



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

(10) **Patent No.:** **US 7,848,439 B2**
(45) **Date of Patent:** **Dec. 7, 2010**

(54) **COMMUNICATION APPARATUS,
COMMUNICATION SYSTEM, AND
COMMUNICATION METHOD**

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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 769 days.

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(21) Appl. No.: **11/719,611**

(22) PCT Filed: **Nov. 18, 2005**

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(86) PCT No.: **PCT/JP2005/021246**

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§ 371 (c)(1),
(2), (4) Date: **May 17, 2007**

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(87) PCT Pub. No.: **WO2006/054697**

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Assistant Examiner—Kabir A Timory

PCT Pub. Date: **May 26, 2006**

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(65) **Prior Publication Data**

US 2009/0147866 A1 Jun. 11, 2009

(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

Nov. 19, 2004 (CN) 2004 1 0094967

A communication apparatus capable of improving the spectrum usage rate of a system, especially, the spectrum usage rate in connection with both a fast fading and a channel estimation error as compared with the conventional sub-band adaptive method, while reducing the degree of the difficulty in achieving the adaptation, and further reducing the feedback overhead. In this apparatus, a sub-band group AMC parameter selecting part (318) selects an AMC parameter of each sub-band. An adaptive reception control part (503) must control an adaptive demodulating/decoding part (311), while controlling a parallel/serial converter (312) in a stage preceding the adaptive demodulation and decoding processes, and combining received symbols in the same sub-band group for demodulation and decoding.

(51) **Int. Cl.**

H04K 1/10 (2006.01)

(52) **U.S. Cl.** **375/260; 375/267; 375/299;**
375/324; 375/349

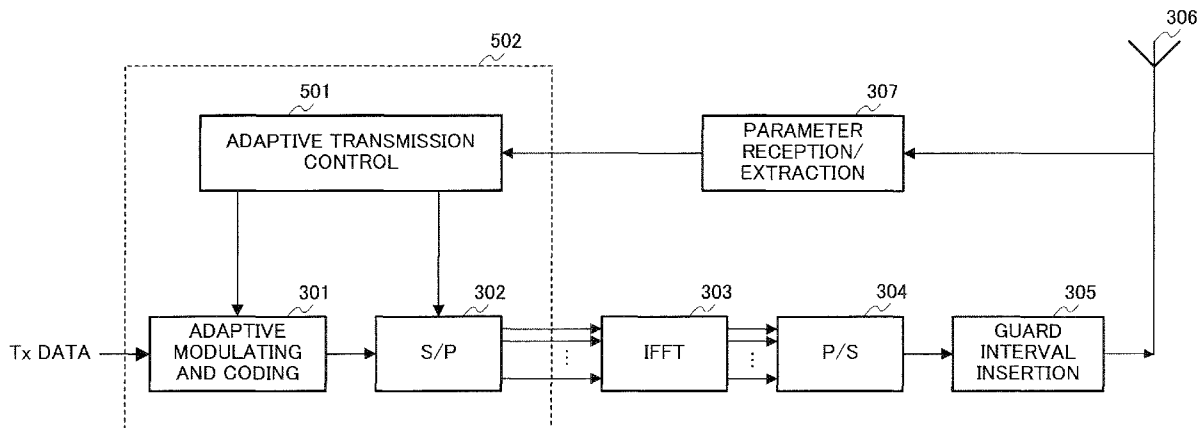
(58) **Field of Classification Search** 375/260,
375/267, 299, 324, 349
See application file for complete search history.

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11 Claims, 16 Drawing Sheets



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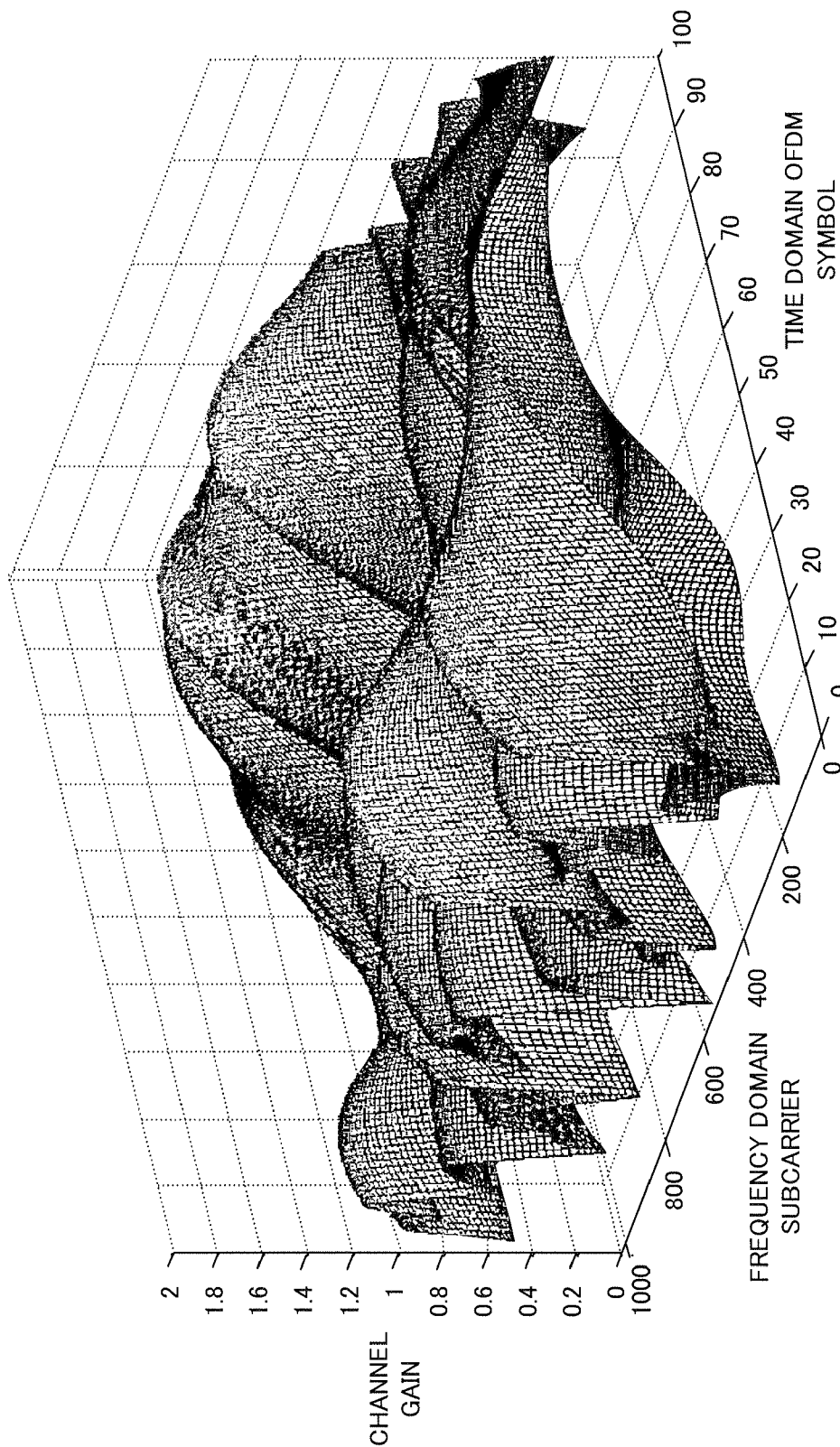
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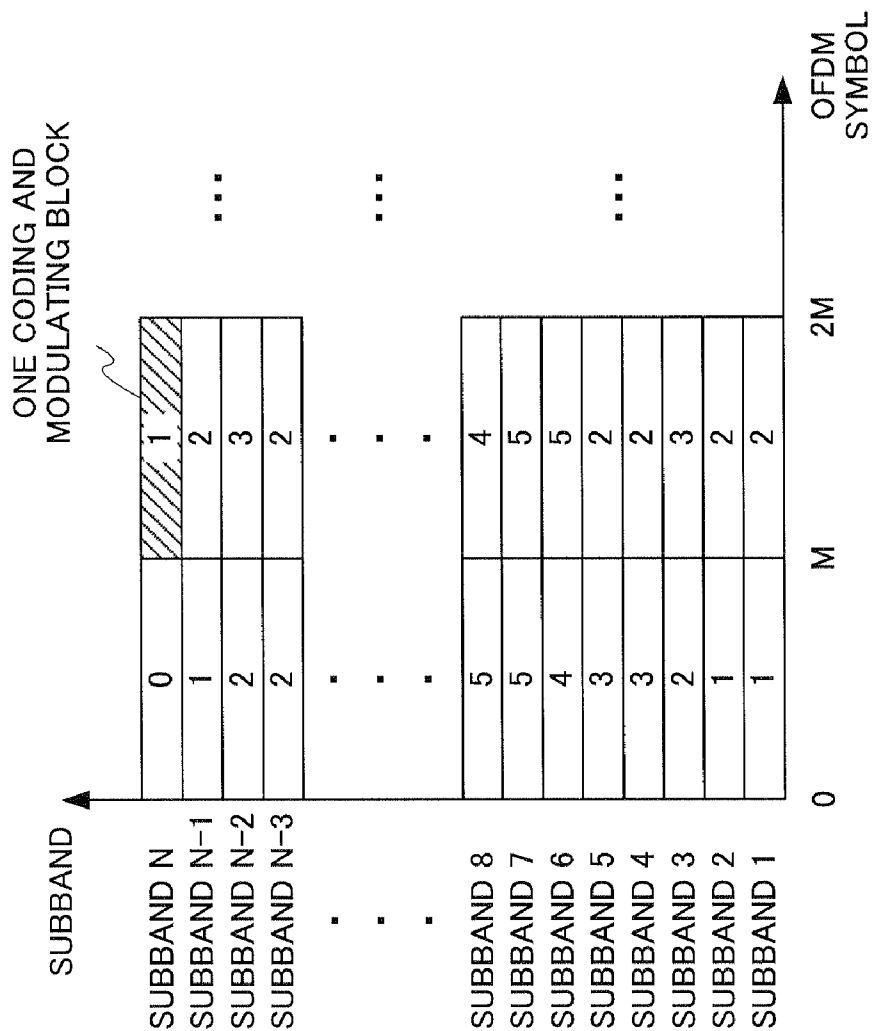
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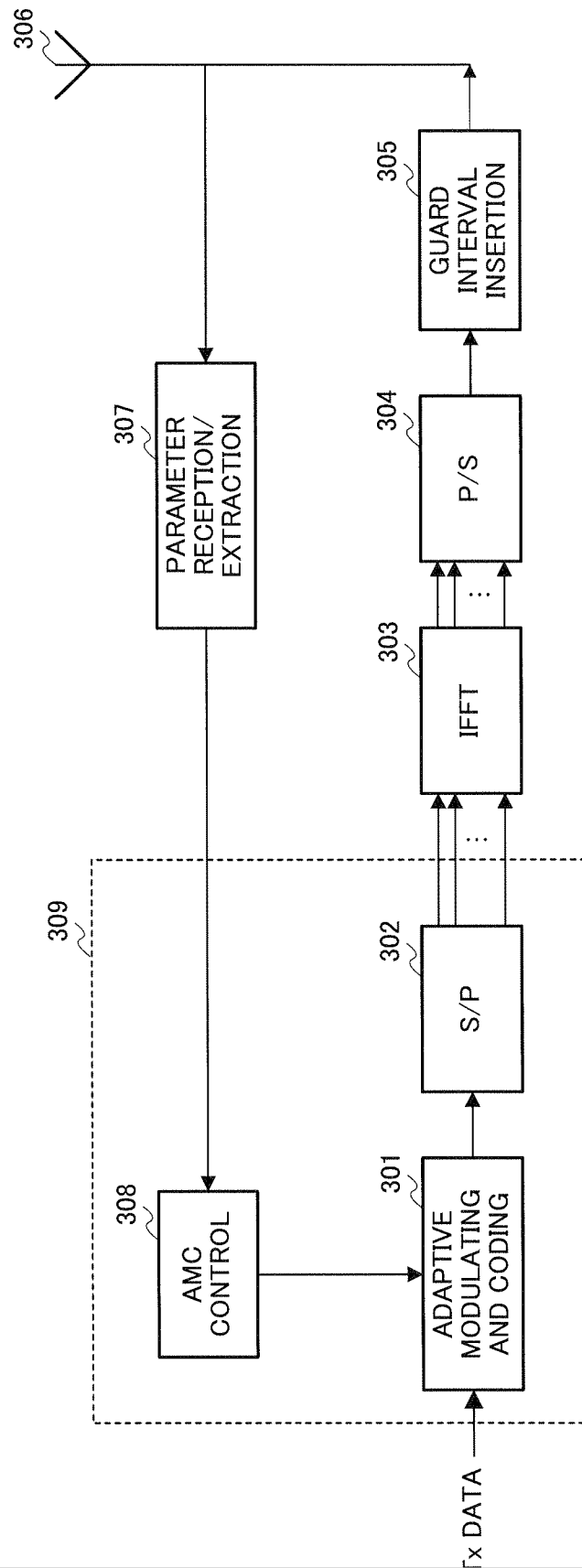
PRIOR ART

FIG.1



PRIOR ART

FIG.2



PRIOR ART
FIG. 3A

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