



US007206587B2

(12) **United States Patent**
Miyoshi et al.

(10) **Patent No.:** **US 7,206,587 B2**
(45) **Date of Patent:** ***Apr. 17, 2007**

(54) **COMMUNICATION TERMINAL APPARATUS, BASE STATION APPARATUS, AND RADIO COMMUNICATION METHOD**

6,452,914 B2 * 9/2002 Niemela 370/337
RE37,870 E * 10/2002 Nakano et al. 370/342
6,603,980 B1 * 8/2003 Kitagawa et al. 455/522

(75) Inventors: **Kenichi Miyoshi**, Yokohama (JP);
Osamu Kato, Yokosuka (JP); **Junichi Aizawa**, Yokohama (JP)

(73) Assignee: **Matsushita Electric Industrial Co., Ltd.**, Osaka (JP)

(Continued)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 256 days.

FOREIGN PATENT DOCUMENTS

EP 0802638 10/1997

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **10/321,623**

(Continued)

(22) Filed: **Dec. 18, 2002**

OTHER PUBLICATIONS

(65) **Prior Publication Data**

US 2004/0203829 A1 Oct. 14, 2004

European Search Report dated Mar. 5, 2004.

(Continued)

Related U.S. Application Data

(63) Continuation of application No. 10/089,605, filed on Apr. 1, 2002, now Pat. No. 6,760,590.

Primary Examiner—Dan Le

(74) Attorney, Agent, or Firm—Stevens, Davis, Miller & Mosher, LLP

(30) **Foreign Application Priority Data**

Aug. 2, 2000 (JP) 2000-234420
Sep. 20, 2000 (JP) 2000-285405

(57) **ABSTRACT**

(51) **Int. Cl.**
H04Q 7/20 (2006.01)

(52) **U.S. Cl.** **455/452.2**; 455/452.1;
455/522; 370/335; 370/318

(58) **Field of Classification Search** 455/522,
455/69, 68, 67.11, 561, 127, 452.2, 452.1;
370/347, 335, 336, 529, 337, 476, 318, 310
See application file for complete search history.

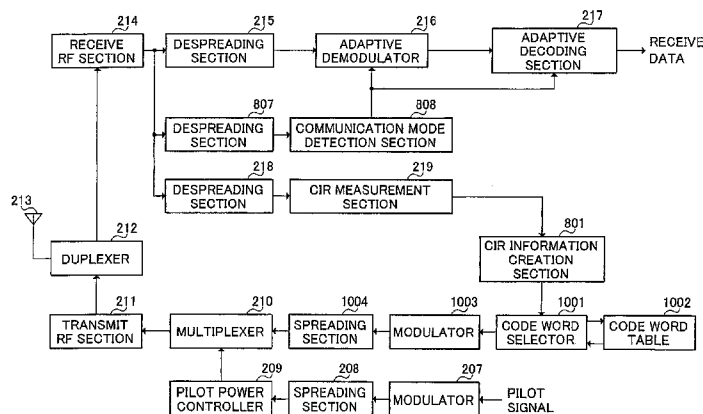
A communication mode determination section **201** determines the communication mode based on the CIR measured by a CIR measurement section **219**; a DRC signal creation section **202** creates a DRC signal with a number corresponding to the communication mode; and a DRC power controller **205** refers to a transmission power table **206** showing the correspondence between DRC numbers and transmission power, and, based on the transmission power of the pilot signal output from a pilot power controller **209**, increases transmission power in proportion as the DRC signal indicates that downlink channel quality is good.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,564,074 A * 10/1996 Juntti 455/67.11

4 Claims, 17 Drawing Sheets



US 7,206,587 B2

Page 2

U.S. PATENT DOCUMENTS

6,651,211	B1	11/2003	Abe et al.	
6,751,197	B1	6/2004	Sadanaka	
2001/0038630	A1*	11/2001	Tong et al.	370/395
2001/0050900	A1*	12/2001	Lee et al.	370/232
2001/0050926	A1*	12/2001	Kumar	370/529
2002/0136242	A1*	9/2002	Niemela	370/523
2002/0155861	A1*	10/2002	Sumasu et al.	455/561
2003/0043778	A1*	3/2003	Luschi et al.	370/349
2005/0083901	A1*	4/2005	Kim et al.	370/342

FOREIGN PATENT DOCUMENTS

EP	0959581	11/1999
EP	0986192	3/2000

EP	0986282	3/2000
JP	11331057	11/1999
JP	11331131	11/1999
JP	20004171	1/2000
JP	2000049663	2/2000
JP	200068959	3/2000
JP	2000124914	4/2000
WO	0013325	3/2000

OTHER PUBLICATIONS

Japanese Office Action dated Dec. 21, 2004, with English translation.

International Search Report dated Nov. 13, 2001.

* cited by examiner

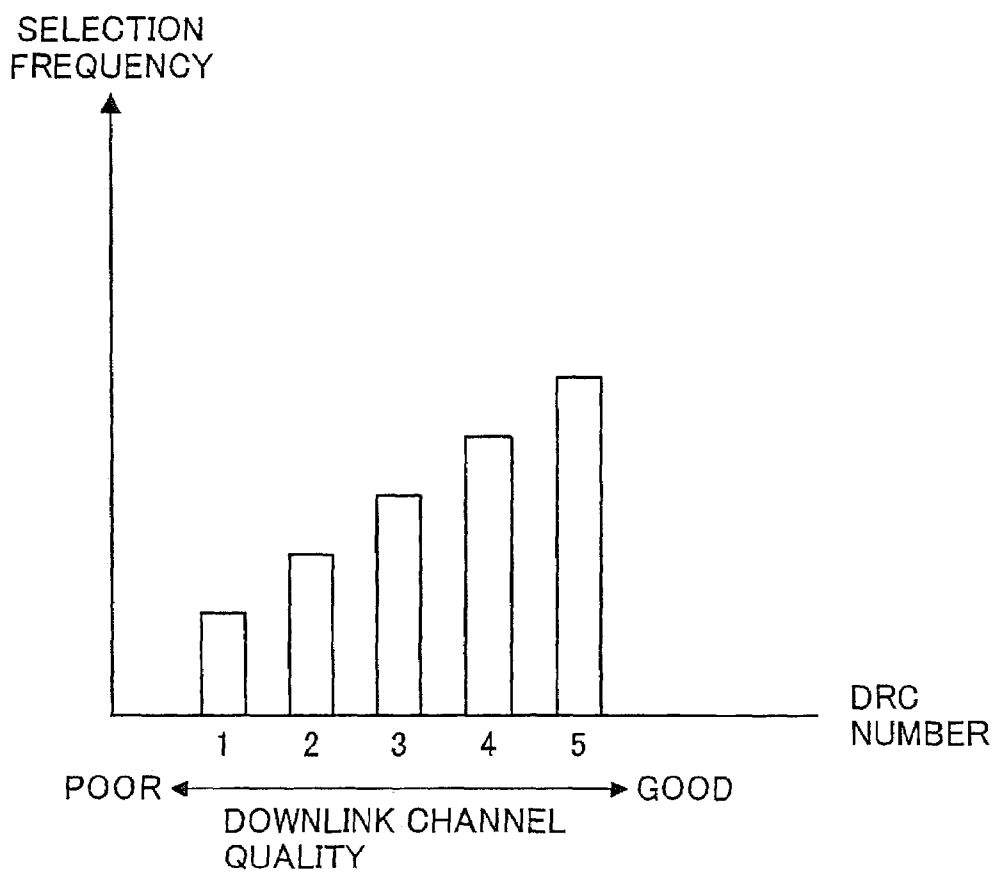


FIG.1

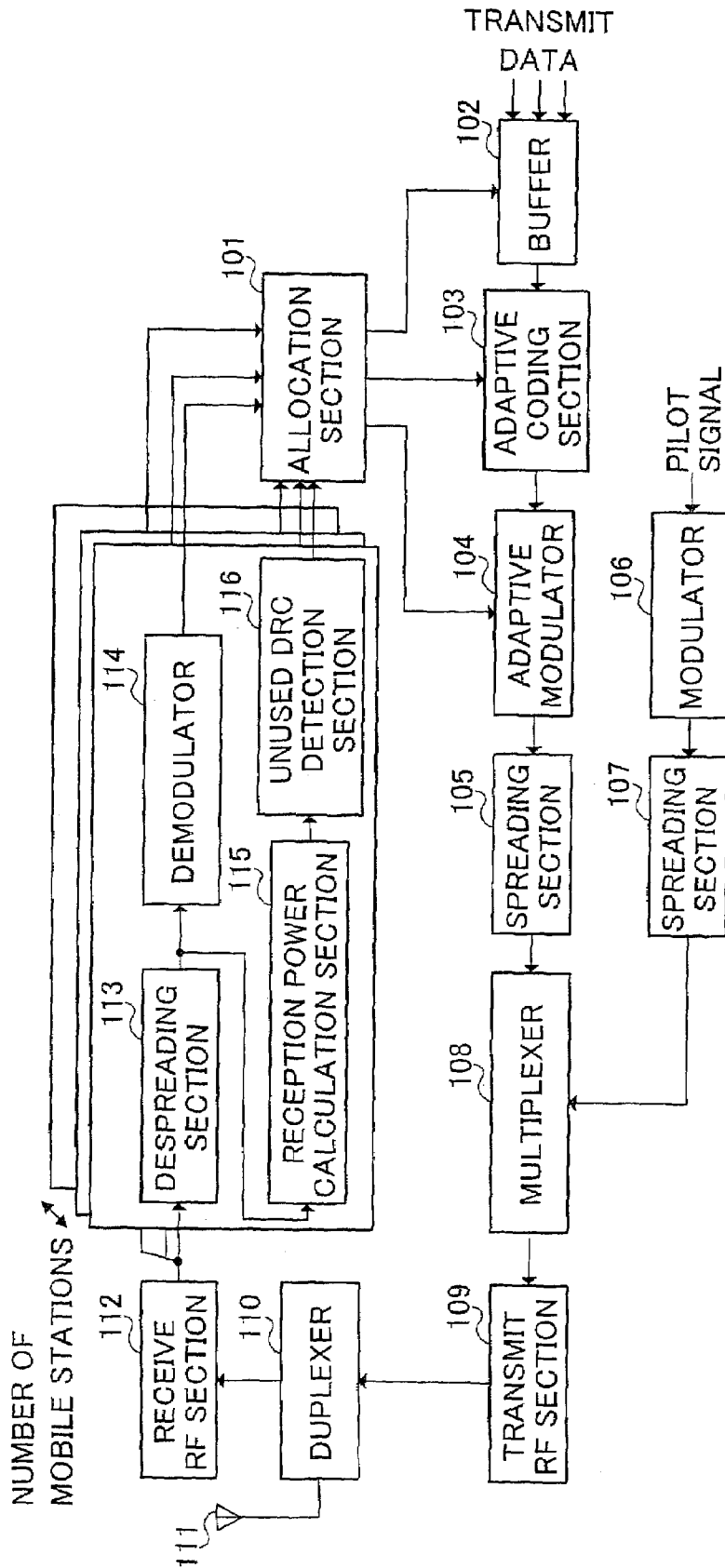


FIG. 2

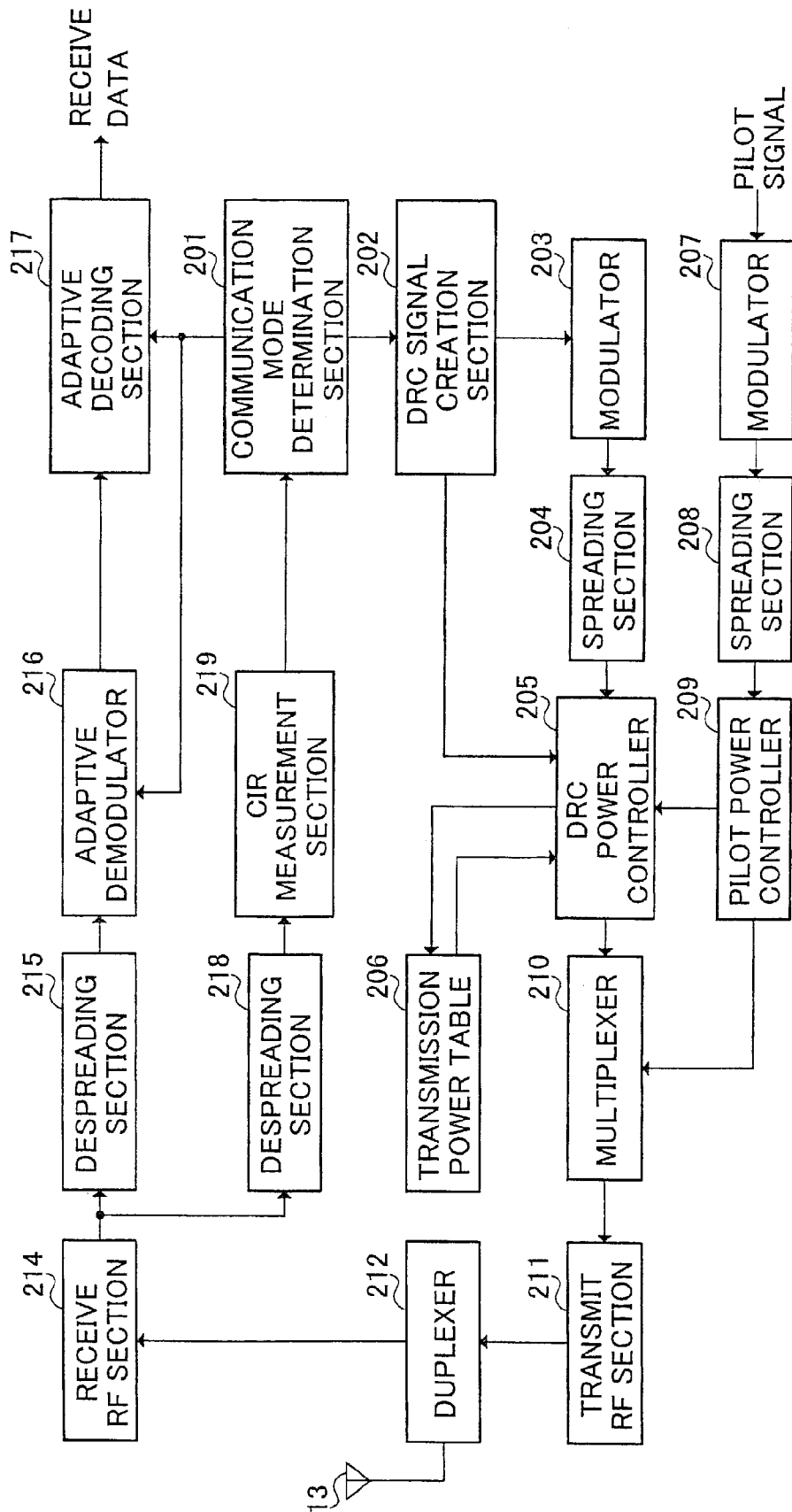


FIG. 3

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.