

# EXHIBIT 2E

**Claim Chart for Amazon S3 for U.S. PATENT NO. 7,945,544**

**Issued May 17, 2011**

**Similarity-Based Access Control Of Data In A Data Processing System**

<b>CLAIM 1 '544 PATENT</b>	<b>Amazon Simple Storage Service (S3)</b>
1. A computer-implemented method, the method comprising: (A) for a first data item comprising a first plurality of parts,	Although a review of Defendant's source code is necessary to confirm, Plaintiff alleges that Amazon S3, in combination with replication and multi-part uploads, operates in a manner that is similar to the claimed method comprising a plurality of parts.  When performing a multipart upload, Amazon S3 automatically generates a multipart upload ID to retrieve the data being uploaded. [ <a href="http://awsdocs.s3.amazonaws.com/S3/latest/multipart-uploads.pdf">http://awsdocs.s3.amazonaws.com/S3/latest/multipart-uploads.pdf</a> ]. Objects greater than 5GB in size require the use of the multipart upload API. [ <a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf">http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf</a> ].

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	<p data-bbox="683 877 1403 926"><b>Common Response Headers</b></p> <p data-bbox="805 957 1624 984">The following table describes response headers that are common to most AWS</p> <table border="1" data-bbox="805 1010 1624 1780"> <thead> <tr> <th data-bbox="805 1010 1024 1056">Name</th> <th data-bbox="1024 1010 1624 1056">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="805 1056 1024 1171">Content-Length</td> <td data-bbox="1024 1056 1624 1171">The length in bytes of the body in the response. Type: String Default: None</td> </tr> <tr> <td data-bbox="805 1171 1024 1325">Connection</td> <td data-bbox="1024 1171 1624 1325">specifies whether the connection to the server is open or Type: Enum Valid Values: open   close Default: None</td> </tr> <tr> <td data-bbox="805 1325 1024 1465">Date</td> <td data-bbox="1024 1325 1624 1465">The date and time Amazon S3 responded, for example, W 12:00:00 GMT. Type: String Default: None</td> </tr> <tr> <td data-bbox="805 1465 1024 1751">ETag</td> <td data-bbox="1024 1465 1624 1751">The entity tag is a hash of the object. The ETag only reflected contents of an object, not its metadata. The ETag is determined is created. For objects created by the PUT Object operation operation, the ETag is a quoted, 32-digit hexadecimal string MD5 digest of the object data. For other objects, the ETag MD5 digest of the object data. If the ETag is not an MD5 digest, it will contain one or more non-hexadecimal characters and than 32 or more than 32 hexadecimal digits. Type: String</td> </tr> <tr> <td data-bbox="805 1751 1024 1780">Server</td> <td data-bbox="1024 1751 1624 1780">The name of the server that created the response.</td> </tr> </tbody> </table> <p data-bbox="667 1808 1393 1843"><a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-api.pdf">[http://awsdocs.s3.amazonaws.com/S3/latest/s3-api.pdf]</a>.</p> <p data-bbox="667 1877 932 1913"><b><u>Multipart Uploads:</u></b></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 reflected contents of an object, not its metadata. The ETag is determined is created. For objects created by the PUT Object operation operation, the ETag is a quoted, 32-digit hexadecimal string MD5 digest of the object data. For other objects, the ETag MD5 digest of the object data. If the ETag is not an MD5 digest, it will contain one or more non-hexadecimal characters and than 32 or more than 32 hexadecimal digits. Type: String	Server	The name of the server that created the response.
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	<p>S3 performs multipart uploads through the generation and use of a 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. <a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf">[http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf]</a>. And once combined, S3 responds with an ETag that uniquely identifies the combined data. <a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf">[http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf]</a>.</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 can retrieve the object just as you would any other object in your bucket.</p> <p><a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf">[http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf]</a></p> <p><b><u>Parts Upload Step</u></b></p> <p><b>Parts Upload</b></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 of the object you are uploading. If you upload a new part using the same part number as a previously uploaded 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 the ETag. You need to include these values in the subsequent request to complete the multipart upload.</u></p> <p><a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf">[http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf]</a></p>

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	<p><b>Multipart Upload Completion (or Abort)</b></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>initial</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.</u> You can optionally abort the multipart upload. After aborting a multipart upload, you can upload a new 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 even if the multipart upload is aborted. To free all storage consumed by all parts, you must abort a multipart upload only if all parts have completed.</p> <p><a href="http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf">http://awsdocs.s3.amazonaws.com/S3/latest/s3-dg.pdf</a></p> <p>* Note: It is our current understanding that the individual parts uploaded with a multipart upload operation necessarily have an ETag that is the MD5 hash of the object data (see the object operations above titled "Common Response Headers,") however the ETag of the <i>complete multipart upload</i> response is not necessarily be an MD5 hash of the object data."</p>

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