

## CLAIMS

### 1. A method comprising:

loading, by a processor, a web page in a browser having a viewport, wherein the web page has a first area, wherein the viewport has a second area, wherein the first area is larger than the second area, wherein the web page has a script embedded therein, wherein the first area contains a third area, wherein the first area is larger than the third area, wherein the third area is not positioned within the second area when the web page is loaded, wherein the third area contains a first ad content sourced from a first real-time ad bidding auction;

performing, by the processor, a first real-time determination whether the first ad content has been loaded in the web page for a predefined time period while the web page remains loaded in the browser, wherein the first real-time determination is via the script while the web page remains loaded in the browser;

performing, by the processor, a second real-time determination whether the third area has been scrolled into the second area at least one of as of or after the expiration of the predefined time period while the web page remains loaded in the browser, wherein the second real-time determination is via the script while the web page remains loaded in the browser, wherein the second real-time determination is based on the first real-time determination determining that the first ad content has been loaded in the web page for the predefined time period while the web page remains loaded in the browser;

requesting, by the processor, a second real-time ad bidding auction for a second ad content to be input into the third area and replace the first ad content responsive to the third area being scrolled into the second area based on the second real-time determination while the web page remains loaded in the browser, wherein the second real-time ad bidding auction occurs while the web page remains loaded in the browser;

receiving, by the processor, the second ad content sourced from the second real-time ad bidding auction while the web page remains loaded in the browser; and

replacing, via the processor, the first ad content in the third area with the second ad content responsive to the third area being scrolled into the second area while the

web page remains loaded in the browser such that the second ad content is displayed within the second area while the web page remains loaded in the browser.

2. The method of claim 1, wherein the second real-time ad bidding auction is a client-side auction.

3. The method of claim 1, wherein the second real-time ad bidding auction is a server-to-server auction.

4. The method of claim 1, wherein the predefined time period is inclusively between at least about 1 second and about 65 seconds.

5. The method of claim 1, wherein the script requests the second real-time ad bidding auction.

6. The method of claim 1, wherein the first real-time ad bidding auction is a server-to-server auction.

7. The method of claim 1, wherein the first real-time ad bidding auction is a client-side auction.

8. The method of claim 1, wherein the first ad content and the second ad content are identical to each other in at least one of data type, data format, data size, or image resolution.

9. The method of claim 1, wherein the first ad content and the second ad content are not identical to each other in at least one of data type, data format, data size, or image resolution.

10. The method of claim 1, wherein the first ad content is replaced with the second ad content in the third area before the third area is displayed within the second area.

11. The method of claim 1, wherein the first ad content is replaced with the second ad content in the third area while the third area is displayed within the second area.
12. The method of claim 1, wherein the third area is scrolled into the second area via a touchscreen.
13. The method of claim 1, wherein the third area is scrolled into the second area via a cursor.
14. The method of claim 1, wherein the second ad content replaces the first ad content based on the second ad content being displayed over the first ad content.
15. The method of claim 1, wherein the second ad content replaces the first ad content based on the first ad content being removed from the third area and the second ad content being inserted into the third area.
16. The method of claim 1, wherein the first real-time determination, the second real-time determination, the second real-time ad bidding auction, and replacing of the first ad content in the third area with the second ad content is instructed by the script.
17. The method of claim 1, wherein the browser includes a just-in-time engine executing the script.
18. The method of claim 1, wherein the second real-time determination occurs during scrolling.
19. The method of claim 1, wherein the first ad content is displayed at least about 33% percent in pixels for a time period inclusively between at least about 1 second and about 65 seconds within the second area while the web page remains loaded in the browser

prior to the requesting of the second real-time ad bidding auction for the second ad content.

20. The method of claim 19, wherein the first ad content is displayed at least 50% percent in pixels for the time period inclusively between at least about 1 second and about 65 seconds within the second area while the web page remains loaded in the browser prior to the requesting of the second real-time ad bidding auction for the second ad content.

21. The method of claim 20, wherein the first ad content is displayed at least about 75% percent in pixels for the time period inclusively between at least about 1 second and about 65 seconds within the second area while the web page remains loaded in the browser prior to the requesting of the second real-time ad bidding auction for the second ad content.

22. The method of claim 19, wherein the first ad content is fully displayed in pixels for the time period inclusively between at least about 1 second and about 65 seconds within the second area while the web page remains loaded in the browser prior to the requesting of the second real-time ad bidding auction for the second ad content.

23. The method of claim 1, wherein the first ad content is displayed at least 50% in pixels for a time period inclusively between at least about 6 seconds and about 65 seconds within the second area while the web page remains loaded in the browser prior to the requesting of the second real-time ad bidding auction for the second ad content.

24. The method of claim 1, further comprising:

- causing, by the processor, a geolocation or a network location of the browser to be identified when the web page is at least one of requested, loading, or loaded;

- causing, by the processor, the second real-time ad bidding auction for the second ad content to occur based on a shortest signal travel distance at that time or a quickest response time at that time based on the geolocation or the network location.

25. The method of claim 24, wherein the geolocation is based on the processor communicating with a satellite positioning receiver or a cell site.

26. The method of claim 24, wherein the network location is based on a network address of the browser.

27. The method of claim 24, wherein the second real-time ad bidding auction is a server-to-server auction having a server and a group of servers, wherein the processor is in communication with the server, where the server is in communication with the group of servers such that the server is logically interposed between the processor and the group of servers, wherein the server selects one member of the group of servers based on the shortest signal travel distance or the quickest response time based on the geolocation or the network location.

28. The method of claim 27, wherein the server selects the one member of the group of servers based on the shortest signal travel distance based on the geolocation or the network location.

29. The method of claim 27, wherein the server selects the one member of the group of servers based on the quickest response time based on the geolocation or the network location.

30. The method of claim 24, wherein the second real-time ad bidding auction is a client side auction having a client being in communication with a group of servers, wherein the client includes the processor, wherein the processor selects one member of the group of servers based on the shortest signal travel distance or the quickest response time based on the geolocation or the network location.

31. The method of claim 30, wherein the processor selects the one member of the group of servers based on the shortest signal travel distance based on the geolocation or the network location.

32. The method of claim 30, wherein the processor selects the one member of the group of servers based on the quickest response time based on the geolocation or the network location.

33. A memory storing a set of instructions executable by a processor to instruct the processor to:

- load a web page in a browser having a viewport, wherein the web page has a first area, wherein the viewport has a second area, wherein the first area is larger than the second area, wherein the web page has a script embedded therein, wherein the first area contains a third area, wherein the first area is larger than the third area, wherein the third area is not positioned within the second area when the web page is loaded, wherein the third area contains a first ad content sourced from a first real-time ad bidding auction;

- perform a first real-time determination whether the first ad content has been loaded in the web page for a predefined time period while the web page remains loaded in the browser, wherein the first real-time determination is via the script while the web page remains loaded in the browser;

- perform a second real-time determination whether the third area has been scrolled into the second area after at least one of as of or after the expiration of the predefined time period has expired while the web page remains loaded in the browser, wherein the second real-time determination is via the script while the web page remains loaded in the browser, wherein the second real-time determination is based on the first real-time determination determining that the first ad content has been loaded in the web page for the predefined time period while the web page remains loaded in the browser;

- request a second real-time ad bidding auction for a second ad content to be input into the third area and replace the first ad content responsive to the third area being scrolled into the second area based on the second real-time determination while the

web page remains loaded in the browser, wherein the second real-time ad bidding auction occurs while the web page remains loaded in the browser;

receive the second ad content sourced from the second real-time ad bidding auction while the web page remains loaded in the browser; and

replace the first ad content in the third area with the second ad content responsive to the third area being scrolled into the second area while the web page remains loaded in the browser such that the second ad content is displayed within the second area while the web page remains loaded in the browser.

34. The memory of claim 33, wherein the browser includes a just-in-time engine, wherein the set of instructions is executable by the processor such that the just-in-time engine executes the script.