

**UNITED STATES DISTRICT COURT  
IN THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

DATA SCAPE LIMITED,

Plaintiff,

v.

DROPBOX, INC.,

Defendant.

C.A. No. 6:19-cv-00316

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

This is an action for patent infringement arising under the Patent Laws of the United States of America, 35 U.S.C. § 1 *et seq.* in which plaintiff Data Scape Limited (“Plaintiff,” “Data Scape”) makes the following allegations against defendant Dropbox, Inc. (“Defendant,” “Dropbox”):

**PARTIES**

1. Data Scape is a company organized under the laws of Ireland with its office located at Office 115, 4-5 Burton Hall Road, Sandyford, Dublin 18, Ireland.

2. On information and belief, Defendant Dropbox, Inc. is a Delaware corporation with a principal place of business at 333 Brannan Street, San Francisco, CA 94107. Dropbox may be served through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808.

**JURISDICTION AND VENUE**

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has original subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over the defendant in this action because the defendant has committed acts within the Western District of Texas giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over the defendant would not offend traditional notions of fair play and substantial justice. The defendant, directly and through subsidiaries or intermediaries, has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the asserted patents.

5. Venue is proper in this district under 28 U.S.C. § 1400(b). Upon information and belief, Dropbox is registered to do business in Texas. Upon information and belief, Dropbox has transacted business in the Western District of Texas and has committed acts of direct and indirect infringement in this District. Dropbox has a regular and established place of business in Western District of Texas. For example, Dropbox has an office in Austin, Texas where it employs sales and user operations teams.

### **COUNT I**

#### **INFRINGEMENT OF U.S. PATENT NO. 10,277,675**

6. Data Scape is the owner by assignment of United States Patent No. 10,277,675 (“the ’675 Patent”), entitled “Communication System And Its Method and Communication Apparatus And Its Method.” The ’675 Patent was duly and legally issued by the United States Patent and Trademark Office on July 17, 2018. A true and correct copy of the ’675 Patent is included as Exhibit A.

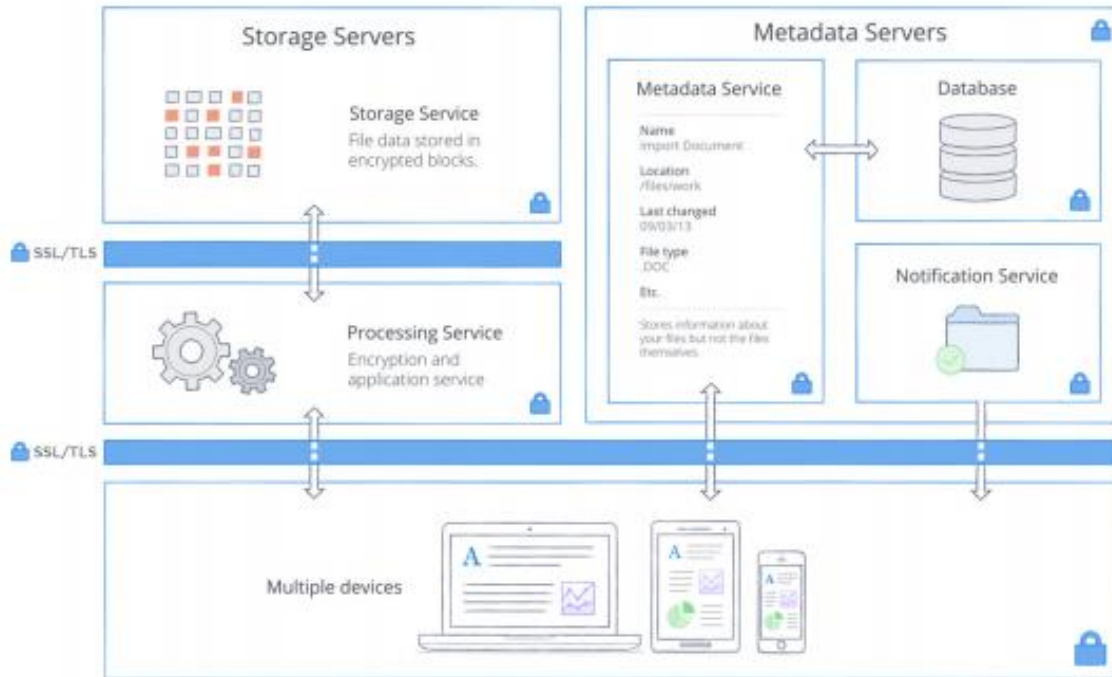
7. Dropbox has offered for sale, sold and/or imported into the United States products and services that infringe the ’675 Patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation,

Defendant's products and services, *e.g.*, Dropbox services, including Dropbox Business, and all versions and variations thereof since the issuance of the '675 Patent ("Accused Instrumentalities").

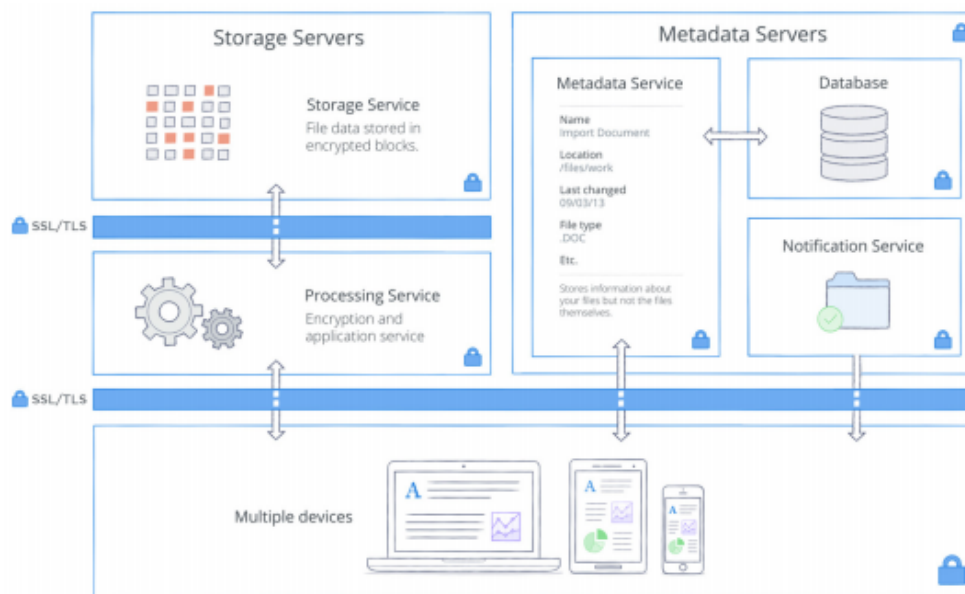
8. Dropbox has directly infringed and continues to infringe the '675 Patent, for example, by making, selling, offering for sale, and/or importing the Accused Instrumentalities, and through its own use and testing of the Accused Instrumentalities. Dropbox uses the Accused Instrumentalities for its own internal non-testing business purposes, while testing the Accused Instrumentalities, and while providing technical support and repair services for the Accused Instrumentalities to its customers.

9. For example, the Accused Instrumentalities infringe Claim 1 (as well as other claims) of the '675 Patent. One non-limiting example of the Accused Instrumentalities' infringement is presented below:

10. The Accused Instrumentalities include "[a] communication system including a first apparatus having a first hardware storage medium, and a second apparatus." For example, Dropbox Business communicates data stored on a second apparatus (*e.g.* Dropbox servers and associated services) to a first apparatus with a first storage medium (*e.g.* a user's device with the Dropbox desktop app installed). *See, e.g.*, "Dropbox Business Security" *available at* [https://cfl.dropboxstatic.com/static/business/resources/dfb\\_security\\_whitepaper-vflunodj.pdf](https://cfl.dropboxstatic.com/static/business/resources/dfb_security_whitepaper-vflunodj.pdf):



11. The Accused Instrumentalities include a second apparatus comprising: “a second hardware storage medium configured to store management information of data to be transferred to said first storage medium.” For example, Dropbox Business includes a storage medium (e.g., the various servers and associated services) configured to store management information (e.g., metadata and sync settings for Smart Sync) of data to be transferred to the user device. *See, e.g.*, “Dropbox Business Security” at 4-5:



Our architecture is comprised of the following services:

- **Processing service.** By design, Dropbox provides a unique security mechanism that goes beyond traditional encryption to protect user data. The Encryption and Application Services process files from the Dropbox applications by splitting each into blocks, encrypting each file block using a strong cipher, and synchronizing only blocks that have been modified between revisions. When a Dropbox application detects a new file or changes to an existing file, the application notifies the encryption and application services of the change, and new or modified file blocks are processed and transferred to the storage service. For detailed information on the encryption used by these services both in transit and at rest, please see the Encryption section below.
- **Storage service.** The actual contents of users' files are stored in encrypted blocks with this service. Prior to transmission, the Dropbox client splits files into file blocks in preparation for the block storage service. The storage service acts as a Content-Addressable Storage (CAS) system, with each individual encrypted file block retrieved based on its hash value.
- **Metadata service.** Certain basic information about user data (including file names and types), called metadata, is kept in its own discrete storage service and acts as an index for the data in users' accounts. Dropbox metadata is stored in a MySQL-backed database service, and is sharded and replicated as needed to meet performance and high availability requirements. Metadata includes basic account and user information, like email address, name, and device names. Metadata also includes basic information about files, including file names and types, that helps support features like version history, recovery, and sync.
- **Notification service.** This separate service is dedicated to monitoring whether or not any changes have been made to Dropbox accounts. No files or metadata are stored here or transferred. Each client establishes a long poll connection to the notification service and waits. When a change to any file in Dropbox takes place, the notification service signals a change to the relevant client(s) by closing the long poll connection. Closing the connection signals that the client must connect to the metadata service securely to synchronize any changes.

### File data storage

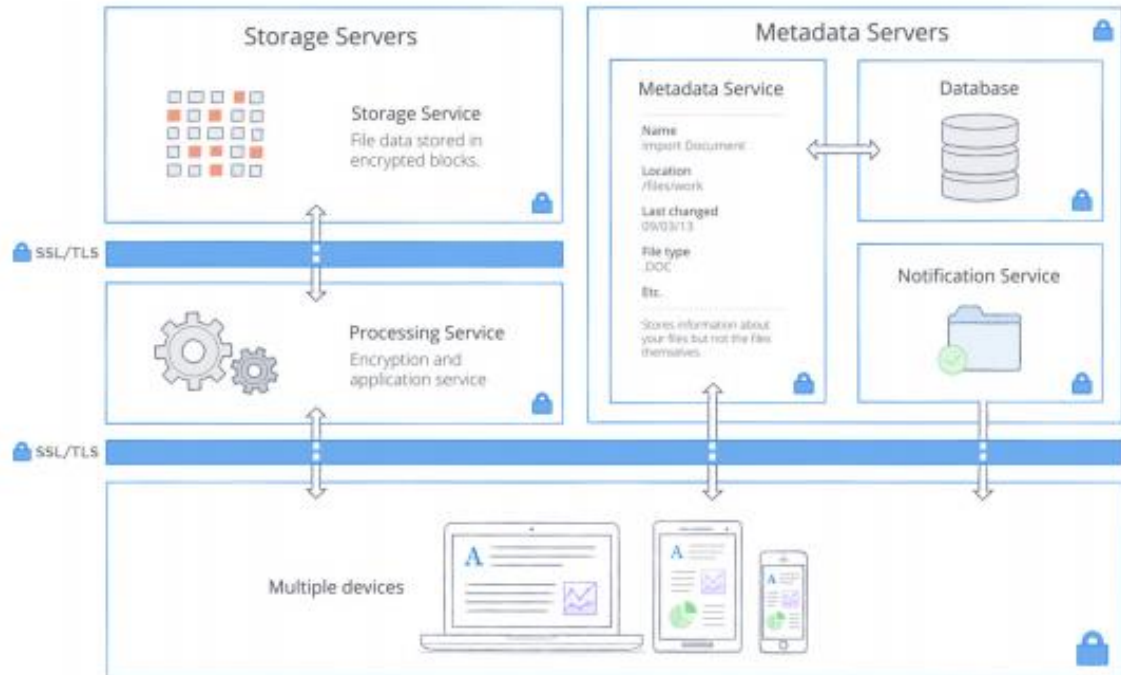
Dropbox stores metadata about files (such as the date and time a file was last changed) and the actual contents of files (file blocks). File metadata is stored on Dropbox servers. File content is stored in one of two systems: Amazon Web Services (AWS) or Magic Pocket, Dropbox's in-house storage system. Magic Pocket consists of both proprietary software and hardware and has been designed from the ground up to be reliable and secure. In both Magic Pocket and AWS, file blocks are encrypted at rest, and both systems meet high standards for reliability. For more details, please see the Reliability section below.

See also “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:

Smart Sync is a Dropbox feature that helps you save space on your hard drive. Access every file and folder in your Dropbox account from your computer, using virtually no hard drive space. Smart Sync is available for Dropbox Professional customers, and members of Dropbox Business teams. With Smart Sync, you can:

- Choose if individual files or folders are available online-only or locally on your computer
- Select a default sync setting for new files and folders that are shared with you

12. The Accused Instrumentalities further include a second apparatus comprising “a hardware interface configured to communicate data with said first apparatus.” For example, Dropbox Business provides a communicator (e.g., one that uses SSL/TLS protocols) configured to communicate with the first apparatus (e.g. a user device). *See, e.g.*, “Dropbox Business Security” at 4, 5:



### Sync

Dropbox offers industry-recognized best-in-class file sync. Our sync mechanisms ensure fast, responsive file transfers and enable anywhere access to data across devices. Dropbox is also resilient. In the event of a failed connection to the Dropbox service, a client will gracefully resume operation when a connection is reestablished. Files will only be updated on the local client if they have synchronized completely and successfully validated with the Dropbox service. Load balancing across multiple servers ensures redundancy and a consistent synchronization experience for the end user.

- **Delta sync.** Using this sync method, only modified portions of files are downloaded/uploaded. Dropbox stores each file in discrete, encrypted blocks and only updates the blocks that have changed.
- **Streaming sync.** Instead of waiting for a file upload to complete, streaming sync will begin downloading to a second device before files have finished uploading from the first device. This is automatically employed when separate computers are linked to the same Dropbox account or when different Dropbox accounts share a folder.
- **LAN sync.** When enabled, this feature downloads new and updated files from other computers on the same Local Area Network (LAN), saving time and bandwidth compared to downloading the files from Dropbox servers.

13. The Accused Instrumentalities further include a second apparatus comprising “a processor configured to: detect whether said first apparatus and said second apparatus are connected.” For example, Dropbox Business includes a detector configured to determine when the user device is connected (e.g. linked devices). *See, e.g.*, “Dropbox Business Security” at 3-5:

Dropbox users can access files and folders at any time from the desktop, web, and mobile clients, or through third-party applications connected to Dropbox. All of these clients connect to secure servers to provide access to files, allow file sharing with others, and update linked devices when files are added, changed, or deleted.

### Sync

Dropbox offers industry-recognized best-in-class file sync. Our sync mechanisms ensure fast, responsive file transfers and enable anywhere access to data across devices. Dropbox is also resilient. In the event of a failed connection to the Dropbox service, a client will gracefully resume operation when a connection is reestablished. Files will only be updated on the local client if they have synchronized completely and successfully validated with the Dropbox service. Load balancing across multiple servers ensures redundancy and a consistent synchronization experience for the end user.

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- **LAN sync.** When enabled, this feature downloads new and updated files from other computers on the same Local Area Network (LAN), saving time and bandwidth compared to downloading the files from Dropbox servers.

14. The Accused Instrumentalities further include a second apparatus comprising “a processor configured to: . . . select certain data to be transferred” [and] “edit said management information based on said selection without regard to the connection of said first apparatus and said second apparatus.” For example, Dropbox Business includes an editor configured to select certain data to be transferred and to edit the management information (e.g. metadata and sync settings for Smart Sync) based on the selection without regard to the connection of the user device. *See, e.g.*, “Smart Sync for Team Admins” available at <https://www.dropbox.com/help/desktop-web/smart-sync-admins>:

Smart Sync helps you and your team share content without worrying about overloading your hard drives. Smart Sync team settings are available to Dropbox Business team admins.

When your team starts using Smart Sync, content that’s already downloaded to team member devices remains downloaded. New content is automatically online-only unless you change this setting in the Admin Console. Team members can also chose a personal default for each of their connected computers.



The Smart Sync default applies to new content after the default is enabled and isn't retroactive. The Smart Sync default applies to:

- Joining a shared folder
- Linking a new device
- Adding new content from another computer

To set a default for your team:

1. Sign in to dropbox.com with your admin account.
2. Click **Admin Console**.
3. Click **Settings**.
4. Click **Smart Sync**.
5. Select a default for Smart Sync:
  - Synced locally
  - Online-only

*See also* “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:

Smart Sync is a Dropbox feature that helps you save space on your hard drive. Access every file and folder in your Dropbox account from your computer, using virtually no hard drive space. Smart Sync is available for Dropbox Professional customers, and members of Dropbox Business teams. With Smart Sync, you can:

- Choose if individual files or folders are available online-only or locally on your computer
- Select a default sync setting for new files and folders that are shared with you

15. The Accused Instrumentalities further include a second apparatus comprising “a processor configured to: . . . compare said management information edited by said processor with management information of data stored in said first storage

medium.” For example, Dropbox Business includes a controller configured to compare the management information edited by the editor with management information of data stored in the user device (e.g. through the Processing Service, the Metadata Service, or the Notification Service), and transmits data in the various servers of Dropbox Business based on the result of the comparison. *See, e.g.*, “Dropbox Business Security” at 3-5:

Dropbox users can access files and folders at any time from the desktop, web, and mobile clients, or through third-party applications connected to Dropbox. All of these clients connect to secure servers to provide access to files, allow file sharing with others, and update linked devices when files are added, changed, or deleted.

#### Sync

Dropbox offers industry-recognized best-in-class file sync. Our sync mechanisms ensure fast, responsive file transfers and enable anywhere access to data across devices. Dropbox is also resilient. In the event of a failed connection to the Dropbox service, a client will gracefully resume operation when a connection is reestablished. Files will only be updated on the local client if they have synchronized completely and successfully validated with the Dropbox service. Load balancing across multiple servers ensures redundancy and a consistent synchronization experience for the end user.

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- **LAN sync.** When enabled, this feature downloads new and updated files from other computers on the same Local Area Network (LAN), saving time and bandwidth compared to downloading the files from Dropbox servers.

Our architecture is comprised of the following services:

- **Processing service.** By design, Dropbox provides a unique security mechanism that goes beyond traditional encryption to protect user data. The Encryption and Application Services process files from the Dropbox applications by splitting each into blocks, encrypting each file block using a strong cipher, and synchronizing only blocks that have been modified between revisions. When a Dropbox application detects a new file or changes to an existing file, the application notifies the encryption and application services of the change, and new or modified file blocks are processed and transferred to the storage service. For detailed information on the encryption used by these services both in transit and at rest, please see the Encryption section below.
- **Storage service.** The actual contents of users' files are stored in encrypted blocks with this service. Prior to transmission, the Dropbox client splits files into file blocks in preparation for the block storage service. The storage service acts as a Content-Addressable Storage (CAS) system, with each individual encrypted file block retrieved based on its hash value.
- **Metadata service.** Certain basic information about user data (including file names and types), called metadata, is kept in its own discrete storage service and acts as an index for the data in users' accounts. Dropbox metadata is stored in a MySQL-backed database service, and is sharded and replicated as needed to meet performance and high availability requirements. Metadata includes basic account and user information, like email address, name, and device names. Metadata also includes basic information about files, including file names and types, that helps support features like version history, recovery, and sync.
- **Notification service.** This separate service is dedicated to monitoring whether or not any changes have been made to Dropbox accounts. No files or metadata are stored here or transferred. Each client establishes a long poll connection to the notification service and waits. When a change to any file in Dropbox takes place, the notification service signals a change to the relevant client(s) by closing the long poll connection. Closing the connection signals that the client must connect to the metadata service securely to synchronize any changes.

See also “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:

With Smart Sync, content on your computer is available as either online-only, local, or in mixed state folders.



### **Online-only content**

Online-only content appears in the Dropbox folder on your computer, but doesn't use the full amount of space that the file otherwise would. You can see the file, but the content isn't fully downloaded until you need it. Only information about the file, such as the file name, location, and date the file was updated, is downloaded.



### **Local content**

Local content is downloaded and saved on the hard drive of your computer. You can directly edit these files from applications on your computer. This content is still backed up to Dropbox as well.



### **Mixed state folders**

Mixed state folders contain both local and online-only content.

16. The Accused Instrumentalities further include a second apparatus comprising “a processor configured to: . . . transmit the selected data stored in said second apparatus to said first apparatus via said hardware interface based on said management information edited by said processor when said processor detects that said first apparatus and said second apparatus are connected based upon a result of the comparison.” For example, Dropbox Business includes a controller configured to control transfer of the

selected data stored in the Storage Servers to the user device when the user device is connected. *See, e.g.*, “Dropbox Business Security” at 3-5:

Dropbox users can access files and folders at any time from the desktop, web, and mobile clients, or through third-party applications connected to Dropbox. All of these clients connect to secure servers to provide access to files, allow file sharing with others, and update linked devices when files are added, changed, or deleted.

Our architecture is comprised of the following services:

- **Processing service.** By design, Dropbox provides a unique security mechanism that goes beyond traditional encryption to protect user data. The Encryption and Application Services process files from the Dropbox applications by splitting each into blocks, encrypting each file block using a strong cipher, and synchronizing only blocks that have been modified between revisions. When a Dropbox application detects a new file or changes to an existing file, the application notifies the encryption and application services of the change, and new or modified file blocks are processed and transferred to the storage service. For detailed information on the encryption used by these services both in transit and at rest, please see the Encryption section below.
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- **Metadata service.** Certain basic information about user data (including file names and types), called metadata, is kept in its own discrete storage service and acts as an index for the data in users' accounts. Dropbox metadata is stored in a MySQL-backed database service, and is sharded and replicated as needed to meet performance and high availability requirements. Metadata includes basic account and user information, like email address, name, and device names. Metadata also includes basic information about files, including file names and types, that helps support features like version history, recovery, and sync.
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### **Local content**

Local content is downloaded and saved on the hard drive of your computer. You can directly edit these files from applications on your computer. This content is still backed up to Dropbox as well.



### **Mixed state folders**

Mixed state folders contain both local and online-only content.

17. Dropbox has had knowledge of the '675 Patent and its infringement since at least the filing of the original Complaint in this action, or shortly thereafter, including by way of this lawsuit. By the time of trial, Dropbox will have known and intended (since receiving such notice) that its continued actions would actively induce and contribute to the infringement of the claims of the '675 Patent.

18. Dropbox's affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and

customary way to infringe the claims of the '675 Patent. Use of the Accused Instrumentalities in their ordinary and customary fashion results in infringement of the claims of the '675 Patent.

19. For example, Dropbox explains to customers the benefits of using the Accused Instrumentalities, such as by touting their advantages of saving space on hard drives and maintaining access to stored files without using hard drive space in the case of the Dropbox Business feature named "Smart Sync.". Dropbox also induces its customers to use the Accused Instrumentalities to infringe other claims of the '675 Patent. Dropbox specifically intended and was aware that the normal and customary use of the Accused Instrumentalities on compatible systems would infringe the '675 Patent. Dropbox performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '675 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Dropbox engaged in such inducement to promote the sales of the Accused Instrumentalities, *e.g.*, through its user manuals, product support, marketing materials, demonstrations, installation support, and training materials to actively induce the users of the accused products to infringe the '675 Patent. Accordingly, Dropbox has induced and continues to induce end users of the accused products to use the accused products in their ordinary and customary way with compatible systems to make and/or use systems infringing the '675 Patent, knowing that such use of the Accused Instrumentalities with compatible systems will result in infringement of the '675 Patent. Accordingly, Dropbox has been (since at least as of filing of the original complaint), and currently is, inducing infringement of the '675 Patent, in violation of 35 U.S.C. § 271(b).

20. Dropbox has also infringed, and continues to infringe, claims of the '675 Patent by offering to commercially distribute, commercially distributing, making, and/or importing the Accused Instrumentalities, which are used in practicing the process, or using the systems, of the '675 Patent, and constitute a material part of the invention. Defendant knows the components in the Accused Instrumentalities to be especially made or especially adapted for use in infringement of the '675 Patent, not a staple article, and not a commodity of commerce suitable for substantial noninfringing use. For example, the ordinary way of using the Accused Instrumentalities infringes the patent claims, and as such, is especially adapted for use in infringement. Accordingly, Dropbox has been, and currently is, contributorily infringing the '675 Patent, in violation of 35 U.S.C. § 271(c).

21. For similar reasons, Dropbox also infringes the '675 Patent by supplying or causing to be supplied in or from the United States all or a substantial portion of the components of the Accused Instrumentalities, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the '675 Patent if such combination occurred within the United States. For example, Dropbox supplies or causes to be supplied in or from the United States all or a substantial portion of the hardware (e.g., storage and metadata servers) and software (e.g., Dropbox Business software) components of the Accused Instrumentalities in such a manner as to actively induce the combination of such components (e.g., by instructing users to rely on multiple servers that save redundant copies of metadata and content in a typical Dropbox Business system) outside of the United States.

22. Dropbox also indirectly infringes the '675 Patent by supplying or causing to be supplied in or from the United States components of the Accused Instrumentalities that are especially made or especially adapted for use in infringing the '675 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use, and where such components are uncombined in whole or in part, knowing that such components are so made or adapted and intending that such components are combined outside of the United States in a manner that would infringe the '675 Patent if such combination occurred within the United States. Because the Accused Instrumentalities are designed to operate as the claimed system and apparatus, the Accused Instrumentalities have no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental. For example, Dropbox supplies or causes to be supplied in or from the United States all or a substantial portion of the hardware (e.g., separate Storage servers and Metadata servers) and software (e.g., Dropbox Business software) components that are especially made or especially adapted for use in the Accused Instrumentalities, where such hardware and software components are not staple articles or commodities of commerce suitable for substantial noninfringing use, knowing that such components are so made or adapted and intending that such components are combined outside of the United States, as evidenced by Dropbox's own actions or instructions to users, and enabling and configuring the infringing functionalities of the Accused Instrumentalities.

23. As a result of Defendant's infringement of the '675 Patent, Plaintiff Data Scape is entitled to monetary damages in an amount adequate to compensate for Dropbox's



infringement, but in no event less than a reasonable royalty for the use made of the invention by Dropbox, together with interest and costs as fixed by the Court.

**COUNT II**

**INFRINGEMENT OF U.S. PATENT NO. 10,027,751**

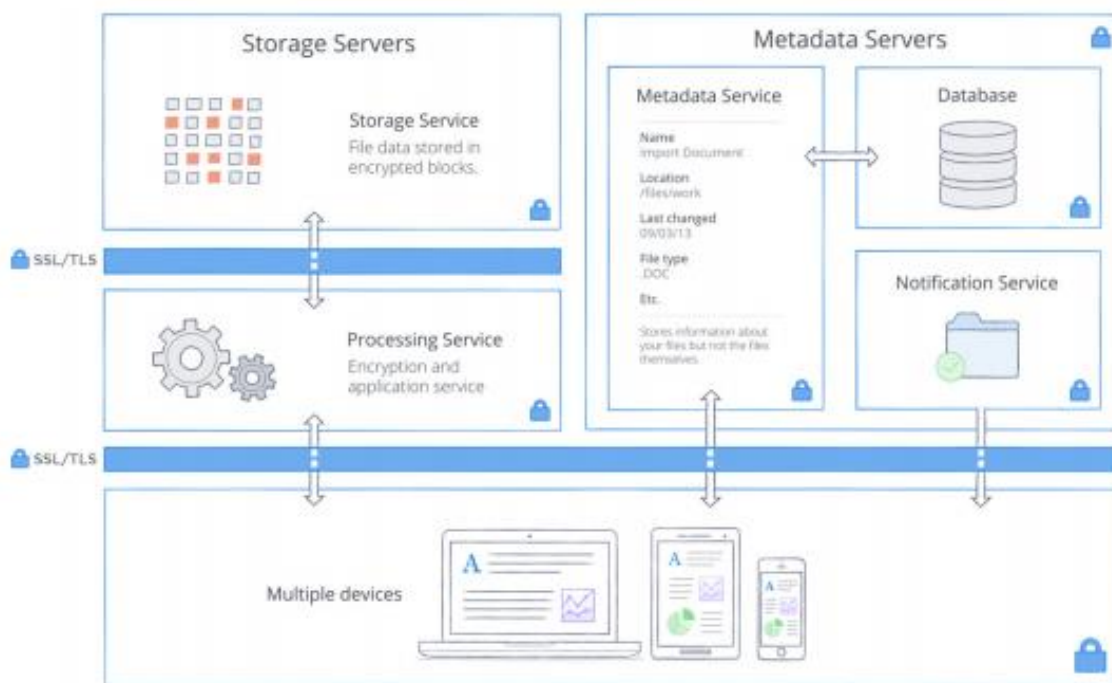
24. Data Scape is the owner by assignment of United States Patent No. 10,027,751 (“the ’751 Patent”), entitled “Communication System And Its Method and Communication Apparatus And Its Method.” The ’751 Patent was duly and legally issued by the United States Patent and Trademark Office on July 17, 2018. A true and correct copy of the ’751 Patent is included as Exhibit B.

25. Dropbox has offered for sale, sold and/or imported into the United States products and services that infringe the ’751 Patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Defendant’s products and services, *e.g.*, Dropbox services, including Dropbox Business, and all versions and variations thereof since the issuance of the ’751 Patent (“Accused Instrumentalities”).

26. Dropbox has directly infringed and continues to infringe the ’751 Patent, for example, by making, selling, offering for sale, and/or importing the Accused Instrumentalities, and through its own use and testing of the Accused Instrumentalities. Dropbox uses the Accused Instrumentalities for its own internal non-testing business purposes, while testing the Accused Instrumentalities, and while providing technical support and repair services for the Accused Instrumentalities to its customers.

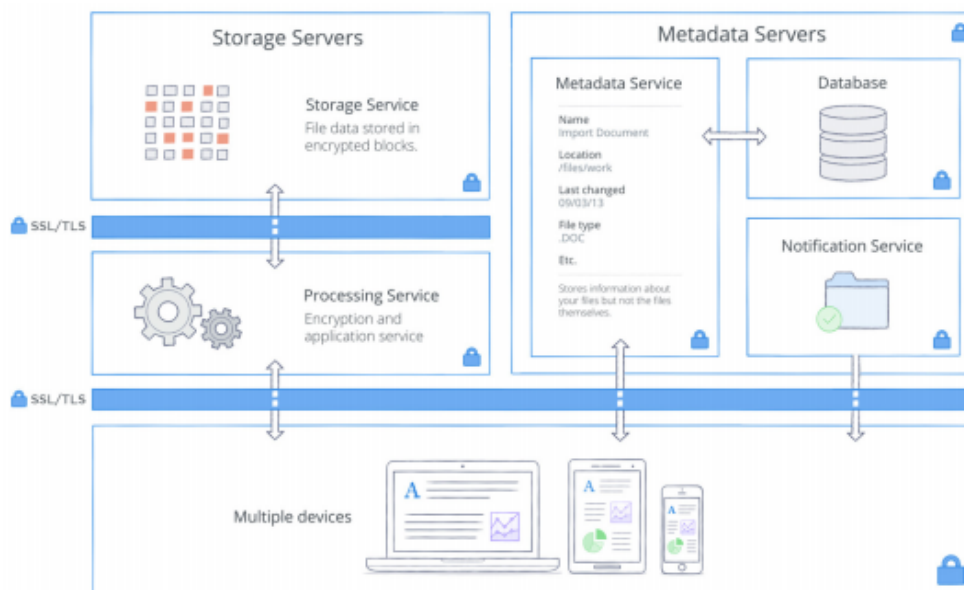
27. For example, the Accused Instrumentalities infringe Claim 1 (as well as other claims) of the '751 Patent. One non-limiting example of the Accused Instrumentalities' infringement is presented below:

28. The Accused Instrumentalities include “[a] communication apparatus configured to transmit data to an apparatus.” For example, Dropbox Business communicates data stored on a one device (e.g. Dropbox servers and associated services) to another device (e.g. a user’s device with the Dropbox desktop app installed). *See, e.g.*, “Dropbox Business Security” available at [https://cfl.dropboxstatic.com/static/business/resources/dfb\\_security\\_whitepaper-vflunodj.pdf](https://cfl.dropboxstatic.com/static/business/resources/dfb_security_whitepaper-vflunodj.pdf):



29. The Accused Instrumentalities include a communication apparatus comprising: “a hardware storage medium configured to store management information of data to be transferred to the apparatus.” For example, Dropbox Business includes a storage

medium (e.g., the various servers and associated services) configured to store management information (e.g., metadata and sync settings for Smart Sync) of data to be transferred to the user device. *See, e.g.,* “Dropbox Business Security” at 4-5:



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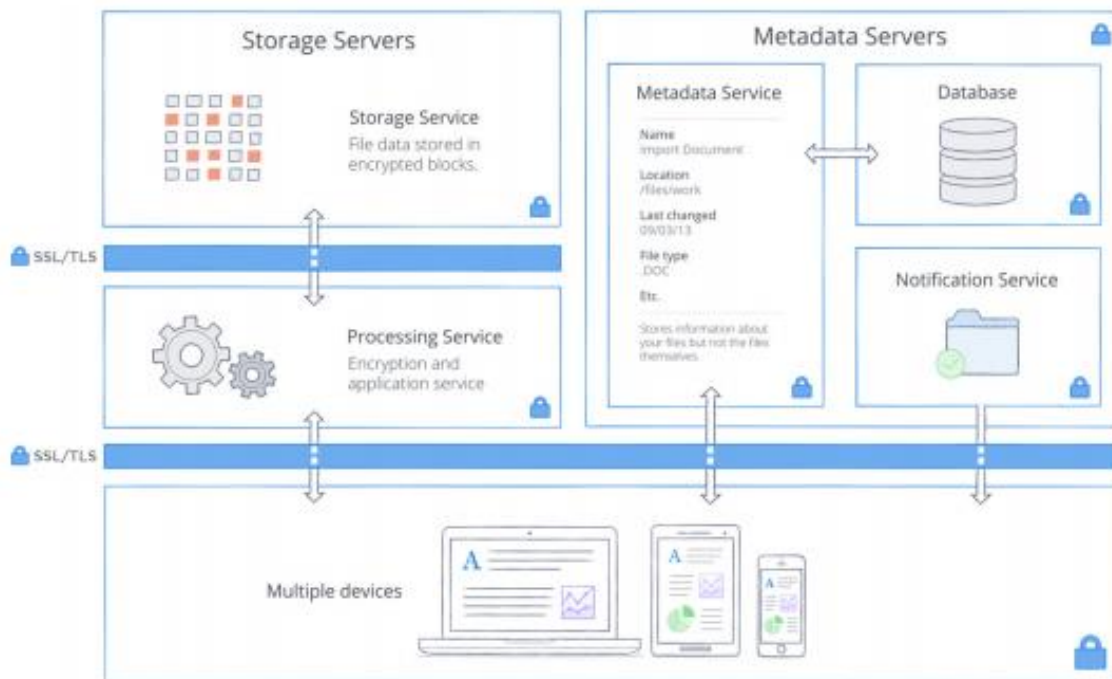
Dropbox stores metadata about files (such as the date and time a file was last changed) and the actual contents of files (file blocks). File metadata is stored on Dropbox servers. File content is stored in one of two systems: Amazon Web Services (AWS) or Magic Pocket, Dropbox's in-house storage system. Magic Pocket consists of both proprietary software and hardware and has been designed from the ground up to be reliable and secure. In both Magic Pocket and AWS, file blocks are encrypted at rest, and both systems meet high standards for reliability. For more details, please see the Reliability section below.

See also “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:

Smart Sync is a Dropbox feature that helps you save space on your hard drive. Access every file and folder in your Dropbox account from your computer, using virtually no hard drive space. Smart Sync is available for Dropbox Professional customers, and members of Dropbox Business teams. With Smart Sync, you can:

- Choose if individual files or folders are available online-only or locally on your computer
- Select a default sync setting for new files and folders that are shared with you

30. The Accused Instrumentalities further include a communication apparatus comprising “a communicator configured to communicate data with the apparatus.” For example, Dropbox Business provides a communicator (e.g., one that uses SSL/TLS protocols) configured to communicate with the first apparatus (e.g. a user device). *See, e.g.*, “Dropbox Business Security” at 4, 5:



### Sync

Dropbox offers industry-recognized best-in-class file sync. Our sync mechanisms ensure fast, responsive file transfers and enable anywhere access to data across devices. Dropbox is also resilient. In the event of a failed connection to the Dropbox service, a client will gracefully resume operation when a connection is reestablished. Files will only be updated on the local client if they have synchronized completely and successfully validated with the Dropbox service. Load balancing across multiple servers ensures redundancy and a consistent synchronization experience for the end user.

- **Delta sync.** Using this sync method, only modified portions of files are downloaded/uploaded. Dropbox stores each file in discrete, encrypted blocks and only updates the blocks that have changed.
- **Streaming sync.** Instead of waiting for a file upload to complete, streaming sync will begin downloading to a second device before files have finished uploading from the first device. This is automatically employed when separate computers are linked to the same Dropbox account or when different Dropbox accounts share a folder.
- **LAN sync.** When enabled, this feature downloads new and updated files from other computers on the same Local Area Network (LAN), saving time and bandwidth compared to downloading the files from Dropbox servers.

31. The Accused Instrumentalities further include a communication apparatus comprising “a detector configured to detect whether the communication apparatus and the apparatus are connected.” For example, Dropbox Business includes a detector configured to determine when the user device is connected (e.g. linked devices). *See, e.g.*, “Dropbox Business Security” at 3-5:

Dropbox users can access files and folders at any time from the desktop, web, and mobile clients, or through third-party applications connected to Dropbox. All of these clients connect to secure servers to provide access to files, allow file sharing with others, and update linked devices when files are added, changed, or deleted.

### Sync

Dropbox offers industry-recognized best-in-class file sync. Our sync mechanisms ensure fast, responsive file transfers and enable anywhere access to data across devices. Dropbox is also resilient. In the event of a failed connection to the Dropbox service, a client will gracefully resume operation when a connection is reestablished. Files will only be updated on the local client if they have synchronized completely and successfully validated with the Dropbox service. Load balancing across multiple servers ensures redundancy and a consistent synchronization experience for the end user.

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- **Streaming sync.** Instead of waiting for a file upload to complete, streaming sync will begin downloading to a second device before files have finished uploading from the first device. This is automatically employed when separate computers are linked to the same Dropbox account or when different Dropbox accounts share a folder.
- **LAN sync.** When enabled, this feature downloads new and updated files from other computers on the same Local Area Network (LAN), saving time and bandwidth compared to downloading the files from Dropbox servers.

32. The Accused Instrumentalities further include a communication apparatus comprising “an editor configured to select certain data to be transferred and to edit the management information based on the selection without regard to the connection of the communication apparatus and the apparatus.” For example, Dropbox Business includes an editor configured to select certain data to be transferred and to edit the management information (e.g. metadata and sync settings for Smart Sync) based on the selection without regard to the connection of the user device. *See, e.g.*, “Smart Sync for Team Admins” available at <https://www.dropbox.com/help/desktop-web/smart-sync-admins>:

Smart Sync helps you and your team share content without worrying about overloading your hard drives. Smart Sync team settings are available to Dropbox Business team admins.

When your team starts using Smart Sync, content that’s already downloaded to team member devices remains downloaded. New content is automatically online-only unless you change this setting in the Admin Console. Team members can also chose a personal default for each of their connected computers.

The Smart Sync default applies to new content after the default is enabled and isn't retroactive. The Smart Sync default applies to:

- Joining a shared folder
- Linking a new device
- Adding new content from another computer

To set a default for your team:

1. Sign in to dropbox.com with your admin account.
2. Click **Admin Console**.
3. Click **Settings**.
4. Click **Smart Sync**.
5. Select a default for Smart Sync:
  - Synced locally
  - Online-only

*See also* “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:

Smart Sync is a Dropbox feature that helps you save space on your hard drive. Access every file and folder in your Dropbox account from your computer, using virtually no hard drive space. Smart Sync is available for Dropbox Professional customers, and members of Dropbox Business teams. With Smart Sync, you can:

- Choose if individual files or folders are available online-only or locally on your computer
- Select a default sync setting for new files and folders that are shared with you

33. The Accused Instrumentalities further include a communication apparatus comprising “a controller configured to control transfer of the selected data stored in the communication apparatus to the apparatus via the communicator based on the management

information edited by the editor when the detector detects that the communication apparatus and the apparatus are connected.” For example, Dropbox Business includes a controller configured to control transfer of the selected data stored in the Storage Servers to the user device when the user device is connected. *See, e.g.*, “Dropbox Business Security” at 3-5:

Dropbox users can access files and folders at any time from the desktop, web, and mobile clients, or through third-party applications connected to Dropbox. All of these clients connect to secure servers to provide access to files, allow file sharing with others, and update linked devices when files are added, changed, or deleted.

Our architecture is comprised of the following services:

- **Processing service.** By design, Dropbox provides a unique security mechanism that goes beyond traditional encryption to protect user data. The Encryption and Application Services process files from the Dropbox applications by splitting each into blocks, encrypting each file block using a strong cipher, and synchronizing only blocks that have been modified between revisions. When a Dropbox application detects a new file or changes to an existing file, the application notifies the encryption and application services of the change, and new or modified file blocks are processed and transferred to the storage service. For detailed information on the encryption used by these services both in transit and at rest, please see the Encryption section below.
- **Storage service.** The actual contents of users' files are stored in encrypted blocks with this service. Prior to transmission, the Dropbox client splits files into file blocks in preparation for the block storage service. The storage service acts as a Content-Addressable Storage (CAS) system, with each individual encrypted file block retrieved based on its hash value.
- **Metadata service.** Certain basic information about user data (including file names and types), called metadata, is kept in its own discrete storage service and acts as an index for the data in users' accounts. Dropbox metadata is stored in a MySQL-backed database service, and is sharded and replicated as needed to meet performance and high availability requirements. Metadata includes basic account and user information, like email address, name, and device names. Metadata also includes basic information about files, including file names and types, that helps support features like version history, recovery, and sync.
- **Notification service.** This separate service is dedicated to monitoring whether or not any changes have been made to Dropbox accounts. No files or metadata are stored here or transferred. Each client establishes a long poll connection to the notification service and waits. When a change to any file in Dropbox takes place, the notification service signals a change to the relevant client(s) by closing the long poll connection. Closing the connection signals that the client must connect to the metadata service securely to synchronize any changes.

*See also* “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:



With Smart Sync, content on your computer is available as either online-only, local, or in mixed state folders.



### **Online-only content**

Online-only content appears in the Dropbox folder on your computer, but doesn't use the full amount of space that the file otherwise would. You can see the file, but the content isn't fully downloaded until you need it. Only information about the file, such as the file name, location, and date the file was updated, is downloaded.



### **Local content**

Local content is downloaded and saved on the hard drive of your computer. You can directly edit these files from applications on your computer. This content is still backed up to Dropbox as well.



### **Mixed state folders**

Mixed state folders contain both local and online-only content.

34. The Accused Instrumentalities further include a communication apparatus with a controller, “wherein the controller is configured to compare the management information edited by the editor with management information of data stored in the apparatus.” For example, Dropbox Business includes a controller configured to compare the management information edited by the editor with management information of data stored in the user device (e.g. through the Processing Service, the Metadata Service, or the Notification Service), and transmits data in the various servers of Dropbox Business based on the result of the comparison. *See, e.g.*, “Dropbox Business Security” at 3-5:

Dropbox users can access files and folders at any time from the desktop, web, and mobile clients, or through third-party applications connected to Dropbox. All of these clients connect to secure servers to provide access to files, allow file sharing with others, and update linked devices when files are added, changed, or deleted.

## Sync

Dropbox offers industry-recognized best-in-class file sync. Our sync mechanisms ensure fast, responsive file transfers and enable anywhere access to data across devices. Dropbox is also resilient. In the event of a failed connection to the Dropbox service, a client will gracefully resume operation when a connection is reestablished. Files will only be updated on the local client if they have synchronized completely and successfully validated with the Dropbox service. Load balancing across multiple servers ensures redundancy and a consistent synchronization experience for the end user.

- **Delta sync.** Using this sync method, only modified portions of files are downloaded/uploaded. Dropbox stores each file in discrete, encrypted blocks and only updates the blocks that have changed.
- **Streaming sync.** Instead of waiting for a file upload to complete, streaming sync will begin downloading to a second device before files have finished uploading from the first device. This is automatically employed when separate computers are linked to the same Dropbox account or when different Dropbox accounts share a folder.
- **LAN sync.** When enabled, this feature downloads new and updated files from other computers on the same Local Area Network (LAN), saving time and bandwidth compared to downloading the files from Dropbox servers.

Our architecture is comprised of the following services:

- **Processing service.** By design, Dropbox provides a unique security mechanism that goes beyond traditional encryption to protect user data. The Encryption and Application Services process files from the Dropbox applications by splitting each into blocks, encrypting each file block using a strong cipher, and synchronizing only blocks that have been modified between revisions. When a Dropbox application detects a new file or changes to an existing file, the application notifies the encryption and application services of the change, and new or modified file blocks are processed and transferred to the storage service. For detailed information on the encryption used by these services both in transit and at rest, please see the [Encryption](#) section below.
- **Storage service.** The actual contents of users' files are stored in encrypted blocks with this service. Prior to transmission, the Dropbox client splits files into file blocks in preparation for the block storage service. The storage service acts as a Content-Addressable Storage (CAS) system, with each individual encrypted file block retrieved based on its hash value.
- **Metadata service.** Certain basic information about user data (including file names and types), called metadata, is kept in its own discrete storage service and acts as an index for the data in users' accounts. Dropbox metadata is stored in a MySQL-backed database service, and is sharded and replicated as needed to meet performance and high availability requirements. Metadata includes basic account and user information, like email address, name, and device names. Metadata also includes basic information about files, including file names and types, that helps support features like version history, recovery, and sync.
- **Notification service.** This separate service is dedicated to monitoring whether or not any changes have been made to Dropbox accounts. No files or metadata are stored here or transferred. Each client establishes a long poll connection to the notification service and waits. When a change to any file in Dropbox takes place, the notification service signals a change to the relevant client(s) by closing the long poll connection. Closing the connection signals that the client must connect to the metadata service securely to synchronize any changes.

See also “Smart Sync” available at <https://www.dropbox.com/help/desktop-web/smart-sync>:

With Smart Sync, content on your computer is available as either online-only, local, or in mixed state folders.



## Online-only content

Online-only content appears in the Dropbox folder on your computer, but doesn't use the full amount of space that the file otherwise would. You can see the file, but the content isn't fully downloaded until you need it. Only information about the file, such as the file name, location, and date the file was updated, is downloaded.



## Local content

Local content is downloaded and saved on the hard drive of your computer. You can directly edit these files from applications on your computer. This content is still backed up to Dropbox as well.



## Mixed state folders

Mixed state folders contain both local and online-only content.

35. The Accused Instrumentalities further include a communication apparatus with a controller, “wherein the controller is configured to . . . determine a size of the selected data in the communication apparatus” and “transmit data in the communication apparatus based on result of the comparison and the determination.” For example, the Accused Instrumentalities keep track of the amount of space available for data transmission and will cease transferring data if storage limitations are reached on either the server or the user device. *See, e.g., “I’m having trouble with my storage space limit”*, available at <https://help.dropbox.com/space/over-storage-limit#full>:

## What do I do if my Dropbox account is full?

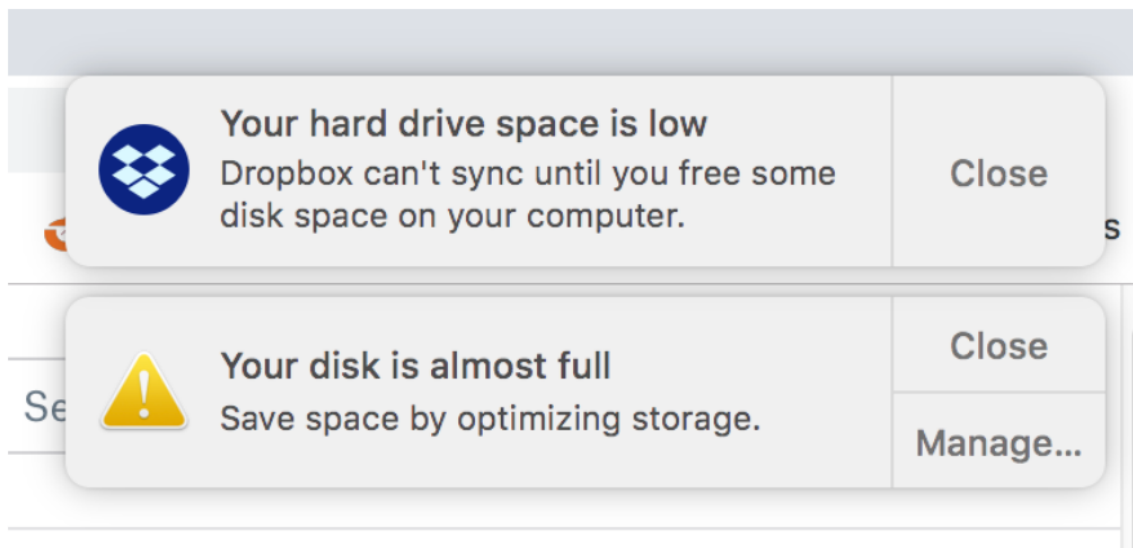
If your Dropbox account is over your storage space quota then file syncing will stop. Files won't be removed, and syncing will resume when you bring your account under your quota again.

To get your account under your storage space quota you can:

- [Upgrade your account](#)
- [Increase your storage quota using referrals bonuses or other promotions](#)
- [Leave any shared folders that put you over quota](#)
- [Remove files from your Dropbox](#)

See also “*Won't Sync Due to Space*”, available at

<https://www.dropboxforum.com/t5/Syncing-and-uploads/Won-t-Sync-Due-to-Space/td-p/337206>:



36. Dropbox has had knowledge of the '751 Patent and its infringement since at least the filing of the original Complaint in this action, or shortly thereafter, including by way of this lawsuit. By the time of trial, Dropbox will have known and intended (since

receiving such notice) that its continued actions would actively induce and contribute to the infringement of the claims of the '751 Patent.

37. Dropbox's affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way to infringe the claims of the '751 Patent. Use of the Accused Instrumentalities in their ordinary and customary fashion results in infringement of the claims of the '751 Patent.

38. For example, Dropbox explains to customers the benefits of using the Accused Instrumentalities, such as by touting their advantages of saving space on hard drives and maintaining access to stored files without using hard drive space in the case of the Dropbox Business feature named "Smart Sync.". Dropbox also induces its customers to use the Accused Instrumentalities to infringe other claims of the '751 Patent. Dropbox specifically intended and was aware that the normal and customary use of the Accused Instrumentalities on compatible systems would infringe the '751 Patent. Dropbox performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '751 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Dropbox engaged in such inducement to promote the sales of the Accused Instrumentalities, *e.g.*, through its user manuals, product support, marketing materials, demonstrations, installation support, and training materials to actively induce the users of the accused products to infringe the '751 Patent. Accordingly, Dropbox has induced and continues to induce end users of the accused products to use the accused

products in their ordinary and customary way with compatible systems to make and/or use systems infringing the '751 Patent, knowing that such use of the Accused Instrumentalities with compatible systems will result in infringement of the '751 Patent. Accordingly, Dropbox has been (since at least as of filing of the original complaint), and currently is, inducing infringement of the '751 Patent, in violation of 35 U.S.C. § 271(b).

39. Dropbox has also infringed, and continues to infringe, claims of the '751 Patent by offering to commercially distribute, commercially distributing, making, and/or importing the Accused Instrumentalities, which are used in practicing the process, or using the systems, of the '751 Patent, and constitute a material part of the invention. Defendant knows the components in the Accused Instrumentalities to be especially made or especially adapted for use in infringement of the '751 Patent, not a staple article, and not a commodity of commerce suitable for substantial noninfringing use. For example, the ordinary way of using the Accused Instrumentalities infringes the patent claims, and as such, is especially adapted for use in infringement. Accordingly, Dropbox has been, and currently is, contributorily infringing the '751 Patent, in violation of 35 U.S.C. § 271(c).

40. For similar reasons, Dropbox also infringes the '751 Patent by supplying or causing to be supplied in or from the United States all or a substantial portion of the components of the Accused Instrumentalities, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the '751 Patent if such combination occurred within the United States. For example, Dropbox supplies or causes to be supplied in or from the United States all or a substantial portion of the hardware (e.g., storage and metadata servers) and software (e.g., Dropbox Business software) components

of the Accused Instrumentalities in such a manner as to actively induce the combination of such components (e.g., by instructing users to rely on multiple servers that save redundant copies of metadata and content in a typical Dropbox Business system) outside of the United States.

41. Dropbox also indirectly infringes the '751 Patent by supplying or causing to be supplied in or from the United States components of the Accused Instrumentalities that are especially made or especially adapted for use in infringing the '751 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use, and where such components are uncombined in whole or in part, knowing that such components are so made or adapted and intending that such components are combined outside of the United States in a manner that would infringe the '751 Patent if such combination occurred within the United States. Because the Accused Instrumentalities are designed to operate as the claimed system and apparatus, the Accused Instrumentalities have no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental. For example, Dropbox supplies or causes to be supplied in or from the United States all or a substantial portion of the hardware (e.g., separate Storage servers and Metadata servers) and software (e.g., Dropbox Business software) components that are especially made or especially adapted for use in the Accused Instrumentalities, where such hardware and software components are not staple articles or commodities of commerce suitable for substantial noninfringing use, knowing that such components are so made or adapted and intending that such components are combined outside of the United States, as evidenced by Dropbox's own actions or

instructions to users, and enabling and configuring the infringing functionalities of the Accused Instrumentalities.

42. As a result of Defendant's infringement of the '751 Patent, Plaintiff Data Scape is entitled to monetary damages in an amount adequate to compensate for Dropbox's infringement, but in no event less than a reasonable royalty for the use made of the invention by Dropbox, together with interest and costs as fixed by the Court.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff Data Scape respectfully requests that this Court enter:

a. A judgment in favor of Plaintiff that Dropbox has infringed, either literally and/or under the doctrine of equivalents, the '675 Patent and '751 Patent (together, "asserted patents");

b. A permanent injunction prohibiting Dropbox from further acts of infringement of the asserted patents;

c. A judgment and order requiring Dropbox to pay Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for its infringement of the asserted patents, as provided under 35 U.S.C. § 284;

d. A judgment and order requiring Dropbox to provide an accounting and to pay supplemental damages to Data Scape, including without limitation, prejudgment and post-judgment interest;

e. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Dropbox; and



f. Any and all other relief as the Court may deem appropriate and just under the circumstances.

**DEMAND FOR JURY TRIAL**

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: May 21, 2019

Respectfully submitted,

/s/ Marc A. Fenster  
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