Tangible Handimation is a sequencer-inspired animation system for recording and playback of whole or individual parts of animations through direct manipulation and tangible interfaces. Besides allowing traditional input from keyboard and mouse, the system allows animators to use performing skill sets through novel interfaces. Users reported the system as enabling real-time performances and making the animation process more democratic, and based upon their input support for imminent feed-forward information was added to the design.

System and Development

Tangible Handimation is an interface for input collection to different virtual 3D objects with support for novel interfaces in the form of Wiimotes, Senseboard hand-worn units, and P5 gloves. The system is able to record, re-record, replay and stream an arbitrary number of data tracks concurrently. A sequencer-based interface is overlaid providing recording and replaying functionality through data tracks, resembling the I/O interface of most audio/MIDI sequencers.

To receive user feedback a workshop was conducted. The workshop took place during one afternoon with 5 professional animators and the project members. The animators were first given a general introduction to the Tangible Handimation concept and then had the possibility to test the system using Wiimotes during breakout brainstorming sessions.

Overall the reaction to the system was very positive, and more specific wishes included:
• Having the possibility to use input from MIDI devices
• Having the possibility to work collaboratively
• Supporting track hierarchies
• Awareness of upcoming moves during playback

All but the last suggestion can be solved by conventional HCI approaches. For the last suggestion, three novel interface solutions were developed (see also images in the gallery section):
• Sequencer Data Stream
• Stand-alone Data Stream
• Foreshadowing

The next step in developing the Tangible Handimation system consist of usability testing these solutions as well as getting feedback through practical use of the system by professionals.

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