nest_to_tvb	nest_to_tvb
NEST Output	TVB Output
Transformer	Transformer
TVB Input	NEST Input

«ConsumerNESTData»
Package::SimulatorIO

simulation_time : Receive data from NEST and add them in a shared buffer

Responsibilities
-- Get data from NEST
-- transfert to transformer

«TransformerSpikeRate»
Package::SimulatorIO

synch: time of synchronization
dt: time of integration
path_init: path of file with initial condition
shape: shape of the buffer
width: the size fo the window
buffer: buffer with the count of spikes
save_hist: saving the histogram
...
save_rate: saving the rate generate
...

simulation_time : Transformation function of the spike to rate
add_spikes(count, size_buffer, buffer): adding spike in the histogram
analyse(count, hist): analyse the histogram to generate state variable
                                  and the time

Responsibilities
-- 1) get the spike
-- 2) transform spike to rate
-- 3) send rate
The step 1 and 3 need to be dissociate for synchronization requirement.
This dissociation allow the transformation module to buffer one more step
from the sender or the receiver.

«ProducerTVBData»
Package::SimulatorIO

simulation_time : Produce data to TVB from receiving data.

Responsibilities
-- Receiving data from transformer
-- Send to TVB

«ConsumerTVBData»
Package::SimulatorIO

simulation_time : Receive data from TVB and transfert them to transformer

Responsibilities
-- Get data from TVB
-- transfert to transformer

«TransformerRateSpike»
Package::SimulatorIO

id: id of NEST devices
percentage_shared: percentage of shared spikes
nb_spike_generator: number of spike generator
nb_synapse: number of synapse attach to the generator
function_transformation: selection function of transformation
save_hist: saving the histogram
...
save_rate: saving the rate generate
...

simulation_time : Transformation function of the spike to rate
generate_spike(count,time_step,rate): generator of spikes from
                  rates using elephant

Responsibilities
-- 1) get the spike
-- 2) transform spike to rate
-- 3) send rate
The step 1 and 3 need to be dissociate for synchronization requirement.
This dissociation allow the transformation module to buffer one more step
from the sender or the receiver.

«ProducerDataNEST»
Package::SimulatorIO

id_first_spike_detector: id of the first spike detector

simulation_time : Produce data to NEST from a shared buffer

Responsibilities
-- Receiving data from transformer
-- Send to NEST