

Qualisys for Animation

Qualisys' solution for animation allows real-time solving of multiple characters, streamed directly into the game engine or animation software of your liking.

The software is capable of creating a real-time moving skeleton of the actor from the collected motion capture data, which can drive a computer generated character. Qualisys provides direct streaming without middleware or third-party software into Unity, Unreal, MotionBuilder, Maya, and iClone Motion LIVE.

QTM WITH SKELETON SOLVER

The integrated skeleton solver in Qualisys Track Manager (QTM) is the latest step in making the most complete software for motion capture.

Qualisys provides a robust skeleton solver that lets you solve one or more actors, either in real-time or as a post-processing step. Skeletal data can be exported to FBX together with optical markers, characters and MotionBuilder actors.

FEATURES

- Direct streaming into animation software
- Free plugins available for download
- Track and stream multiple bodies simultaneously
- Export characters, skeletons, optical markers & MotionBuilder actors to FBX
- Daisy-chained system for a clean studio setup

ROBUST AND RELIABLE TRACKING

QTM uses a proven and robust inverse kinematics solver that is capable of dealing with occluded markers in challenging, multi-character takes.

By combining skeleton solving with our Automatic Identification of Markers (AIM), you can capture advanced setups in a simplified work flow. Capturing crouching, wrestling and lying on the floor have never been this straight-forward. The calibrated skeleton will track and stream even when some markers are unseen.

OPEN SOURCE

Most full-featured plugins are released as open source software and are available for download on www.github.com/qualisys or on the Qualisys website.

SITE LICENSE

The industry-unique site licensed software means that you are able to deploy QTM on as many computers as you like, in the studio and even on all team members' portable computers to be used for post-processing and animating work.



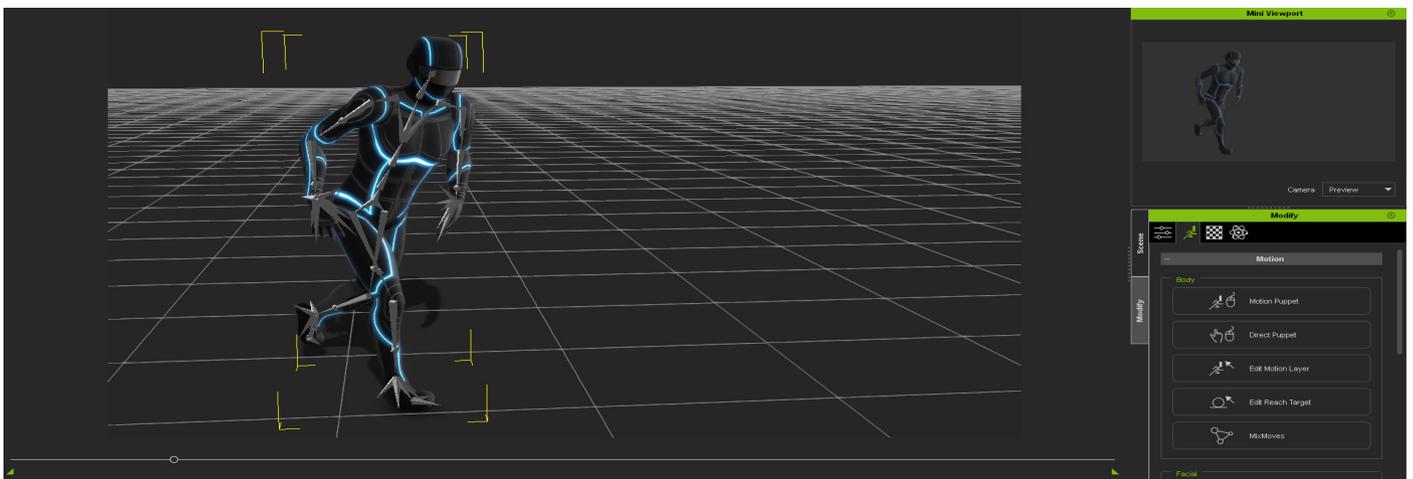
By using the pre-defined animation marker set in QTM, you will be capturing and streaming live skeletal data in no time.



ICLONE MOTION LIVE

Qualisys supports real-time skeleton streaming in iClone Motion LIVE using a Qualisys motion capture system.

Reallusion has used Qualisys' open-source Python SDK to allow real-time skeleton streaming from QTM to iClone Motion LIVE. Just start iClone Motion LIVE and select Qualisys as Body Gear. Then connect the Qualisys skeleton to a iClone character and you are free to record and work with your streaming data directly in iClone.





QTM CONNECT FOR UNREAL

QTM Connect for Unreal includes functionality for streaming skeletons, 3D marker data and rigid bodies (6DOF) in real-time from a Qualisys motion capture system to Unreal Engine.

Add 3D marker positions to your actor components, or let rigid body position and orientation manipulate them. Mapping skeletons to a mesh is handled by Unreal Engine's LiveLink plugin (a common interface for streaming and consuming animation data from external sources). The QTM Connect for Unreal is built upon our open source C++ SDK and is available on GitHub.



QTM CONNECT FOR MOTIONBUILDER

QTM Connect for MotionBuilder includes functionality for streaming skeletons and 3D marker data in real-time, using an open source C++ SDK available on GitHub.

The Qualisys Skeleton Device handles the streaming of skeleton segment transforms (6DOF) from QTM. The skeleton data is automatically characterized, which makes it very easy to connect a streamed skeleton to any rigged character.

3D markers are streamed using the Qualisys Optical Device and can be used to map an animated character with optical 3D data.



QTM CONNECT FOR UNITY

QTM Connect for Unity includes functionality for real-time streaming of skeletons, 3D marker data, rigid body objects (6DOF), gaze vectors and analog data.

Automatic mapping between Unity's Mecanim human bones and QTM segments is straight forward and simple. Using a QTM rigid body to set position and orientation of a GameObject is equally easy. Add a script to the GameObject and set the name of the QTM rigid body. Both the Unity package and the C# SDK are available on GitHub.



QTM CONNECT FOR MAYA

QTM Connect for Maya includes functionality for streaming skeletons, 3D marker data and rigid bodies (6DOF models) in real-time directly. Receive your mocap data in Maya as joints or locators and animate characters or other types of objects. Since our joint naming convention works seamlessly with HumanIK, getting your workspace up and running is extremely quick.

QTM Connect for Maya is open source to make it easy for any kind of customization and forward development. It uses our open source Python SDK.

SELECTION GUIDE

| Real-time streaming plugin | 2D | 3D | Rigid body (6DOF) | Gaze vector | Analog | Force | Skeleton | Time-code |
|----------------------------|----|----|-------------------|-------------|--------|-------|----------|-----------|
| iClone | - | - | - | - | - | - | + | + |
| MATLAB | + | + | + | + | + | + | - | + |
| LabView | + | + | + | + | + | + | - | + |
| MotionBuilder | - | + | + | - | - | - | + | + |
| Maya | - | + | + | - | - | - | + | + |
| Unity | - | + | + | + | + | - | + | + |
| Unreal Engine | - | + | + | - | - | - | + | + |

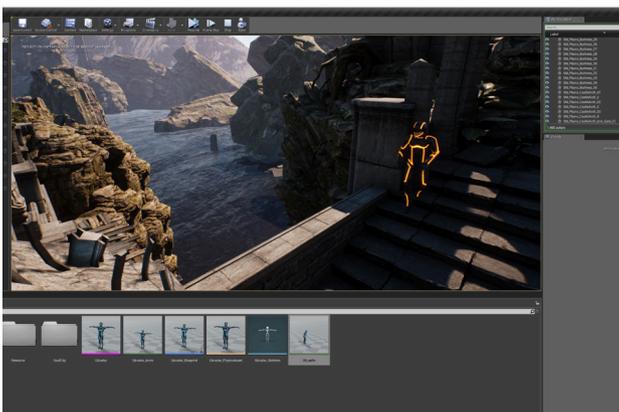
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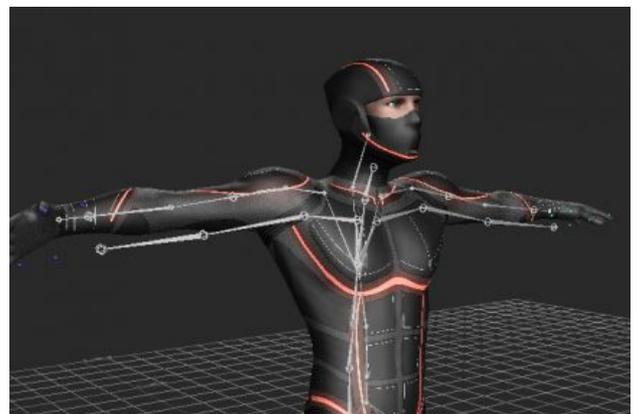
REAL-TIME STREAMING

QTM automatically tracks objects in real-time, allowing instant confirmation of accurate data acquisition. Captured data is easily streamed in real-time from QTM to external software. Automatic Identification of Markers (AIM) uses an advanced algorithm for identifying markers and an AIM model can be trained by consecutive captures in order to work with multiple actors and streamed in real-time for instant animation.

Apply the pre-trained AIM model, stand in a T-pose to fit the skeleton and the real-time solver will stream skeleton data to your application of choice. Qualisys has full-featured plugins for Unity, Unreal, MotionBuilder, Maya, and iClone LIVE. which makes integration a breeze. You can also record and export skeletal data in FBX format for use in third party software.



Seamlessly stream your Qualisys captures into a scene in Unreal or other animation software.



Characterized actors can be exported or live streamed into MotionBuilder software.

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