Artimate: an articulatory animation framework for audiovisual speech synthesis

Ingmar Steiner and Slim Ouni

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Motion Capture
Face/Body Performance
Motion Capture
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source: photobucket.com
Motion Capture
Face/Body Performance

source: photobucket.com

source: tumblr.com
Motion Capture

Speech
Motion Capture
Speech

source: turbosquid.com
Motion Capture

Speech?
Model Assembly
Static model & EMA
Model Assembly

Rigging
Model Animation

Skeleton
Model Animation

Surface
Architecture
Artimate Model Compiler
Artimate Model Compiler

Artimate Core
Architecture

Artimate Model Compiler

Artimate Core

Artimate Demo App
Architecture

Artimate Model Compiler ←→ blender

Artimate Core

Artimate Demo App
Architecture

Artimate Model Compiler ↔ blender

Artimate Core ↔ TextToSpeech

Artimate Demo App
Architecture

Artimate Model Compiler ↔ blender

Artimate Core ↔ MARY Text To Speech

Artimate Demo App ↔
Architecture

Artimate Demo App

Artimate Core

Artimate Model Compiler
Summary

- Adapted skeletal animation for articulatory animation
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- Motion capture data (EMA)
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- Modular, cross-platform implementation with open-source dependencies
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- Motion capture data (EMA)
- Modular, cross-platform implementation with open-source dependencies
- Self-contained, portable resource
Further work

• Handle noisy EMA data
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- Testing (validation, portability, integration, . . . )
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- Documentation
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- Testing (validation, portability, integration, ...)
- Documentation
- Public release