FORM 2

THE PATENTS ACT, 1970
(39 of 1970)
AND
THE PATENTS RULES, 2003

COMPLETE
SPECIFICATION

(See Section 10; rule 13)

TITLE OF THE INVENTION

"HOSTED STORAGE LOCKING"

APPLICANT

GOOGLE INC.
of 1600 Amphitheatre Parkway, Mountain View
CA 94043, USA; Nationality: USA

The following specification particularly describes
the invention and the manner in which
it is to be performed

WHAT IS CLAIMED IS:

1. A method performed by one or more processors, the method comprising:

    receiving, at a hosted storage system, a request from a requester to access a hosted resource, the hosted resource including a binary large object, the hosted storage system providing hosted storage to a plurality of clients that are coupled to the hosted storage system;

    creating a copy of the hosted resource;

    providing a copy message comprising the copy of the hosted resource to the requester;

    maintaining the hosted resource in the hosted storage system while the requester modifies the copy of the hosted resource;

    receiving a message from the requester comprising a modified copy of the hosted resource; and

    determining that the hosted resource has not been modified since the copy of the hosted resource was created;

    replacing, in response to the determining and in the hosted storage system, the hosted resource with the modified copy of the hosted resource; and

    wherein the request from a requester, the copy message, and the message from the requester are Hypertext Transfer Protocol or Hypertext Transfer Protocol Secure messages.

2. The method of claim 1, wherein:

    providing comprises providing a version indicator of the hosted resource to the requester;

    receiving the modified copy of the hosted resource comprises receiving the provided version indicator;

    determining comprises comparing the provided version indicator with a current version indicator of the hosted resource; and

    replacing comprises incrementing the version indicator.

3. The method of claim 2, wherein the version indicator comprises a plurality of values, each value associated with a version of the hosted resource or a metadata value associated with the hosted resource.

4. The method of claim 3, wherein comparing the provided version indicator with a current version indicator of the hosted resource comprises comparing a subset of the plurality of values of the provided version indicator with a subset of the plurality of values of the current version indicator.

5. The method of claim 1, wherein the hosted storage system comprises:

   a datastore configured to store hosted resources;

   a metadata store configured to store metadata related to hosted resources, the metadata including access control lists; and

   an interface configured to receive the request from a requester to access a hosted resource, to provide the copy message to the requester, and to receive the message from the requester comprising a modified copy of the hosted resource.

6. The method of claim 1, wherein the determining and the replacing are performed as part of a single operation.

7. The method of claim 1, the method further comprising:

   receiving, at the hosted storage system and before the replacing, a second request from a second requester to access a hosted resource;

   creating a second copy of the hosted resource;

   providing the second copy of the hosted resource to the second requester for modification;

   receiving a second modified copy of the hosted resource, the second modified copy created by the second requester;

   determining that the hosted resource has been modified since the second copy of the hosted resource was created; and

   providing, to the second requester, a modification rejection message.

8. The method of claim 7, the method further comprising:

> modifying a portion of the hosted resource; and

> wherein the modification rejection message indicates a modified portion of the hosted resource.

9. A method performed by one or more processors, the method comprising:

> receiving, at a hosted storage system, a request from a requester to access a hosted resource, the hosted storage system providing hosted storage to a plurality of clients that are coupled to the hosted storage system;

> creating a copy of the hosted resource;

> providing a copy message comprising the copy of the hosted resource and a version indicator of the hosted resource to the requester, the version indicator comprising a plurality of values, each value associated with a version of the hosted resource or a metadata value associated with the hosted resource;

> maintaining the hosted resource in the hosted storage system while the requester modifies the copy of the hosted resource;

> receiving a message from the requester comprising a modified copy of the hosted resource and the provided version indicator; and

> determining that the hosted resource has not been modified since the copy of the hosted resource was created by comparing the provided version indicator with a current version indicator of the hosted resource;

> replacing, in response to the determining and in the hosted storage system, the hosted resource with the modified copy of the hosted resource; and

> incrementing, in response to the determining and in the hosted storage system, the version indicator.

10. A computer system comprising:

> a hosted storage system configured to:

>> provide hosted storage to a plurality of clients that are coupled to the hosted storage system;

>> receive a request from a requester to access a hosted resource, the hosted resource including a binary large object;

create a copy of the hosted resource;

provide a copy message comprising the copy of the hosted resource to the requester;

maintain the hosted resource in the hosted storage system while the requester modifies the copy of the hosted resource;

receive a message from the requester comprising a modified copy of the hosted resource; and

determine that the hosted resource has not been modified since the copy of the hosted resource was created; and

replace, in response to the determining and in the hosted storage system, the hosted resource with the modified copy of the hosted resource; and

a requestor configured to:

provide to the hosted storage system the request;

receive from the hosted storage system the copy message;

modify the copy of the hosted resource; and

provide to the hosted storage system the message; and

wherein the request from a requester, the copy message, and the message from the requester to access a hosted resource are Hypertext Transfer Protocol or Hypertext Transfer Protocol Secure messages.

11. The system of claim 10, wherein:

providing the copy message comprises providing a version indicator of the hosted resource to the requester;

receiving the modified copy of the hosted resource comprises receiving the provided version indicator;

determining comprises comparing the provided version indicator with a current version indicator of the hosted resource; and

replacing comprises incrementing the version indicator.

12. The system of claim 11, wherein the version indicator comprises a plurality of values, each value associated with a version of the hosted resource or a metadata value associated with the hosted resource.

13. The system of claim 12, wherein comparing the provided version indicator with a current version indicator of the hosted resource comprises comparing a subset of the plurality of values of the provided version indicator with a subset of the plurality of values of the current version indicator.

14. The system of claim 10, wherein the hosted storage system comprises:

a datastore configured to store hosted resources;

a metadata store configured to store metadata related to hosted resources, the metadata including access control lists; and

an interface configured to receive the request from a requester to access a hosted resource, to provide the copy message to the requester, and to receive the message from the requester comprising a modified copy of the hosted resource.

15. The system of claim 10, wherein the determining and the replacing are performed as part of a single operation.

16. The system of claim 10, wherein the hosted storage system is further configured to:

receive, at the hosted storage system and before the replacing, a second request from a second requester to access a hosted resource;

create a second copy of the hosted resource;

provide the second copy of the hosted resource to the second requester for modification;

receive a second modified copy of the hosted resource,

determine that the hosted resource has been modified since the second copy of the hosted resource was created; and

provide, to the second requester, a modification rejection message; and the system further comprising the second requester configured to:

provide to the hosted storage system the second request;

receive from the hosted storage system the copy of the hosted resource;

modify the copy of the hosted resource; and

provide to the hosted storage system the second modified copy of the hosted resource; and

receive the modification rejection message.

17. The system of claim 16, wherein the hosted storage system is further configured to:

        modify a portion of the hosted resource; and

        wherein the modification rejection message indicates a modified portion of the hosted resource.

5

dated this 10 day of April 2014.

(Arindam Paul)
REG. No.: IN/PA-174
of De Penning & De Penning
(Agent For The Applicants)