TrakIR Tool for Matlab Help

This document describes the TrackIR Tool for Matlab. This consists of one Matlab Object, TrackIRTracker, designed to interact with a single connected and active TrackIR tracker.

In order to use the TrackIR Tool for Matlab, the TrackIR software (available at www.trackir.com/download) must be installed and operation on the system and the Matlab path must first be properly configured. Please read the TrackIR Tool for Matlab Setup Guide to see how this is done.

TrackIRTracker

Create an TrackIRTracker object to interact with all TrackIR trackers that are connected and active on the system.

Syntax

trt =TrackIRTracker; trt =TrackIRTracker(ClipType);

Description

TrackIRTracker creates an interface for interacting with a single TrackIR tracker that is connected and active on the system. The initialization has one, optional input argument ClipType. This may be set to either 'TrackClip' or 'TrackClipPro'. Be default (if ClipType is omitted), the interface is initialized for 'TrackClip'.

Read-Only Properties

After initialization, the following properties are available for read only:

- 'CurrentTime' = the amount of time that has elapsed since this object was created.
- 'NumberOfTrackers' = the number of trackers connected and active. Always equal to 1.
- 'Position' = the current position, in [X, Y, Z] coordinates in centimeters.
- 'Orientation' = the current orientation, specified as Euler angles [YAW, PITCH, ROLL].
- 'History' = a rolling history, recorded at a rate of 30 times per second, of the past 30 seconds of the available position and orientation information. The history is returned as a structure H, where:
 - H.Time = a 900-by-1 vector specifying the time of each element in the 30 second history.
 - H.Position = a 900-by-3 matrix where each row specifies the tracker position at each time in H.Time.
 - H.Orientation = a 900-by-3 matrix where each row specifies the tracker orientation at each time in H.Time.

Read-Write Properties

The following properties are available to the user both for reading and writing.

• 'ClipType' = the current clip type being tracked. May be set to either 'TrackClip' or 'TrackClipPro'.

DEFAULT: 'TrackClip'

• 'UserData' = a property in which the user may store arbitrary data such as a scalar, a structure, or a cell array. Data stored in 'UserData' will be available as 'trt.UserData' within the button callback, if desired.

DEFAULT: []

Methods

• ResetOrientation(trt)

Reset the tracker origin. Specifically, the current three-dimensional tracker cartesian location will be mapped to[0,0,0] and the current tracker yaw will be reset to 0 degrees.