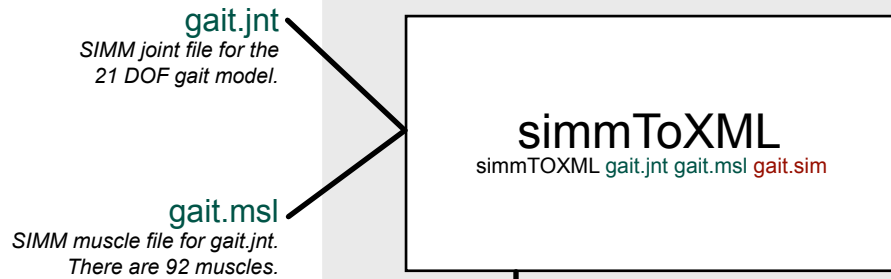


1. Convert a SIMM model to the OpenSim XML format.



gait.sim
Generic gait model.
OpenSim models use the .sim
file extension.

subject_setup_scale_ik.xml
Setup file for scaling and inverse kinematics.
Input parameters and files are specified here.

subject_scaleFactors.xml
File containing manual scale factors. Manual scale
factors are optional and can be either embedded
in the setup file (subject_setup_scale_ik.xml)
or kept in a separate file as shown here.

markerFile.xml
File containing additional markers or edited markers
for overriding the standard marker properties
contained in the gait model (gait.sim).

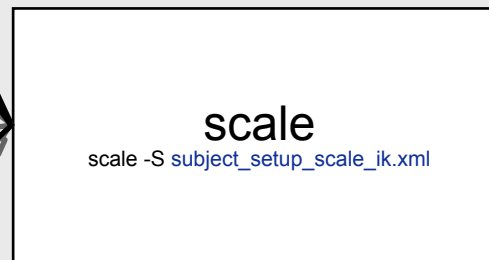
subject_scale.trc
File containing tracked marker data used for
scaling a model. This is often a static trial.

subject_markerPlacement.trc
File containing tracked marker data used for relocating
segment markers. This is often a static trial and can be
the same file used to scale the model (subject_scale.trc).

subject_coordinates.mot
Motion file containing model coordinates used to relocate
segment markers. The coordinates are used to place the
model in a desired position, and then designated segment
markers are moved to match the marker locations in
subject_makerPlacement.trc

Experimental
Data

2. Scale a generic model to a particular subject and move segment markers to match experimental marker locations.



subject_scaledOnly.jnt
SIMM joint file after scaling.
The model and marker positions
are scaled only; marker positions
are not moved.

subject.msl
SIMM muscle file after scaling.

subject.jnt
SIMM joint file after scaling and marker
relocations. Segment markers are
moved based on marker placement
settings in the setup file.

subject_scaleFactors_applied.xml
File containing scale factors used
to scale the gait model as determined
from the marker data.

subject.sim
OpenSim gait model scaled to subject,
with segment markers relocated to match
experimental marker data.

Visualize
in SIMM

Steps 1 and 2 of the Gait Workflow

SIMM files are shown in **dark green**. Experimental data files are shown in **light green**. The setup file, which specifies all input parameters, input files, and output files, is shown in **dark blue**. Other user-configurable files, which are referred to by the setup file, are shown in **light blue**. Output files that are not necessary for the remaining steps in the workflow are shown in **gray**. OpenSim model files are shown in **dark red**. Necessary input and output files are indicated by solid black connecting lines (—); optional input and output files are indicated by dashed grey lines (— — —).

3. Solve the inverse kinematics problem.

ik