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United States Patent [19]

Jalali et al.

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

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[73] Assignee: **Northern Telecom Limited**, Quebec, Canada

[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

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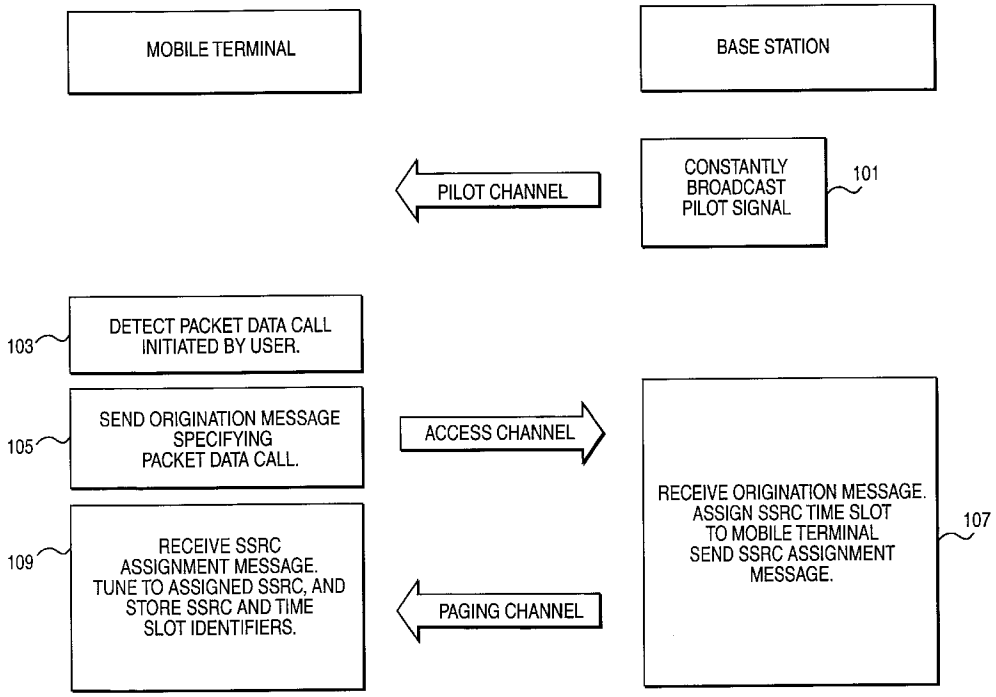
[57] **ABSTRACT**

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.

16 Claims, 5 Drawing Sheets



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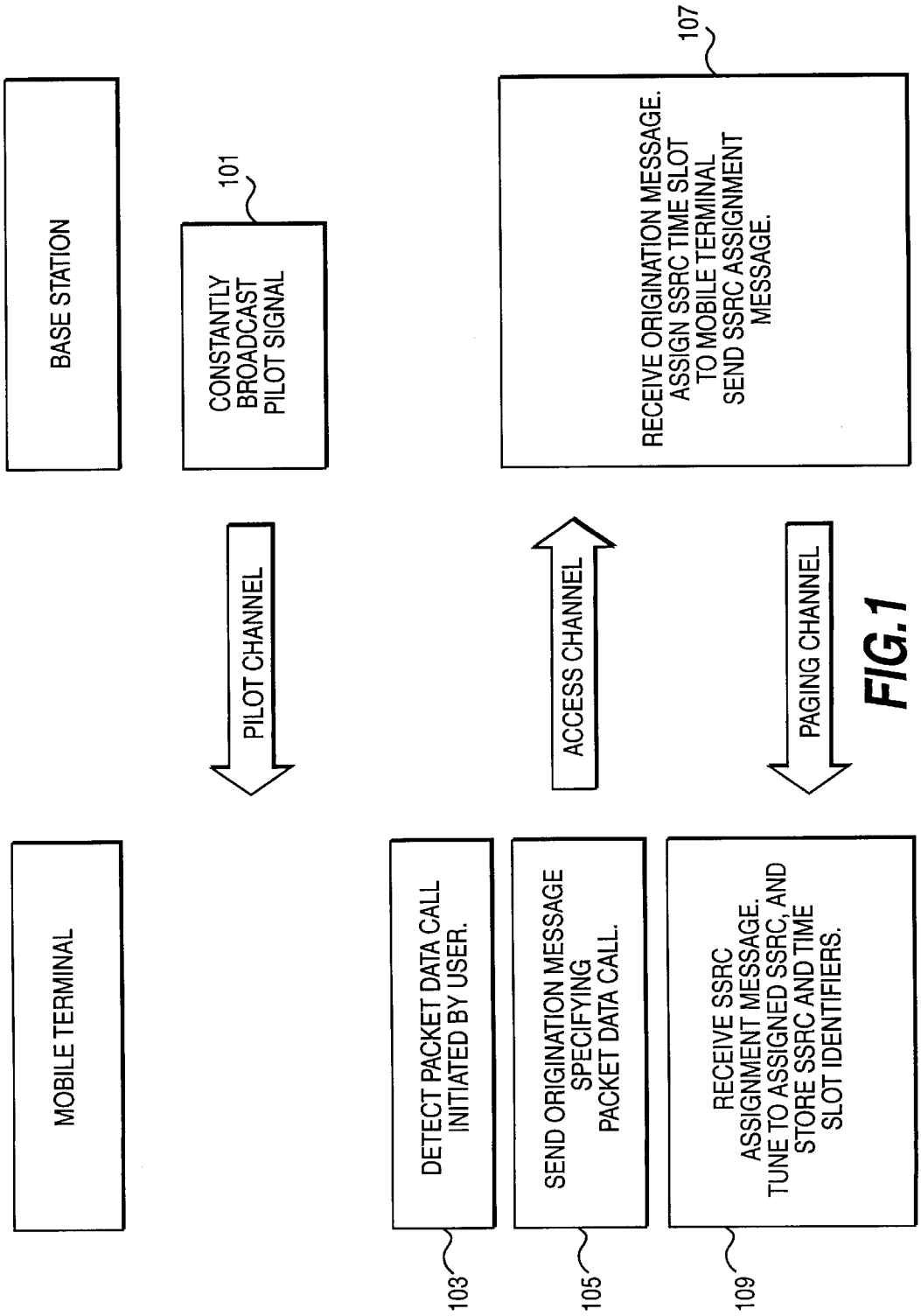

FIG. 1

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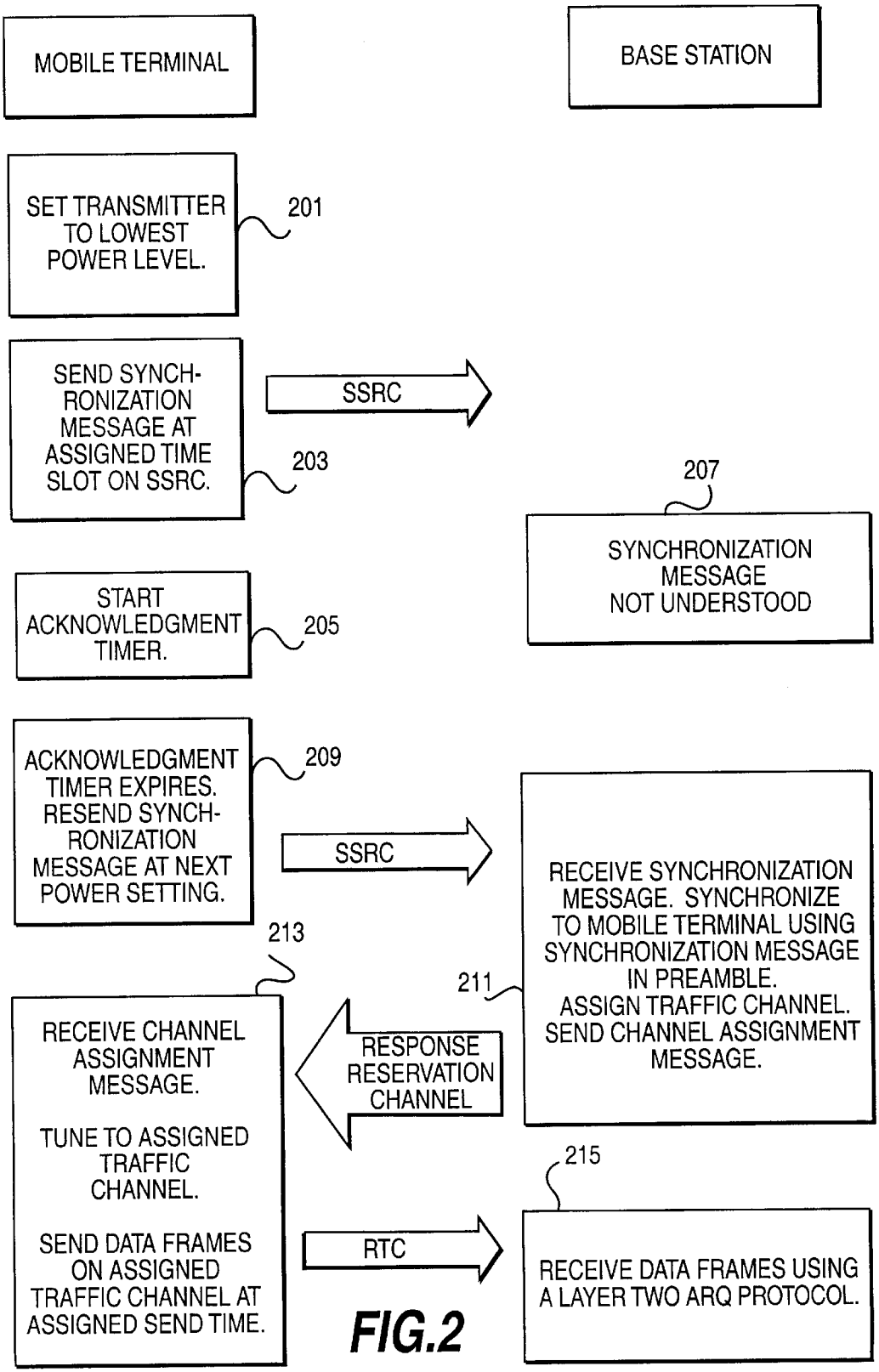

FIG.2

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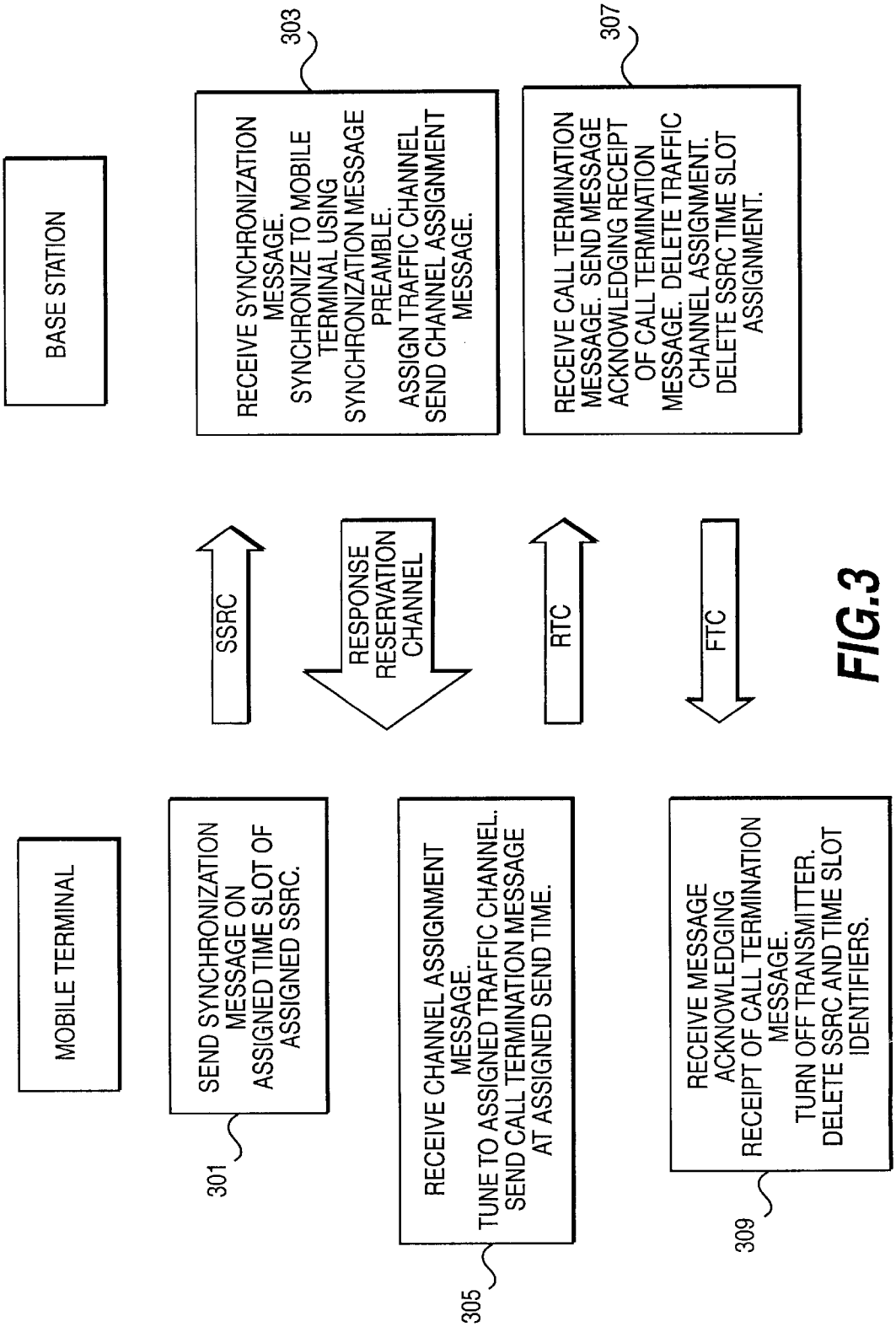

FIG.3

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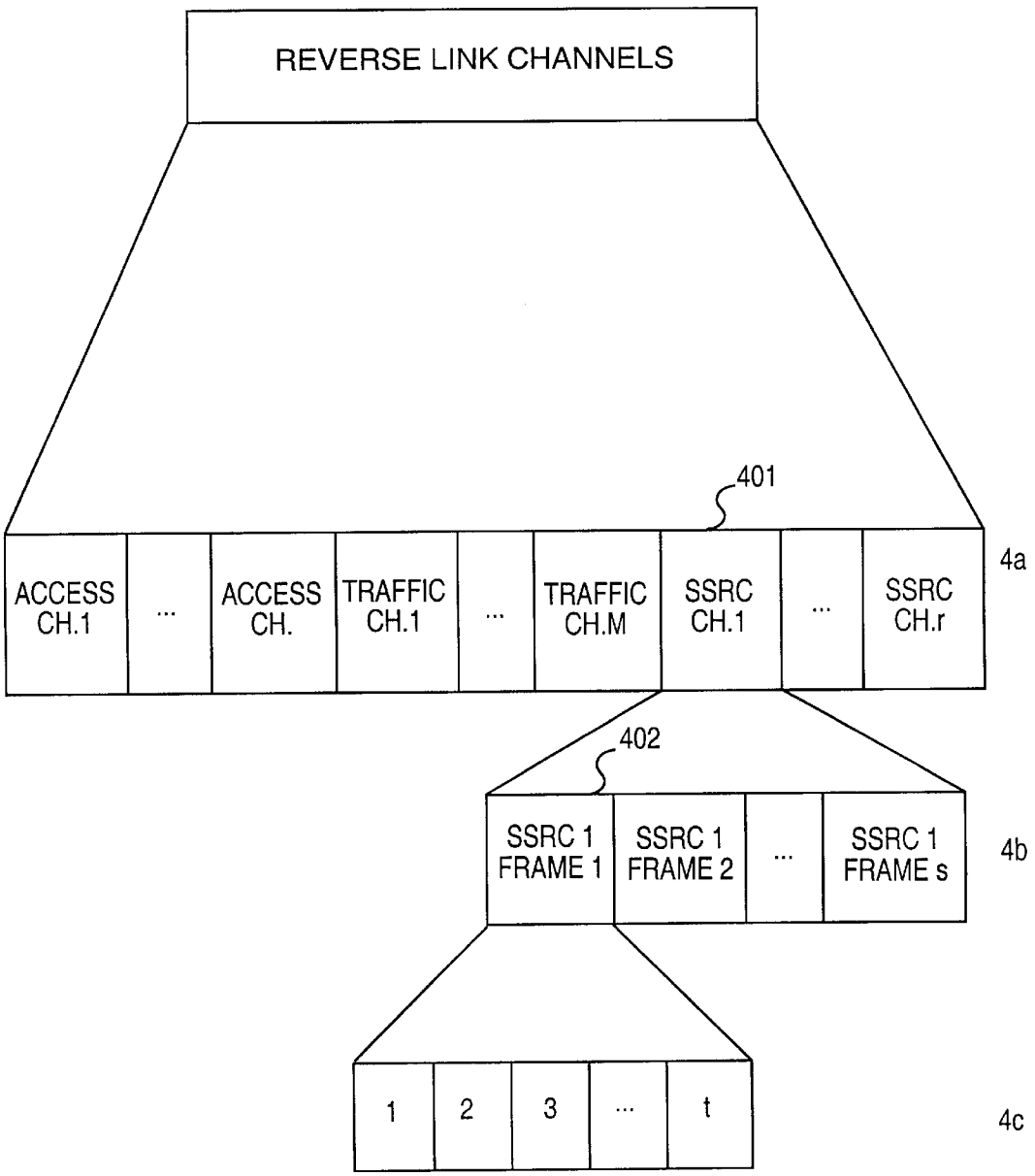

FIG.4

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