Igor Kotov's Master Thesis Review

Title:
Non-linear Playback of Collection of Audio Samples for Video Games

Igor Kotov focused on the techniques of playback duration retargeting, i.e. altering the course of the playback to match the desired playback duration using non-trivial audio editing techniques (cuts, crossfades, etc.) in a way that the character of the audio signal is maintained (in his case, the texture of music is not altered).

The author narrowed down the focus to electronic music and covered a realistic use case of a techno music track, stored as a standard PCM digital signal.

He has implemented a functioning prototype of non-linear playback tool which analyses the music track on input and identifies plausible "jump points". The user can then start a playback of the track, which runs linearly and in real-time, until the user specifies a target position further away from the current time point. In a response to that, the system finds the nearest jump point after the origin and the nearest jump point before the destination. This mechanism then is then linked using a simple API to a video game, thus implementing a simple adaptive music engine. The system was tested by the author in full compliance with the thesis assignment.

The text of the thesis is a piece of professional work. The author clearly outlines his aims, methods, and results.

I fully recommend the thesis for defense and recommend the grade *"A – výborně"*.

doc. Ing. Adam Sporka, Ph.D.
Thesis Supervisor

In Prague, June 2, 2019