



[54] **MEDIUM ACCESS CONTROL SCHEME FOR DATA TRANSMISSION ON CODE DIVISION MULTIPLE ACCESS (CDMA) WIRELESS SYSTEMS**

5,673,259 9/1997 Quick, Jr. 370/342

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[75] Inventors: Ahmad Jalali, Plano, Tex.; Witold Krzymien, Edmonton; Paul Mermelstein, Cote St. Luc, both of Canada

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Alfred Baier, Open Multi-Rate Radio Interface Architecture Based on CDMA, Phillips Kommunikations Industrie AG, Nurnberg, Germany, ICUPC '93, IEEE 1993, pp. 985-989. An Overview of the Application of Code Division Multiple Access (CDMA) to Digital Cellular Systems and Personal Cellular Networks, Qualcomm inc., Jun. 4, 1992, pp. 1-56.

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[21] Appl. No.: 666,828

[22] Filed: Jun. 19, 1996

[51] Int. Cl.⁶ H04B 7/216

[52] U.S. Cl. 370/335

[58] Field of Search 370/320, 321, 370/324, 335, 337, 342, 347, 350, 441; 455/422

[57] ABSTRACT

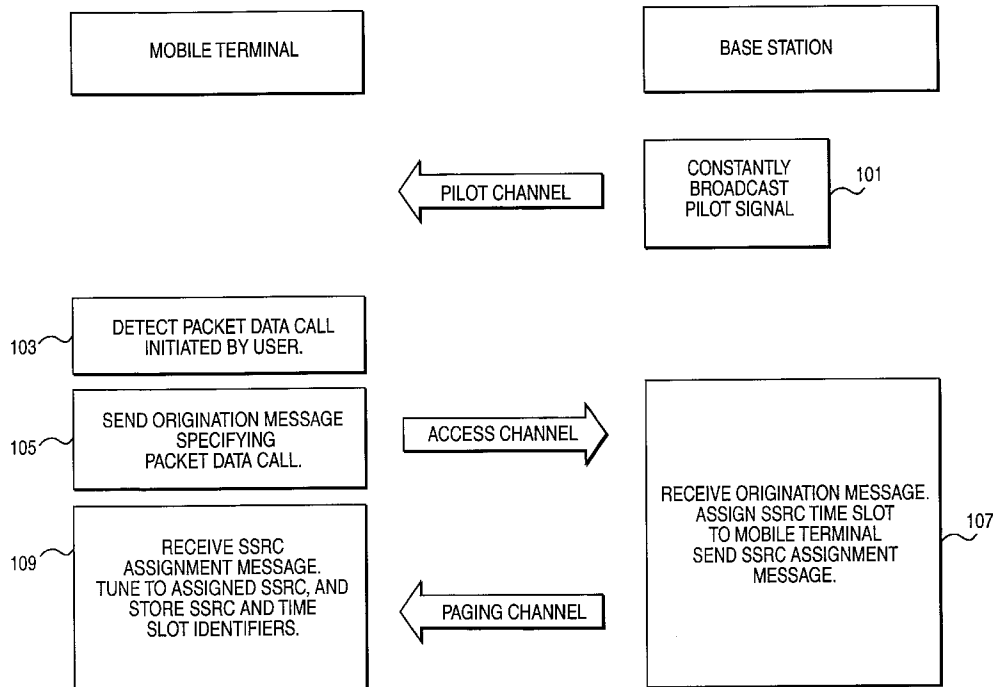
A synchronous discontinuous transmission medium access control (SDTX-MAC) method and apparatus for more efficiently using existing uplink channels by sharing these uplink channels between multiple terminals engaged in bursty data transmission. This is accomplished by assigning each mobile terminal an individual time slot and by not requiring each mobile terminal to broadcast its identity. This results in a reduction in the number of receivers on each base station and a reduction in the length of the synchronization message.

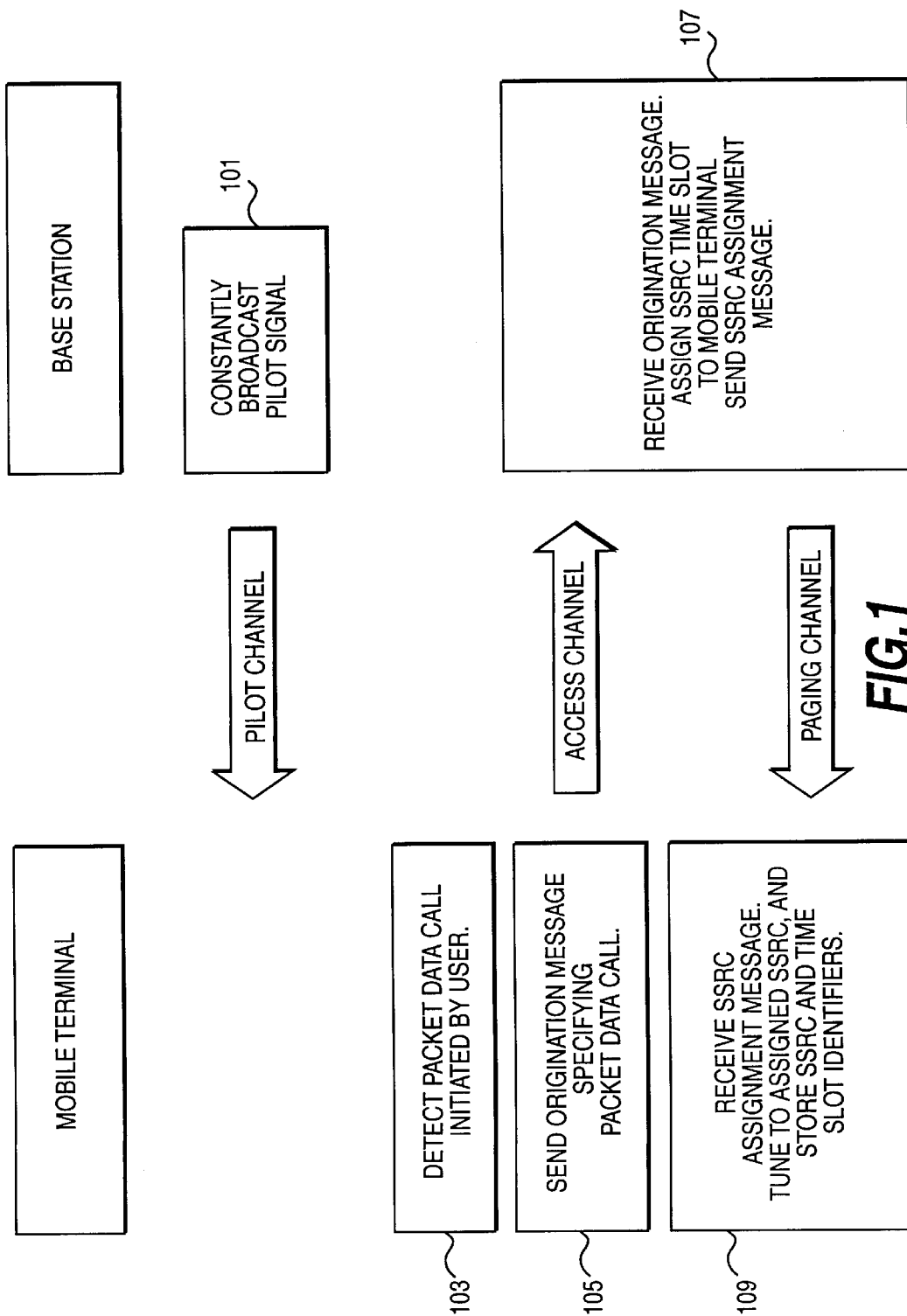
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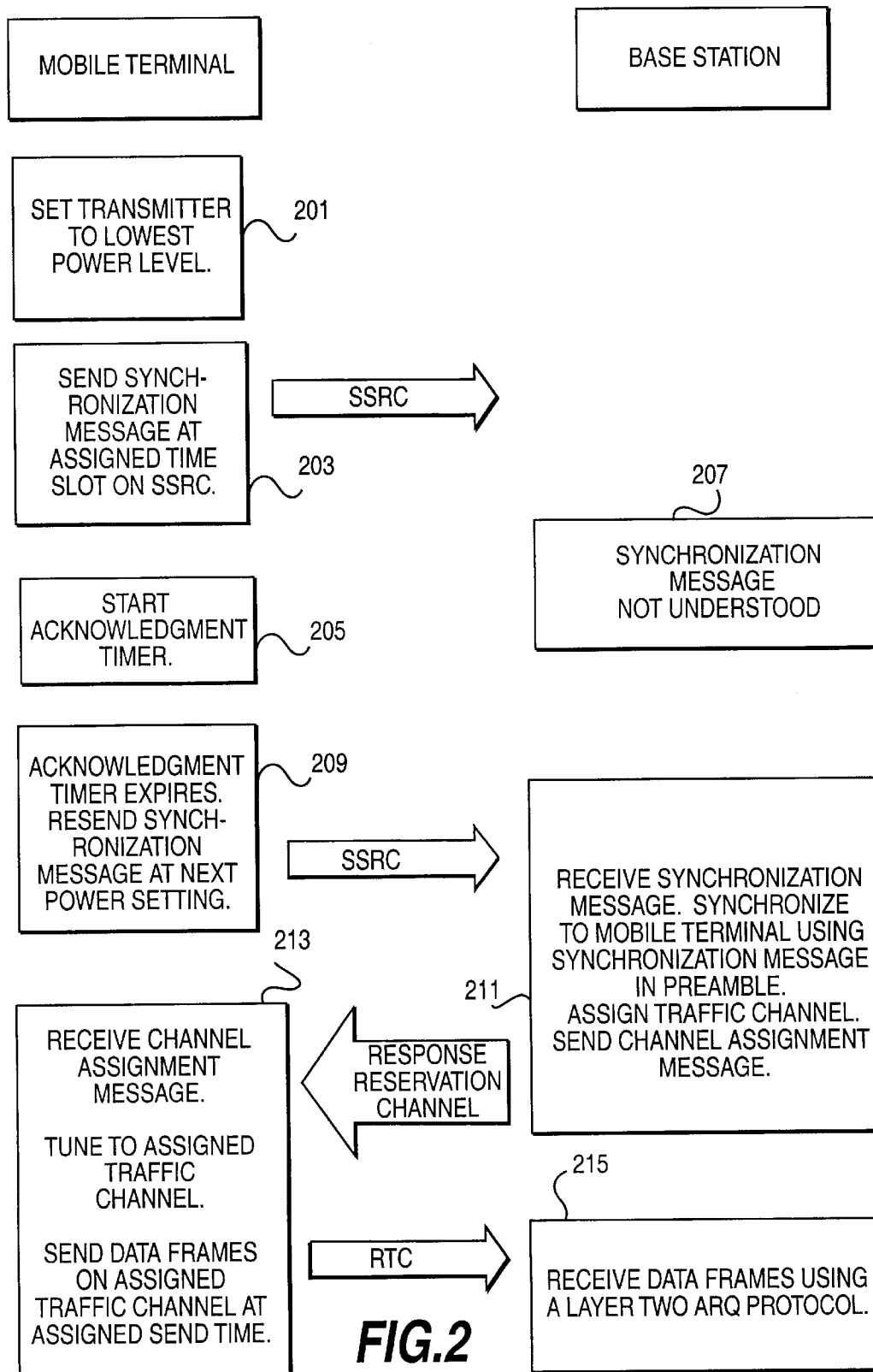
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16 Claims, 5 Drawing Sheets







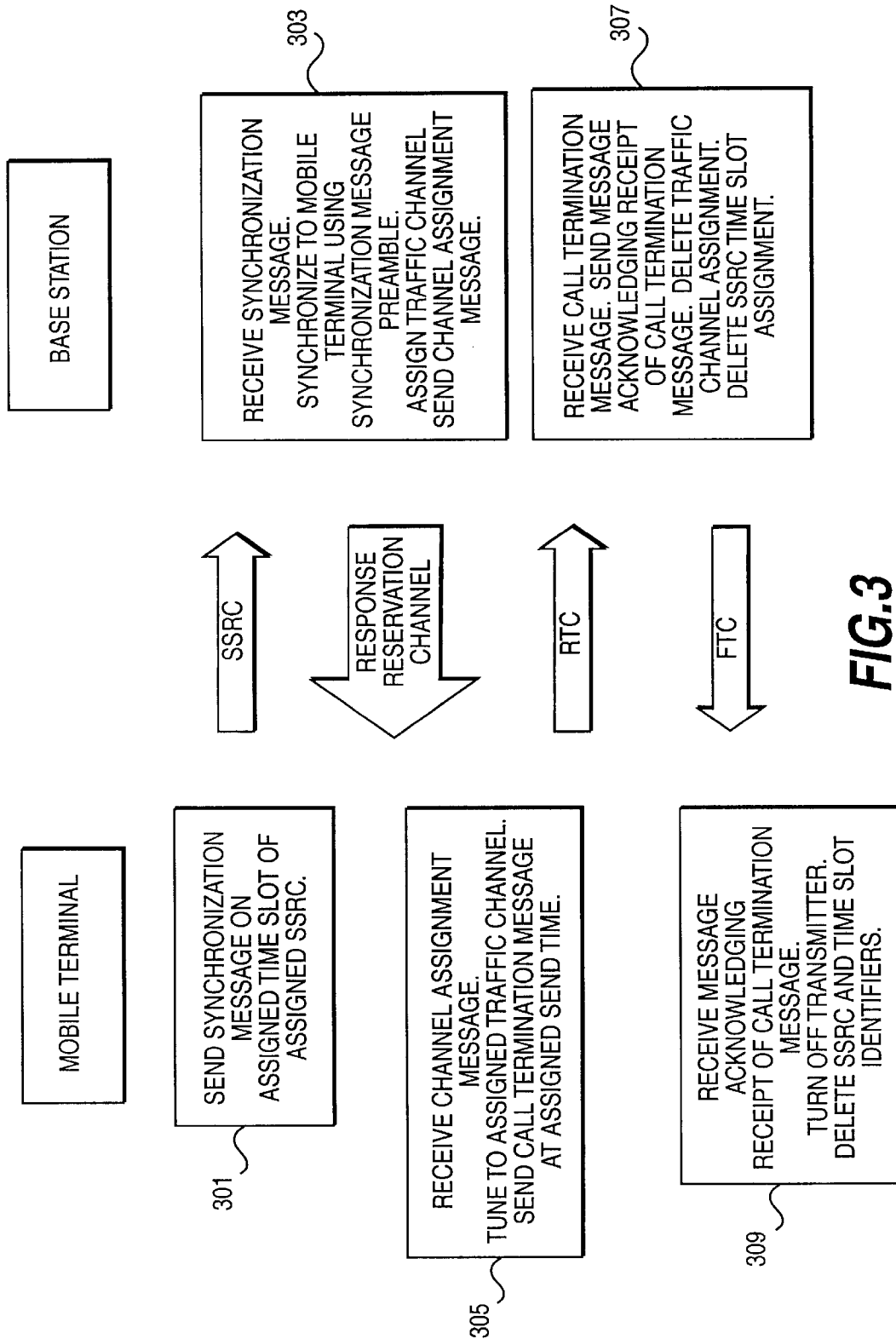


FIG.3

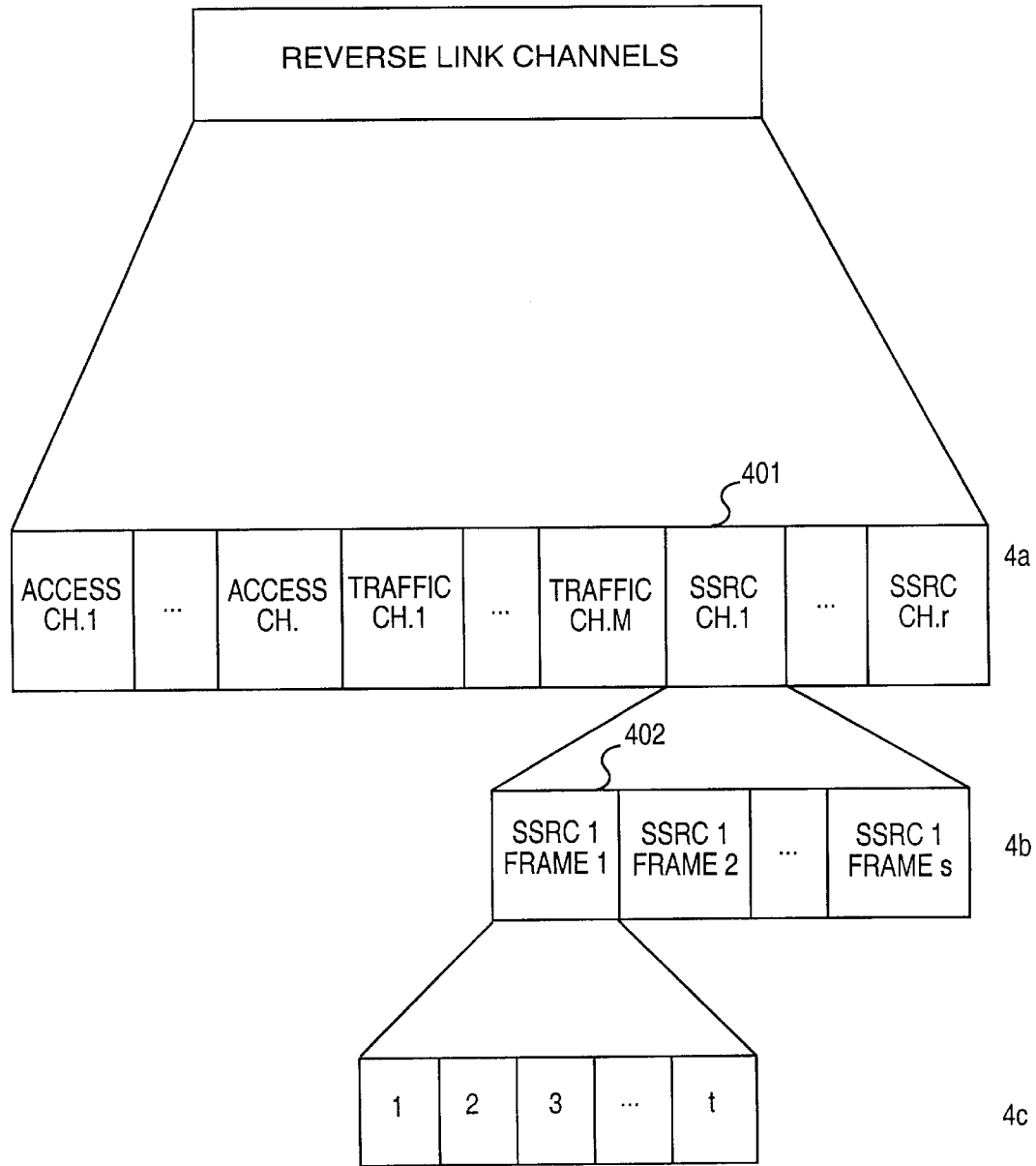


FIG.4

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