

# *Motion Captor*



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**Motion Captor** is a highly cost-effective real-time optical motion capture system by **STT**. It was developed to meet the specific needs of the entertainment industry: high-quality animation for video games, television and film (post-production), film pre-visualization and live performance (for broadcast and events). It has the following advantages:

- Real-time optical motion capture
- Extremely clean data - can often be used as-is without editing
- Includes plug-ins for the leading 3D animation programs
- Extremely cost-effective solution including hardware and software
- Uses widely available off-the-shelf hardware
- Reliable, robust and easy-to-use system
- Quick and easy to setup and calibrate
- Very easy to learn

#### AN OPTICAL SYSTEM

**Motion Captor** is an optical motion capture system. It uses synchronized video cameras to record the actor's motion. The system includes all the hardware and software necessary for automatic control of cameras and lights during the capture process.

**Motion Captor** includes advanced software for motion reconstruction and occlusion removal.



#### CAPTURE RESULTS

The results obtained from capture sessions with **Motion Captor** can easily be imported directly into 3D animation packages using the included plug-ins.

**Motion Captor** uses advanced kinematic skeletons to correlate marker movement during the capture process, resulting in extremely clean data output. Use of kinematic skeletons during capture dramatically reduces the need to edit the resultant data - it can often be imported directly into 3D animation programs without further motion editing. Capture of non-human characters is also supported.

**Motion Captor** provides connection plug-ins for:

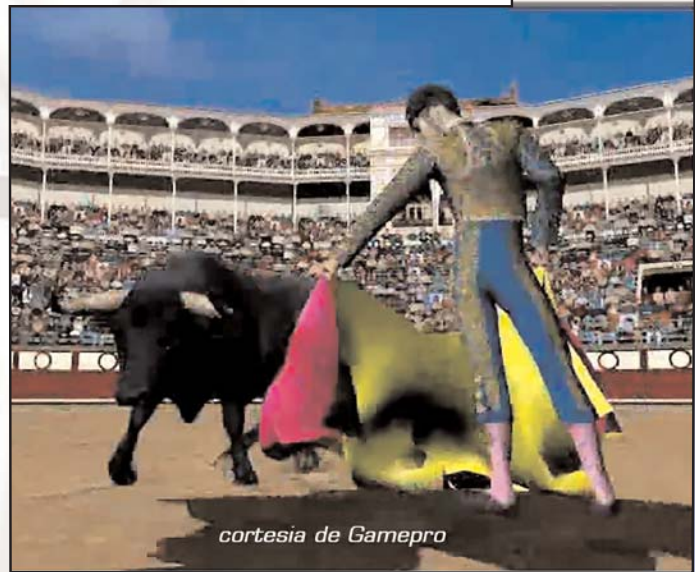
- Kaydara FiLMBOX® motioncapture and online
- Softimage® and Softimage XSI™
- 3d studio max®
- LightWave 3D®
- Kaydara® MOCAP and Kaydara® ONLINE
- Maya®
- Character Studio®



## CAPTURE PROCESS

With **Motion Captor** the capture process is very simple and straightforward.

1. **Marker placement.** Reflective spherical markers are placed on major joints and other characteristic locations on the body. **Motion Captor** includes eight different marker configurations. Custom marker configurations are provided upon user request.
2. **Capture.** The capture process begins by clicking the capture button. The software activates the lights, labels the markers, tracks marker movement and computes their 3D trajectories in real-time, automatically, without user intervention. During the capture process, use of a kinematic skeleton greatly reduces marker occlusion and leads to extremely clean data output. Motion Captor's exceptional real-time performance makes it the ideal choice for live events, film visualization and live-to-air television broadcast.
3. **Data output.** Once capture is complete, data can be imported directly into the 3D animation program of choice via the included plug-ins. The STT plug-ins create a skeleton and apply the recorded motion as joint rotations. The plug-ins support use of the skeleton as-is, and also include options for motion retargeting. (This allows characters with different skeletal dimensions and proportions to use the same data).



**Motion Captor** includes a plug-in for real-time character animation and capture directly within Kaydara FiLMBOX® motioncapture and online, and Kaydara® MOCAP and ONLINE.





## TECHNICAL CHARACTERISTICS

**Motion Captor** is a complete, easy-to-use, powerful and affordable solution for motion capture. The system is highly transportable and can be set up quickly and easily in a wide variety of locations, on-site or in studio. It can even be used outdoors, in non-direct sunlight.

**Motion Captor** uses widely available standard hardware, making it very affordable and easy to maintain. The system consists of:

- Standard PC workstation running Windows NT®, Windows® 2000 Professional
- Adjustable camera layout: 4 to 9 cameras (other layouts available on request)
- Frame grabbers
- Cables
- Standard halogen lights
- Capture area: a circle of up to 6 meters (20 feet) diameter (6 camera system)
- Unlimited number of markers



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