



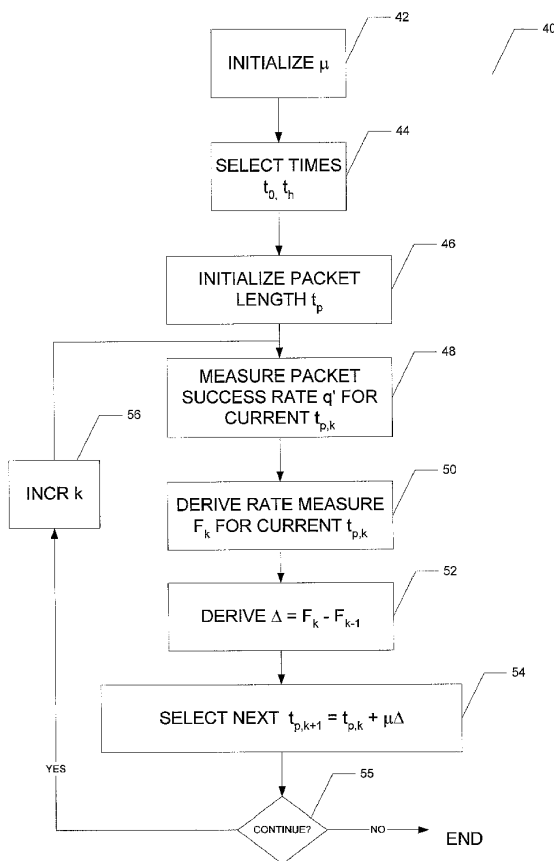
US 20020122413A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2002/0122413 A1**
(43) **Pub. Date: Sep. 5, 2002**(54) **ADAPTIVE FRAGMENTATION FOR WIRELESS NETWORK COMMUNICATIONS**(52) **U.S. Cl. 370/349; 370/470**(75) **Inventor: Matthew B. Shoemake, Allen, TX (US)**(57) **ABSTRACT**

Correspondence Address:
TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

(73) **Assignee: Texas Instruments Incorporated, Dallas, TX**(21) **Appl. No.: 10/026,088**(22) **Filed: Dec. 21, 2001****Related U.S. Application Data**(60) **Provisional application No. 60/262,507, filed on Jan. 18, 2001.****Publication Classification**(51) **Int. Cl.⁷ H04J 3/24**

A wireless local area network (LAN) adapter (20) that optimizes the length of message packets, for example according to the IEEE 802.11 standard, and in an environment having interfering transmissions (BL1 et seq.), is disclosed. The disclosed adapter (20) executes an adaptive process by way of which an adjustment to the packet length is derived based upon rate measures for the most recent two trial packet lengths. The rate measure corresponds to a packet success rate for that packet length, determined either from an estimating function or by actual measurements, multiplied by a ratio of the data portion of each packet to a total packet length including interpacket spacing. Upon convergence as the adjustment becomes smaller, the optimized packet length for best data rate given the present interference. A method of determining the need for packet length optimization is also disclosed, in which the actual packet error rate is compared against an expected packet error rate based upon signal-to-noise ratios.



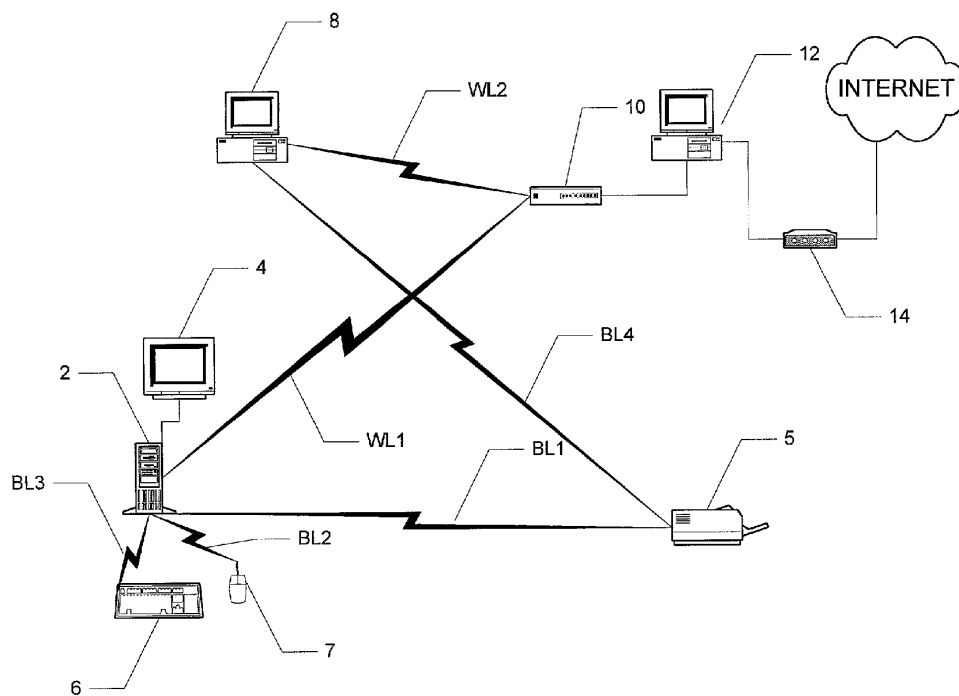


FIG. 1

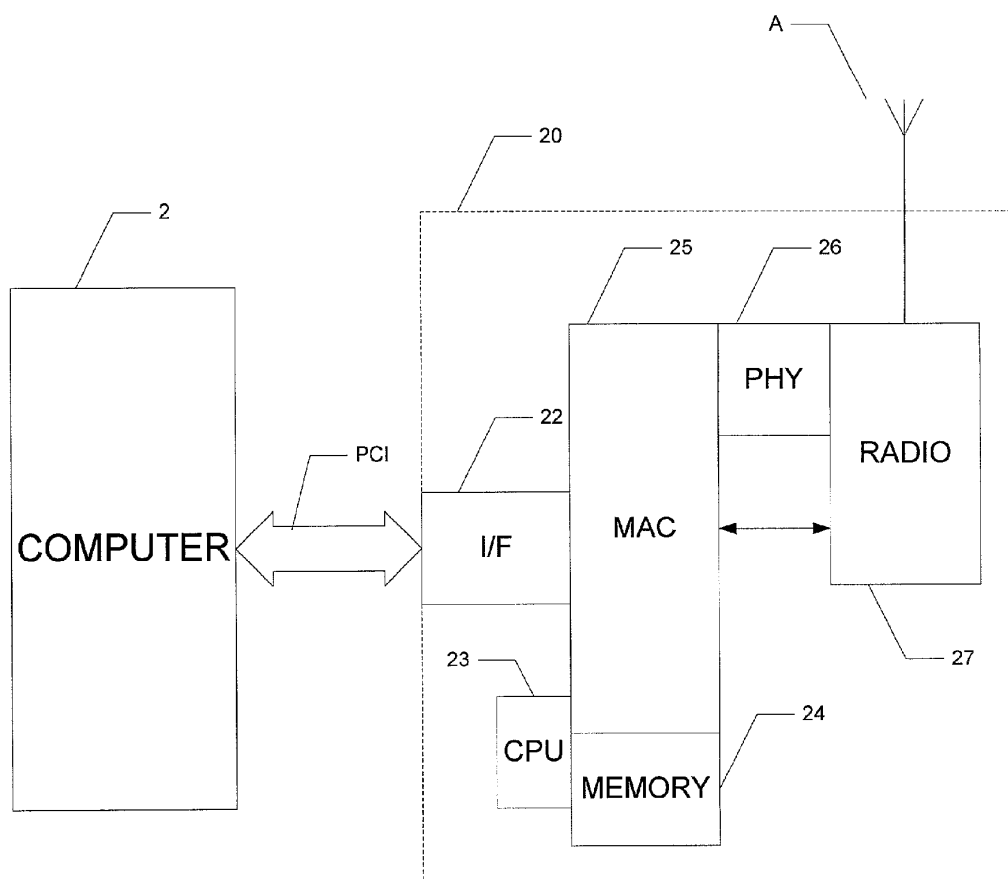


FIG. 2

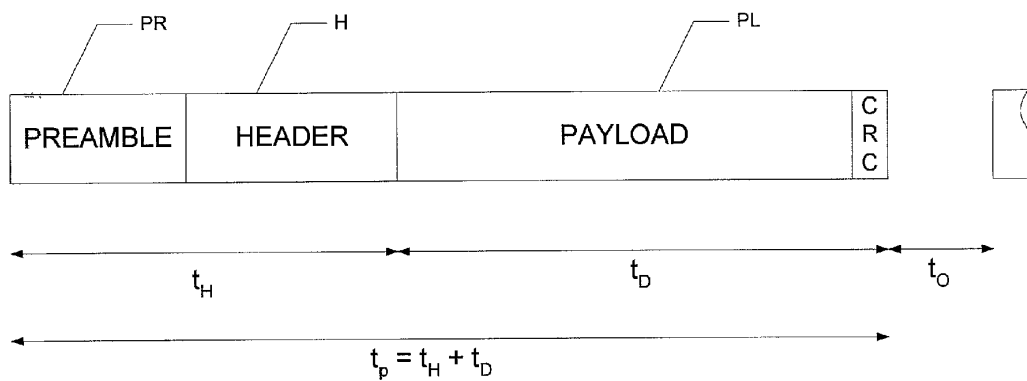
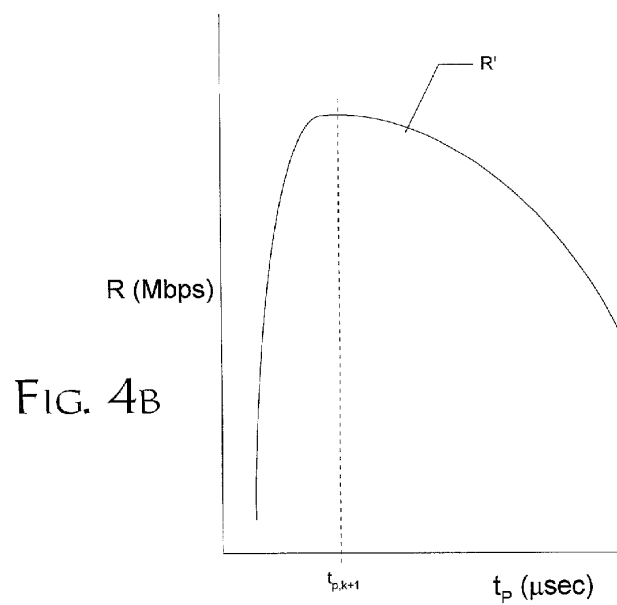
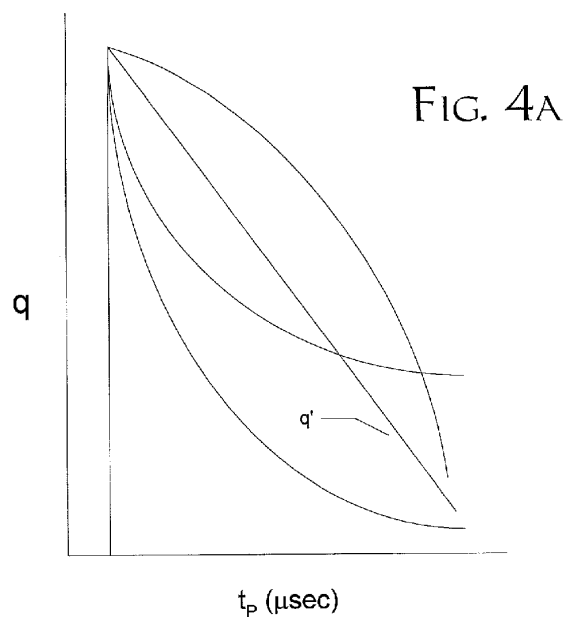


FIG. 3



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.