iPi Soft Unveils Biomech Add-On To iPi Motion Capture
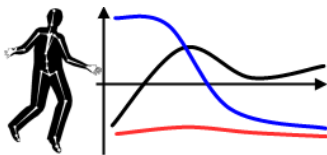
New Tool Designed For In-Depth Biomechanical Analysis Of Human Motions

Includes Visualization And Motion Data Export To Excel, MATLAB

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MOSCOW, RUSSIA, 19th June 2014 – iPi Soft, developers of the iPi Motion Capture line of markerless motion capture technology, has unveiled iPi Biomech, a new add-on software tool for the biomechanical analysis of human motion. iPi Biomech extends the functionality of iPi Motion Capture for markerless tracking and visualization of motion capture data for medical, sports analysis and movement science applications.

The iPi Biomech add-on extracts motion and plot motion data for selected bones using convenient coordinate systems (so users can select how coordinates are measured). Tracking data can be exported to various formats, including Excel or MATLAB.

Since its introduction into the marketplace in 2009, iPi Soft motion capture technology has been gaining rapid adoption predominantly by filmmakers and videogame developers as an accurate, easy-to-use and affordable motion capture solution for animating believable humanoid motion characters. Although it has been in use as a motion analysis tool in other industries – including medical, sports, movement science, ergonomics, military, kinematic and others -- the supported export data formats (designed primarily for animation) were not familiar to scientists and doctors.

"We're excited about the potential that iPi Biomech technology brings to professionals across numerous vertical markets to analyze motion data," **Michael Nikonov**, iPi Soft founder and chief technology architect says*. "Since iPi Motion Capture does not require clumsy sensor suits or uniform backgrounds, doctors, scientists and others can conveniently set up a motion capture system in their offices. The ability to export bone motion data to Excel or MATLAB using our Biomech add-on, means that users will not have to spend time converting data and can get access to it right away."*

Dr. Mario Petersen, a developmental pediatrician based in Eugene, OR, who specializes in children with physical development disabilities has been using the iPi Motion Capture system effectively and notes that it was particularly useful in a recent case involving a two-year old boy with mild cerebral palsy.

"We used iPi Motion Capture without the iPi Biomech add-on to create 'before and after' footage to compare the child's posture using specialized body tape designed to improve posture and then without it," Petersen says. *"The mocap data clearly showed a positive changes in his posture when he had when the tape was applied. With the new iPi Biomech add-on tool, we would expect to see even more functionality and dynamic data tailored specifically for biomechanic use."*

<u>iPi Biomech Add-on Feature Highlights:</u>
Working in conjunction with iPi Motion Capture, iPi Biomech will provide customers with linear and angular quantities for selected bones, including:
- Linear coordinate, velocity, acceleration
- Euler angles, angular velocity and angular acceleration
- Quaternions and rotation matrices

Users are able to:
- Select convenient coordinate systems
  - Linear: Absolute (relative to floor), Relative to parent joint, Relative to center of mass
  - Angular: Absolute (relative to floor), Relative to parent joint

- o Select Euler angles system
- Plot values of selected quantities for selected bones
- Export bones motion data to tab-separated text for Excel or MATLAB

About iPi Motion Capture

Introduced in 2009, iPi Motion Capture has been gaining momentum as a professional and reliable alternative for capturing human motion data without the need for expensive facility space, clumsy sensor suits with reflective markers or a team of technicians. The software uses sophisticated image processing and computer vision algorithms to recognize and track the human body and lets users shoot video using up to three MS Kinect motion sensing input devices or up to eight Sony PlayStation Eye cameras.

Pricing and Availability:

iPi Soft makes available three editions of its iPi Motion Capture markerless technology – Express, Basic and Standard – that differ by the set of available features and complexity of motions that can be tracked. The new iPi Biomech add-on is now available directly from the iPi Soft web site and its worldwide distribution channel at a cost of $495. It is available with numerous bundle options available [here](#).

About iPi Soft:

Launched in 2008, iPi Soft, LLC is the Moscow-based developer of iPi Motion Capture™, a markerless motion capture software tool that uses sophisticated image processing and computer vision algorithms to recognize and track the human body. The company's breakthrough technology digitizes the movement of a human skeleton, rendering it in expressive 3D characters for video games or computer generated films. Recent projects that relied on iPi Motion Capture include the hit feature film "Now You See Me" and the upcoming horror classic reboot "Night of the Living Dead: Origins 3D" and the acclaimed videogame "Halo 4."

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