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(54) Title: REAL-TIME GENERATION OF SPEECH ANIMATION

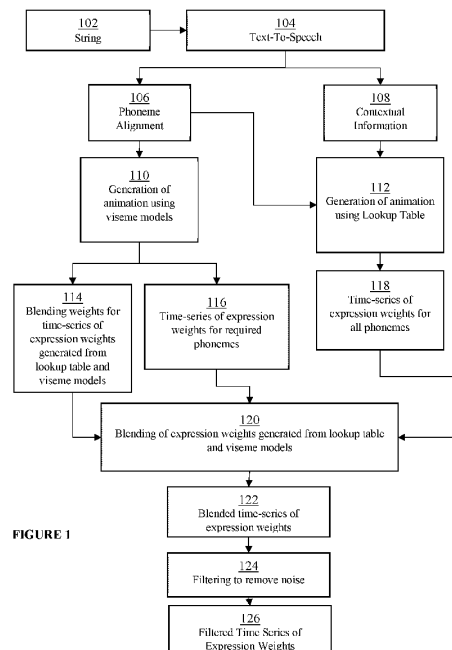


FIGURE 1

(57) Abstract: To realistically animate a String (such as a sentence) a hierarchical search algorithm is provided to search for stored examples (Animation Snippets) of sub-strings of the String, in decreasing order of sub-string length, and concatenate retrieved sub-strings to complete the String of speech animation. In one embodiment, real-time generation of speech animation uses model visemes to predict the animation sequences at onsets of visemes and a look-up table based (data-driven) algorithm to predict the dynamics at transitions of visemes. Specifically posed Model Visemes may be blended with speech animation generated using another method at corresponding time points in the animation when the visemes are to be expressed. An Output Weighting Function is used to map Speech input and Expression input into Muscle-Based Descriptor weightings.

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MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
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