



US005742641A

United States Patent [19]

Dingsor

[11] Patent Number: 5,742,641

[45] Date of Patent: Apr. 21, 1998

[54] APPARATUS, METHOD AND ARTICLE OF MANUFACTURE FOR THE DYNAMIC COMPENSATION OF FM DEVIATION IN A FM RADIO RECEIVER

[75] Inventor: Andrew Dwight Dingsor, Durham, N.C.

[73] Assignee: International Business Machines Corporation, Armonk, N.Y.

[21] Appl. No.: 683,478

[22] Filed: Jul. 18, 1996

[51] Int. Cl.⁶ H04B 1/38; H04L 5/16

[52] U.S. Cl. 375/222; 455/557; 455/75

[58] Field of Search 375/222; 329/315, 329/123; 455/557, 558, 75

[56] References Cited

U.S. PATENT DOCUMENTS

3,810,188	5/1974	Gross et al.	346/33
4,087,756	5/1978	Rogers, Jr.	329/50
4,293,818	10/1981	Jarger	329/50
4,355,414	10/1982	Inoue	455/184
4,466,128	8/1984	Couvillon	455/208
4,484,154	11/1984	Pavin	331/23
4,523,324	6/1985	Marshall	375/91
4,573,026	2/1986	Curtis et al.	332/18
4,870,699	9/1989	Garner et al.	455/76
4,905,305	2/1990	Garner et al.	455/183
5,034,695	7/1991	Owen	329/325
5,280,644	1/1994	Vannatta et al.	455/265
5,301,364	4/1994	Arens et al.	455/69
5,365,546	11/1994	Koenck et al.	375/9

5,396,251	3/1995	Schuermann	342/51
5,408,695	4/1995	Dorr	455/226.1
5,438,699	8/1995	Coveley	455/67.4
5,453,748	9/1995	Lindell	342/51
5,493,710	2/1996	Takahara et al.	455/192.2
5,497,402	3/1996	Pyo et al.	375/344
5,517,491	5/1996	Nanni et al.	370/29

Primary Examiner—Stephen Chin

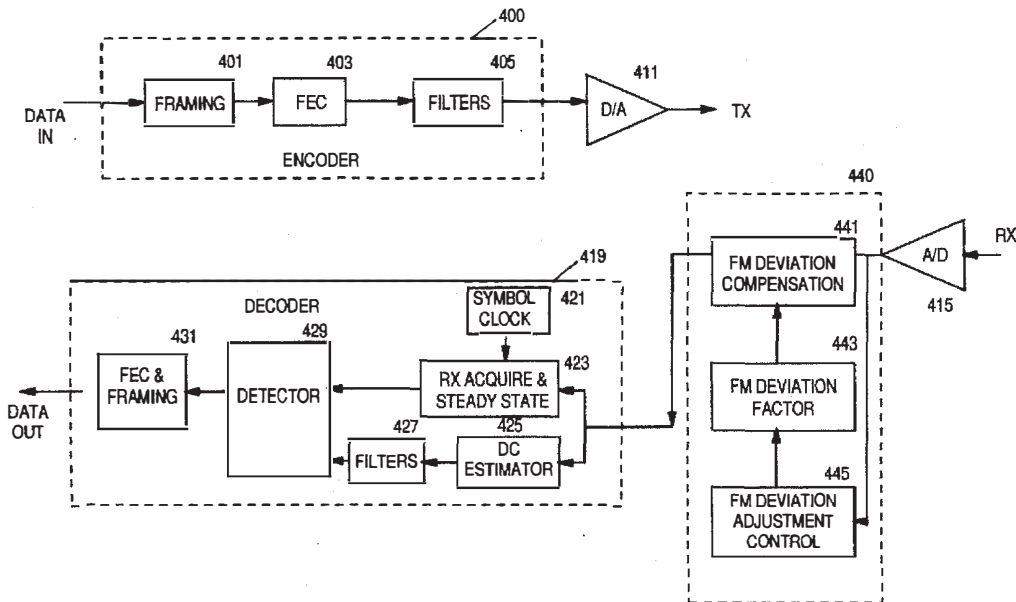
Assistant Examiner—Mohammad Ghayour

Attorney, Agent, or Firm—John D. Flynn

[57] ABSTRACT

Described is a method, apparatus, and article of manufacture to minimize radio data modem receive errors when a base station keys up. It applies to an intermittently keyed, multiple base station, single frequency reuse, FM modulated, radio data network such as the ARDIS network. Compensation is provided for the fact that each base station in the network may have a different transmit FM deviation level. Since these networks typically use the same base station to transmit to any one radio data modem over periods of time, and since the modem receiver can measure and remember the FM deviation level of each base station, a modem can compensate by using the FM deviation value of its "present" base station as the starting value for its automatic deviation control algorithm. By seeding the algorithm with the actual value for the "present" base station, receive data errors are reduced during the critical time when the base station is keying up. As the geographical position of the modem changes, or as radio conditions vary, the network may select a different base station to transmit to a modem. The modem will detect this change, and dynamically change its compensation to match the new "present" base station.

19 Claims, 10 Drawing Sheets



INTEL 1013

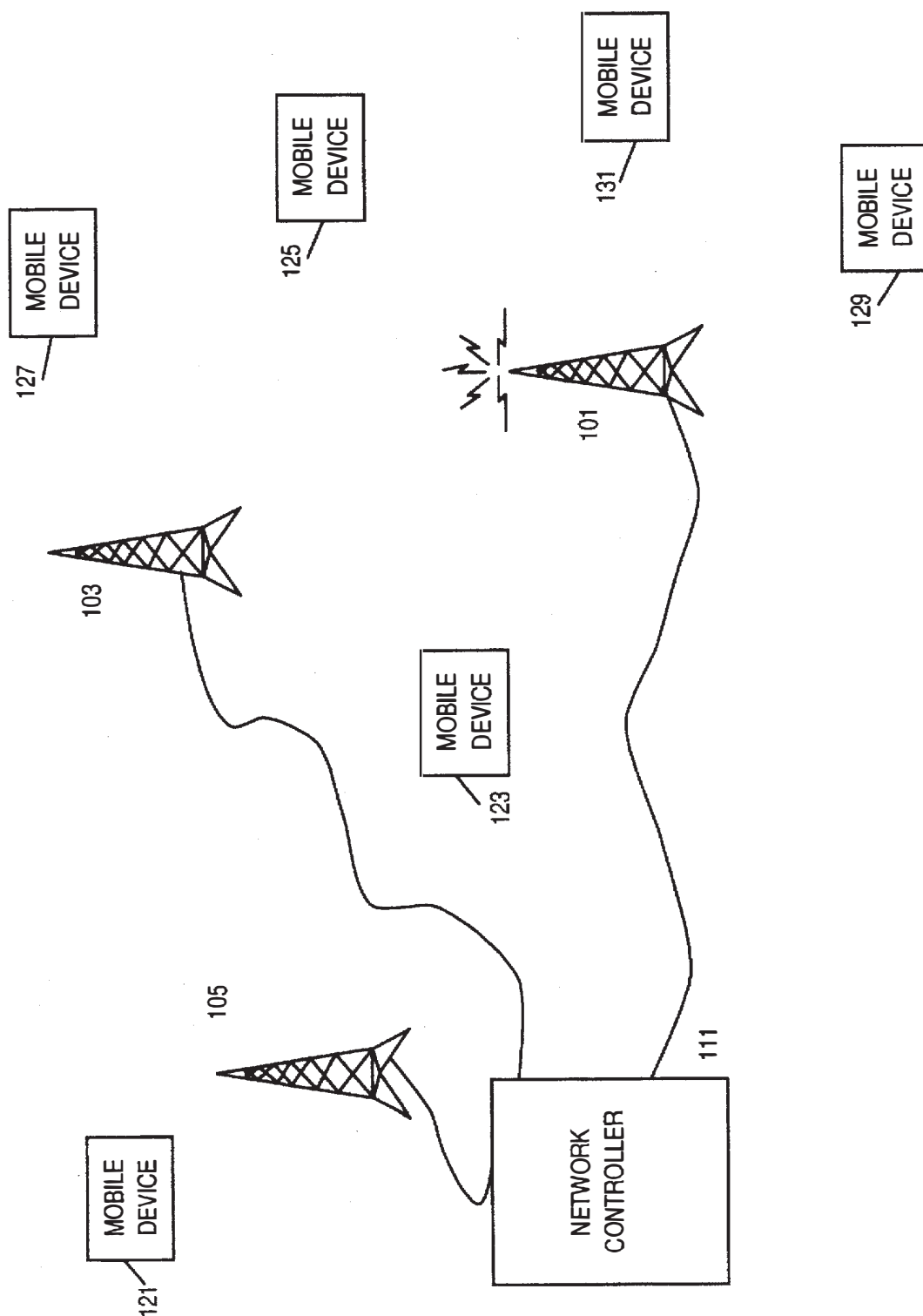


FIG. 1

INTEL 1013

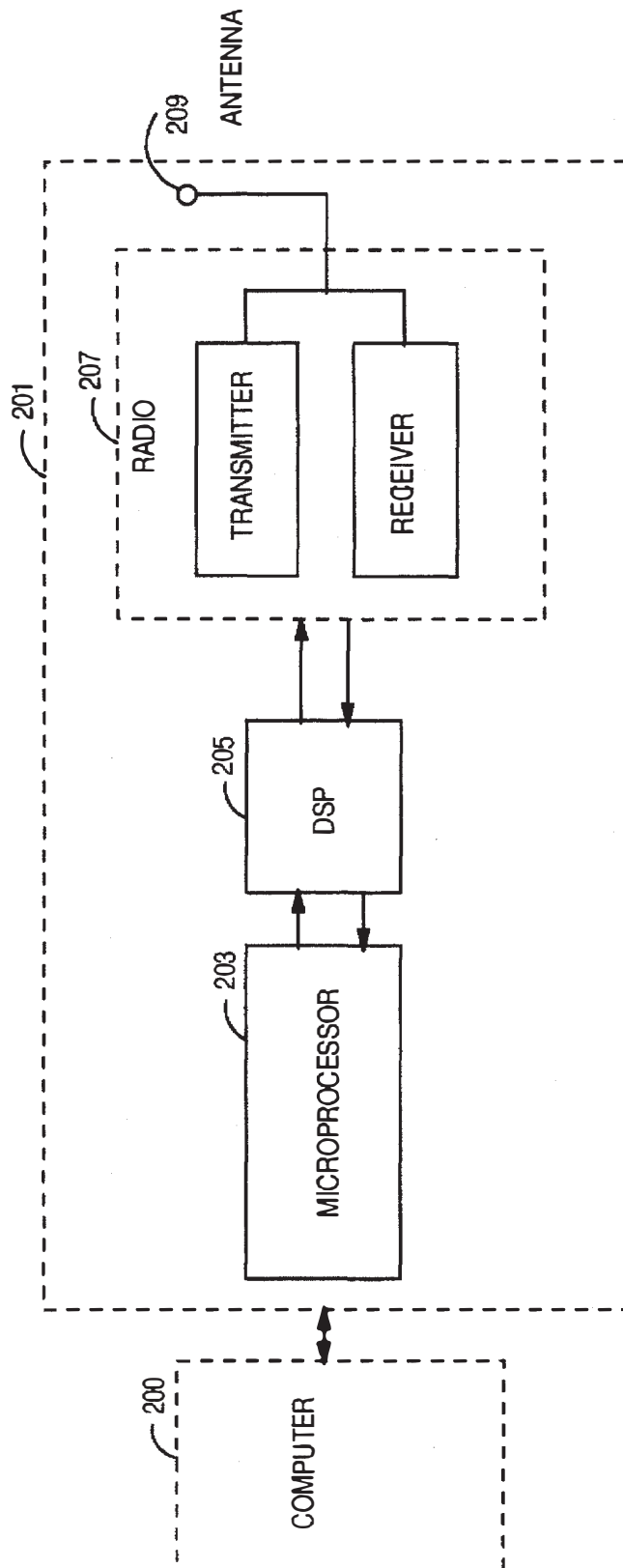


FIG. 2

INTEL 1013

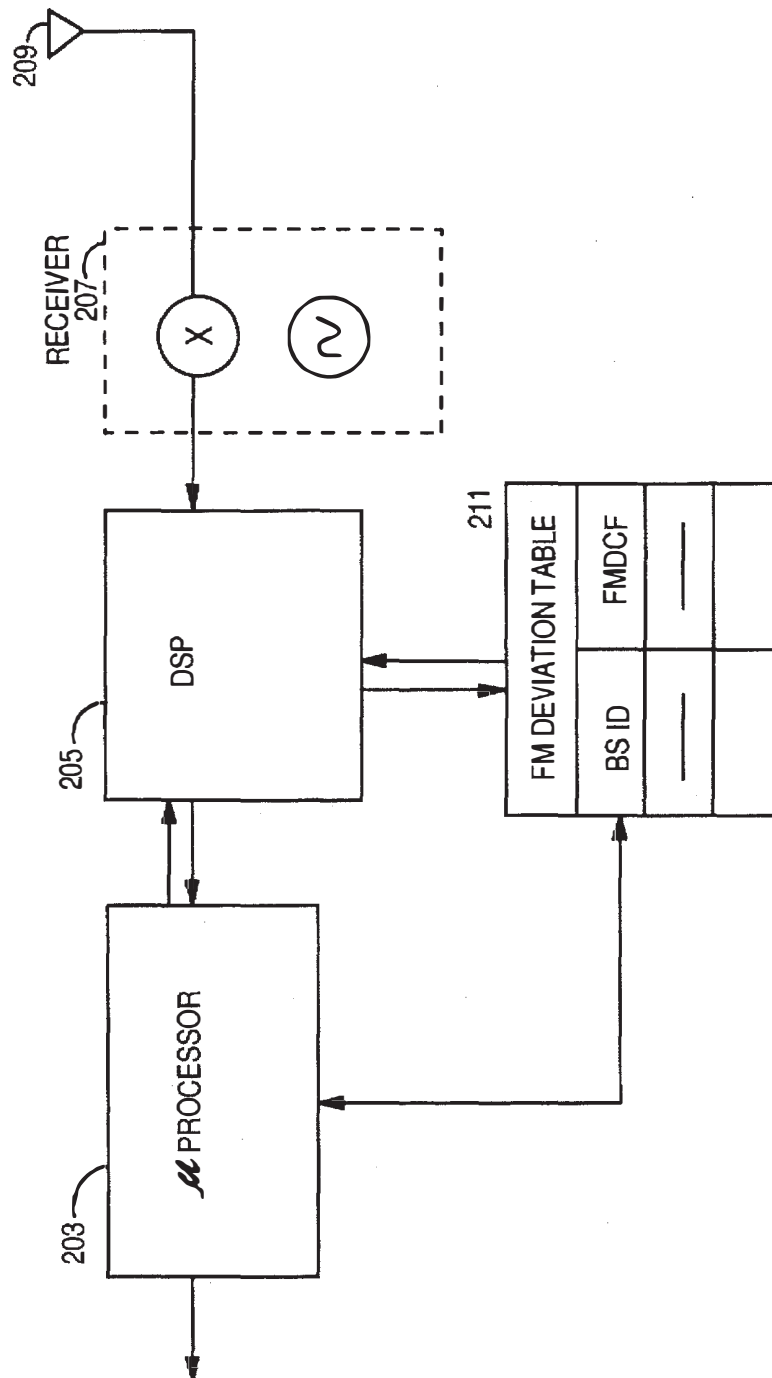


FIG. 3

INTEL 1013

INTEL 101

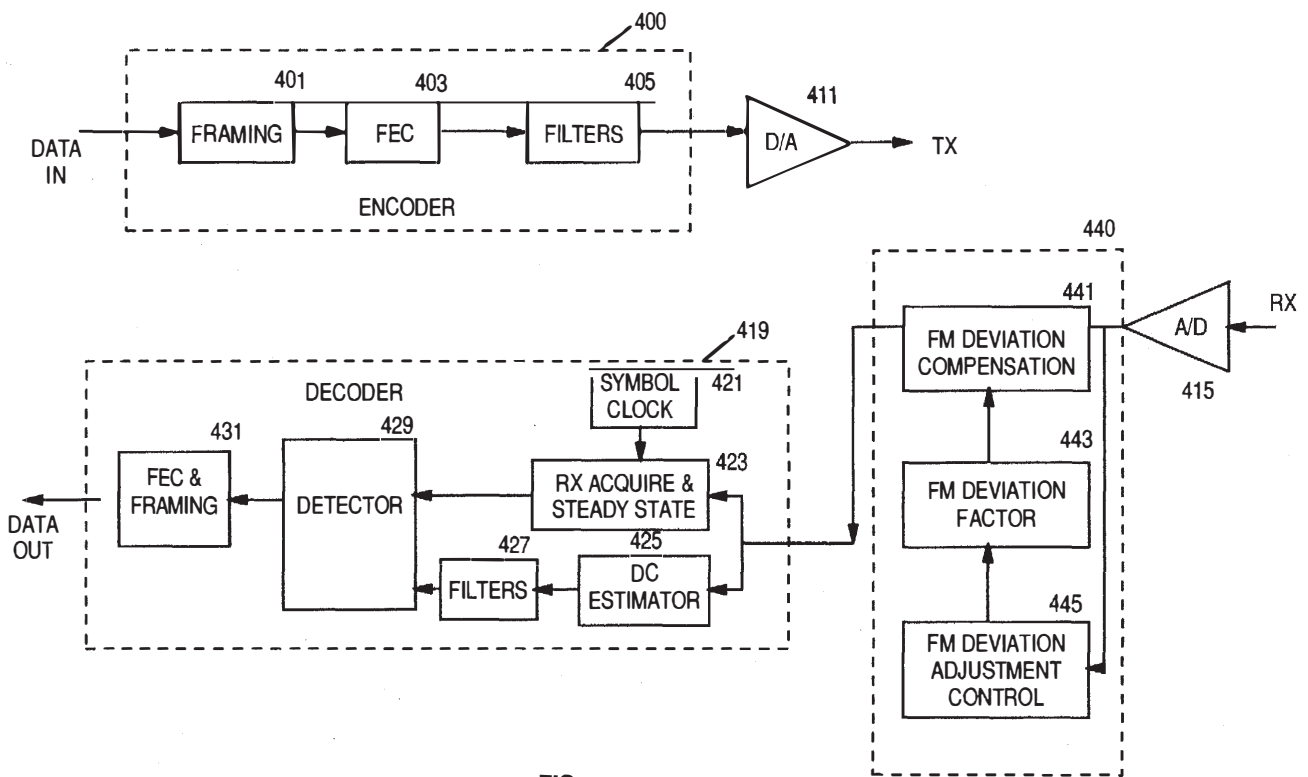


FIG. 4

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.