

Motions in Man and Machine

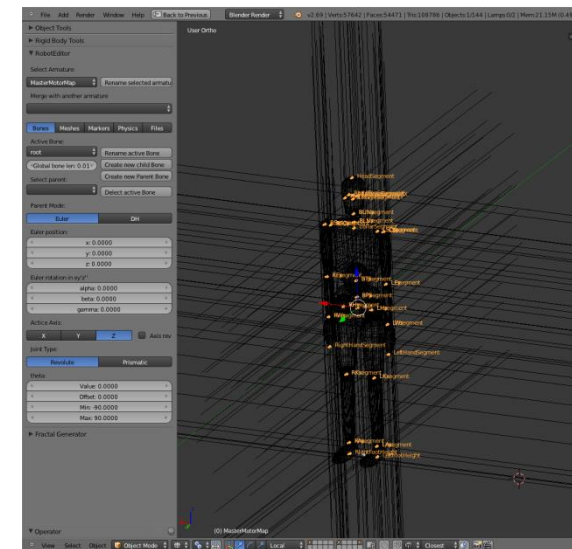
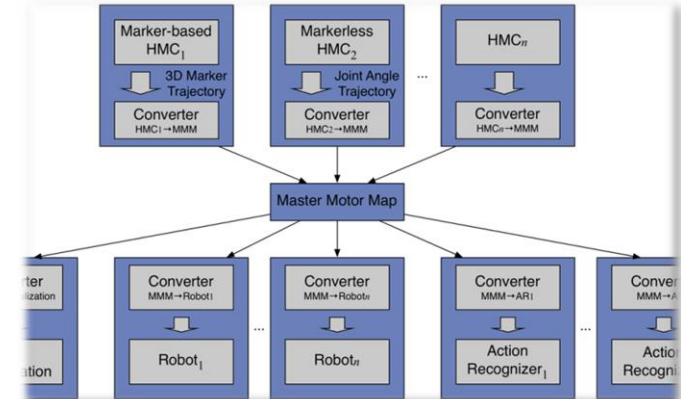
Projektthemen am KIT

Institute for Anthropomatics and Robotics (IAR), High Performance Humanoid Technologies (H²T)



Human Motion Capturing & Character Animation

- Mapping of **Human Motion Capture** data to reference model (Master Motor map)
 - Enables the transfer to humanoid robots/characters
- **Tasks**
 - Recording of **motion(s)** (*VICON*)
 - Preparation of **target robot/character model** (*Blender RobotEditor*)
 - **Conversion** of motion (*MMM framework*)
 - VICON → MMM
 - MMM → target model (marker set adaptation of target model)
 - **Rendering** of motion video(s) (*Blender RobotEditor*)
 - **Documentation** of findings



Learning and Parameterization of Motion Primitives from Human Observation

- Learning of parameterizable motion primitives (MP) representations from captured demonstrations
 - **Dynamic Movement Primitives**
- Reproduction of learned MPs with different parameters
- Execution of MPs on human model in simulation

