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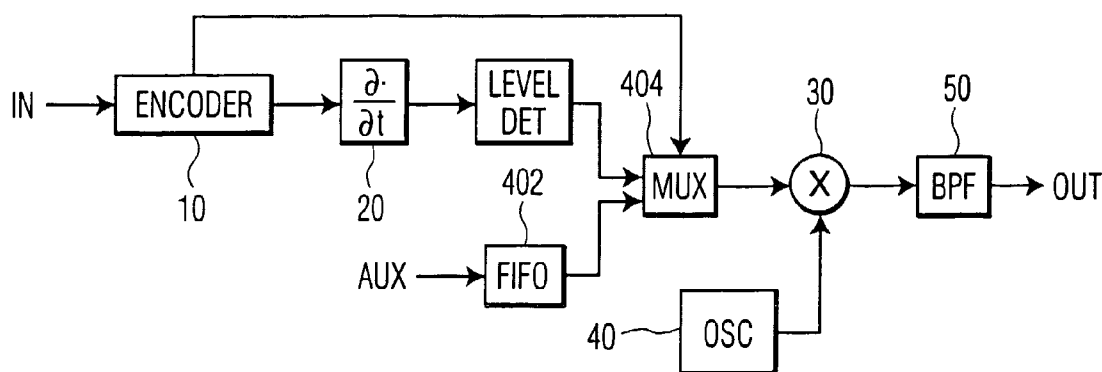
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(54) Title: TRANSMISSION OF MAIN AND AUXILLIARY DATA USING PULSE WIDTH MODULATION



(57) **Abstract:** A digital data modulator (Fig. 8) is coupled to a source of a digital data signal, which has a data bit period, to an auxiliary data signal. An encoder encodes the digital data using a variable pulse width code, the edges of which occur within the data bit period. A pulse generator, generates respective pulses, which represent the edges of the encoded digital data signal. A carrier signal generator generates a carrier signal, which has carrier pulses corresponding to the respective pulses, and modulated by the auxiliary signal otherwise. A digital data demodulator (fig 9) is coupled to a source of a modulated signal, which includes successive bit periods, each having a first interval containing a carrier pulse, spaced relative to other carrier pulses to represent a variable pulse width encoded digital data signal, and a second interval during which the carrier is modulated with an auxiliary data signal. A demodulator demodulates the modulated signal to generate a variable pulse width encoded signal and an auxiliary data signal. A decoder decodes the variable pulse width encoded signal to generate the digital data signal.



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