

Skeleton Builder

A skeleton is a hierarchically connected set of bones with translation and rotation data. Each bone has a “parent” and potentially any number of “children”. One special bone has no parent and is usually referred to as the “root” of the skeleton. Skeleton Builder, as the name implies, is a tool that allows you to construct a skeleton by creating bones and arranging them in a hierarchy. Each bone is defined by the motion of three markers used to construct its rotation data.

Skeleton Builder skeletons are relatively simple, direct and fast calculations of segments (bones) that are defined and calculated from one marker center to another. The markers can be real or virtual (calculated) and are typically from one virtual joint center to a second virtual joint center. A 3D local coordinate system is defined with three markers: origin, bone (Y) axis, and XY plane. The advantage of Skeleton Builder skeletons is that they compute very quickly and they represent the method of how most biomechanical models have been computed for many years.

Advantages

- Entire specification done in Cortex and stored in .prj files
- You can make changes to the setup and see results immediately in the any viewing package attached to the Cortex SDK
- Good for tracking props
- Easy to create rotational and transitional offsets
- Easy to track individual rotation channels, such as for a hinge
- Extremely fast calculations - they are directly generated
- Entire specification is done in Cortex
- Good for tracking props

