Cortex

Cortex is Motion Analysis’ software for handling all phases of motion capture within a single program - initial setup, calibration, tracking and post processing. A single, integrated application accelerates learning the system and improves productivity.

Cortex is the industry’s first mocap tracking software tailored to both a 32-bit and a 64-bit operating system for use with high-throughput multi-processor environments. It is built on Microsoft’s .NET Framework. The .NET framework maximizes programming productivity, which translates into more features delivered to our customers.

Cortex has undockable windows so that the operator can control which windows are open at once and where they can be positioned, even if they are moved onto a second monitor. Cortex’s internal plug-in architecture has been simplified through templates, making it easier for third party developers to create plug-ins to Cortex using free Microsoft Visual Studio express versions. Existing external software programs and plug-ins that use the MAC exclusive simultaneous-connection SDK2 environment will run without changes under Cortex.

Multiple Tracking Objects (MTO)

In both real-time and post-processing, Multiple Tracking Objects allows our customers to separate the capture into separate MarkerSets and edit each data set separately. Each MarkerSet has its own marker names, linkages, template and optional skeleton definition. With a simple tab selection you highlight and select the particular maker set desired.

MTO Details:

- Post process data with multiple objects (templates, equipment)
- Simplified system set up
- Multiple simultaneous skeleton engine support
- Fully backwards compatible with legacy data
- Simplified data packaging and transfer
**3D Display Options**

The Cortex 3D workspace is invaluable to the user because it provides a way to efficiently view the coordinate data. Users now have the ability to specify the number of figures to show before and after the current displayed frame, and plot the trajectory of any marker. Also within this workspace you can view force and velocity vectors, camera positions, and body center of mass.

**Presentation Graphs**

Presentation Graphs allow one or multiple pages with tabs, one or more graphs per page and complete scaling and formatting control to optimize graph readability. Any data known to Cortex can be graphed via simple variable selector interface or scripts that retrieve and display the data.

**Collada 3D Viewer**

The Collada 3D Viewer allows our customers to play high resolution animations (collada open source standard for model rendering) within Cortex or SONIC. The animated figure can be displayed with markers as well as with joint velocity and ground reaction force vectors. The figures can be displayed in real-time or during Post Processing, and played back in sync with Presentation graphs. With Cortex you can also use collada files to generate custom scenes with floors, backgrounds and furniture of your choice.

**DV Reference**

Motion Analysis offers a software solution for digital video capture, DV Reference. DV Reference is embedded in Cortex and allows the synchronized capture and playback of reference video data from stationary and moving DV cameras. The software enables you to collect color or monochrome video from multiple cameras that is time matched to the motion capture data. This software requires DV cameras (contact MAC for compatible models) or high speed Basler digital video cameras.

DV Reference also offers a function to overlay the reference color video images with stick figures, markers, vectors and other model information. Following a simple calibration procedure, the color reference video camera view becomes a background to the 3D View. The 3D Show Video checkbox will dim the floor and snap the 3D viewpoint to the reference video viewpoint.