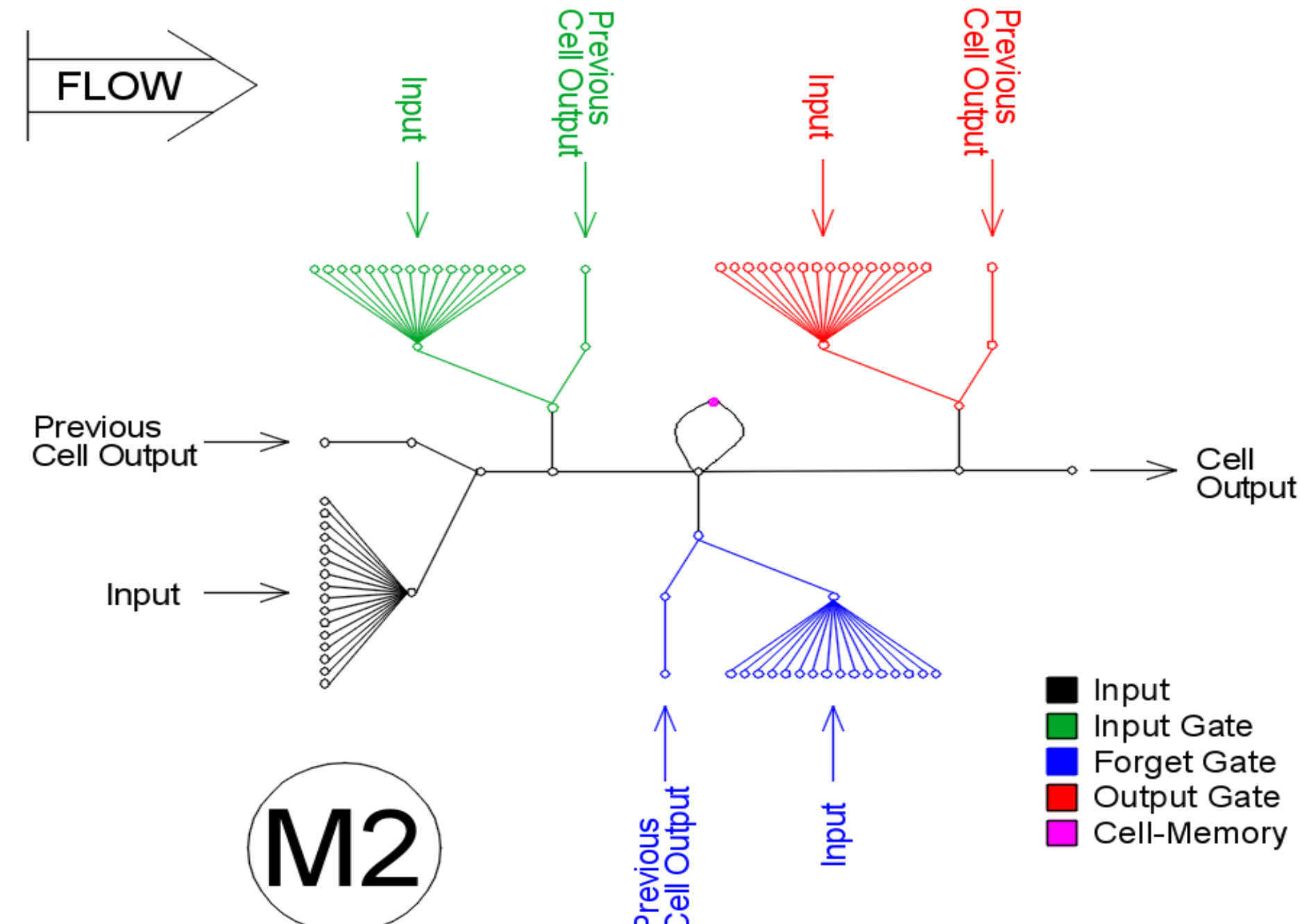
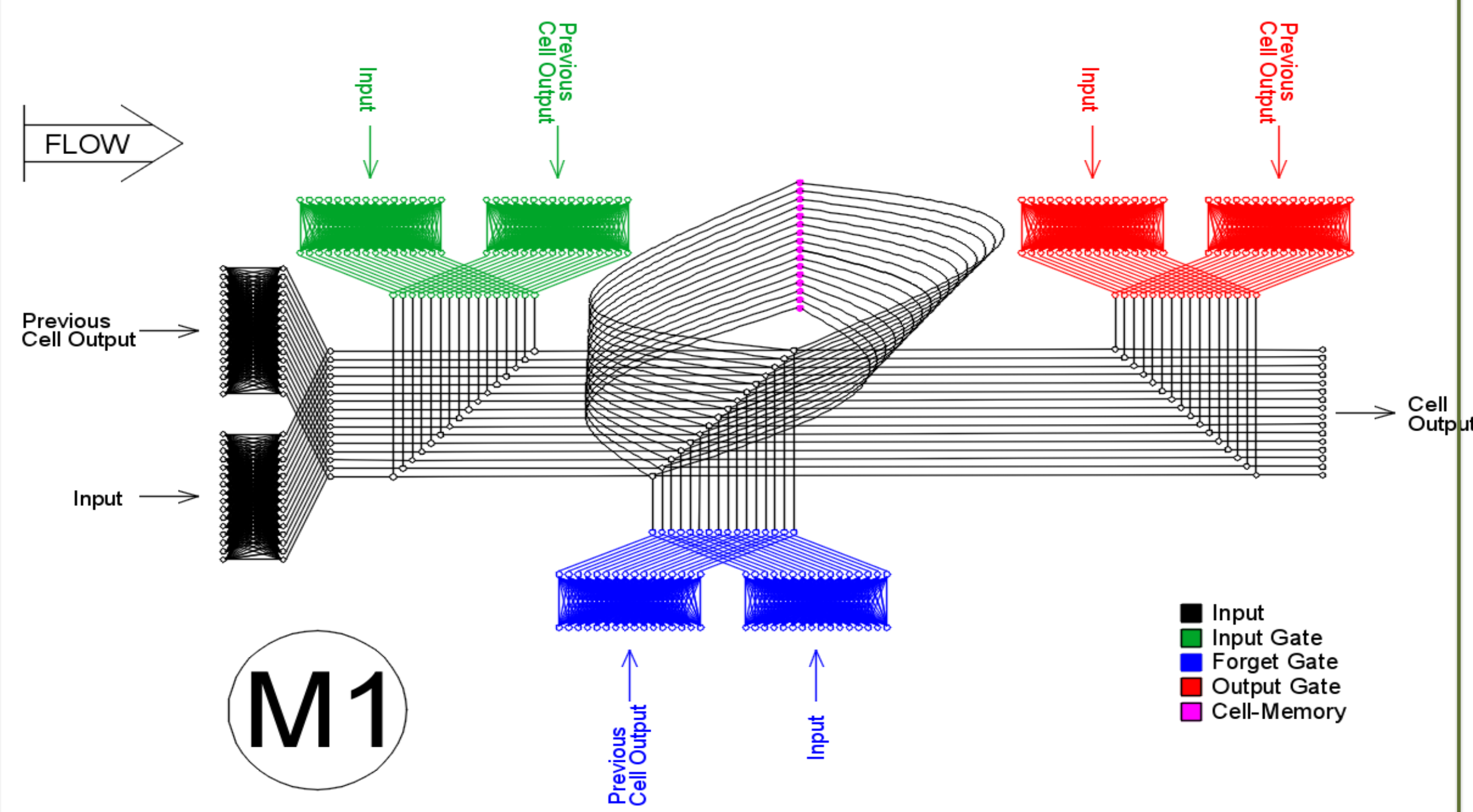
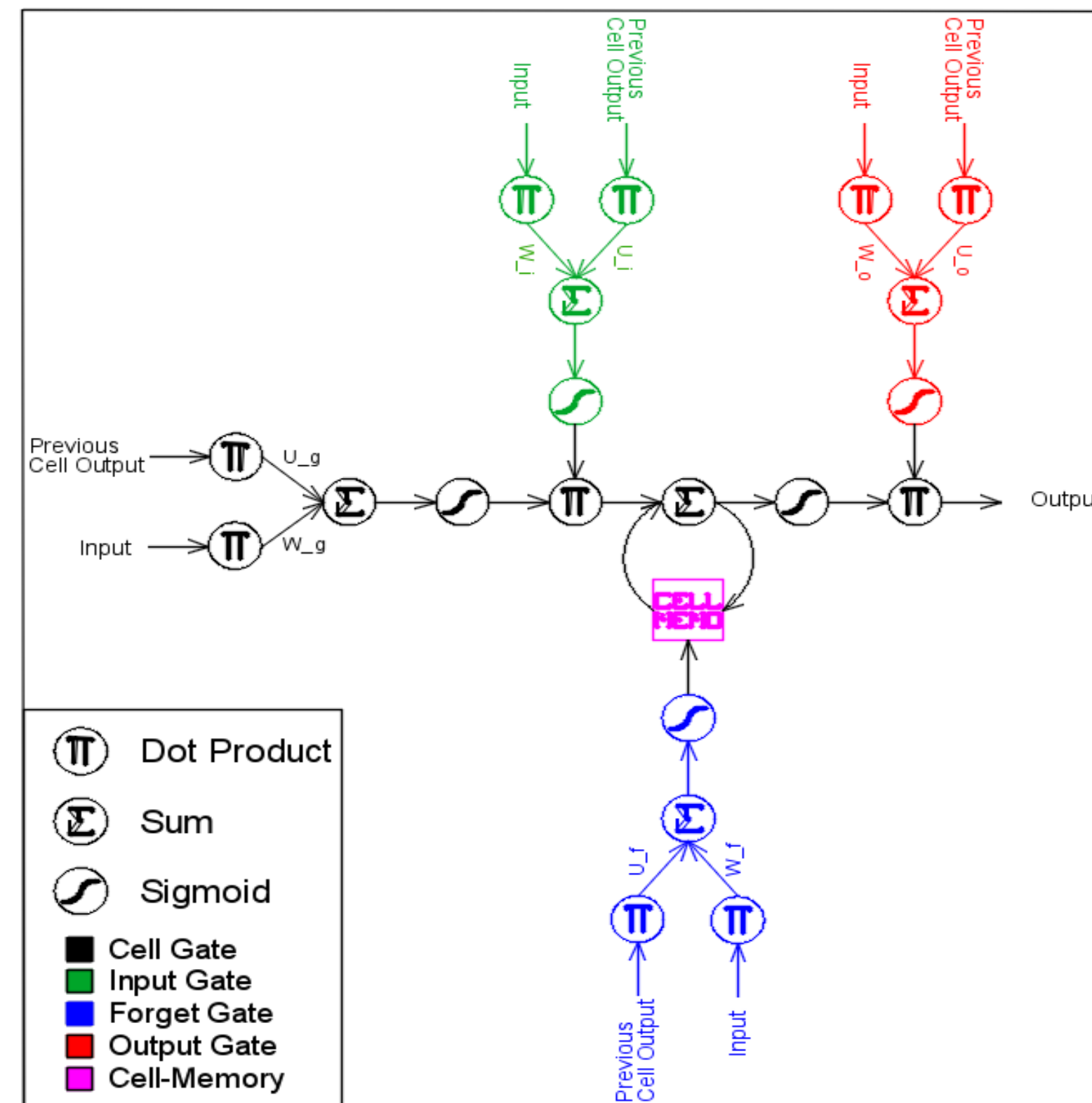


Using LSTM Recurrent Neural Networks to Predict Excess Vibration Events in Aircraft Engines

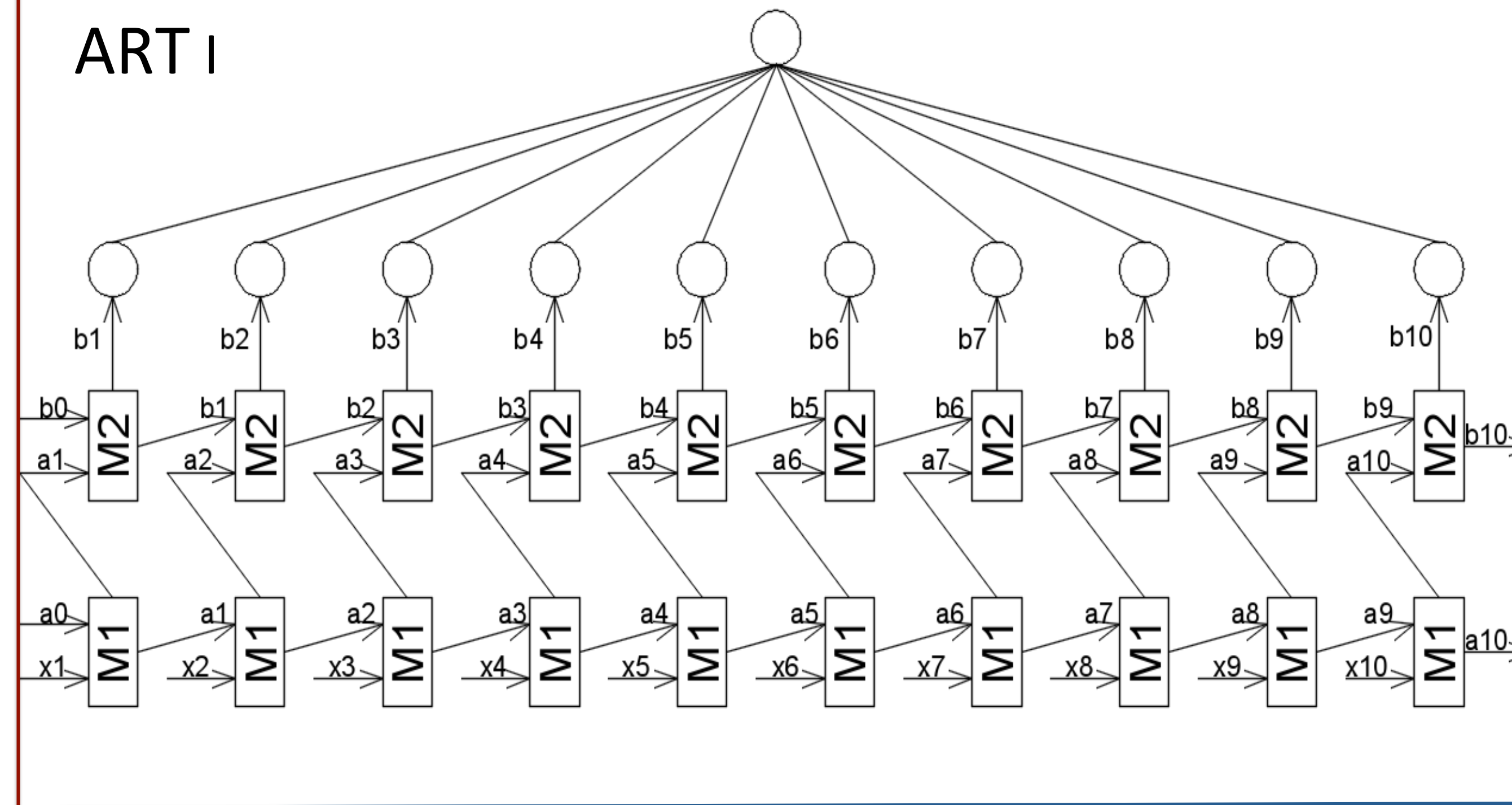
AbdElrahman ElSaid*, Brandon Wild†, James Higgins†, Travis Desell*
Department of Computer Science* Department of Aviation†

LSTM RNN Cells

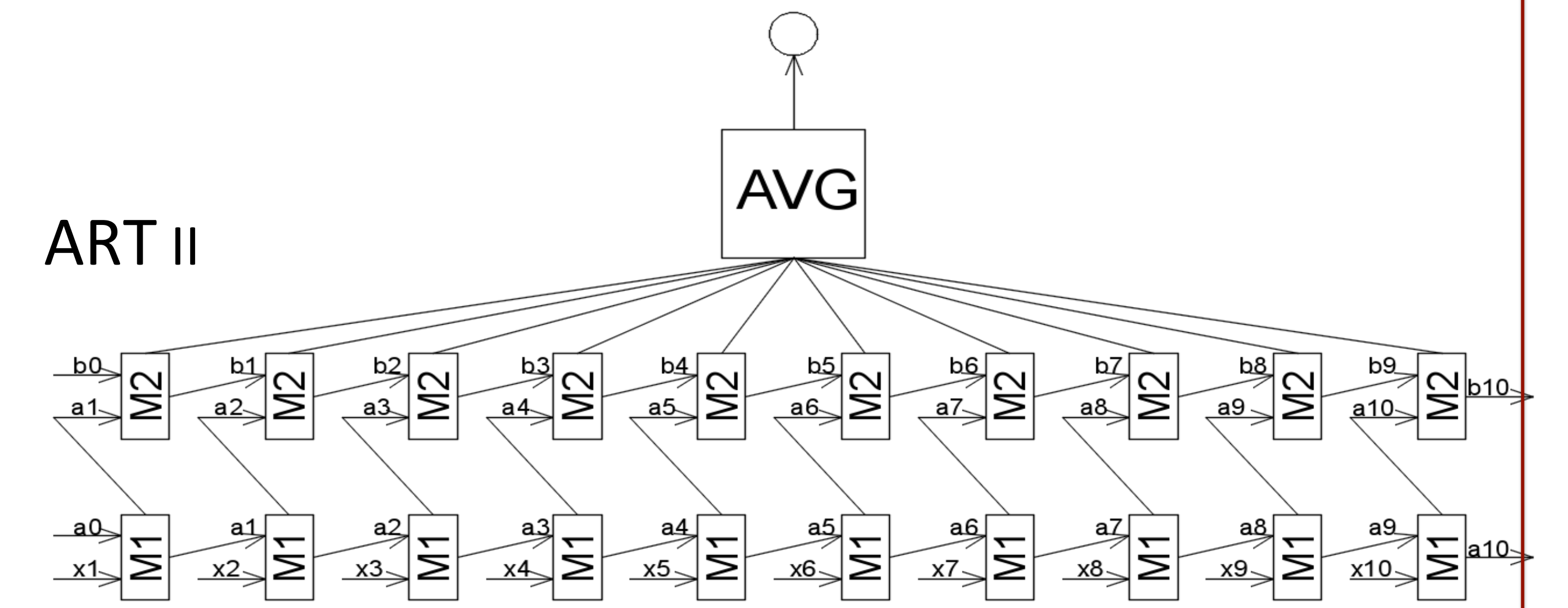


Architectures

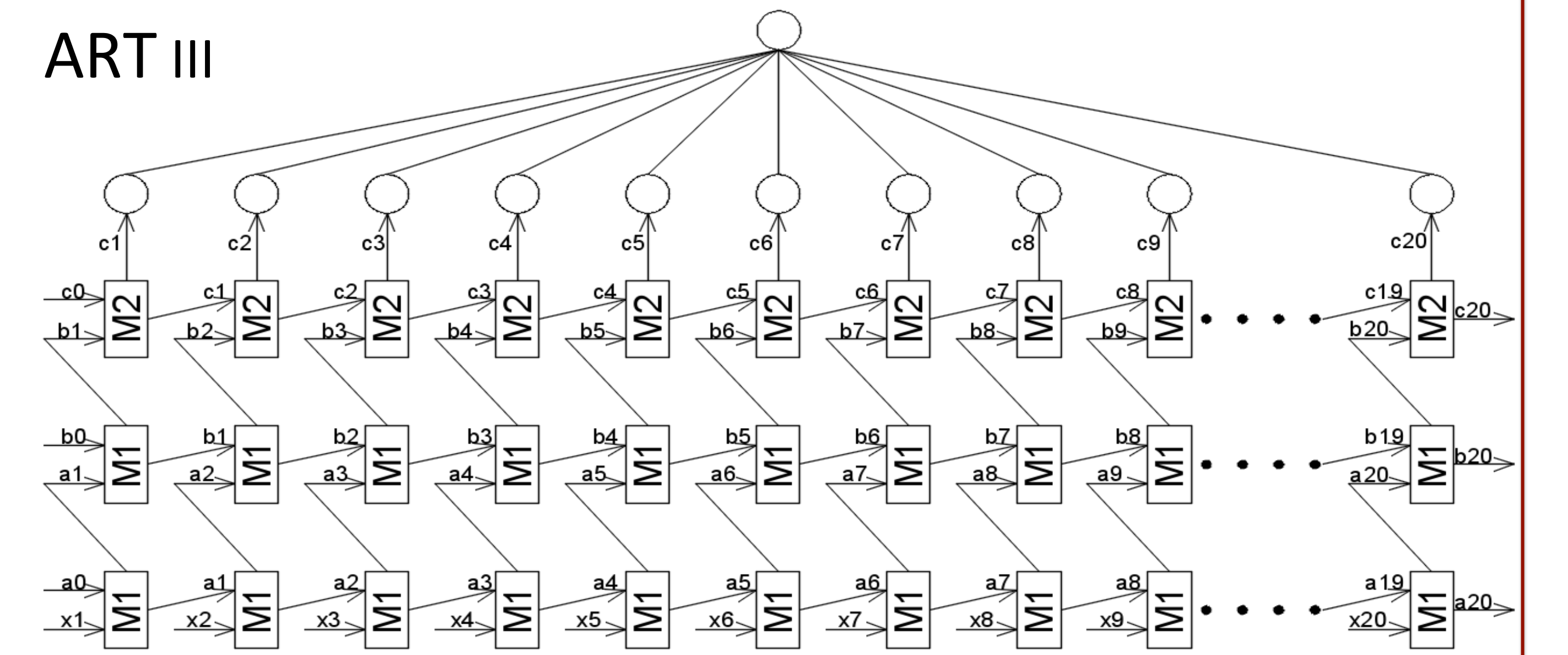
ART I



ART II



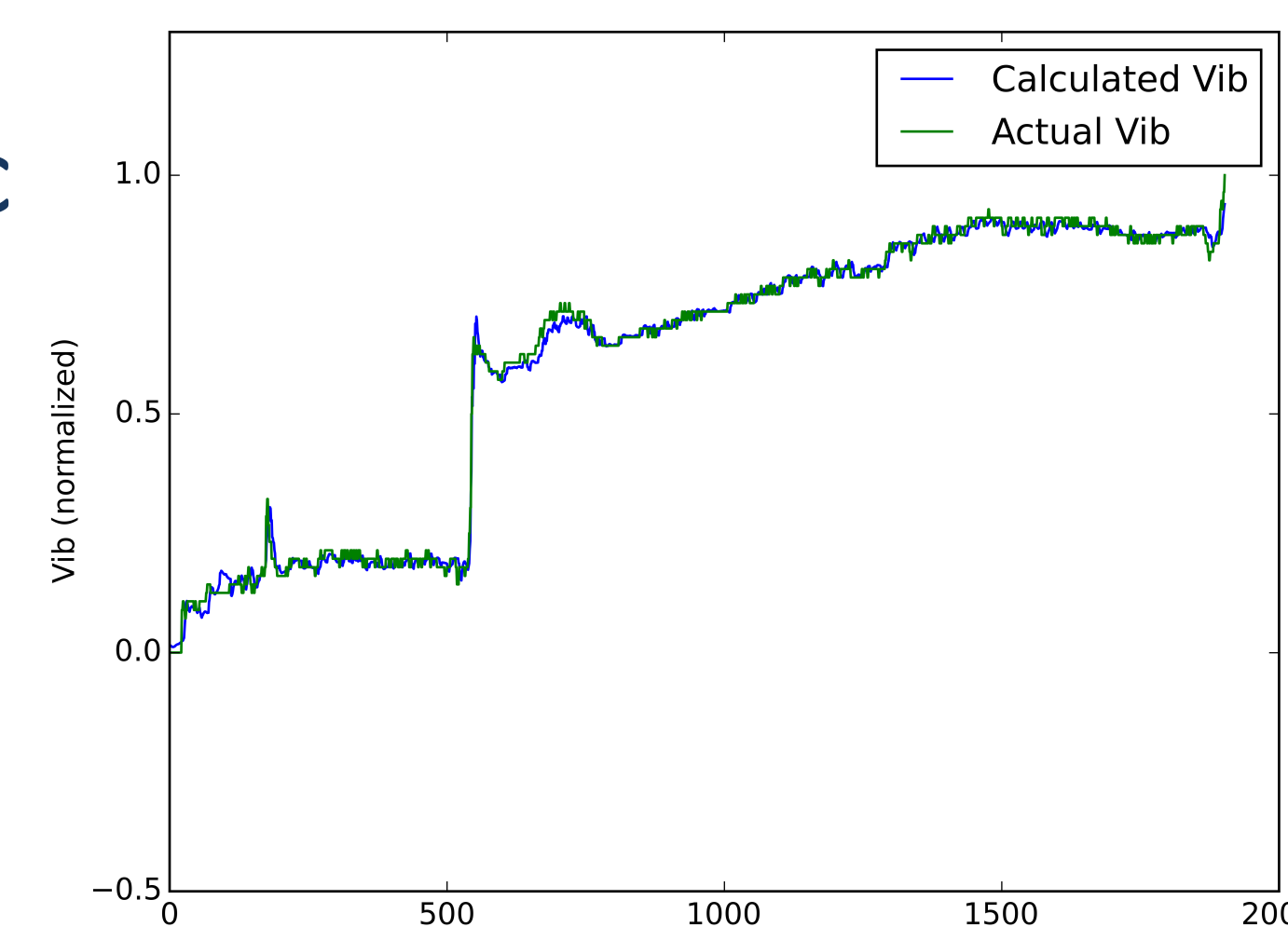
ART III



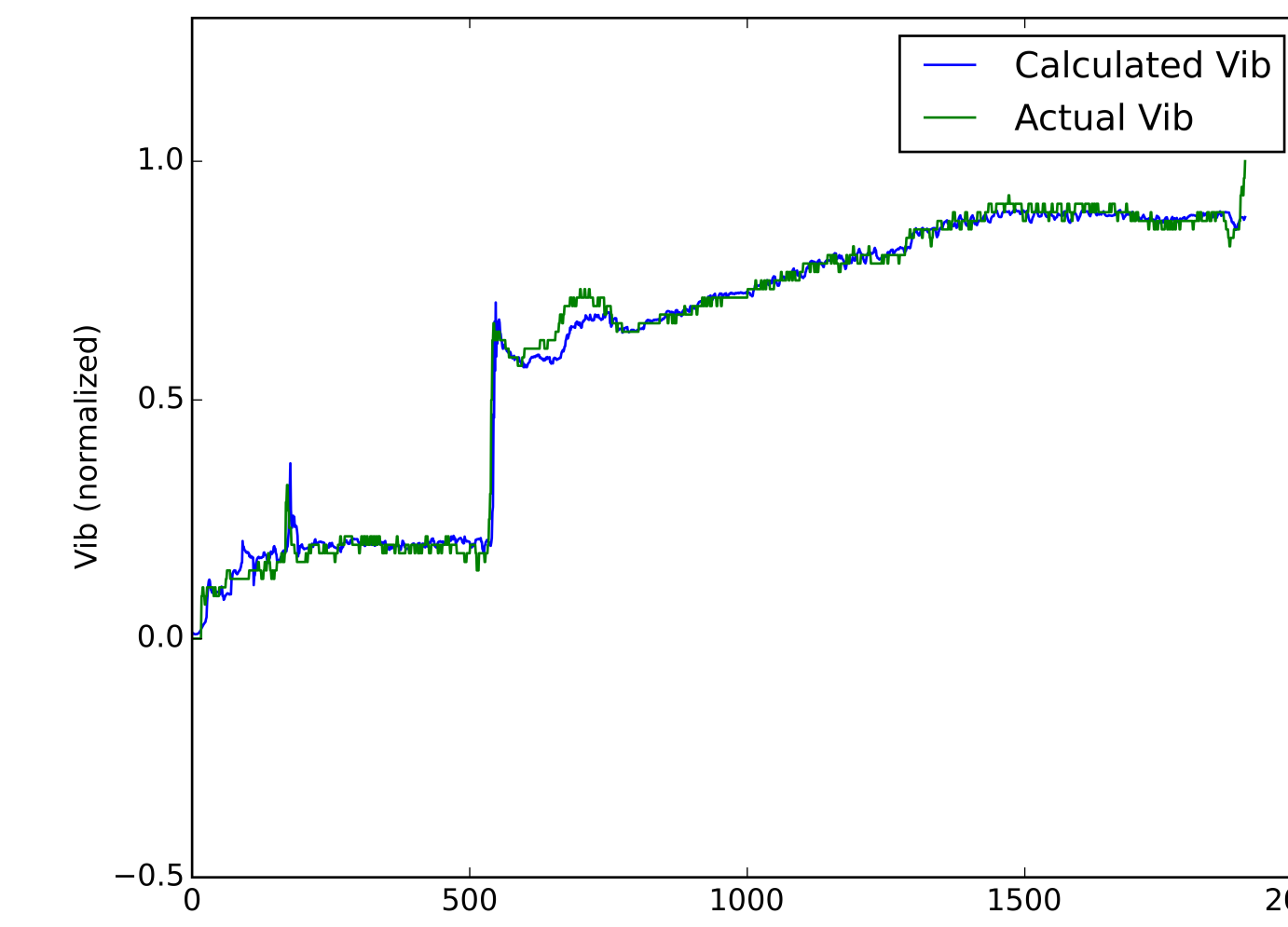
Results For Architecture I

Vibration prediction for for one flight

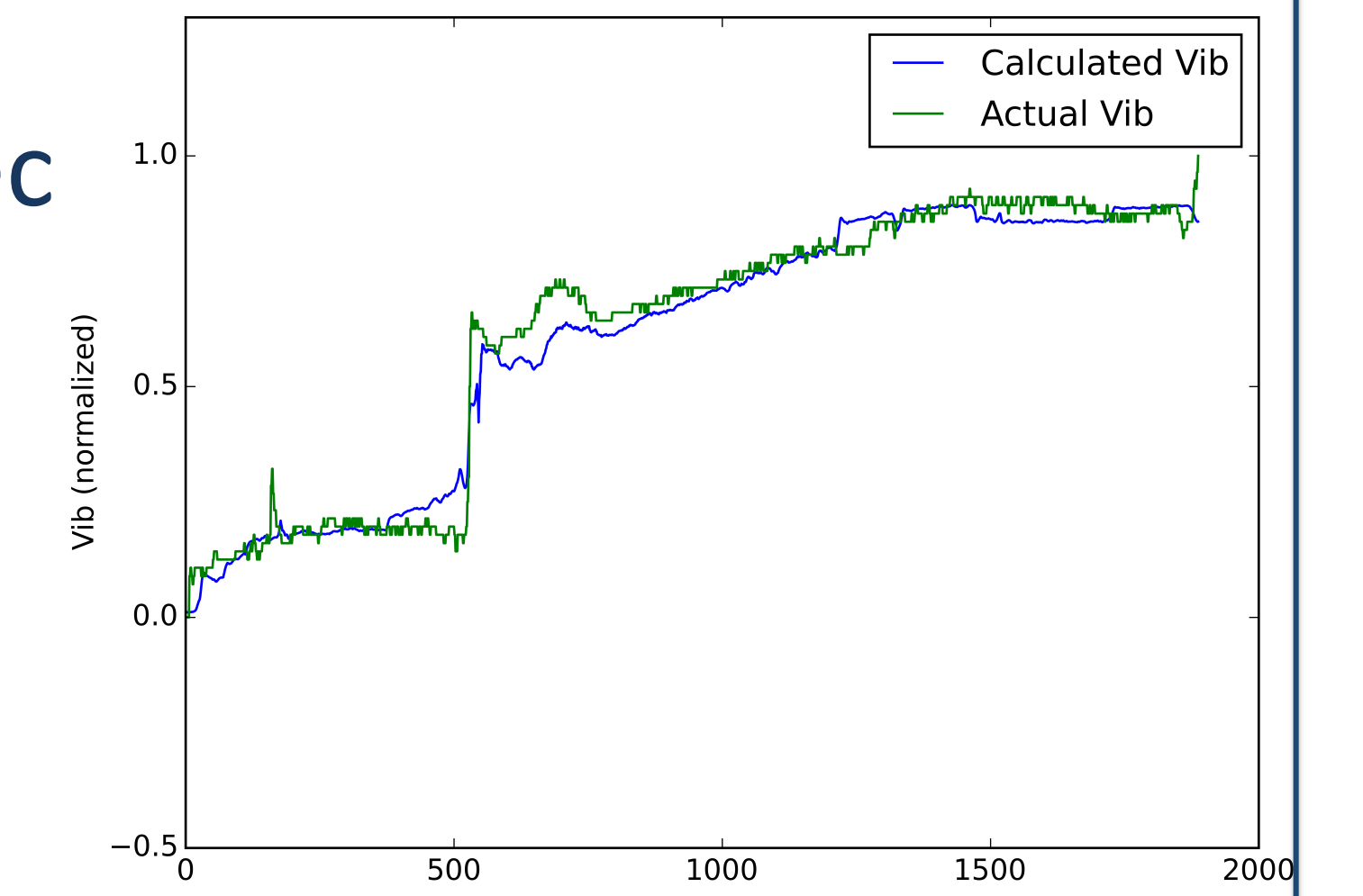
5 sec



10 sec



20 sec



Vibration prediction for
all test flight data
(10 sec)

