HFNLP biological implementation development specification - 07 June 2022

Concept neuron: Q

Instantiations of Q are encoded via detection of contextual temporal/sequential spiked input:

Detected sequences (via combined subsequence detection):

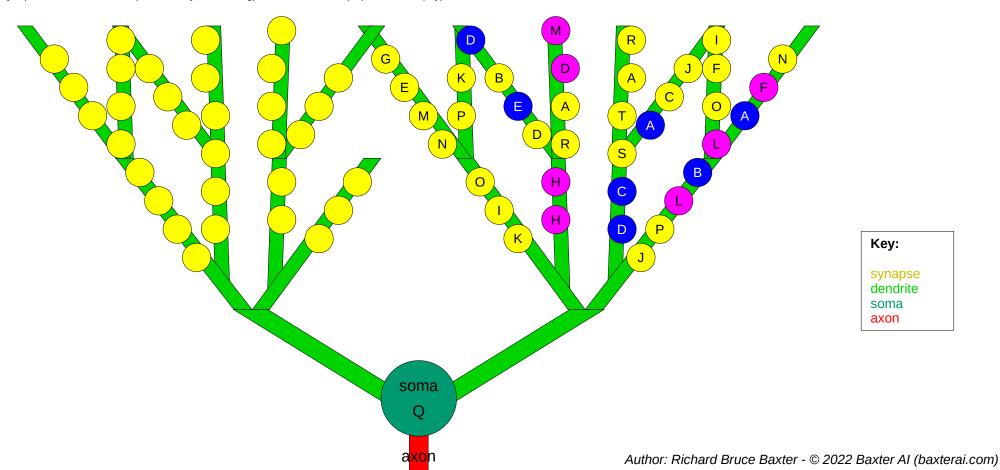
Sequence #1: ABCDE[Q]

Sequence #2: FLMDH[Q]

Detected subsequences;

Subsequences #1: AB + AC + CD + DE = AP threshold Subsequences #2: FL + MDH = AP threshold

- Detection of combined subsequences (#1 or #2) are sufficient to reach neuron Q action potential firing threshold.
- contributing synapses correlated with (immediately preceding) AP are strengthened (Hebbian)
- synapses uncorrelated with (immediately succeeding) AP are weakened (depression/atrophy)



List of concept neurons in network:

ABCDEFGHIJKLMNOPQRST