

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:
Jacob W. JORGENSEN

Appl. No. 09/349,477
Confirmation No.

Filed: July 9, 1999

For: **TRANSMISSION CONTROL
PROTOCOL/INTERNET
PROTOCOL (TCP/IP)
PACKET-CENTRIC WIRELESS
POINT TO MULTI-POINT
(PTMP) TRANSMISSION
SYSTEM ARCHITECTURE**

Art Unit: 2155

Examiner:
Philip B. Tran

Atty. Docket No. 36792-162236
(formerly A-21505)

Customer No.



26694

PATENT TRADEMARK OFFICE

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

Honorable Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In reply to the Non-final Office Action (Office Action) dated April 24, 2001, (PTO Prosecution File Wrapper Paper No. 6), Applicant submits the following Amendment and Reply.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper.

However, if additional extensions of time are needed to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees

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Intellectual Ventures I LLC

Exhibit 2012

ERICSSON v. IV I

IPR2018-00727

required therefor (including fees for net addition of claims), and any other fee deficiency are hereby authorized to be charged, and any overpayments credited to, our Deposit Account No. 22-0261.

Amendments

In the Claims:

Please add the following new claims:

13. A packet-centric wireless point to multi-point telecommunications system comprising:

a wireless base station communicating via a packet-centric protocol to a first data network, wherein said packet-centric protocol comprises at least one of a transmission control protocol/internet protocol (TCP/IP), and a user datagram protocol/internet protocol (UDP/IP);

one or more host workstations communicating via said packet-centric protocol to said first data network;

one or more subscriber customer premise equipment (CPE) stations coupled with said wireless base station over a shared wireless bandwidth via said packet-centric protocol over a wireless communication medium; and

one or more subscriber workstations coupled via said packet-centric protocol to each of said subscriber CPE stations over a second network.

14. The system of claim 13, further comprising:

resource allocation means for allocating shared bandwidth among said subscriber CPE stations and wherein said resource allocation means comprises means for performing

bandwidth allocation to ensure optimal end-user quality of service (QoS).

15. The system of claim 13, wherein said wireless communication medium comprises a radio frequency (RF) communications medium.

16. The system of claim 13, wherein said wireless communication medium comprises a cable communications medium.

17. The system of claim 13, wherein said wireless communication medium further comprises, a telecommunications access method including a time division multiple access / time division duplex (TDMA/TDD) access method.

18. The system of claim 13, wherein said first data network comprises a wireline wide area network (WAN) and said second network comprises a wireline local area network (LAN).

19. The system of claim 13, further comprising:
a resource allocator that allocates shared bandwidth among said subscriber CPE stations, wherein said resource allocator optimizes end-user quality of service (QoS), and wherein said resource allocator is application aware.

20. The system of claim 13, wherein said packet-centric protocol is not an asynchronous transfer mode protocol.

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-20 will be pending in the application, with claims 1 and 13 being the independent claims. New claims 13-20 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

If any portion of the specification or claims were sought to be amended in the foregoing, attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned “**Version with markings to show changes made.**”

Based on the above Amendment and the following Remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Objection to the Claims

Regarding claim 12, the Examiner at ¶1 objects to “application aware” for informalities, stating the Applicant should replace the term with “application software” or other suitable terms. Applicant respectfully disagrees. The expression “application aware” is clear as defined in the specification. Applicant refers the Examiner to the following selections from the specification that make the expression clear:

. . . the [media access control (MAC)] link layer of the present invention is in communication with the higher protocol layers, it is **application aware**, transport

aware and network aware. . . IP header fields 702 can include, e.g., source and destination IP addresses, helpful in providing *application aware* preferential resource allocation.

Thus Applicant requests that the objection be withdrawn as no correction is required.

The Examiner at ¶3 objects to claim 6 under 35 U.S.C. 112, 2nd paragraph as being indefinite. Applicant respectfully disagrees. The Examiner asserts that “[it] is not clear how a **wireless** communication comprises a **cable** communication medium.” Applicant refers the Examiner to following quoted passages from the Specification that should clarify for the Examiner what is meant by the claim. It would be clear to a person of ordinary skill in the art that broadband communication over a coaxial cable waveguide is a form of radio frequency (RF) communication which for the purposes of this specification is described as a wireless communication method. Applicant can of course “be his own lexicographer.”

. . . Prior to the present invention, per-flow differentiation has not been used in a *wireless environment (including radio frequencies transmitted over coaxial cables and satellite communications)*. . . FIG. 1C illustrates a conventional video network 150 such as, e.g., a cable television (CATV) network. Video network 150 can include video network 160 coupled to various video capture, distribution links and video output monitors. Video input devices can include, e.g., conference cameras 154 and 158. Video output devices can include, e.g., televisions 152 and 156. Video network 160 can include a variety of head end (i.e. the serving end of the cable) and distribution link equipment such as, e.g., coaxial cable television (CATV) and national television standard code (NTSC) tuner equipment for multiplexing various video signals. Standard cable systems have an immense amount of bandwidth available to them.

It is important to note that *CATV is a wireless communication method*. The frequencies of many video signals are distributed along the cable at the same time. A television tuner selects a particular channel by tuning into a specific frequency or a “frequency band.”

Although a cable television CATV video network often includes only one physical cable, a number of channels can simultaneously be present on the cable.

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