310, 320 function to “push” modified or created files to the synch application 380, the synch application 380 may instead function to periodically “pull” or otherwise actively retrieve such files from the transfer clients 310, 320. Instead, the invention should be determined entirely by reference to the claims that follow.

Ground 1: Under PO's construction, Sigurdsson discloses and renders obvious the server "automatically" transferring files without client request

Sigurdsson's Server "Automatically" Transferring to Clients

[0068] An alternative embodiment of step 606 bypasses the second client and sends the data directly to the server, as shown by the dashed line pointing from the step 606 to the step 610. For example, referring to FIG. 4, the Client X Content 410 can be sent directly to the Server 106, thus bypassing the Client B 104. The Server 106 can then transmit the content to the remaining client peers, such as the Clients B and C.

Sigurdsson's Server "Automatically" Transferring to Clients



- Sigurdsson's clients have both HTTP "client" and HTTP "server" capabilities
- Obvious that Sigurdsson's server would include HTTP client/server capability in order to "transmit" files to client devices

(-427 Reply at 11-12; -433 Reply at 11-12; Sigurdsson, Fig. 3)

Ground 1: Motivation to combine Sigurdsson with Shappell

Motivation to Combine Sigurdsson with Shappell

- Analogous references for synchronizing files among multiple user devices over a network
- Sigurdsson does not detail what happens at a client device when it receives an updated version of a file
- Shappell teaches to “remove the local copy of the out-of-date file” and obtain an “updated version of the file” using “automatic replication” (Shappell, ¶ 81)
- Obvious to apply Shappell’s “automatic replication” so that Sigurdsson’s server automatically transfers the updated file to a receiving client (without a request from the client) to replace any outdated version of the file and prevent outdated versions of files from endlessly accumulating

Shappell Does Not Teach Away From Sigurdsson



“[A] reference does not teach away if it merely expresses a general preference for an alternative invention but does not criticize, discredit or otherwise discourage investigation into the invention claimed.”

Actavis Lab'ys UT, Inc., 65 F.4th 679, 692 (Fed. Cir. 2023) (citation and internal quotation marks omitted)

Shappell Does Not Teach Away From Sigurdsson

- Shappell teaches that the “***type of network . . . is not critical***” and is only “***preferably*** a peer-to-peer network” (Shappell, ¶ 40)
- Shappell suggests transferring “***indirectly***” between user machines (as in client/server architectures) (Shappell, ¶ 40)
- The “remote computer 49” in Shappell Fig. 1, with which user “device 20” may communicate, may be “***a server***” or “a peer device” (Shappell, ¶ 37)

Ground 1: Sigurdsson teaches client devices
associated with the same user

Sigurdsson: Clients Associated with the Same User

[0027] The system 100 includes a Client A 102, a Client B 104, and a Server 106. The Client A 102 and the Client B 104 represent computers which a user may employ to manage digital information, for example by saving or opening files, or accessing web pages. A user may access many computers including, for example, computers at home, computers at work, and mobile computers, such as personal digital assistants (PDAs) and cell phones.

Sigurdsson: Clients Associated with the Same User

Similarly, when the user employs the Client B 104 to save or open a file stored on the Client B 104, Client B Content 112 is extracted from the file stored on the Client B 104 and is sent to the Server 106, as indicated by arrow 114. For example, the Client B 104 may be the user's work computer. Because content from the Client A 102 (e.g., the user's home computer) has been transferred to the user's work computer, the user has access to files not previously resident on his work computer. Similarly, the user's home computer now has files previously resident only on the user's work computer. In the implementation shown in FIG. 1, the Server 106 serves as a conduit for sharing file content across the user's work and home computers.

Petitioners Do Not Rely on Shappell for the Same User



“A finding of obviousness . . . cannot be overcome by attacking references individually where the rejection is based upon the teachings of a combination of references.”

Bradium Techs. LLC v. Iancu, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (citation omitted).

(-427 Reply at 16; -433 Reply at 17)

Ground 2: Under PO's construction, Brown and Hesselink render obvious "automatically" transferring files without a client request

Brown with Hesselink Renders Obvious “Automatically” Transferring

- Hesselink teaches automatically updating connected computers when a file is updated at one location

[0183] As noted above, when data is updated, such as when a file is edited, for example, the system may be configured to automatically update all or some designated subset of computers on the network as soon as the update has been performed at one location. Computers that are offline at such a time will be automatically updated as soon as those computers go online again.

Optionally, all computers that are connected to the network, that share a file that the user is working on and that have a copy of that file in cache memory (or on a remote device) may be automatically updated concurrently with the updates of the device module file, each time an update is performed, when such computers are actively subscribed, as noted above. Computers that are not actively subscribed or are offline can be automatically updated when reconnecting with the network or initiating an active subscription.

Brown with Hesselink Renders Obvious “Automatically” Transferring

- A POSA “would have found it obvious in view of Hesselink to use Brown’s server to automatically push updates from the server to connected clients as soon as file updates occur.” (Balakrishnan Decl., EX1028, ¶ 902).
- Brown expressly teaches its server pushes changes to syncing clients – “changes that need to be ***pushed down to a syncing client.***” (Brown, 5:36-38.)
- PO improperly attacks the references individually and improperly argues against bodily incorporation.

(-427 Petition at 41-52; -433 Petition at 42-52; -427 Reply at 20, -433 Reply at 20)



“[T]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references.”

Bradium Techs. LLC v. Iancu, 923 F.3d 1032, 1050 (Fed. Cir. 2019) (citation omitted).

Ground 2: Motivation to combine Brown with Hesselink

Motivation to Combine Brown with Hesselink

- Analogous references for synchronizing files among multiple user devices over a network
- Hesselink expressly motivates use of its automatic updates:
 - ***“This functionality saves the user a great deal of time”*** (Hesselink, ¶ 189)
 - ***“there is no concern over having two different versions of a file, or concern that a user is not using the latest, most up to date version of a file”*** (Hesselink, ¶ 189)
 - ***“the user is ensured of having a completely up to date master copy of each shared data file”*** (Hesselink, ¶ 192)

(-427 Petition at 45-48; -433 Petition at 46-48)

Motivation to Combine Brown with Hesselink



“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”

Intel Corp. v. PACT XPP Schweiz, AG, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (citation omitted).

Hesselink Does Not Teach Away From Brown

- Hesselink does not criticize client/server architectures

As noted above, any of computers 72, 74 and 76 may be a desktop computer, laptop computer, personal digital assistant, network attached storage system, file server or other computing device that has CPU, storage and connectivity capabilities.

Ground 2: Brown suggests client devices
associated with the same user

BACKGROUND OF THE INVENTION

It is increasingly common for people to find themselves working on one machine at the office, a second machine at home, and having use of a portable computer when they need to have computer access while traveling.

Accordingly, a need remains for a way to maintain distributed files across multiple clients, maintaining currency at each client as changes are made, to address these and other problems associated with the prior art.

Brown: clients “associated with the same user”

The term client refers to various kinds of machines that can be connected to a network. Client 130 represents an ordinary desktop computer, as might be present at a user's place of work or home. Portable computer 135 represents a notebook or laptop computer, as a user might take with him to a hotel room on business. To the extent that the client software can be installed on other types of devices, these other devices can be clients. For example, a user might use a personal digital assistant (PDA) to synchronize with server 105, if the PDA can install the client SA.

Thus, multiple clients to the same account can upload data concurrently but the insert operations are interleaved.

Thank you