

Calcium Solver

The skeleton HTR data generated by Calcium Solver is the cleanest and highest quality data you can get for character animation.

Calcium Solver is a powerful skeletal creation, setup, and motion measuring solution. It is an easy to use tool to measure captured marker data onto a skeleton. The marker data drives a pre-defined, rigid, hierarchical skeleton definition.

In the solving process, Calcium Solver reads in TRC marker data of an Init or T-pose, and one or more motion capture sequences. It allows you to view the resulting Hierarchical Translation and Rotation (HTR) skeleton data and writes it to a file for later use. The HTR data can then be viewed, edited, and read into all of the major animation packages.

Calcium Solver uses a technique called Global Optimization (GO) which has been proven to be a very effective tool for generating accurate data and minimizing errors caused by markers moving on skin or loose clothing.

Features

- Interactive solving — make an adjustment and see the result immediately
- Multiple skeletons and solvers in one file
- The same skeleton can be driven by more than one marker set
- The skeleton is defined by joint types including “Hinge”, “Universal” and “Spherical”
- Enhanced visual representations of skeletons
- Enhanced data navigation and editing
- Enhanced layout controls
- One simple marker type (as opposed to the requirement of using reference and terminating markers)

Advantages of Using HTR Files

- Proper and complete init pose
- All segments can have translation data
- Multiple global roots are allowed
- Easy readable format
- Widely used standard for many years = robust!

- File Input and Output plug-ins are available for all major animation packages
- More meta-information is in the header than in any other ASCII format

Why Calcium Solver Technology ?

- The best skeleton-fitting algorithm in the business
- The axes of rotation for a joint can be defined separately from the axes of the bone definition
- Provides a global and “holistic” solution—the whole skeleton is fitted to the cloud of markers at once, not just parts of the skeleton in separate passes
- The skeleton definition is integrated with the tracking software to run in real-time
- Custom setup modes remember your screen layouts
- Rigid segments are used yet there is never a problem with sliding end-effectors
- Gives useful results even when there is incomplete data
- Does re-targeting of motion directly onto a character
- Easily handles skeletons of any structure
- Can handle long sequences of shared segments (like a spine) and evenly distributes motion
- Many joint types from which to choose

