



US006983166B2

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

(10) **Patent No.:** **US 6,983,166 B2**
(45) **Date of Patent:** **Jan. 3, 2006**

(54) **POWER CONTROL FOR A CHANNEL WITH MULTIPLE FORMATS IN A COMMUNICATION SYSTEM**

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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 597 days.

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(21) Appl. No.: **09/933,604**

(22) Filed: **Aug. 20, 2001**

(65) **Prior Publication Data**

US 2003/0036403 A1 Feb. 20, 2003

(51) **Int. Cl.**
H04Q 7/20 (2006.01)

(52) **U.S. Cl.** **455/522**; 455/69; 455/127.1; 370/342

(58) **Field of Classification Search** 455/522, 455/69, 68, 67.1, 67.2, 226.1, 127.1, 343.1; 370/320, 252, 348, 337, 342
See application file for complete search history.

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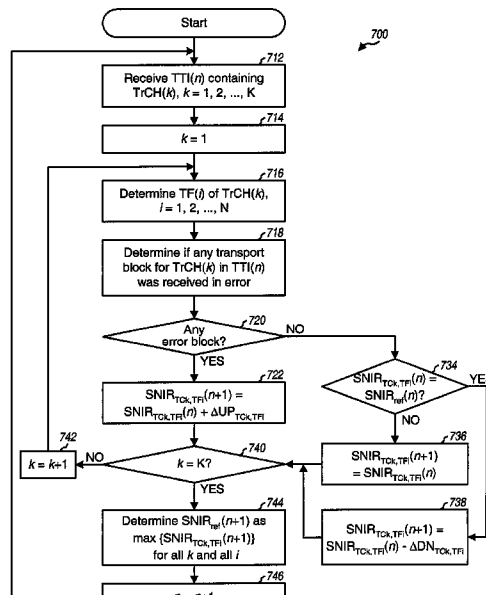
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(57) **ABSTRACT**

Techniques to more efficiently control the transmit power for a data transmission that uses a number of formats (e.g., rates, transport formats). Different formats for a given data channel (e.g., transport channel) may require different target SNIRs to achieved a particular BLER. In one aspect, individual target BLER may be specified for each format of each data channel. In another aspect, various power control schemes are provided to achieve different target SNIRs for different formats. In a first power control scheme, multiple individual outer loops are maintained for multiple formats. For each format, its associated outer loop attempts to set the target SNIR such that the target BLER specified for that format is achieved. In a second power control scheme, multiple individual outer loops are maintained and the base station further applies different adjustments to the transmit power levels for different formats.

8 Claims, 14 Drawing Sheets



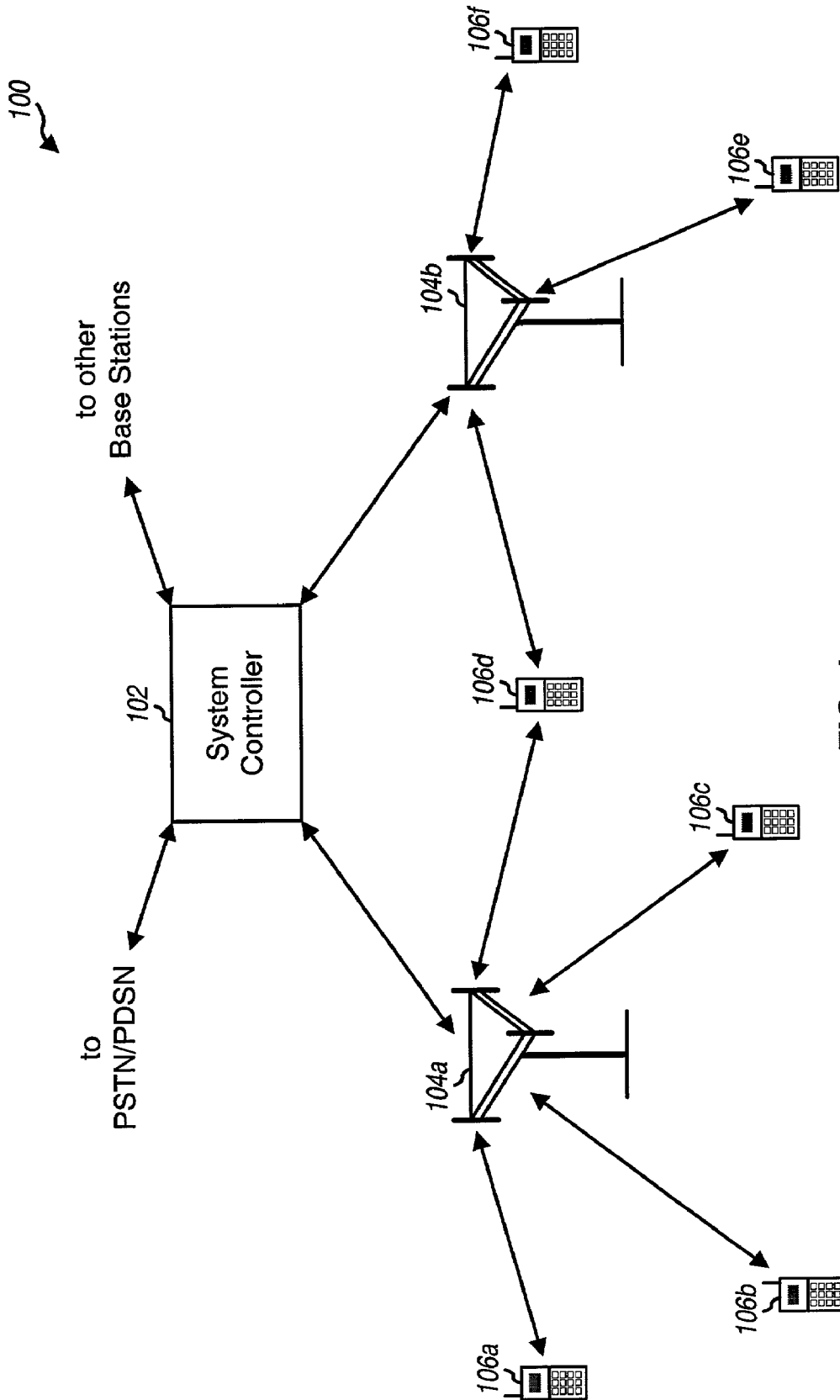


FIG. 1

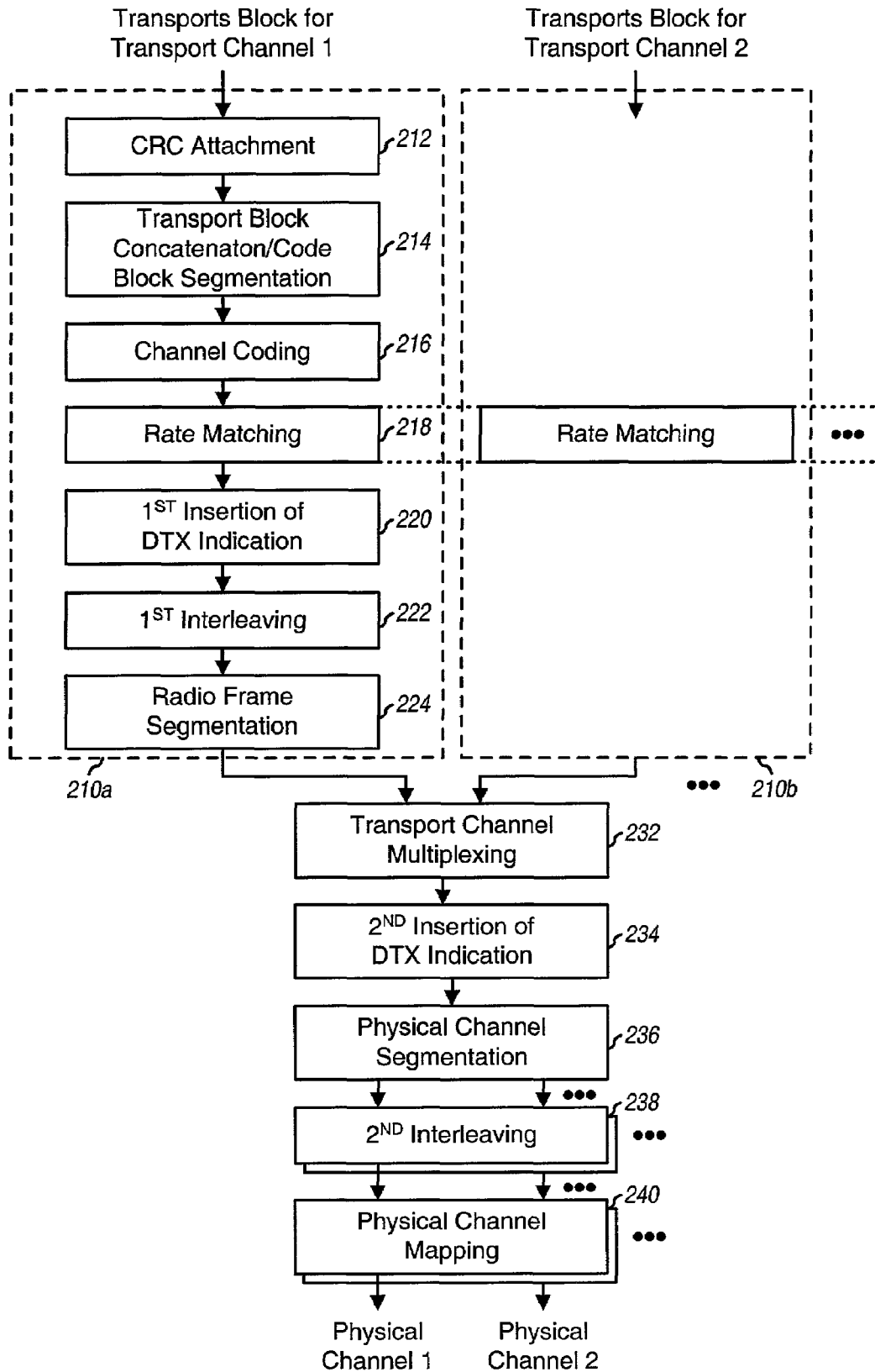


FIG 2A

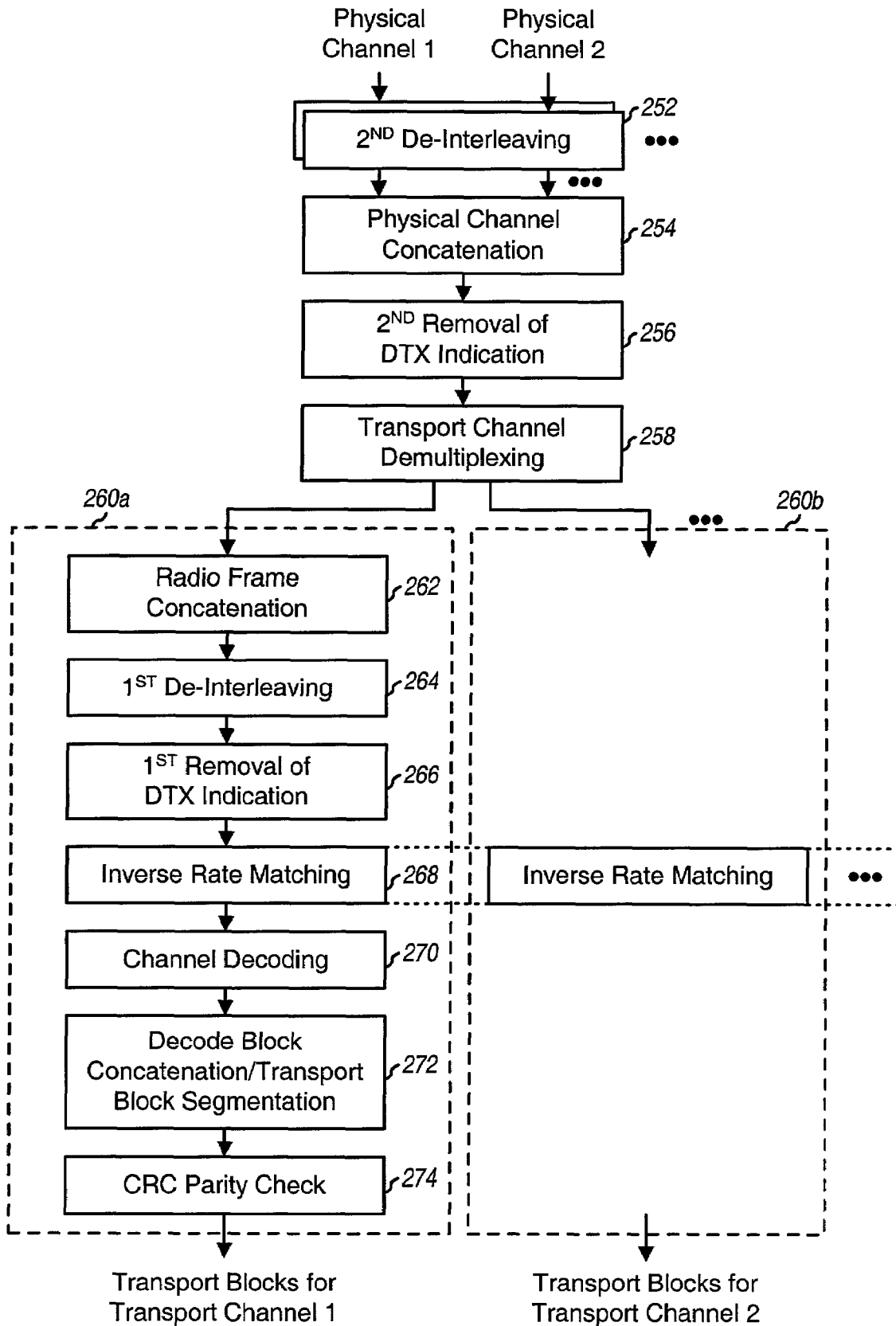


FIG 2B

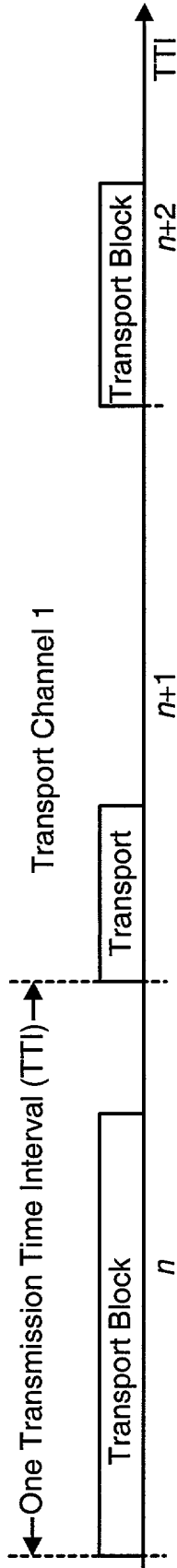


FIG. 3A

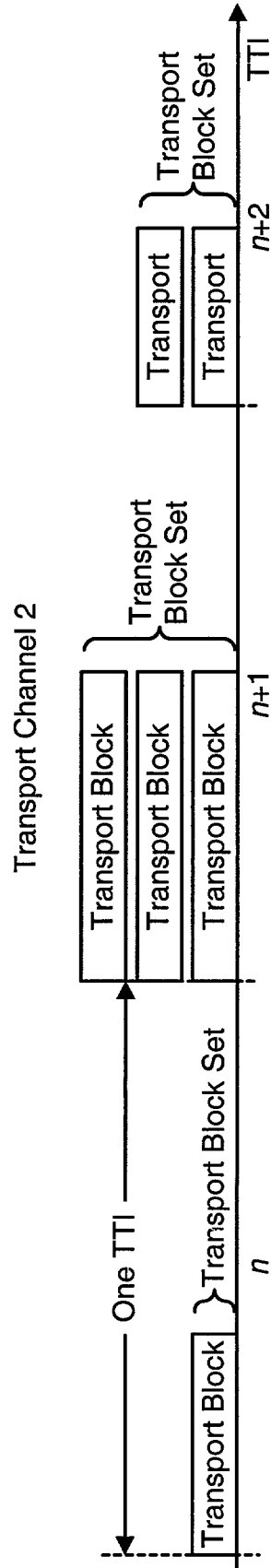


FIG. 3B

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