

TRACEBACK FOR VITERBI DECODER**ABSTRACT OF THE DISCLOSURE:**

In a traceback unit for an M-step Viterbi decoder for a convolutionally encoded data stream, each of the traceback stages has a group of K input wires representing K possible candidate states. A bank of K multiplexers selects one of 2^M of the input wires according to M bits of traceback data. The K multiplexer outputs feed a succeeding traceback stage. M groups of K wires carry the traceback data, with each wire being connected to a selection line of each multiplexer. At the output of the traceback unit an identification circuit identifies a subgroup of the K possibilities which has a maximum number of candidate states remaining therein. The arrangement obviates the need for retiming between every traceback stage.

FIGURE 21