VICON MOTUS VIDEO

_ ACCURATE, FLEXIBLE, PORTABLE
_ EASY NAVIGATION
_ POWERFUL CALCULATIONS AND REPORTING TOOLS
_ DATA CAPTURE, DIGITIZING, CALCULATIONS, AND REPORTING ALL IN ONE

KINEMATIC VIDEO ANALYSIS IN ANY ENVIRONMENT

VICON MOTUS VIDEO

MOTUS VIDEO KEY BENEFITS

_ ACCURATE, FLEXIBLE AND PORTABLE SYSTEM FOR DATA COLLECTION IN VARIETY OF ENVIRONMENTS
_ SIMPLE ENOUGH FOR BASIC TEACHING APPLICATIONS AND POWERFUL ENOUGH FOR ADVANCED RESEARCH
_ USE OFF-THE-SHELF VIDEO EQUIPMENT
_ DATA CAPTURE, DIGITIZING, CALCULATIONS, AND REPORTING ALL IN ONE

OVERVIEW

The Vicon Motus Video digitizing system is a complete solution for capturing and processing kinematic data in a wide variety of environments. Easy enough to use in basic teaching applications, yet accurate and powerful enough for complex research. The flexibility of three options for identifying datapoints, along with its extreme portability, allow you to use the system indoors, outdoors, even underwater.

CAPTURING

Using a video system gives you the flexibility to import video from previously captured .avi files or to capture directly from one or multiple cameras. Because Vicon Motus Video systems can grow with your needs, you can begin with simple 2D studies using a single camera and build your system to incorporate multiple cameras for 3D research.

Importing an existing file is simple through Vicon's software – just browse for your stored file and click Import. If you are capturing directly from a video camera, Vicon can integrate analog, digital, even hi-definition cameras if they have manual control capabilities of the shutter speed, focus and aperture. Video from up to six standard digital camcorders can be captured directly to your hard-drive as well as synchronized data from analog devices such as EMG and forceplates.

DIGITIZING

Vicon software offers you multiple options for digitizing kinematic data. Choose the method that best suits your budget and your needs.

Manual: If you are unable to use reflective or black markers or have less than optimal lighting conditions, you can still obtain accurate data by manually digitizing - simply click on the points one at a time throughout the video sequence. Zoom windows, predictive location algorithms and segment length options assist you.

Automatic Tracking: Using reflective or black markers that contrast with the background speeds up the point identification process by allowing the software to track markers with little or no user intervention. Software adjustments can be made to enhance the image quality and contrast to help marker tracking in a variety of lighting conditions.

Pattern Tracking: No markers. No manual digitizing. If you can choose a distinguishable pattern that is visible across several frames, the software can recognize a point within the pattern and track it throughout the video sequence. This is especially helpful in situations where solid, contrasting markers cannot be used.

POST-PROCESSING

Once the coordinate data are captured they're ready for post-processing. Vicon software includes options for generating 2D and 3D scaled coordinates which may then be filtered and kinematic parameters such as linear and angular displacements, velocities, and accelerations calculated. You can also write your own advanced calculations using the powerful KineCalc module.

If your research involves gait analysis, a standard template can generate not only gait kinematics, but also lower extremity joint kinetics (forces, moments, and powers). All of these data can then be easily displayed in animated reports that include synchronized video clips, line graphs, bar graphs, and text. Share your reports as stand-alone .avi or .jpg files that may be used within MS Word or PowerPoint, emailed to colleagues, or even burned to DVD.

HIGHLIGHTS

REMOTE VIDEO SYNCHRONIZATION
Synchronize data from multiple digital camcorders via a 1000 Hz audio tone generated and broadcast by the Remote Video Synchronization Unit (RVSU). After the video is captured the software automatically detects the signal, accurately determines the time offset, and interpolates the data before calculating the 3D coordinates.

HIGH SPEED CAMERA INTEGRATION
The integration of high-speed cameras offer an affordable solution for capturing 100 frames per second at 656 X 492 resolution or faster at reduced resolutions. Capture up to six synchronized cameras via standard Firewire (IEEE-1394) capture devices directly to dedicated hard drives.

STOBE IMAGING
Progressively overlay selected video images to create a stroboscopic effect in your reports. Enhance your reports by identifying and displaying events such as heel strike, toe-off or ball release.

ONE-STEP 3D & ANALOG COLLECTION
Collect 3D video and analog data concurrently, direct to the hard drive. Synchronize analog data with digital camcorders, high speed Basler cameras, or genlockable analog cameras via the RVSU, Event & Video Control Unit (EVCU), or MX Control.

COMMUNICATE

For further information on Vicon Motus Video and other Vicon products please contact your nearest office or email **info@vicon.com**

www.vicon.com

OXFORD
14 Minns Business Park,
West Way, Oxford, OX2 0JB, UK
T: +44 (0) 1865 261800
F: +44 (0) 1865 240527

LOS ANGELES
5419 McConnell Avenue,
Los Angeles, CA 90066, USA
T: +1 310 306 6131
F: +1 310 437 4229

LAKE FOREST
9 Spectrum Pointe Drive,
Lake Forest, CA 92630, USA
T: +1 949 472 9140
F: +1 949 472 9136

DENVER
7388 S. Revere Parkway Suite 901,
Centennial, CO 80112, USA
T: +1 303 799 8686
F: +1 303 799 8690