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(12) **United States Patent**  
**Chen et al.**

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(54) **PACKET COMMUNICATIONS SYSTEM,  
BASE STATION AND MOBILE STATION**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 806 days.

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(30) **Foreign Application Priority Data**

May 16, 2003 (JP) ..... P 2003-139588

(51) **Int. Cl.**

**H04B 7/204** (2006.01)

**H04J 3/14** (2006.01)

(52) **U.S. Cl.** ..... **370/230; 370/329; 370/341; 370/349**

(58) **Field of Classification Search** ..... None  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

6,414,943 B1 \* 7/2002 Hwang et al. .... 370/310

6,842,619 B2 *	1/2005	Lee et al. ....	455/453
6,850,509 B2 *	2/2005	Lee et al. ....	370/336
6,865,169 B1 *	3/2005	Quayle et al. ....	370/335
7,003,302 B2 *	2/2006	Yoshida et al. ....	455/450
2003/0081664 A1 *	5/2003	Lu et al. ....	375/222
2003/0120802 A1 *	6/2003	Kohno ....	709/237
2003/0133457 A1 *	7/2003	Ono et al. ....	370/395.4
2003/0231598 A1 *	12/2003	Venkataraman et al. ....	370/252

**FOREIGN PATENT DOCUMENTS**

JP	2000-232402	8/2000
JP	2002-171573	6/2002

\* cited by examiner

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(57) **ABSTRACT**

In a packet communications method of performing packet communications between a mobile station and a base station, the base station manages an amount of packets stored in a transmission buffer of the mobile station. The mobile station notifies a changed result of an amount of packets stored in the transmission buffer of the mobile station, when the amount of packets stored in the transmission buffer of the mobile station changes. The base station changes a managed amount in accordance with the changed result notified from the mobile station.

**13 Claims, 10 Drawing Sheets**

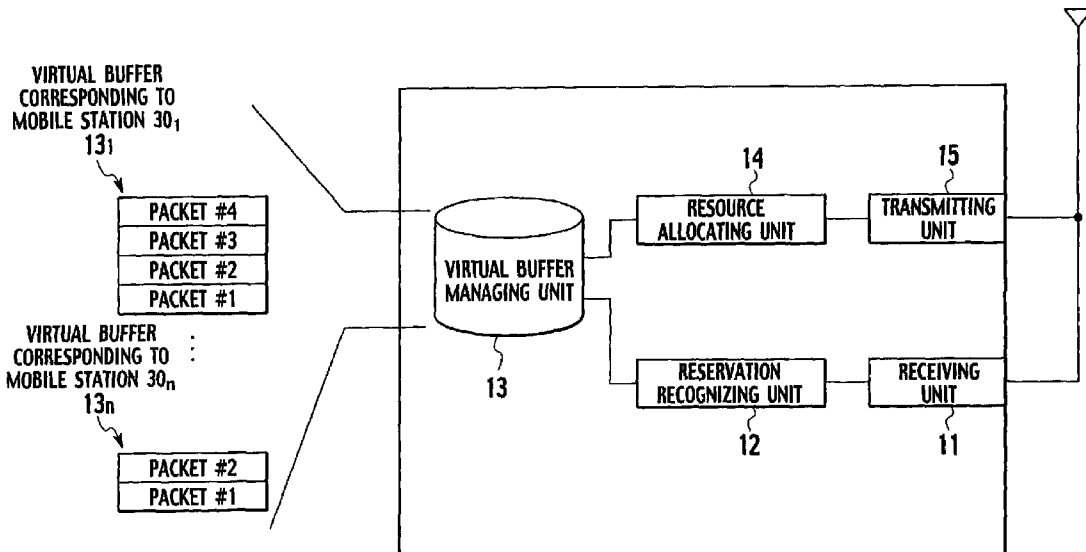


FIG. 1

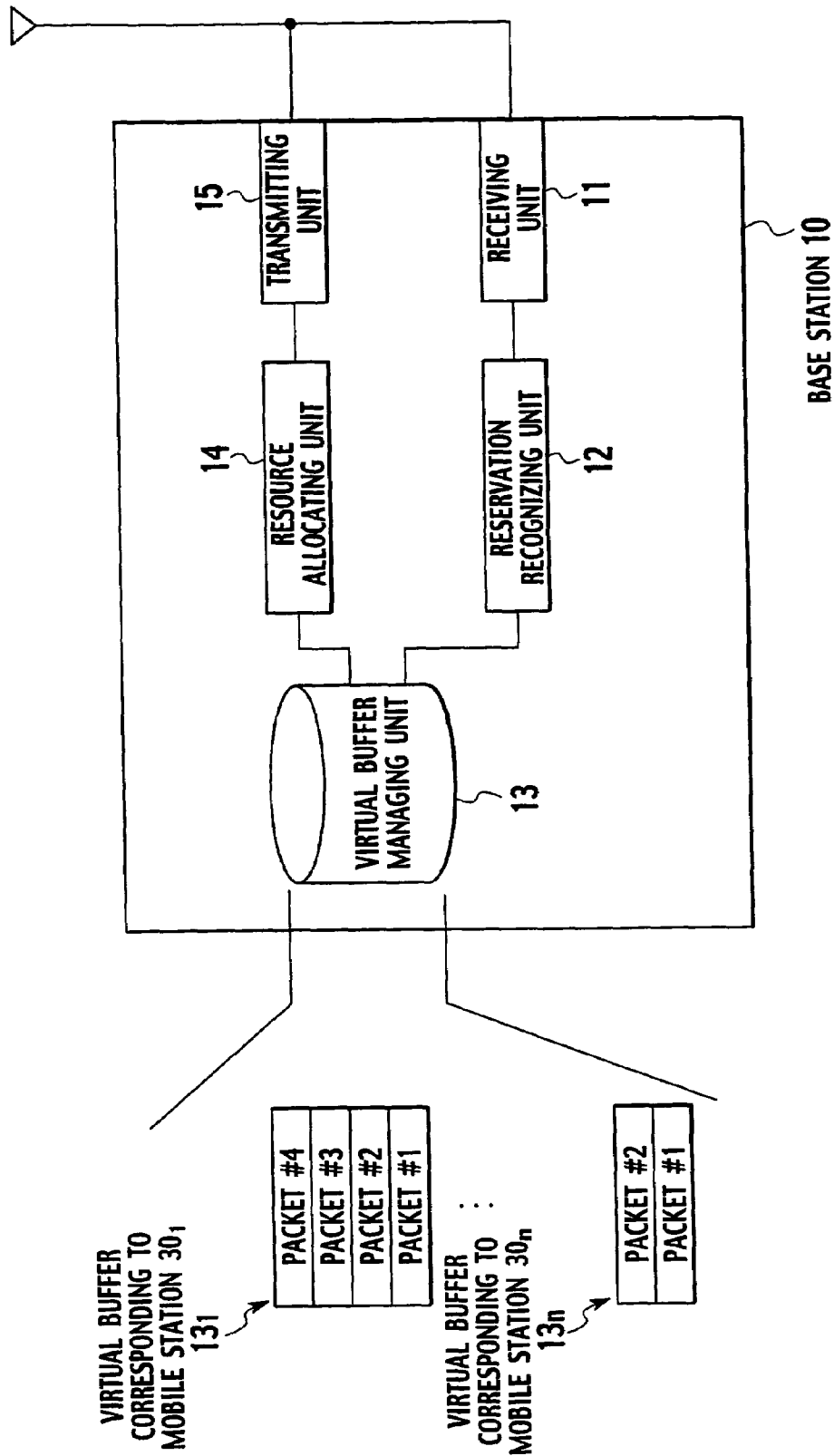


FIG.2

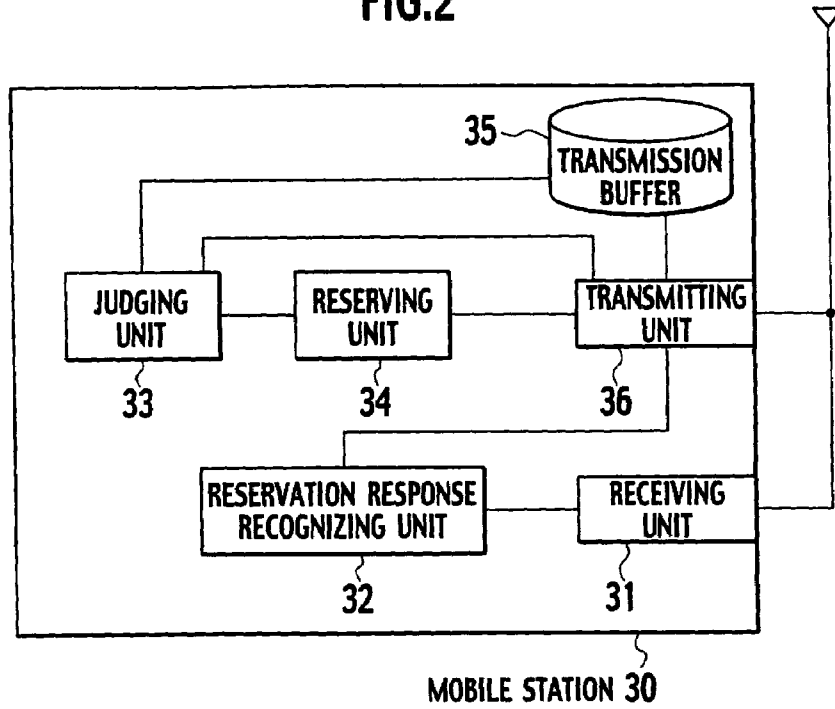


FIG.3

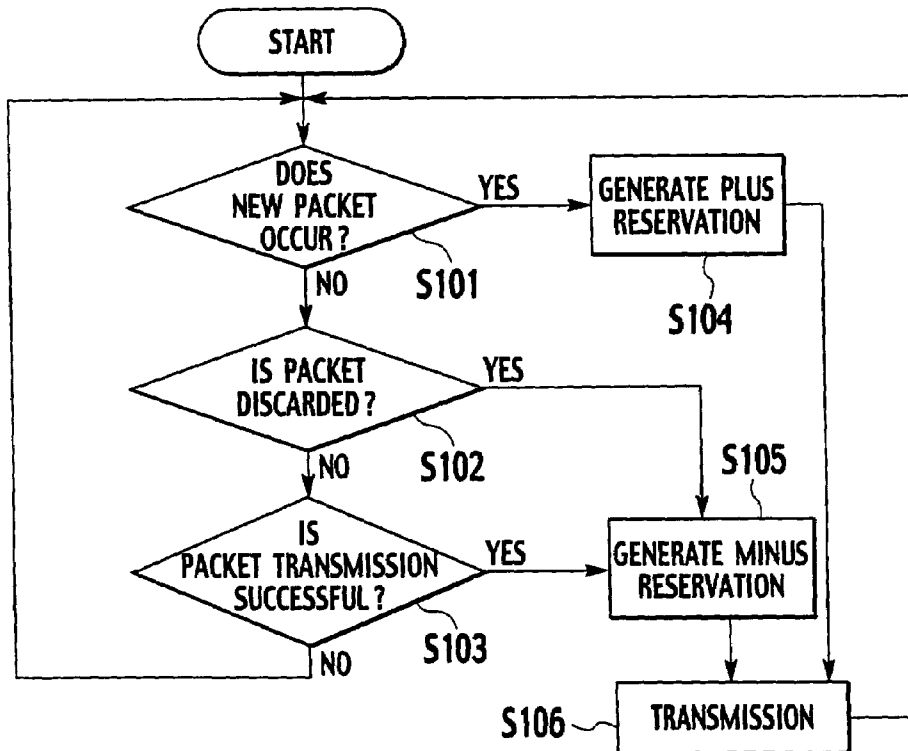


FIG.4

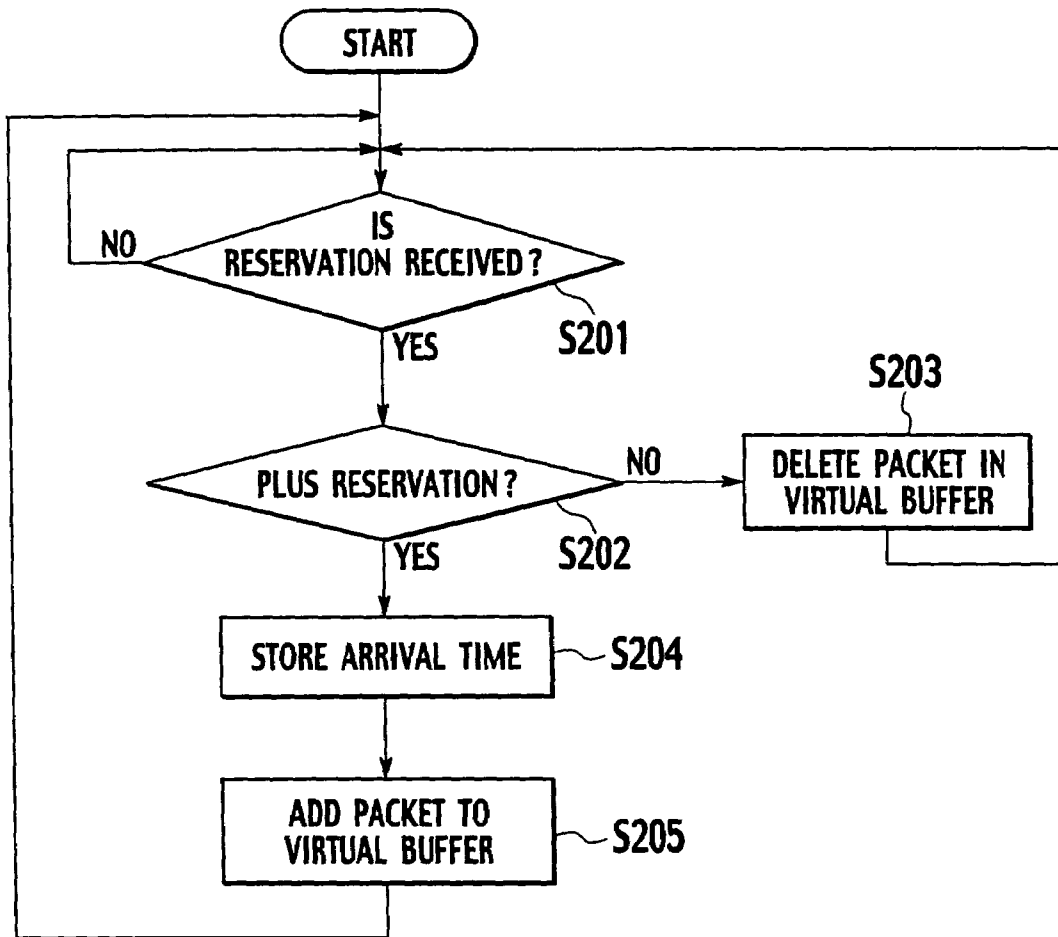
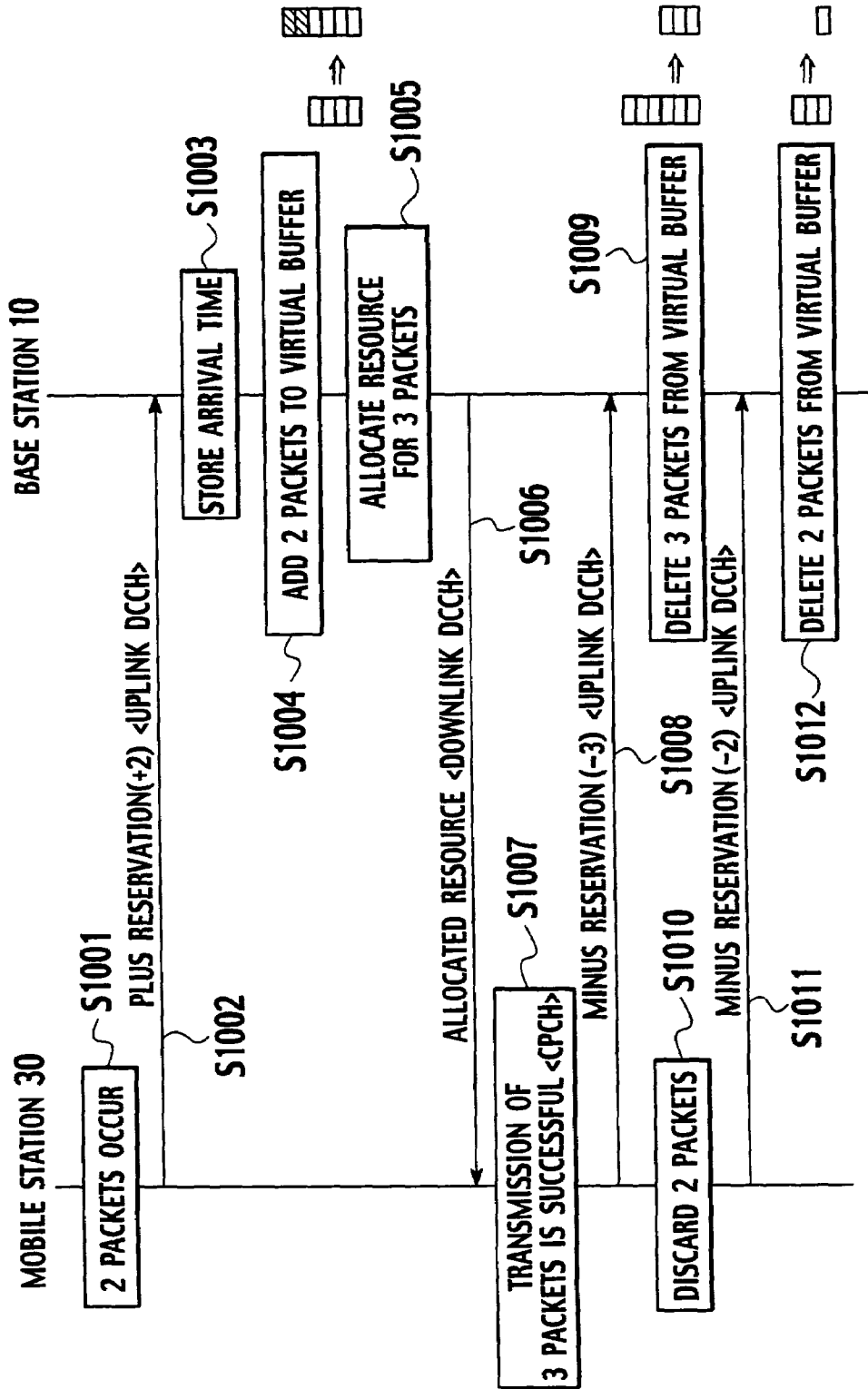


FIG. 5



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