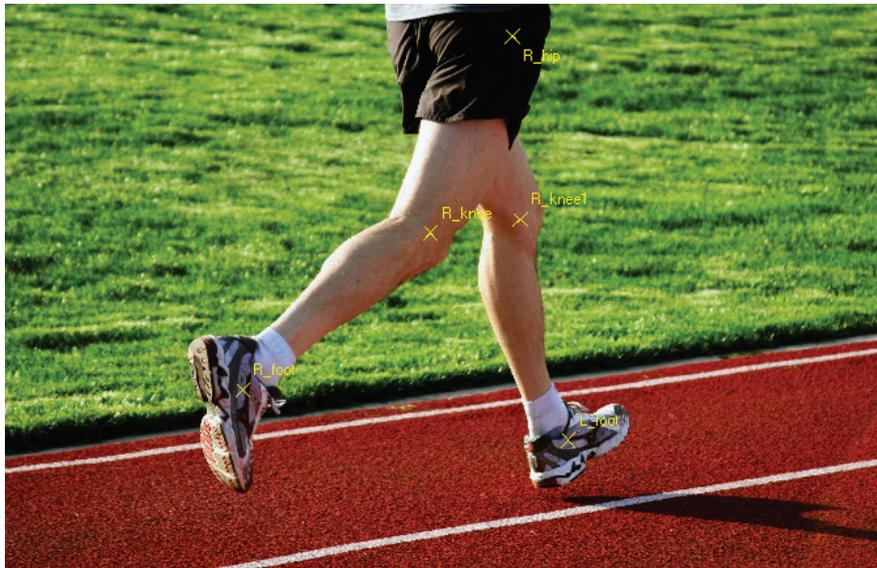




Qualisys Video Analysis

Markerless video tracking software



QVA - Qualisys Video Analysis- is an analysis software tool used to manage and report video data. Together with a Qualisys Motion Capture High Speed Video System, QVA provides an advanced and affordable solution for biomechanical motion analysis. The high speed video image can now be evaluated both visually – by watching the sequence in slow-motion – as well as analytically, by means of QVA. QVA is developed around and based upon TEMA, software created by Image Systems, one of Qualisys global strategic partners in developing and marketing world-class motion analysis systems.

With every shipment of a Qualisys High Speed Video Camera (Oqus), a 60-day trial version of QVA will now be included for the user to install and use at no extra charge.

Product Information

KEY FEATURES

- Supports a large numbers of digital formats
- Advanced and flexible high speed tracker
- 2D tracker
- Automatic and manual tracking event settings
- Import and export of data
- Generates reports

BENEFITS

- Automating processes to save money through reduced cycle times, reduced opportunities for mistakes and reduced training needs
- Having the flexibility to customize the system to meet your local, specific data collection, formatting, processing, analytic and reporting requirements
- Generating consistent reports across trials, time and systems for performance quantification and analysis

SYSTEM REQUIREMENTS

- Windows 2000, XP
- Pentium III, 2GHz or higher
- 1 GB RAM Memory
- Video card with >19" @1280x1024



SOFTWARE FEATURES

QVA can track a number of points throughout the image sequence and the results can be presented in a variety of predefined graphs and tables. Depending on the requirements of the user, QVA is offered in different versions, each with its own unique features. The standard version contains following features.

| | |
|---------------------------------|--|
| Tracking | Correlation |
| Number of points in one session | 5 |
| Import of image | AVI, TIFF, MPEG, JPEG and others |
| Export of diagrams and images | To Word document |
| Scaling | Dynamic, static and manually scaling |
| Co-ordinate system | Visualizing of grid system/division and scale of image |
| Diagram | X/Y, X/T diagram, full interactivity |
| Tables | Free choice of parameters, full interactivity |
| Toolbox | Several options except printing parameters, scales of diagrams printing of logo types, test comments etc. |

TOOLS AND PROPERTIES

QVA has a large set of predefined tools available to the user. This function makes it easy to handle functions such as image improvement, measurements in images and to perform calculations for the analysis.

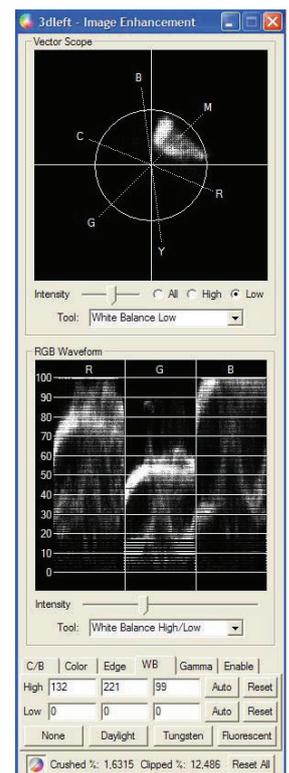
OPTIONS

3D with two or more fixed cameras and a series of defined fixed targets in any one image can be tracked. The observations (tracked pixel coordinates) from each camera, computes the direction from each camera to the target, and finds the target position that is the best fit to the observations

6 Degrees of Freedom (6DOF) is an optional feature that computes the position and orientation of a tracked rigid body from a single camera. The motion of the rigid body can be described with six parameters: three positions coordinates (x , y and z), which gives the position of a specific point on the body, and three altitude angles (roll, pitch and yaw), which gives its orientation in space.

To correct the image data from the camera, lens calibration is performed by using a mathematical model of distortion. A sequence of images from a target board is imported into the program and the coordinates of the target positions relative to the lens center is calculated.

Viewer allows the recipient to rerun the tracking with the images, graphs and spreadsheet data synchronized. Data collected during this process can easily be copied into other documents; the user does not require any additional program installation to run it.



The operator can also define properties like angles and distances between points. The system will then automatically calculate distance, angles, angle velocity and angle acceleration for each frame in the sequence.

FEATURES

FLEXIBLE - The flexible windows-based user interface makes it fast and easy to find the best setup for your application. Key-bindings to the menu system make the operation very fast

POWERFUL - Handles and analyses at rapid speed large quantities of data from high speed cameras and other sensors. The operator can choose between a large number of tracking algorithms and track an unlimited number of points throughout the image sequence.

SYNCHRONIZED - The User Interface is "Fully synchronized": any change of parameters or set-up will directly affect all parts of the tracking session, updating results, graphs and tables.

COMPATIBLE - The system handles all major image formats on the market and has options to control most of the available cameras such as Phantom, Photron, Redlake and others.

PRESENTATION

One of the great advantages using the QVA system, is the possibility to present data and results in customized graphs and tables. It is easy to add comments, special graphics as well as to customize the appearance of a certain view. The main tools for presentations are 2D diagrams, diagrams in which data can be plotted against time or other values. All data, whether tracking data, or data inputted separately, can be plotted in single or multi axis X/T or Y/X plots with numerous options to customize.



Tables: All types of data can be presented in tabulated form using rows and columns. The diagram can easily be customized with different headers or combination of data.

APPLICATIONS

QVA provides maximum flexibility in managing, analyzing, and reporting optical data collected by the Qualisys Motion Capture System and Oqus High Speed Video. QVA has evolved from being a research tool into the most powerful and practical solution for many industries and researchers in fields, such as:

- Clinical Motion Analysis (including Gait Analysis)
- Human Factors Engineering and Ergonomics
- Neuroscience
- Sports motion analysis
- Animal motion studies
- Psychology studies

