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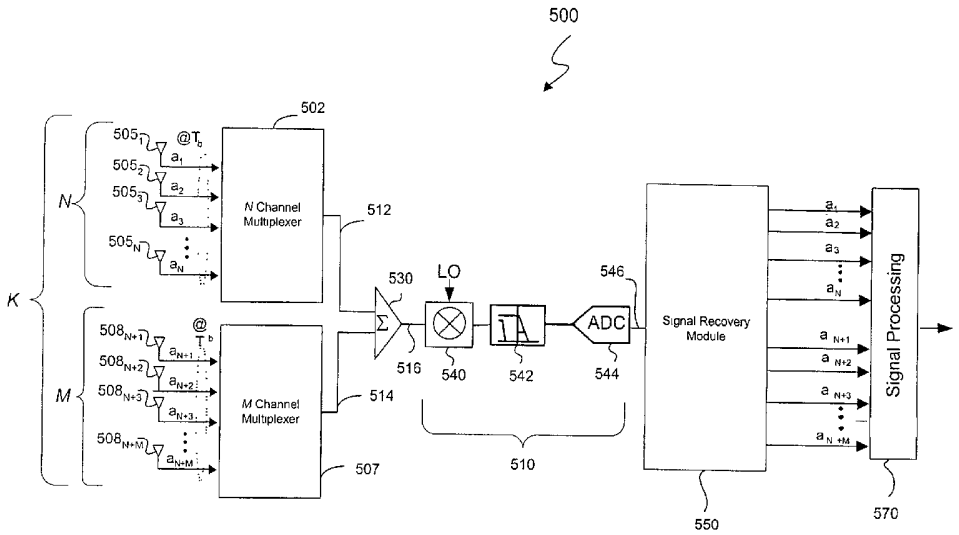
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ITERATIVE MULTI-STAGE DETECTION TECHNIQUE FOR A DIVERSITY RECEIVER HAVING MULTIPLE ANTENNA ELEMENTS



(57) Abstract: An iterative multistage detection system and method for orthogonally multiplexing K channels onto a signal processing chain using N orthogonal sequences of length N. The K channels include a first set of N channels and a second set of M channels (the M channels being separate and distinct from the N channels), where $K = N + M$. In a first iteration, interference from the first set of N channels imparted on the second set of M channels is removed from the multiplexed signal, thereby enabling the symbol values associated with the second set of M channels to be reliably estimated. In a second iteration, interference from the second set of M channels imparted on the first set of N channels is removed from the first set of N channels, thereby enabling the symbol values associated with the first set of N channels to be reliably estimated.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US03/26933

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04B 1/38
US CL : 455/101, 562.1

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)
U.S. : 455/101, 562.1

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 practicable, 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.
X	US 6,369,758 B1 (ZHANG) 09 April 2002 (09.04.2002), whole document.	1-31
A	US 6,351,500 B2 (KUMAR) 26 February 2002 (26.02.2002), whole document.	1-31
A,P	US 6,473,467 B1 (WALLACE et al) 29 October 2002 (29.10.2002), whole document.	1-31
A,P	US 6,512,737 B1 (AGEE) 28 January 2003 (28.01.2003), whole document.	1-31

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
04 February 2004 (04.02.2004)	08 MAR 2004
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