IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Chia J. Liu

Application No.: 15/720,727	Confirmation No.: 5433
Filed: September 29, 2017	Art Unit: 2473
For: Load Balancing and Session Persistence in Packet Networks	Examiner: O. Huq

ARGUMENTS IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW

The Office erred in rejecting the claims for at least the following reasons, as detailed below:

1. The cited references do not teach, disclose, or otherwise suggest *"determining, based on the first header not indicating a server identifier for the first packet to be sent ..., a server from a plurality of servers"* as recited in independent claims 1 and 14; and

2. The cited references does not teach, disclose, or otherwise suggest receiving "a Hyper Text Transfer Protocol (HTTP) packet" from a first computing device and receiving "a Hyper Text Transfer Protocol Secure (HTTPS) packet" from a second computing device as recited in independent claim 10.

Claims 1 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawata et al. (US 2002/0032777) in view of Achlioptas et al. (US 2006/0233106). Claims 2, 4-9 and 16-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawata in view of Achlioptas, as applied to the claims above and further in view of disclosed prior art Ono et al. (US 2003/0093560). Claims 3, 15 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawata in view of Achlioptas, as applied to the claims above and further in view of Khalid et al. (US 2010/0063988). Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Portolani et al. (US 2006/0095969) in view of Brendel (US 2007/0094373). Claims 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Portolani in view of as applied to the claims above and further in view of Khalid.

I.   Independent Claims 1 and 14

Claims 1 and 14 recite, in part:

determining, based on the first header not indicating a server identifier for the first packet to be sent and based on one or more load balancing criteria, a server from a plurality of servers;

Appellant respectfully submits that Kawata and Achlioptas considered alone or in combination, fail to teach or suggest at least the above-recited features. In support of the rejection to claim 1, the Office Action alleges that Kawata discloses the above-recited feature by describing "means for analyzing a packet header in a service request packet from a client; means for estimating a load evaluation value indicating processing load on a server based on request contents of the service request packet; means for storing load status values for each server in the form of totals of load evaluations values of distributed service request packets over a fixed past period; and means for determining a server to which to send the service request based on the load status values." *See,* Office Action at page 3 and Kawata at paragraph [0007].

Appellant respectfully disagrees. Kawata details the "means for determining a server to which to send the service request based on the load status values" of paragraph [0007] of Kawata in paragraph [0039] which discloses that "the server selection processing module 102 selects a server 105 to which the service request packet is to be transferred. This module 102 looks up a server load management table 104 to select the server with the lightest load." *See,* Kawata at paragraphs [0039-0040]. Kawata selects a server for the service request packet by estimating a load required by the packet and selecting a server with the lightest load that can accommodate that packet. Therefore, Kawata fails to teach or suggest the features *"determining, based on the first header not indicating a server identifier for the first packet to be sent ..., a server from a plurality of servers"* as recited in claim 1, and *"selecting, based on the first header not indicating a server identifier for the first packet to be sent ..., a server from a plurality of servers"* as recited in claim 14.

Achlioptas discloses "routing functions (e.g., hash functions) that assign incoming packets to available hosts that service the packets." *See,* Achlioptas at [0008]. Achlioptas further discloses that the "routing functions ... define the current availability of one or more of the destination hosts. The routing function also takes into consideration destination loading such that load-balancing is

2

performed between the available hosts." *See,* Achlioptas at [0027]. Therefore, Achlioptas fails to teach or suggest the features *"determining, based on the first header not indicating a server identifier for the first packet to be sent ..., a server from a plurality of servers"* as recited in claim 1, and *"selecting, based on the first header not indicating a server identifier for the first packet to be sent ..., a server from a plurality of servers"* as recited in claim 14.

Accordingly, Kawata and Achlioptas together fail to disclose each and every feature of independent claims 1 and 14.

II.   Dependent Claims 2, 4-9 and 16-20

Claims 2, 4-9 and 16-20 depend from independent claims 1 and 14 and are allowable by virtue of their dependency and further in view of the additional features recited therein. Furthermore, Ono discloses that based on whether or not a destination option code "60" is found in a data packet and whether or not an option type in the DOEH of the packet is "201," either a source address (stored in the IPv6 header of the packet) or a home address (stored in the DOEH of the packet) may be used as a retrieval key to select a server from a load balancing table, and the packet may then be sent to the server selected from the load balancing table. *See,* Ono at [0068], [0071], and [0089]. Ono does not remedy the defects of Kawata and Achlioptas with respect to claims 1 and 14. For at least this reason, the combination of Kawata, Achlioptas and Ono even assuming (but not conceding) proper fails to render 2, 4-9 and 16-20 obvious and Appellant respectfully requests withdrawal of the rejection.

III.   Dependent Claims 3, 15, and 21

Claims 3, 15, and 21 depend from claims 1 and 14, and are allowable over Kawata and Achlioptas for at least the same reasons listed above with respect to claims 1 and 14. Khalid does not remedy the defects of Kawata and Achlioptas with respect to claim 1. For at least this reason, the combination of Kawata, Achlioptas, and Khalid even assuming (but not conceding) proper fails to render claims 3, 15, and 21 obvious.

IV.   Independent claim 10

Claim 10 recites, in part:

> > *receive, from a first computing device, a Hyper Text Transfer Protocol (HTTP) packet;*
>
> > ...
>
> > *receive, from a second computing device, a Hyper Text Transfer Protocol Secure (HTTPS) packet*

Appellant respectfully submits that Portolani and Brendel considered alone or in combination, fail to teach or suggest at least the above-recited features.

The Office Action concedes that "Portolani does not explicitly disclose receive, from a second computing device, a Hyper Text Transfer Protocol Secure (HTTPS) packet." *See*, Office Action at page 22. The Office Action contends that paragraph [0013] of Brendel "discloses a method for load-balancing among servers when both encrypted and un-encrypted connections occur that comprises receive, from a second computing device, a Hyper Text Transfer Protocol Secure (HTTPS) packet." *See*, Office Action at page 22.

However, paragraph [0013] of Brendel describes that the "load-balancer 10 can assign all packets for a certain connection to the same server, but typically the server closes the connection after each HTTP request is processed. Thus a new connection is used for each web page displayed, while simultaneously one or more encrypted sessions may also be ongoing. Since load-balancer 10 is middleware, <u>it is not able to directly associate the different encrypted sessions and clear-text connections with the same user</u>." None of the paragraphs cited by the Office Action (abstract, paragraph [0001], [0013] and [0025]) or other paragraphs in Brendel describe receiving "a Hyper Text Transfer Protocol (HTTP) packet" from a first computing device and receiving "a Hyper Text Transfer Protocol Secure (HTTPS) packet" from a second computing device. If the Office insists in maintaining the rejection, Appellant respectfully requests the Office to indicate the paragraphs in Brendel that discloses receiving "a Hyper Text Transfer Protocol (HTTP) packet" from a first computing device and receiving "a Hyper Text Transfer Protocol Secure (HTTPS) packet" from a second computing device.

Brendel fails to remedy the deficiencies of Portolani with respect to the claimed subject matter. Accordingly, the combination of Portolani and Brendel fails to render claim 10 obvious.

V.   Dependent claims 11-13

Claims 11-13 depend from claim 10 and are allowable over Portolani and Brendel for at least the same reasons listed above with respect to claim 10. Khalid fails to remedy the deficiencies of Portolani and Brendel with respect to the claimed subject matter. Accordingly, the combination of Portolani, Brendel, and Khalid even assuming (but not conceding) proper fails to render claims 11-13 obvious.