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Designing backwards: Rethinking complex issues in animation

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“3D Animation” for many consists of characters moving and acting on screen. Rigging is a background artform that many do not even know exists; it is one of the most important steps to creating believable characters and motions to create the illusion of life. I propose a new methodology to achieve less user clicks while animating, reducing production time by overcoming one of the biggest technical limitations in animation. Since 2004, commercial developers have tried to create a stable and intuitive Multi-way/Bi-directional constraint. Looking at the problem from a user’s perspective; there are tools already made available to the public and imagining the user’s visual experience leads to solutions that are simpler to apply. Technical complexity in animation is defined by the limitations of the tools they use to manipulate the character. By rethinking the issue of Bi-directional constraints as a user interface issue rather than an issue of technical dependency limitation, simpler code can be utilized to switch out control hierarchies. Instead of breaking or negotiating technical issues associated with linear dependencies; it avoids them altogether. Thinking backwards allows us to feign the wholeness of a system while behind the scenes several systems drive functionality and provides an intuitive user experience with the rig. Also, working within current rule sets reduces feature creep and obsolescence. Rethinking these issues actualizes the freedom animators desire by circling obstacles created by software limitations.

Biography

Farley J Chery is an Assistant Professor of practice, who specializes in production art with a focus on motion capture and rigging techniques in the IMGD program at Worcester Polytechnic Institute. His research changed many ideas about rigging. Elements of his “Enhanced Ik” are now used in studios throughout the world such as Dwarf Labs in France to Valve Software and Epics games in America. Epic games features “Enhanced Ik” in it’s Maya plug-in ARTools for the Unreal 4 engine. He continues to innovate and educate in the 3D space. He has published many tutorials based on his research with Digital Tutors.

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