

Avatar Video Generator Patent Description

This software will use alpha channel based video footage of a 2D, 3D or life-like avatar character. It will generate structured avatar video sequences that will be input for the compatible avatar player system. It will also generate a meta-data file describing the avatar body coordinates within the video at given time-stamps. It will also generate a time-coded and cue-point XML file of the dialog that the avatar speaks.

The Avatar Player system is a software module similar to a video player system that is used to control video based avatars. It controls the playback of any set of avatar videos. Any particular avatar video has multiple sections.

Any particular avatar video is a structured video of an Avatars behavior. The video consist of the following sequence.

- 1) Transition sequence from starting pose,
- 2) Expressive performance content.
- 3) Transition sequence back to starting pose
- 4) Idle clips. (starting and ending with transition pose)
- 5) Transition to Master-Transition clip (Bridges body to other structured videos)

This software will automatically analyze the raw avatar video footage(s) and create a new video in the structured file pattern. To do this it will analyze the outlines of the avatar within the video canvas to determine body positioning. throughout the entire video.

* It will generate time-code dependent x,y coordinates of body features: head, shoulders, elbows, hands, gate, knees, feet.

* It will then have a precise measurement of the transition poses used in the clip.

* It will determine where the idle state starts and ends in the clip.

* It will generate additional idle states frames and loops.

* It will add additional transition states.

* It will add cue points for each structured video segment.

* A new video will be generated that represents a structured video.

* This video can now be played back in the Avatar Player system.

