

EXHIBIT 2F

Claim Chart for Amazon Simple Storage Service (S3) for U.S. PATENT NO. 5,978,799

Issued November 2, 1999

**Data Processing System Using Substantially Unique Identifiers To Identify Data Items
Whereby Identical Data Items Have the Same Identifiers**

CLAIM 1 '791 PATENT	Amazon Simple Storage Service (S3)
<p>1. In a data processing system, an apparatus comprising:</p>	<p>Amazon S3 (Simple Storage Service) is an online storage web service offered by Amazon.com. Amazon S3 is a part of Amazon Web Services that uses a data processing system.</p> <p>Amazon S3 provides storage through web services interfaces. S3 stores arbitrary objects (computer files) up to 5 terabytes in size, each accompanied by up to 2 kilobytes of metadata. Objects are organized into buckets (each owned by an Amazon Web Services account) and identified within each bucket by a unique, user-assigned key. [http://en.wikipedia.org/wiki/Amazon_S3]; http://aws.amazon.com/s3/].</p>
<p>identity means for determining, for any of a plurality of data items present in the system, a substantially unique identifier, the identifier being determined using and depending on all of the data in the data item and only the data in the data item, whereby two identical data items in the system will have the same identifier; and</p>	<p>Plaintiffs contend that this element is governed by 35 U.S.C. § 112(6). The structures, acts, or materials in the Accused Instrumentality that performs this function are as follows: the hardware and software used by the Amazon S3 system, which uses an “ETag,” determines, for any of a plurality of data items present in the system, a substantially unique identifier, the identifier being determined using and depending on all of the data in the data item and only the data in the data item, whereby two identical data items in the system will have the same identifier.</p> <p>When performing a multipart upload, Amazon S3 automatically generates a unique identifier for each part and retrieves the data being uploaded. [http://awsdocs.s3.amazonaws.com/S3/latest/userguide/multipart-uploads.html]. Objects greater than 5GB in size require the use of the multipart upload API. [http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf].</p>

U.S. PATENT NO. 5,978,791

Issued November 2, 1999

**Data Processing System Using Substantially Unique Identifiers To Identify Data Items
Whereby Identical Data Items Have the Same Identifiers**

CLAIM 1 '791 PATENT	Amazon Simple Storage Service (S3)												
	<p style="text-align: center;">Common Response Headers</p> <p>The following table describes response headers that are common to most AWS :</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Content-Length</td> <td>The length in bytes of the body in the response. Type: String Default: None</td> </tr> <tr> <td>Connection</td> <td>specifies whether the connection to the server is open or Type: Enum Valid Values: open close Default: None</td> </tr> <tr> <td>Date</td> <td>The date and time Amazon S3 responded, for example, W 12:00:00 GMT. Type: String Default: None</td> </tr> <tr style="border: 2px solid red;"> <td>ETag</td> <td>The entity tag is a hash of the object. The ETag only reflects the contents of an object, not its metadata. The ETag is determined when the object is created. <u>For objects created by the PUT Object operation, the ETag is a quoted, 32-digit hexadecimal string that is the MD5 digest of the object data.</u> For other objects, the ETag is the MD5 digest of the object data. If the ETag is not an MD5 digest, it will contain one or more non-hexadecimal characters and may be more than 32 or more than 32 hexadecimal digits. Type: String</td> </tr> <tr> <td>Server</td> <td>The name of the server that created the response</td> </tr> </tbody> </table> <p>[http://awsdocs.s3.amazonaws.com/S3/latest/s3-api.pdf].</p>	Name	Description	Content-Length	The length in bytes of the body in the response. Type: String Default: None	Connection	specifies whether the connection to the server is open or Type: Enum Valid Values: open close Default: None	Date	The date and time Amazon S3 responded, for example, W 12:00:00 GMT. Type: String Default: None	ETag	The entity tag is a hash of the object. The ETag only reflects the contents of an object, not its metadata. The ETag is determined when the object is created. <u>For objects created by the PUT Object operation, the ETag is a quoted, 32-digit hexadecimal string that is the MD5 digest of the object data.</u> For other objects, the ETag is the MD5 digest of the object data. If the ETag is not an MD5 digest, it will contain one or more non-hexadecimal characters and may be more than 32 or more than 32 hexadecimal digits. Type: String	Server	The name of the server that created the response
Name	Description												
Content-Length	The length in bytes of the body in the response. Type: String Default: None												
Connection	specifies whether the connection to the server is open or Type: Enum Valid Values: open close Default: None												
Date	The date and time Amazon S3 responded, for example, W 12:00:00 GMT. Type: String Default: None												
ETag	The entity tag is a hash of the object. The ETag only reflects the contents of an object, not its metadata. The ETag is determined when the object is created. <u>For objects created by the PUT Object operation, the ETag is a quoted, 32-digit hexadecimal string that is the MD5 digest of the object data.</u> For other objects, the ETag is the MD5 digest of the object data. If the ETag is not an MD5 digest, it will contain one or more non-hexadecimal characters and may be more than 32 or more than 32 hexadecimal digits. Type: String												
Server	The name of the server that created the response												

U.S. PATENT NO. 5,978,791

Issued November 2, 1999

**Data Processing System Using Substantially Unique Identifiers To Identify Data Items
Whereby Identical Data Items Have the Same Identifiers**

CLAIM 1 '791 PATENT	Amazon Simple Storage Service (S3)
	<p><u>Multipart Uploads:</u></p> <p>S3 performs multipart uploads through the generation and use of an “ETag” hash (because it is a PUT operation, it is a MD5 hash, see “common response” above,) of the data-part, which is required for a later request to complete the upload and for Amazon S3 to concatenate the parts together to form a single object. [http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf]. And once combined, S3 responds with an ETag that uniquely identifies the combined data. [http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf].</p> <p>Multipart uploading is a three-step process: You initiate the upload, you upload the parts, you have uploaded all the parts, you complete the multipart upload. Upon receiving the multipart upload request, Amazon S3 constructs the object from the uploaded parts, and you retrieve the object just as you would any other object in your bucket.</p> <p>[http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf]</p> <p><u>Parts Upload Step</u></p>

U.S. PATENT NO. 5,978,791

Issued November 2, 1999

**Data Processing System Using Substantially Unique Identifiers To Identify Data Items
Whereby Identical Data Items Have the Same Identifiers**

CLAIM 1 '791 PATENT	Amazon Simple Storage Service (S3)
	<p>Parts Upload</p> <p>When uploading a part, in addition to the upload ID, you must specify a part number any part number between 1 and 10,000. A part number uniquely identifies a part object you are uploading. If you upload a new part using the same part number as part, the previously uploaded part is overwritten. <u>Whenever you upload a part, Amazon S3 returns an ETag header in its response. For each part upload, you must record the part number and ETag value. You need to include these values in the subsequent request to complete the multipart upload.</u></p> <p>http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf</p> <p>Multipart Upload Completion (or Abort)</p> <p>When you complete a multipart upload, Amazon S3 creates an object by concatenating the parts in order based on the part number. If any object metadata was provided in the <i>initiate multipart upload</i> request, Amazon S3 associates that metadata with the object. After a successful multipart upload, the parts no longer exist. <u>Your <i>complete multipart upload</i> request must include the upload ID, both part numbers and corresponding ETag values. Amazon S3 response includes the ETag, which identifies the combined object data. This ETag will not necessarily be an MD5 hash of the object data. You can optionally abort the multipart upload. After aborting a multipart upload, you can upload a part using that upload ID again. All storage that any parts from the aborted multipart upload is then freed. If any part uploads were in-progress, they can still succeed or fail independently. To free all storage consumed by all parts, you must abort a multipart upload only after all parts have completed.</u></p> <p>http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf</p> <p>* Note: It is our current understanding that the individual parts uploaded with the multipart upload object operations necessarily have an ETag that is the MD5 hash of the object data. (See the section above titled "Common Response Headers,") however the ETag of the <i>complete multipart upload</i></p>

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.