

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Jacob W. JORGENSEN

Appl. No. 09/349,482

Confirmation No. 6669

Filed: July 09, 1999

For: APPLICATION-AWARE
QUALITY OF SERVICE (QoS)
SENSITIVE, MEDIA ACCESS
CONTROL (MAC) LAYER

Group Art Unit: 2155

Examiner: Frantz B. Jean

Atty. Docket No. 36792-162254
(formerly A-21542)

Customer No.



26694

PATENT TRADEMARK OFFICE

Amendment and Reply Under 37 C.F.R. § 1.111 and 1.121

Honorable Commissioner for Patents
Washington, D.C. 20231

Sir:

No extension of time fee or claim fee is believed to be required in connection with this Amendment. If an extension of time is needed to prevent abandonment of this application, such extension of time is hereby requested under 37 C.F.R. § 1.136(a). Please charge any fee deficiency or credit overpayments to our Deposit Account No. 22-0261, and notify the undersigned accordingly.

In reply to the Office Action mailed January 2, 2003, Applicant submits the following
Amendment and Remarks:

Intellectual Ventures I LLC

Exhibit 2015

ERICSSON v. IV I

IPR2018-00727

Amendment

In the Claims:

Please amend claims 1-5, 7, 10-17 and 20 as follows:

1. (Amended) An application aware, quality of service (QoS) sensitive, media access control (MAC) layer comprising:

an application-aware resource allocator at the MAC layer, wherein said resource allocator allocates bandwidth resource to an internet protocol (IP) flow associated with a software application of a user based on IP QoS requirements of said software application, wherein said resource allocator allocates said bandwidth resource in a packet-centric manner that is not circuit-centric and does not use asynchronous transfer mode (ATM).

2. (Amended) The MAC layer according to claim 1, wherein said resource allocation is based on input from at least one of:

a packet header; and

a software application communication to said MAC layer.

3. (Amended) The MAC layer according to claim 2, wherein said software application communication comprises:

a communication between said software application, running on at least one of a subscriber workstation and a host workstation, and the MAC layer, running on at least one of a subscriber CPE station and a wireless base station.

4. (Amended) The MAC layer according to claim 2, wherein said bandwidth resource comprises at least one of wide area network (WAN) wireless bandwidth and local area network (LAN) wireless bandwidth.

5. (Amended) The MAC layer according to claim 1, wherein said resource allocator schedules said bandwidth resource to allow transmission of one or more packets of said IP flow.

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7. (Amended) The MAC layer according to claim 5, wherein said resource allocator in said resource allocation takes into account resource requirements of at least one of a source application and a destination application of said IP flow.

10. (Amended) The MAC layer according to claim 1, wherein said resource allocator allocates switching resource to said software application based on an application type.

11. (Amended) The MAC layer according to claim 10, wherein said application type is identified based on input from at least one of:

packet header; and

a software application communication to said MAC layer.

12. (Amended) The MAC layer according to claim 11, wherein said software application communication comprises:

a communication between said software application, running on at least one of a subscriber workstation and a host workstation, and said MAC layer, running on at least one of a subscriber CPE station and a wireless base station.

13. (Amended) The MAC layer according to claim 11, wherein said software application communication comprises:

a priority class of said IP flow.

14. (Amended) The MAC layer according to claim 1, further comprising:

an application identifier that identifies an application type of said software application to said resource allocator.

15. (Amended) The MAC layer according to claim 14, wherein said application identifier uses contents of a packet header to identify a source application of said IP flow.

16. (Amended) The MAC layer according to claim 14, wherein said application identifier uses a direct conduit of an application layer from a source application to identify said source

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application of said IP flow.

17. (Amended) The MAC layer according to claim 1, wherein said application-aware resource allocator comprises a module operative to recognize an application type of said software application associated with said IP flow.

20. (Amended) An application-aware media access control (MAC) layer for optimizing end user application internet protocol (IP) quality of service (QoS) to IP flows comprising:

identifying means for identifying an application type of a software application associated with an IP flow; and

allocating means for allocating resources to said IP flow, responsive to said identifying means, so as to optimize end user application IP QoS requirements of said software application, wherein said resource allocating means allocates resources in a packet-centric manner that is not circuit-centric and does not use asynchronous transfer mode (ATM).

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Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the above amendments, claims 1-20 are pending in the application, with claims 1 and 20 being the independent claims. Claims 1-5, 7, 10-17 and 20 are amended.

Attached hereto is a marked-up version of the changes made to claims. The attachment is captioned "Version with markings to show changes made." It is noted that the claims 2-5, 7 and 10-17 have been amended to correct editorial informalities only and have not been amended to overcome any objection or rejection.

Based on the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Claim Rejections Under 35 U.S.C. § 102(e)

In section 4 of the Office Action, the Examiner rejects claims 1-15 and 17-19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,787,080 to Hulyalkar et al. ("Hulyalkar"). Applicant traverses the rejection for the following five reasons.

1. Failure to teach or fairly suggest an application-aware resource allocator at the ***MAC layer***.

It is important to note that claim 1 teaches a ***MAC layer*** including a resource allocator at the ***MAC layer***. Hulyalkar on the other hand maps applications to an ATM circuit at the ATM layer. Applicant's invention has nothing to do with ATM, as discussed further below.

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