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(54) **Title:** CONSTRAINED OPTIMIZATION TECHNIQUES FOR GENERATING ENCODING LADDERS FOR VIDEO STREAMING

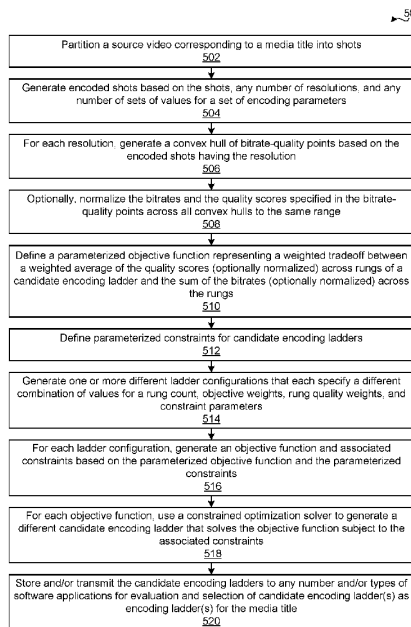


FIGURE 5

(57) **Abstract:** In various embodiments, an encoding ladder application generates encoding ladders that are used to stream media titles. The encoding ladder application generates an objective function based on a ladder configuration and a parameterized objective function. The parameterized objective function approximates a tradeoff between a quality of experience and a cost term associated with a candidate encoding ladder. The encoding ladder application generates constraints based on the ladder configuration and parameterized constraints. The encoding ladder application executes a constrained optimization algorithm on the objective function, the constraints, and encoding point metadata associated with a set of encoded videos to generate a first candidate encoding ladder for a media title.

WO 2024/151417 A1

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