



US 20070104174A1

(19) **United States**

(12) **Patent Application Publication**
Nystrom et al.

(10) **Pub. No.: US 2007/0104174 A1**

(43) **Pub. Date: May 10, 2007**

(54) **METHOD AND APPARATUS FOR
ALLOCATING A PILOT SIGNAL ADAPTED
TO THE CHANNEL CHARACTERISTICS**

(30) **Foreign Application Priority Data**

Dec. 12, 2003 (EP) 03104661.8

Publication Classification

(76) Inventors: **Johan Nystrom**, Stockholm (SE); **Pal
Frenger**, Vallingby (SE); **Erik
Dahlman**, Bromma (SE); **Svante
Signell**, Vallingby (SE); **Goran Klang**,
Enskede (SE)

(51) **Int. Cl.**
H04J 1/00 (2006.01)

(52) **U.S. Cl.** **370/343**

(57) **ABSTRACT**

A set of different pilot structures are designed for use in different environments and/or different user behaviours that are expected to occur in a cell. The radio conditions for a user are estimated. Each user is then assigned an area (108A-E) in resource space for its communication, which has a suitable pilot configuration. In one embodiment, the entire resource space is provided with different pilot structures in different parts (110A-D) In advance and allocation of resources to the users are then performed in order to match estimated radio conditions to the provided pilot structure. In another embodiment, allocation is performed first, and then the actual pilot structure is adapted within the allocated resource space area to suit the environmental conditions.

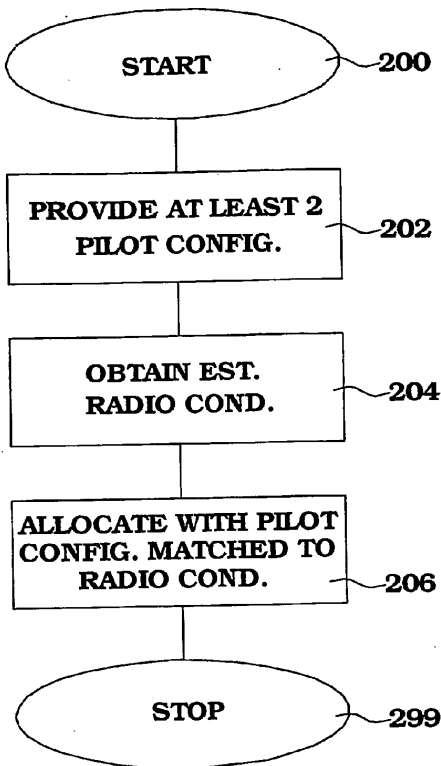
Correspondence Address:
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203 (US)

(21) Appl. No.: **10/582,478**

(22) PCT Filed: **Dec. 1, 2004**

(86) PCT No.: **PCT/EP04/53192**

§ 371(c)(1),
(2), (4) Date: **Jun. 12, 2006**



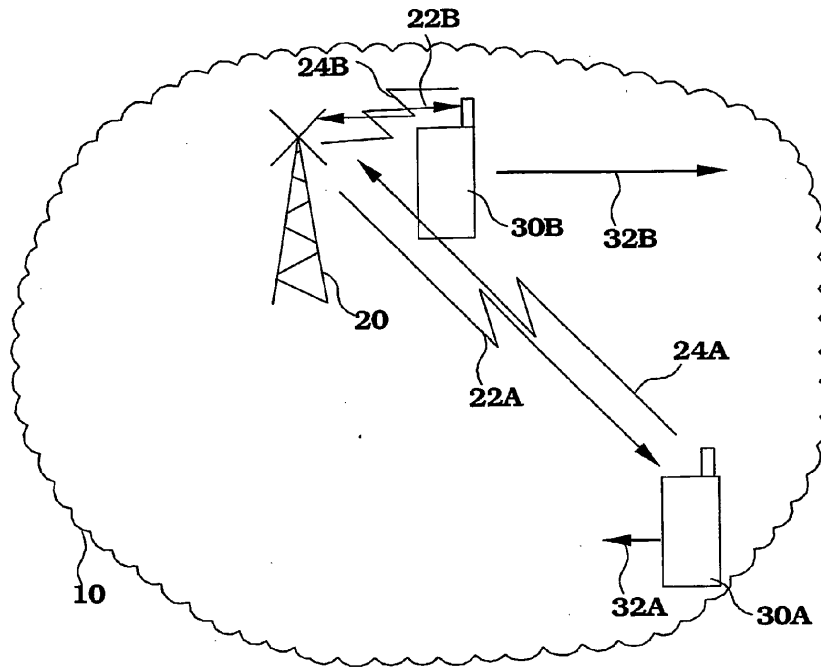


Fig. 1

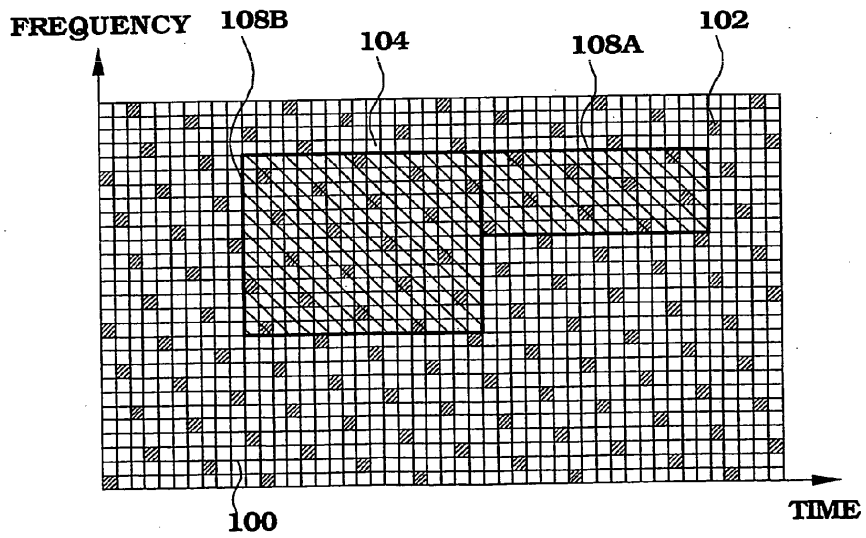


Fig. 2A

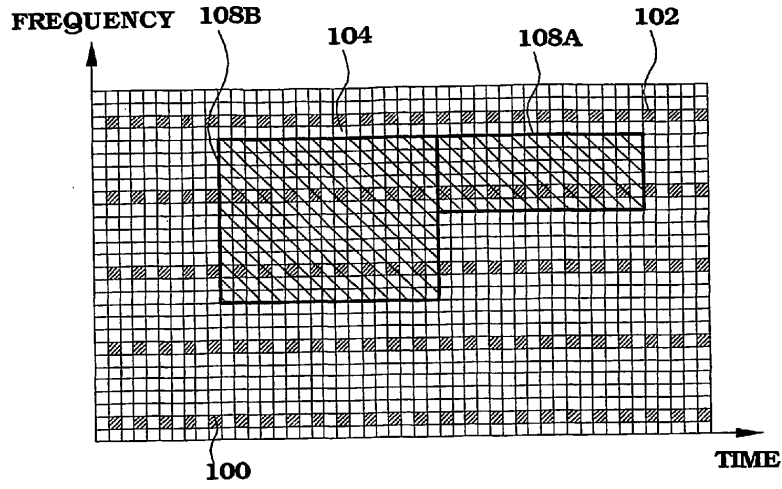
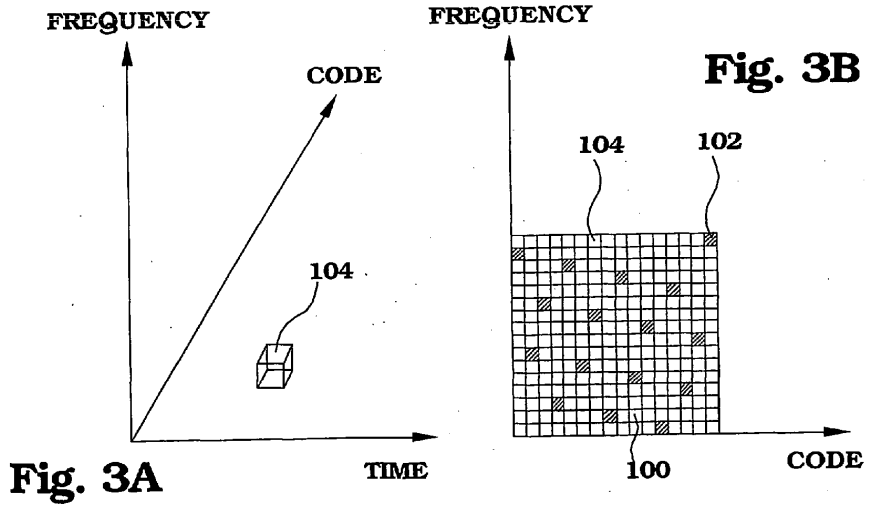


Fig. 2B



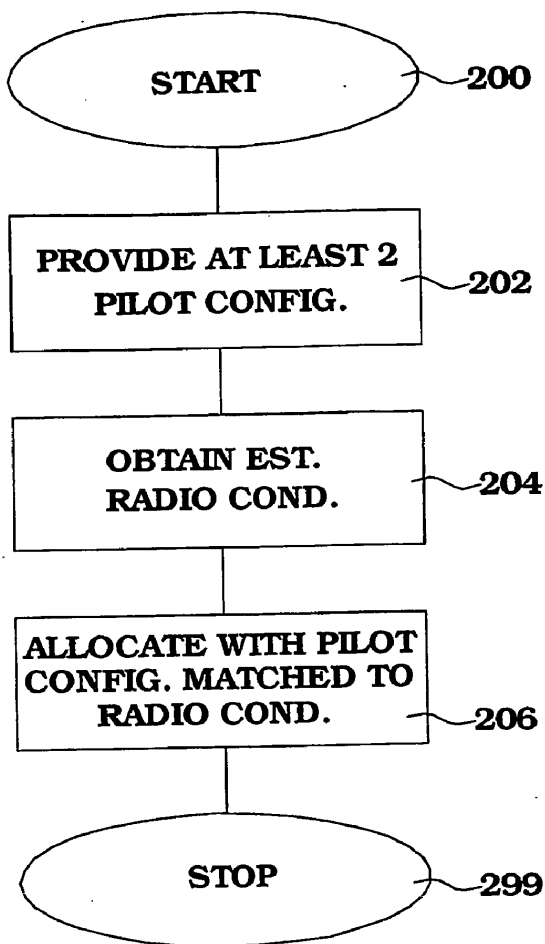


Fig. 4

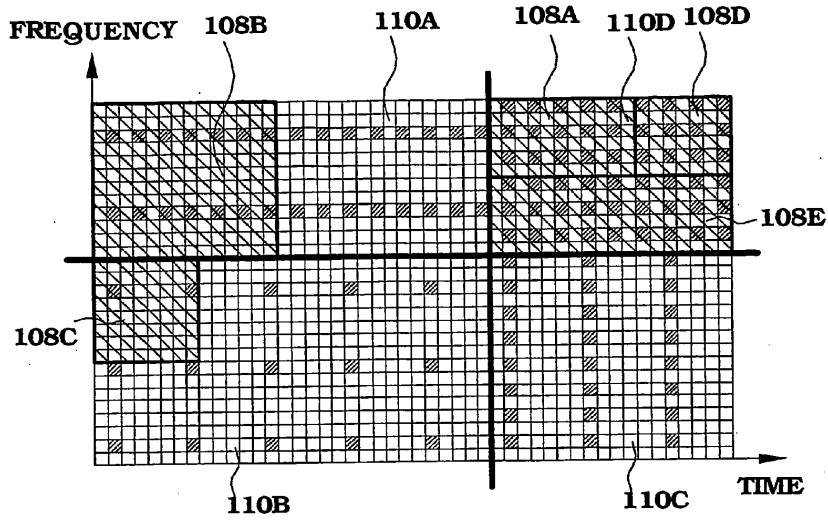


Fig. 5A

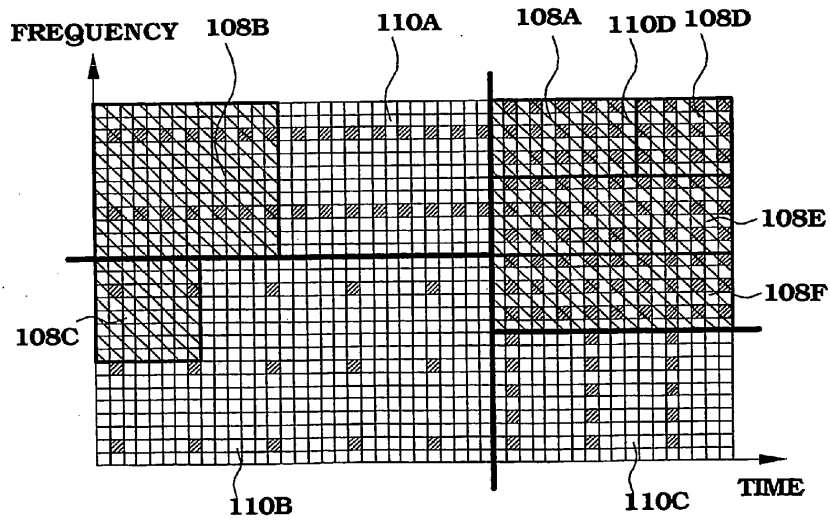


Fig. 5B

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.