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She et al.

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(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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(57) **ABSTRACT**

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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.

(30) **Foreign Application Priority Data**

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(51) **Int. Cl.**
H04K 1/10 (2006.01)

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

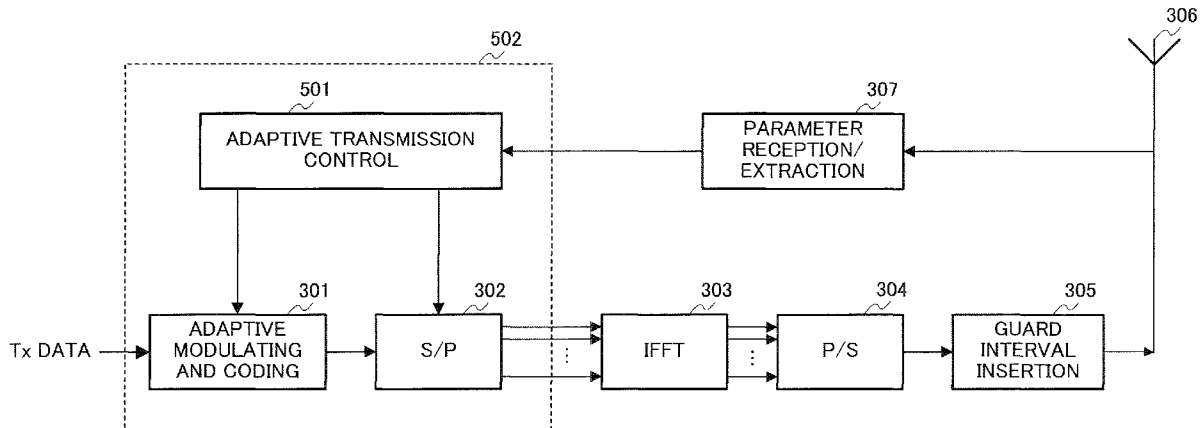
(58) **Field of Classification Search** **375/260,**
375/267, 299, 324, 349
See application file for complete search history.

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11 Claims, 16 Drawing Sheets



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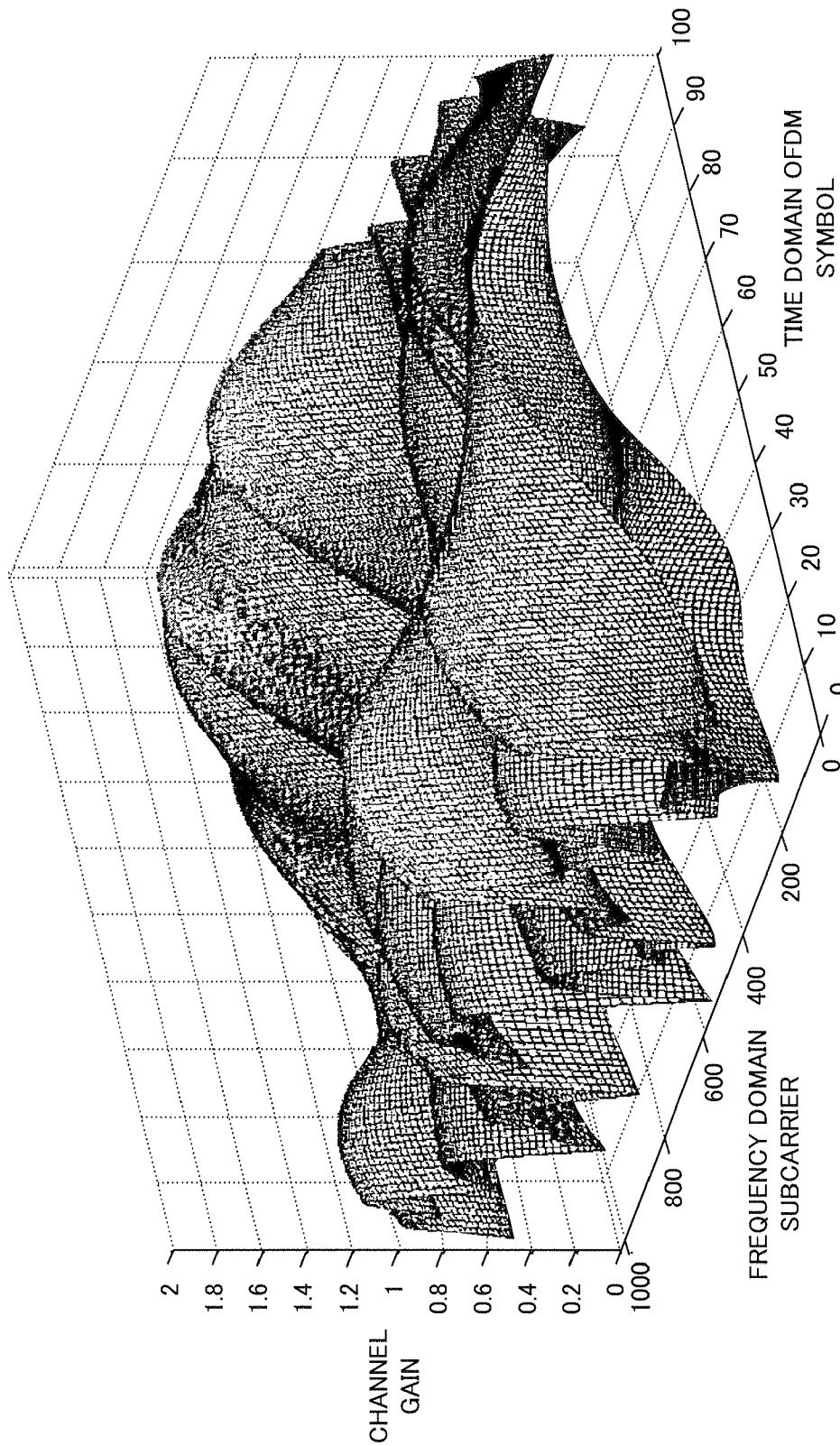
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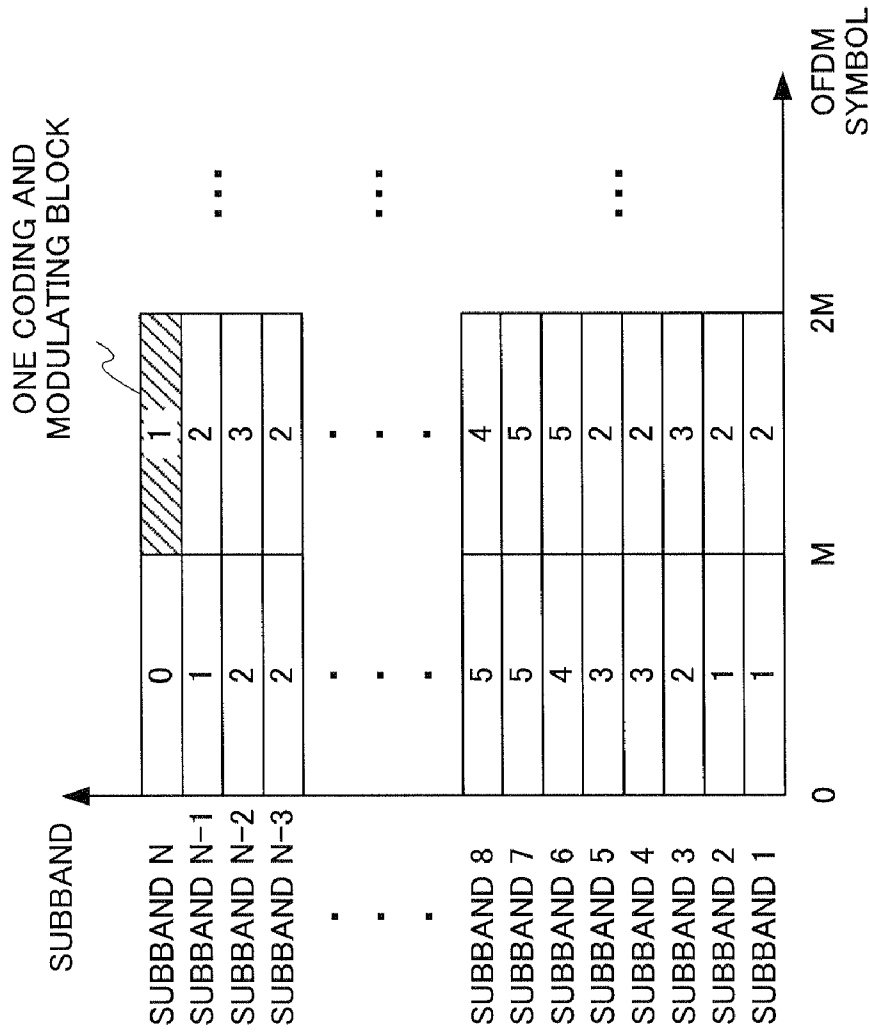
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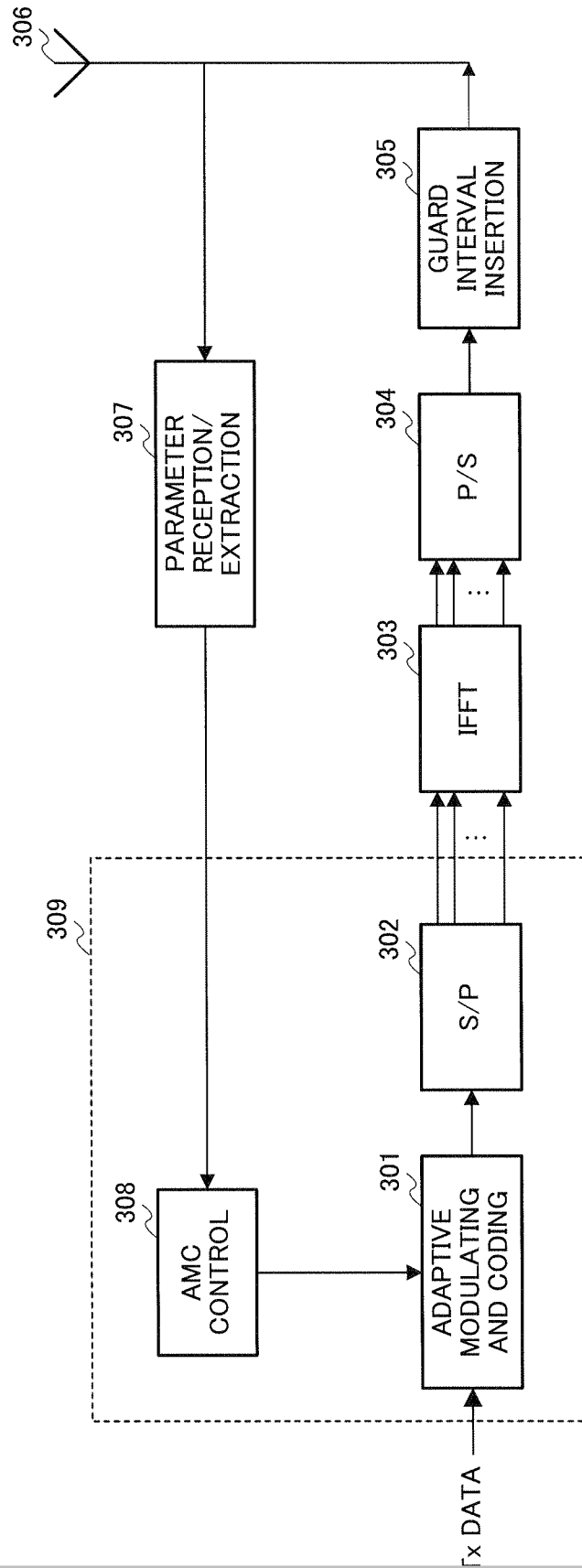
PRIOR ART

FIG.1



PRIOR ART

FIG.2



PRIOR ART
FIG.3A

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