

ENCODING RATIO SETTING METHOD AND RADIO COMMUNICATION DEVICE

Abstract

5 Disclosed are an encoding ratio setting method and a radio
communication device which can avoid encoding of control
information at an encoding ratio lower than necessary and
suppress lowering of the transmission efficiency of the control
information. In the device, an encoding ratio setting unit (122)
10 sets the encoding ratio $R'_{control}$ of the control information which
is time-multiplexed with user data, according to the encoding
ratio R_{data} of the user data, $\Delta PUSCH_{offset}$ as the PUSCH offset of
each control information, and $\Delta RANK_{offset}$ as the rank offset
based on the rank value of the data channel using Expression (1).

$$15 \quad R'_{control} = \frac{O}{Q'} = \max \left(\left\lceil \frac{\frac{O}{10^{\frac{-\Delta PUSCH_{offset} + \Delta RANK_{offset}}{10}}} \cdot R_{data}}{4 \cdot M_{sc}} \right\rceil, \frac{O}{4 \cdot M_{sc}} \right) \quad \dots (1)$$

Where $\lceil x \rceil$ is an integer not greater than x , and $\max(x, y)$ is the
greater one among X and Y .

20 Figure 2