

What is claimed is:

1. A computer-implemented method comprising performing computer-implemented operations for:

storing a document on a server computer;

5 receiving a plurality of user commands using web-based applications to modify the document ~~at a first application~~;

serializinge the received commands ~~by way of the first application~~;

storinge the serialized commands in sequential order in a command stream separate from the document;

10 determining whether the server computer is a highly loaded server computer;

if the server computer is a highly loaded server computer then determining whether there is an in-progress document editing session for the document; and

if there is an in-progress document editing session, applying the command stream to the document; and then

15 moving the document to a non-highly loaded server computer.

~~modifying the document by way of a second application to create a modified document; and~~

~~applying the serialized commands in the command stream to the modified document by way of the first application.~~

20 2. The computer-implemented method of claim 1, further comprising:

receiving a request ~~at the first application~~ to save the document; and

in response to receiving the request, applying the commands in the command stream to the document in serial order and saving the document.

25 3. The computer-implemented method of claim 2, wherein a first application modifies the document to generate a modified document, and wherein a second application applies the commands in the serialized command stream to the modified document.

4. The computer-implemented method of claim 3, wherein the first application comprises a desktop client application, and wherein the second application comprises a web application.

30 ~~5~~3. The computer-implemented method of claim ~~1~~2, further comprising:

saving the document and the command stream to a mass storage device;

unloading the command stream from a volatile memory;

receiving a second command;

in response to receiving the second command, loading the document from the mass storage device, applying the command stream to the document, serializing the second command, and storing the serialized second command in the command stream separate from the document.

5 ~~4. The computer implemented method of claim 2, further comprising:
identifying one or more highly loaded server computers;
identifying one or more document editing sessions on each of the highly loaded
server computers; and~~

10 ~~for each of the identified document editing sessions, applying a command stream
to a document associated with the document editing session and moving the document to a
non highly loaded server computer.~~

5. The computer implemented method of claim 4, further comprising:
identifying an editing session on a server computer executing a down level
application program for editing the document;

15 applying the commands in the command stream to a document associated with the
editing session;

moving the document associated with the editing session to a server computer
executing an up level application program for editing the document; and

20 resuming the editing session on the server computer executing the up level
application program for editing the document.

6. The computer-implemented method of claim 1, further comprising:
determining whether the in-progress document editing session is on a server
computer executing a down level application program for editing the document;

25 if the in-progress document editing session is on a server computer executing a
down level application program, then moving the document and the command stream
associated with the in-progress document editing session to a server computer executing
an up level application program for editing the document.

7. The computer-implemented method of claim 6, further comprising applying
the commands in the command stream to the document in serial order prior to moving the
document to the server computer executing the up level application program.

30 86. A computer-readable storage medium having computer-executable
instructions stored thereupon which, when executed by a computer, cause the computer to:
store a document on a server computer;

receive a plurality of user commands using web-based applications to modify the document;

serialize the received commands;

5 store the serialized commands in sequential order in a command stream separate from the document;

receiveing a request to save the document;~~and~~

in response to receipt of~~receiving~~ the request, determine whether the server computer is a highly-loaded computer;~~applying the commands in the command stream to the document in serial order and saving the document.~~

10 if the server computer is a highly loaded server computer then determine whether there is an in-progress document editing session for the document;

if there is an in-progress document editing session then apply the commands in the command stream to the document in serial order and save the document; and then move the saved document to a non-highly loaded server computer.

15 97. The computer-readable storage medium of claim 86, wherein a first application modifies the document to generate a modified document, and wherein a second application applies the commands in the serialized command stream to the modified document.

20 108. The computer-readable storage medium of claim 97, wherein the first application comprises a desktop client application, and wherein the second application comprises a web application.

11. The computer-readable storage medium of claim 9, having further computer-executable instructions stored thereupon which, when executed by the computer, cause the computer to:

25 determine whether in-progress document editing session is on a server computer executing a down level application program for editing the document;

if the in-progress document editing session is on a server computer executing a down level application program, then move the document and the command stream associated with the in-progress document editing session to a server computer executing an up level application program for editing the document.

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12. The computer-readable storage medium of claim 11, having further computer-executable instructions stored thereupon which, when executed by the computer, cause the computer to apply the commands in the command stream to the document in

serial order prior to moving the document to the server computer executing the up level application program.

139. The computer-readable storage medium of claim 8, having further computer-executable instructions stored thereupon which, when executed by the computer, cause the computer to:

save the document and the command stream to a mass storage device;

unload the command stream from a volatile memory of the computer;

receive a second command;

in response to receiving the second command, load the document from the mass storage device, apply the command stream to the document, serialize the second command, and store the serialized second command in the command stream separate from the document.

~~10. The computer-readable storage medium of claim 7, having further computer-executable instructions stored thereupon which, when executed by the computer, cause the computer to:~~

~~identify one or more highly loaded server computers;~~

~~identify one or more document editing sessions on each of the highly loaded server computers; and~~

~~for each of the identified document editing sessions, apply a command stream to a document associated with the document editing session and move the document to a non-highly loaded server computer.~~

14. A computer-implemented method comprising performing computer-implemented operations for:

storing a document on a server computer;

receiving a plurality of user commands using web-based applications to modify the document at a first application;

serializing the received commands by way of the first application;

storing the serialized commands in sequential order in a command stream separate from the document;

modifying the document by way of a second application to create a modified document;

determining whether the server computer is a highly loaded server computer;

if the server computer is a highly loaded server computer then determining whether there is an in-program document editing session for the document;

if there is an in-progress document editing session then applying the serialized commands in the command stream to the modified document by way of the first application; and then

moving the document to a non-highly loaded server computer.

5 15. The computer-implemented method of claim 14, further comprising:
receiving a request at the first application to save the document; and
in response to receiving the request, applying the commands in the command stream to the document in serial order and saving the document.

10 16. The computer-implemented method of claim 15, further comprising:
saving the document and the command stream to a mass storage device;
unloading the command stream from a volatile memory;
receiving a second command;
in response to receiving the second command, loading the document from the mass storage device, applying the command stream to the document, serializing the second
15 command, and storing the serialized second command in the command stream separate from the document.

17. The computer-implemented method of claim 14, further comprising:
identifying whether the in-progress document editing session is on a server computer executing a down level application program for editing the document;
20 if the in-progress document editing session is on a server computer executing a down level application program, then applying the commands in the command stream to the document; and
moving the document to a server computer executing an up level application program for editing the document.

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