



# United States Patent [19]

[11] Patent Number: **5,142,533**

Crisler et al.

[45] Date of Patent: **Aug. 25, 1992**

- [54] **METHOD FOR CONTROLLING THE SCHEDULING OF MULTIPLE ACCESS TO COMMUNICATION RESOURCES**
- [75] Inventors: **Kenneth J. Crisler**, Wheaton;  
**Michael L. Needham**, Palatine, both of Ill.
- [73] Assignee: **Motorola, Inc.**, Schaumburg, Ill.
- [21] Appl. No.: **676,653**
- [22] Filed: **Mar. 28, 1991**
- [51] Int. Cl.<sup>5</sup> ..... **H04J 3/16**
- [52] U.S. Cl. .... **370/95.1; 370/85.2**
- [58] Field of Search ..... **370/95.1, 85.2, 87.7, 370/95.3, 104.1**

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

- 4,774,707 9/1988 Raychaudhuri ..... 370/85.2
- 4,888,765 12/1989 Dyke ..... 370/95.1

**OTHER PUBLICATIONS**

"Packet Reservation Multiple Access for Local Wireless Communications", Goodman et al., IEEE publication, pp. 701-706 (1988).  
 Multiple Access Protocols for Data Communications via VSAT Networks, Wolejsza et al., IEEE Communications Magazine, pp. 30-39 (1987).  
 Performance Analysis of Virtual Time CSMA, Meditch et al., IEEE Publication, pp. 242-251 (1986).  
 Virtual Time CSMA: Why Two Clocks Are Better

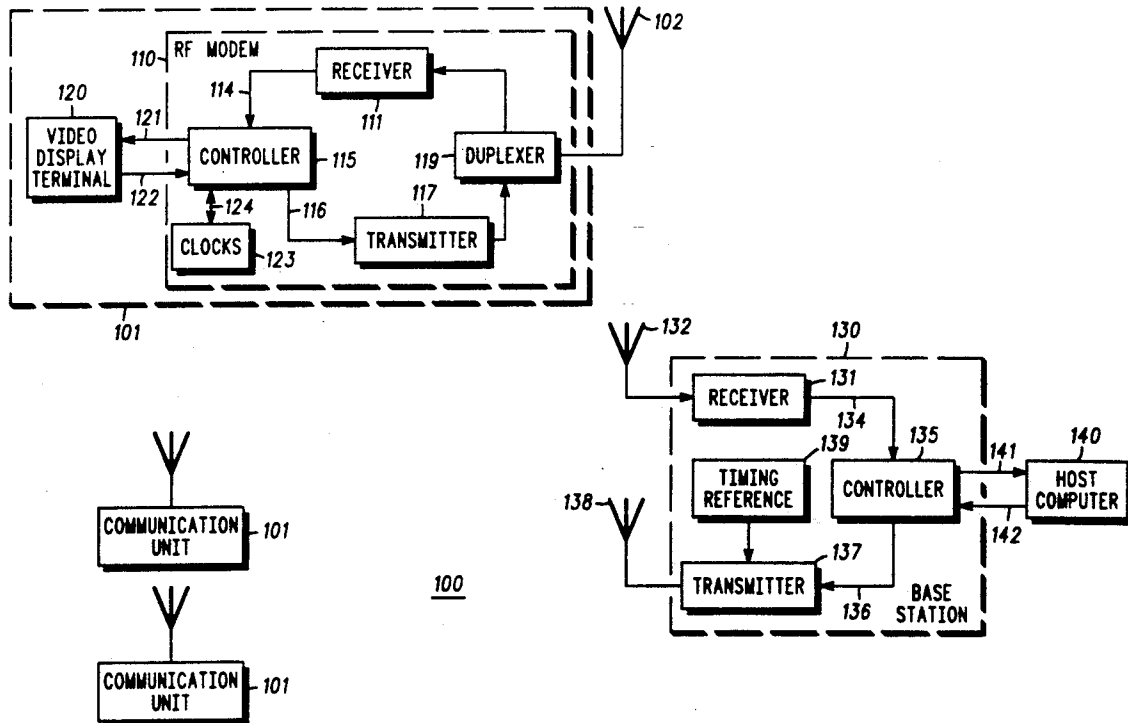
Than One, Molle et al., IEEE Transactions on Communications, pp. 919-933 (Sep. 1985).  
 Multiaccess Protocols in Packet Communication Systems, Tobagi, IEEE Transactions On Communications, pp. 468-488 (Apr. 1980).  
 On Protocols For Satellite Packet Switching, Lam, IEEE Publication, pp. 58.6.1-58.6.6 (1979).  
 An Analysis of the Reservation-ALOHA Protocol for Satellite Packet Switching, Lam, IEEE Publication, pp. 27.3.1-27.3.5 (1978).

*Primary Examiner*—Douglas W. Olms  
*Assistant Examiner*—Min Jung  
*Attorney, Agent, or Firm*—Steven G. Parmelee

[57] **ABSTRACT**

A method of providing a communication unit (10) access to a shared communication resource. In the communication unit, a clock (123) is maintained, and the unit detects the time when an inhibit period on the shared communication resource begins, and the time at which it concludes. When access to the shared communication resource is desired, the unit attempts to access the communication resource based on the time at which access was desired, as well as the times at which a detected inhibit condition began and concluded. A virtual time clock runs only during non-inhibit periods. Access to the communication resource is then based on when the virtual time clock equals the desired access time.

**13 Claims, 6 Drawing Sheets**



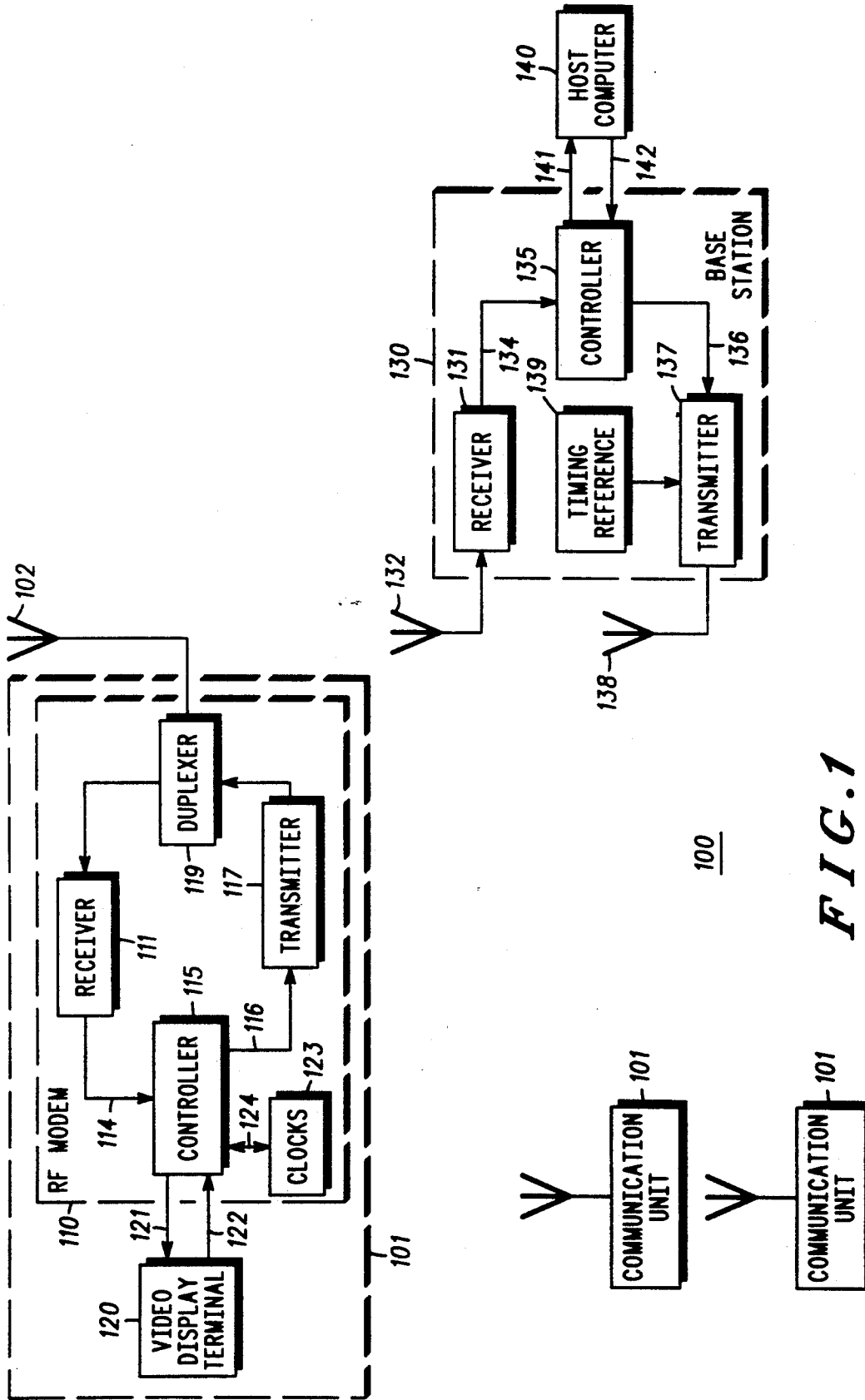


FIG. 1



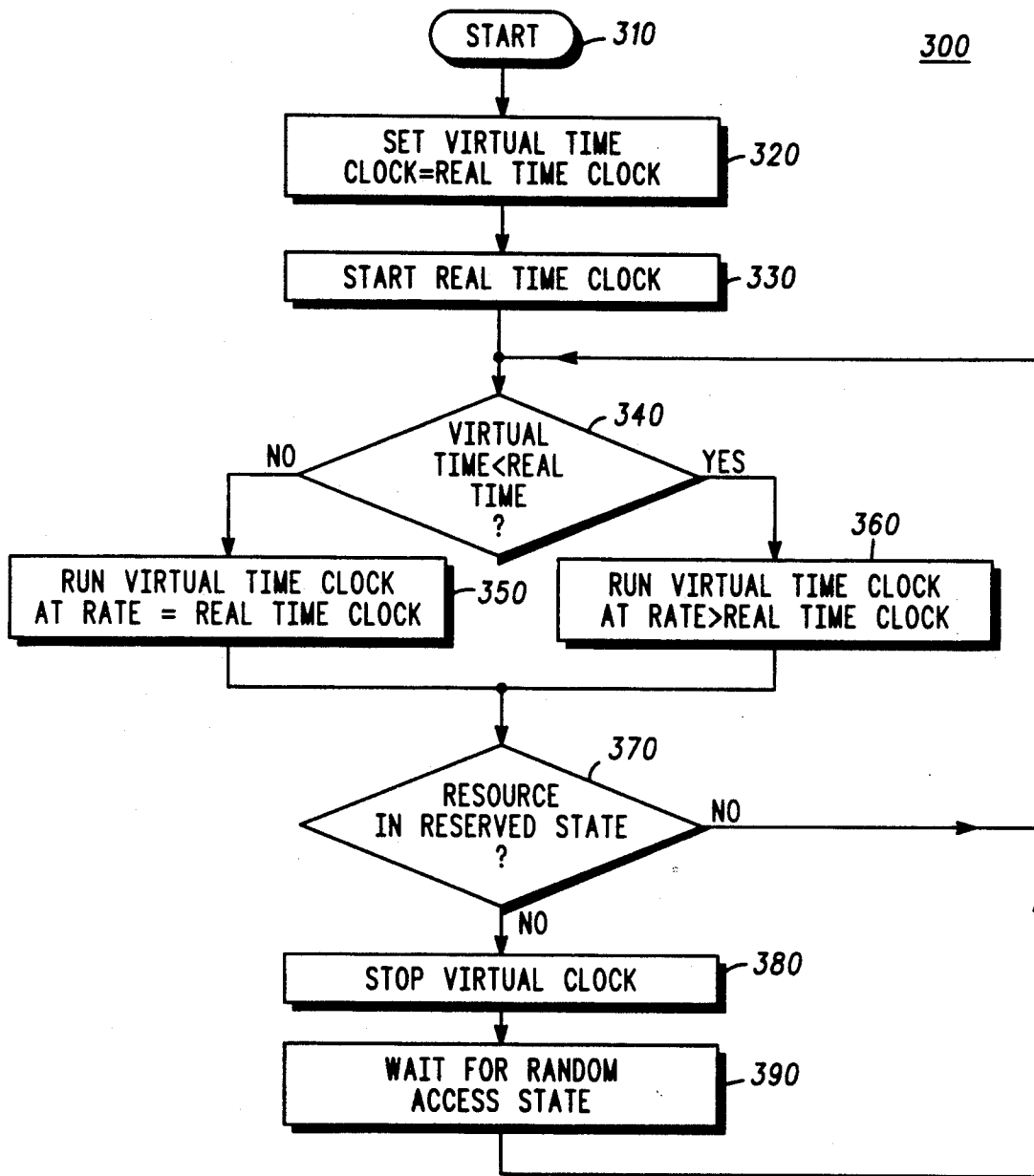
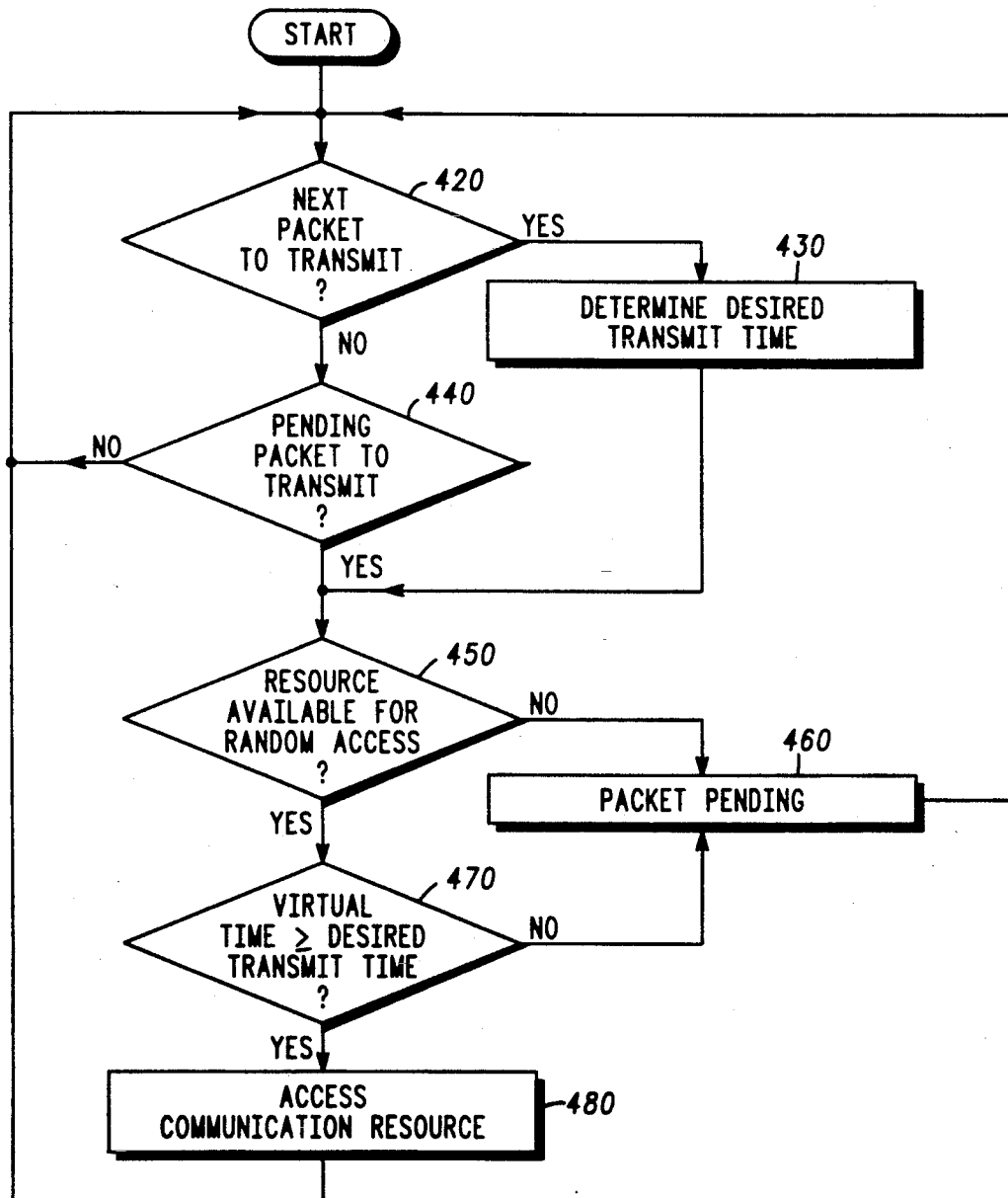


FIG. 3

FIG. 4

400



# 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.