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- (54) **Title:** SIMULATION-BASED TECHNIQUES FOR EVALUATING ENCODING LADDERS FOR VIDEO STREAMING

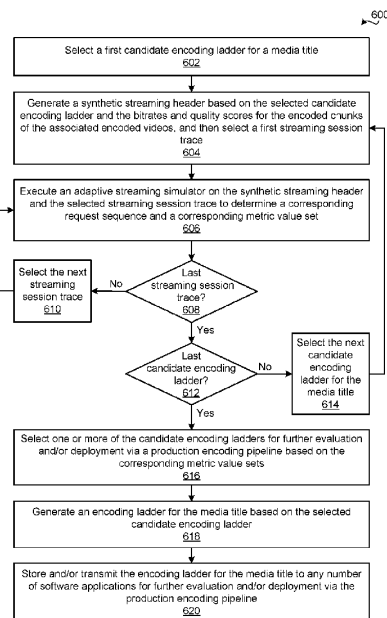


FIGURE 6

(57) **Abstract:** In various embodiments, a simulation evaluation application generates a first streaming header based on rungs of a first candidate encoding ladder, where each rung specifies a resolution and a bitrate of a different encoded video. The simulation evaluation application executes an adaptive bitrate algorithm on the first streaming header based on a network throughput trace to determine a first value for a metric that is relevant to quality of experience. The simulation evaluation application generates a second streaming header based on a second candidate encoding ladder. The simulation evaluation application executes the adaptive bitrate algorithm on the second streaming header based on the network throughput trace to determine a second value for the first metric. The simulation evaluation application compares the first value to the second value to determine that the first candidate encoding ladder instead of the second candidate encoding ladder should be used to stream the media title.

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