Apple et al v. INVT SPE LLC U.S. Patent No. 7,764,711

IPR2018-01476 Oral Hearing, January 14, 2020

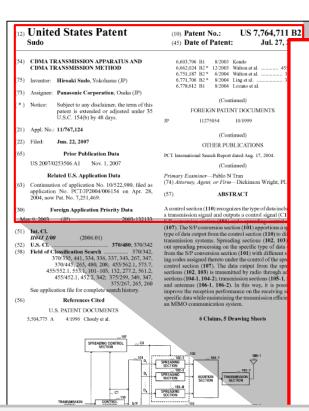


Key Disputes

- Claim Construction. The challenged claims require simultaneous use of transmit diversity (TD) and spatial multiplexing (MIMO)
- Substantive Failure. The asserted references fail to te "simultaneous" TD and MIMO, where TD is used for a "specific" [higher priority] data item
- 3. Motivation to combine. Failed to meet burden to show why POSITA would expect success, particularly where Huang teaches away
- 1 Secondary Considerations At least some weight



U.S. Patent No. 7,764,711



(12) United States Patent

(54) CDMA TRANSMISSION APPARATUS AND CDMA TRANSMISSION METHOD

(75) Inventor: Hiroaki Sudo, Yokohama (JP)

Punasonic Corporation, Osaka (JP) (73) Assignee:

Subject to any disclaimer, the term of this (*) Notice: patent is extended or adjusted under 35 U.S.C. 154(b) by 48 days.

(21) Appl. No.: 11/767,124

(22) Filed: Jun. 22, 2007

US 2007/0253506 A1

Prior Publication Data (65)

Related U.S. Application Data

Nov. 1, 2007

(63) Continuation of application No. 10/522,980, filed as application No. PCT/JP2004/006154 on Apr. 28, 2004, new Pat. No. 7,251,469.

(30)Foreign Application Priority Data (10) Patent No.: (45) Date of Patent:

TP:

6.603,796 BI 8/2003 Kondo

6,662,024 B2 * 12/2003 Walton et al. 6,751,187 B2 * 6/2004 Walton et al. 6,771,706 B2 ° 8/2004 Ling et al. . 6,778,612 BI 8/2004 Lozano et al.

(Continued)

US 7.

FOREIGN PATENT DOCUM 11275054 10/1999

(Continued)

OTHER PUBLICATION

PCT International Search Report dated Aug. 13 (Continued)

Primary Examiner—Pablo N Tran (74) Attorney, Agent, or Firm—Dickinsor

ABSTRACT

A control section (110) recognizes the type



The '711 Patent

- A transmitting apparatus employing a MIMO (multiinput/multi-output) scheme of transmitting a plurality of data items for a same receiving apparatus using a plurality of antennas in parallel, the transmitting apparatus comprising:
 - a mapping section that maps the plurality of data items to at least one of the plurality of antennas; and
 - a transmitting section that transmits the plurality of data items using the at least one of the plurality of antennas to the receiving apparatus,
 - wherein the mapping section generates a replica data item by replicating a specific data item of the plurality of data items, and maps the plurality of data items to the at least one of the plurality of antennas such that the specific data item and the replica data item are transmitted from different antennas at a same time.

- 6. A transmitting method employing a MIM multi-output) scheme of transmitting a plurali for a same receiving apparatus using a pluralit parallel, the transmitting method comprising
 - a mapping step of mapping the plurality of least one of the plurality of antennas; an
 - a transmitting step of transmitting the pi items using the at least one of the pluralit the receiving apparatus,
 - wherein, in the mapping step, a replica dat ated by replicating a specific data item of data items, and the plurality of data item the at least one of the plurality of antenn specific data item and the replica data ite ted from different antennas at a same tin



The '711 Patent - Problem To Be Solved

BACKGROUND ART

An MIMO (Multi-Input/Multi-Output) communication is attracting attention as a technology for realizing communications of large-volume data such as images in recent years. In the MIMO communication, different items of transmission data (substreams) are transmitted from a plurality of antennas on a transmitting side and the plurality of items of transmission data mixed along a propagation path is separated into the original items of transmission data on a receiving side using a propagation path estimated value (e.g. see FIG. 4 in the Unexamined Japanese Patent Publication No. 2002-44051).



DOCKET

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.

