

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.

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```
!
! 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_prox+v3d_lab_lat_prox++++Medial+v3d_lab_Distal_Radius+v3d_lab_Proximal_Radius
/REFERENCE_OBJECT_TYPES=LANDMARK+LANDMARK+LANDMARK+LANDMARK++++METRIC+METRIC
/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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