

EXPERIMENTAL IMAGING DATA

NeuroLucida

trace
label
proof-edit (correct)

Amira

trace
label
proof-edit (correct)
merge neurons w/ anatomical landmarks
extract anatomical landmarks (e.g. boundary surfaces)
quantitative + visual analysis
dense model construction

SegmentNeuron
ASC Export

HOC Export/Import (default)
HOC Export/Import (ZIB)

NeuroNet
dense model

ASC

ASC

SG-SET-AM
SG-AM

BuildingBrains

NeuroConv (Perl)

format conversion
interpolate soma
connect root points to soma

SG-AM

HOC

NeuroControl

HOC

vS1Registration

MotorRegistration

HOC

FeatureExtractor

CellTypeClassifier

SynapticInputMapper (C++)

input from excitatory presynaptic cells in
dense model

SynapticInputMapper-NW-Level

acquire selected POSTSYN morphol.
embed in dense model

dense model

NIDs

NeuralActivitySimulation

full compartmental model
- single neuron
- neuron ensemble / network
hybrid point-like / full compartmental

SynapticInputMapper (Python)

embed HOC in dense model

dense model

CortexInSilico

structural connectivity analysis
- selection of neuron populations (NIDs)
- rule-based subcellular wiring model
- aggregate connectivity statistics
- subcellular
- cellular
- network

dense model