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(54) **DELAY RESILIENT DECISION FEEDBACK EQUALIZER**

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See application file for complete search history.

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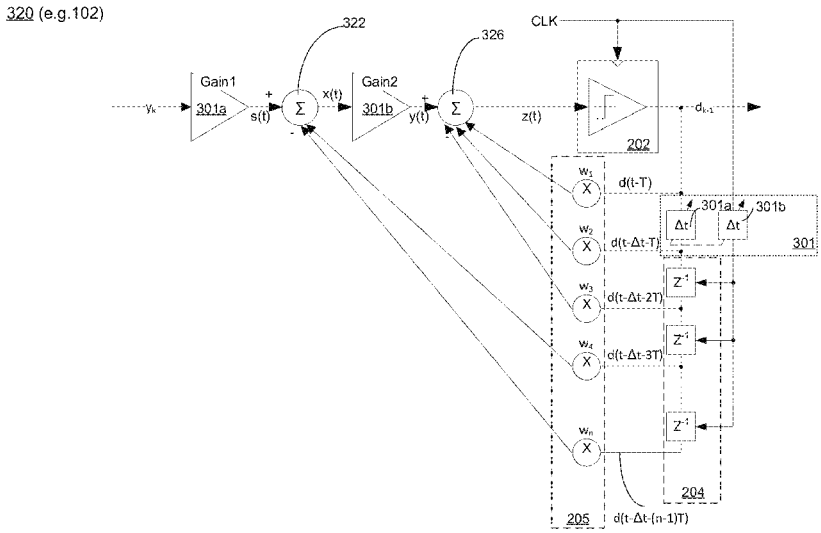
(57) **ABSTRACT**

Described is an apparatus which comprises a decision feedback equalizer (DFE) having a first DFE tap path and non-first DFE tap paths, wherein the DFE includes a variable delay circuit in a signal path of the non-first DFE tap paths. In some embodiment, an apparatus is provided which comprises: a summer; a slicer to receive input from the summer; a first feedback loop to cancel a first post-cursor, the first feedback loop forming a loop by coupling the slicer to the summer; and a second feedback loop to cancel a second post-cursor, the second feedback loop forming a loop by coupling an input of the first feedback loop to the summer, wherein the second feedback loop having a programmable delay at its input.

24 Claims, 9 Drawing Sheets