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(71) Applicant: ERICSSON INC. [US/US]; 7001 Development Drive, P.O. Box 13969, Research Triangle Park, NC 27709 (US).

(72) Inventor: RAMESH, Rajaram; 403 Danton Drive, Cary, NC 27511 (US).

(74) Agents: BIGEL, Mitchell, S. et al.; Myers, Bigel, Sibley & Sajovec, P.A., P.O. Box 37428, Raleigh, NC 27627 (US).

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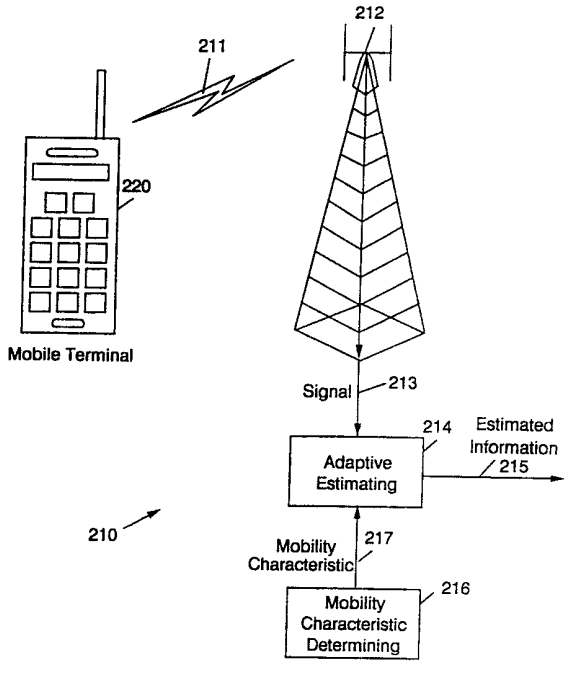
(54) Title: COMMUNICATIONS APPARATUS AND METHODS FOR ADAPTIVE SIGNAL PROCESSING BASED ON MOBILITY CHARACTERISTICS

(57) Abstract

Information represented by a signal generated in a communications medium by a first entity is recovered by receiving the signal from the communications medium at a second entity, determining a mobility characteristic for communications between the first entity and the second entity, and adaptively estimating the information from the received signal based on the determined mobility characteristic. The mobility characteristic may be received from the first entity at the second entity, and the information represented by the received signal may be adaptively estimated based on the received mobility characteristic. According to an embodiment of the invention, the mobility characteristic is a cell type identifier which is communicated from a base station to a mobile terminal, the mobile terminal adaptively estimating information from a signal received from the base station based on the communicated cell type identifier. A number of signal processing functions may be adaptively performed, including adaptive demodulation, adaptive channel estimation/interpolation, adaptive equalization, adaptive channel tracking, and adaptive combining of received signals.



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INTERNATIONAL SEARCH REPORT

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PCT/US 98/16503

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04B7/005 H04B17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 H04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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[X] Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Cochonneau, O

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A	EP 0 434 651 A (ERICSSON TELEFON AB L M) 26 June 1991 see abstract see column 2, line 38 - column 3, line 44 see column 3, line 24 - column 9, line 16 see figures 6-8	1-58
A	EP 0 593 186 A (NOKIA MOBILE PHONES LTD) 20 April 1994 see abstract see page 2, line 13 - page 3, line 49 see figure 2	1-58

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