

HasMotion Wiki Documentation Site Main Page



Visual3D

Visual3D™ is the most advanced biomechanics analysis software for 3D motion capture data available. With Visual3D™ you can accurately analyze 3D movements using your own data, analysis techniques, marker sets, and data capture systems.

Visual3D is hardware independent, it enables labs around the world to collaborate and share data and analysis results in a consistent manner, regardless of the motion capture system used. Its hardware independence also enables a lab to modify, enhance, update, or even replace underlying motion capture systems without affecting any existing data or studies in progress. Visual3D is all about managing your motion capture data, and key concepts are documented throughout this wiki.

Processing motion capture data takes several steps, each of which is important. They are data collection, modelling, analysis and reporting.

New updates are regularly released. See the list of release notes for details.

For an accurate and reliable kinematics and kinetics data are essential to the appropriate application of movement analysis data for clinical and research purposes. Proper laboratory calibration includes the accurate determination of the positions of the force platform(s) and cameras in the laboratory coordinate system, as well as correct setting of force platform parameters.



CalTester is an easy-to-use tool and software program to provide needed configuration and calibration information of a laboratory's motion and force measurement systems. It also can be used to find the accurate position, orientation, and corners of a force plate used with an optical motion capture system. The CalTester software handles instrumented treadmills and force structures. The functionality is now available in Visual3D when a CalTester license key is provided. The standalone CalTester-Plus software application has been discontinued and replaced with a newer CalTester module, which is simply the CalTester tab in Visual3D.

List of some of the features that Visual3D provides:

- * Multisubject support in C3D files using the subject prefix parameters (prefixes are provided by mocap systems)
- * Automatically adds subject prefix to marker labels landmarks and segments in Model Templates
- * Allows multiple subjects in the same movement trial to be processed (identified by the unique prefixes used)
- * Allows multiple static calibration trials to be used for applying to movement trials. Handles each subject separately for computing means, normal data, metrics, etc. when working with the CMZ Library. Previously V3D required 1 subject per CMO/CMZ file.
- * Allows subject tagging in the model to allow setting the active subject tag (in Set_Active_File) which lets pipelines process different types of subjects differently (ie; BATTER, PITCHER, etc. tags, generically applied to any specific subject prefix).

To learn more how Visual3D works, visit [Visual3D](#)!



Sift

Tailored for users handling large biomechanical datasets, Sift is your solution for seamless data analysis with no exporting necessary. Load multiple CMZ libraries simultaneously, simplify data management, and conquer unwieldy databases effortlessly.

Dive straight into your datasets with a variety of visualization tools, cutting-edge analysis techniques, and seamless integration of the Visual3D engine into this stand alone application. From incorporating Visual3D pipeline commands to performing Statistical Parametric Mapping, Principal Component Analysis, or outlier detection algorithms, Sift empowers you to complete comprehensive biomechanics analyses within a single application.

List of some of the features that Sift provides:

- * Load multiple [C3D](#) files
- * Detect and remove outliers manually or through statistical algorithms
- * Group signals based on unique conditions
- * Complete advanced analyses through built in Principal Component Analysis
- * Curve registration
- * Statistical Parametric Mapping and gait measures
- * Produce customized visualizations

Sift is designed to integrate seamlessly with [Visual3D](#). Where Visual3D is primarily a session-based tool for processing motion capture data, Sift lets researchers take their Visual3D results and process them at study-level. Users can leverage the power of the Visual3D engine by running pipeline commands on loaded CMZ libraries directly through Sift's interface.

At its heart, Sift is all about helping researchers through the knowledge discovery process: [collecting](#),

[cleaning](#), [shaping](#), and [analysing](#) their data before communicating their results.

To learn more of Sift, visit [Sift!](#)

Learn more about HAS-Motion at the [company website](#). Plus check out our [blog](#) for overviews of new features and discussions of the biomechanical literature.

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