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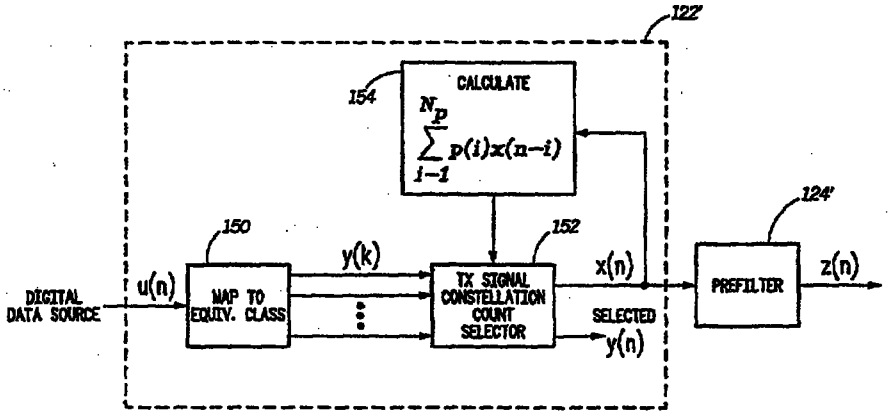
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1 Applt

(54) Title: DEVICE AND METHOD FOR PRECODING DATA SIGNALS FOR PCM TRANSMISSION



BLOCK DIAGRAM HOW PRECODER AND PREFILTER WORKS

(57) Abstract

A device and method for precoding data signals for pulse code modulation (PCM) transmission including a transmitter (52) for transmitting a sequence of analog levels over analog channel to a quantization device, wherein the analog channel modifies the transmitted analog levels, the transmitter (52) comprising: a mapping device (150) for mapping data bits to be transmitted to a sequence of equivalence classes, wherein each equivalence class contains one or more constellation points; and a constellation point selector (152) interconnected to the mapping device (150) which selects a constellation point in each equivalence class to represent the data bits to be transmitted and which transmits an analog level that produces the selected constellation point at an input to the quantization device.