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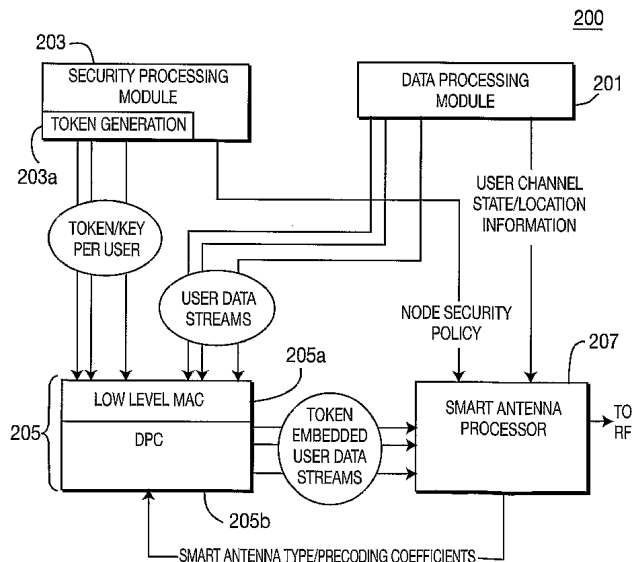
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(57) Abstract: A transceiver comprising a data processing module, a security processing module, a medium access control (MAC) module, a dirty-paper-coding (DPC) module, and a smart antenna processor. The data processing module provides user data streams to the MAC module and channel state information to the smart antenna processor. The security processing module generates security data and provides the security data to the MAC module. The security module also provides security policy data to the smart antenna processor. The MAC module determines data transmission rates for the user data streams and the security data. In addition, the MAC module allocates the data streams and security data to transmission channels for transmission. The DPC module encodes the security data onto the user data streams. The smart antenna processor generates pre-coding coefficients used by the DPC module and transmits the security encoded data streams.

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| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br>IPC(8): H04K 1/10 (2007.01)<br>USPC: 380/33<br>According to International Patent Classification (IPC) or to both national classification and IPC   |   |  |
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| <b>B. FIELDS SEARCHED</b><br>Minimum documentation searched (classification system followed by classification symbols)<br>USPC: 380/33<br>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br>USPC: 380/ 270<br>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)<br>PubWEST(USPT,PGPB,EPAB,JPAB); DialogPRO; WIPO, EPO, CITESEER, Google patents, Google scholar<br>Search Terms Used: transceiver security dirty paper coding DPC antenna coding   |   |  |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>  |   |  |
| Category*  | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.  |
| Y  | US 2004/0095907 A1 (AGEE et al.) 20 May 2004 (20.05.2004) entire document especially para [0071], [0105], [0172]-[0176], [0254], [0388]-[0389]. | 1-30   |
| Y  | US 2005/0043031 A1 (CHO et al.) 24 February 2005 (24.02.2005) entire document especially para [0014]-[0016].                                    | 1-30   |
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