

Virtual Lab for OpenSim

Appendix (Creating the v3d_lab)

For example if a lab was set up such that the person walked in the -X direction, +Z was vertical, and +Y was to the subjects left. (See Appendix for an example of Visual3d mdh script could be used to create a compatible virtual lab.

```
!  
! Segment v3d_lab  
!  
**HYBRID_SEGMENT**  
! /CALIBRATION_FILE=  
/TYPE=Visual_3D  
/NAME=v3d_lab  
/REFERENCE_OBJECT=Medial Distal+Lateral Distal+Medial Proximal+Lateral  
Proximal+Proximal Joint+Distal Joint+Additional Object+Additional  
Plane+Distal Radius+Proximal Radius  
/REFERENCE_OBJECT_NAMES=v3d_lab_med_distal+v3d_lab_lat_distal+v3d_lab_med_pr  
ox+v3d_lab_lat_prox++++Medial+v3d_lab_Distal_Radius+v3d_lab_Proximal_Radius  
/REFERENCE_OBJECT_TYPES=LANDMARK+LANDMARK+LANDMARK+LANDMARK++++METRIC+METRI  
C  
/USE_CAL_TARGETS_FOR_TRACKING=FALSE  
/TRACKING_TYPES=LANDMARK+LANDMARK+LANDMARK+LANDMARK  
/TRACKING_NAMES=v3d_lab_lat_prox+v3d_lab_med_prox+v3d_lab_lat_distal+v3d_lab  
_med_distal  
! /USE_OPTIMAL_TRACKING=TRUE  
/KINEMATIC_ONLY=TRUE  
! /STATIC_MODEL=FALSE  
/GRAPHICS_ROT_X=0  
/GRAPHICS_ROT_Y=0  
/GRAPHICS_ROT_Z=0  
/GRAPHICS_SCALE_X=1  
/GRAPHICS_SCALE_Y=1  
/GRAPHICS_SCALE_Z=1  
/GRAPHICS_TRANSLATE_X=0  
/GRAPHICS_TRANSLATE_Y=0  
/GRAPHICS_TRANSLATE_Z=0  
! /GRAPHICS_UNIT_SCALE=1.000000  
/MASS=0.000000  
! /GEOMETRY=  
/PROX_TO.CG_AXIAL=0.5*v3d_lab_SEG_LENGTH  
/PROX_TO.CG_ML=0*v3d_lab_SEG_LENGTH  
/PROX_TO.CG_AP=0*v3d_lab_SEG_LENGTH  
/IXX=0  
/IYY=0  
/IZZ=0  
! /AP_DIRECTION=
```

```
! /AXIAL_DIRECTION=  
! /OBJFILE=  
! /COLFILE=  
! /DEPTH=  
**,**
```

```
! Landmarks  
**Add_Landmark**  
/LANDMARK_NAME=v3d_lab_lat_prox  
! /CALIBRATION_FILE=  
! /USER_GENERATED=TRUE  
! /USE_PERCENTAGE=FALSE  
! /CALIBRATION_ONLY=FALSE  
! /USE_TARGETS=FALSE  
/SEGMENT_NAME=LAB  
! /TARGET_TYPES=  
! /TARGET_NAMES=  
! /MCSX=0.0  
/MCSY=0.001  
! /MCSZ=0.0  
! /LANDMARK_LOCATION=  
! /REFERENCE_LOCATION_NAME=  
! /REFERENCE_LOCATION_TYPE=  
! /USE_REFERENCE_LOCATION=FALSE  
**,**
```

```
**Add_Landmark**  
/LANDMARK_NAME=v3d_lab_med_prox  
! /CALIBRATION_FILE=  
! /USER_GENERATED=TRUE  
! /USE_PERCENTAGE=FALSE  
! /CALIBRATION_ONLY=FALSE  
! /USE_TARGETS=FALSE  
/SEGMENT_NAME=LAB  
! /TARGET_TYPES=  
! /TARGET_NAMES=  
! /MCSX=0.0  
/MCSY=-0.001  
! /MCSZ=0.0  
! /LANDMARK_LOCATION=  
! /REFERENCE_LOCATION_NAME=  
! /REFERENCE_LOCATION_TYPE=  
! /USE_REFERENCE_LOCATION=FALSE  
**,**
```

```
**Add_Landmark**  
/LANDMARK_NAME=v3d_lab_lat_distal  
! /CALIBRATION_FILE=  
! /USER_GENERATED=TRUE  
! /USE_PERCENTAGE=FALSE
```

```
! /CALIBRATION_ONLY=FALSE
! /USE_TARGETS=FALSE
/SEGMENT_NAME=LAB
! /TARGET_TYPES=
! /TARGET_NAMES=
! /MCSX=0.0
/MCSY=0.001
/MCSZ=-0.001
! /LANDMARK_LOCATION=
! /REFERENCE_LOCATION_NAME=
! /REFERENCE_LOCATION_TYPE=
! /USE_REFERENCE_LOCATION=FALSE
**;
```

```
**Add_Landmark**
/LANDMARK_NAME=v3d_lab_med_distal
! /CALIBRATION_FILE=
! /USER_GENERATED=TRUE
! /USE_PERCENTAGE=FALSE
! /CALIBRATION_ONLY=FALSE
! /USE_TARGETS=FALSE
/SEGMENT_NAME=LAB
! /TARGET_TYPES=
! /TARGET_NAMES=
! /MCSX=0.0
/MCSY=-0.001
/MCSZ=-0.001
! /LANDMARK_LOCATION=
! /REFERENCE_LOCATION_NAME=
! /REFERENCE_LOCATION_TYPE=
! /USE_REFERENCE_LOCATION=FALSE
**;
```

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