Interactive 3D animation of human figures is very common in video games, animation studios, and virtual environments. However, it is difficult to produce full-body animation that looks realistic enough to be comparable to studio quality human motion data. The commercial motion capture systems are expensive and not suitable for capture in everyday environments. Real-time requirements tend to reduce quality of animation. This motion graph based framework produces high quality motion sequences in real-time using a set of inertial sensor based controllers. The user’s action generates signals from the controllers that provide constraints to select appropriate sequence of motions from a structured database of human motions, namely motion graph. A local search algorithm utilizes noise prone and rapidly varying input sensor signals for querying a large database in real-time. The ability to waive the controllers for producing high quality animation provides a simple 3D user interface that is intuitive to use. The proposed framework is inexpensive and easy to setup.

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Type: Sensor Motion Graphic