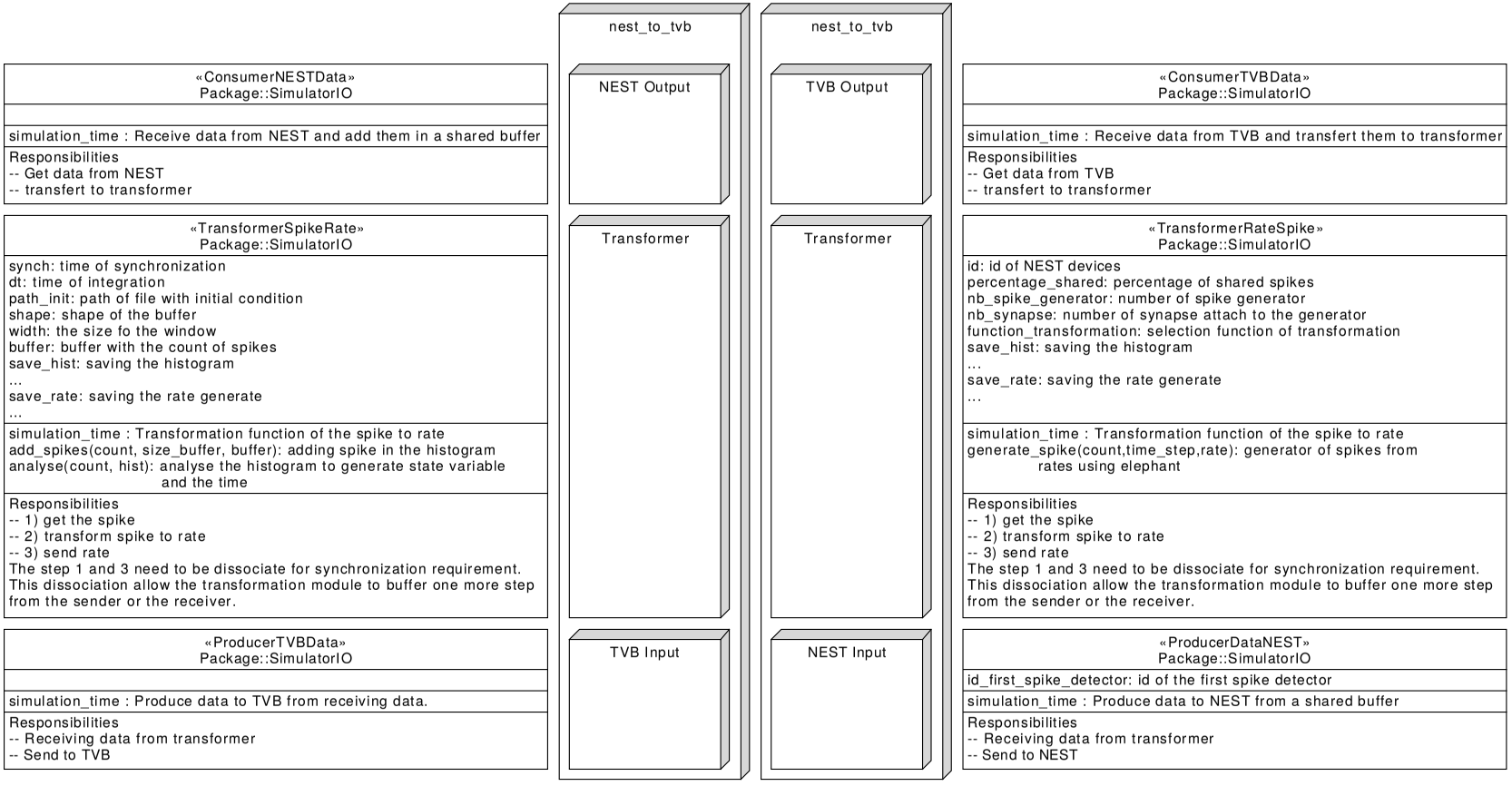
nest_to_tvb
nest_to_tvb
«ConsumerNESTData»
Package::SimulatorIO
simulation_time : Receive data from NEST and add them in a shared buffer
Responsibilities
-- Get data from NEST
-- transfert to transformer
NEST Output
TVB Output
«ConsumerTVBData»
Package::SimulatorIO
simulation_time : Receive data from TVB and transfert them to transformer
Responsibilities
-- Get data from TVB
-- 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.
Transformer
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.
«ProducerTVBData»
Package::SimulatorIO
simulation_time : Produce data to TVB from receiving data.
Responsibilities
-- Receiving data from transformer
-- Send to TVB
TVB Input
NEST Input
«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