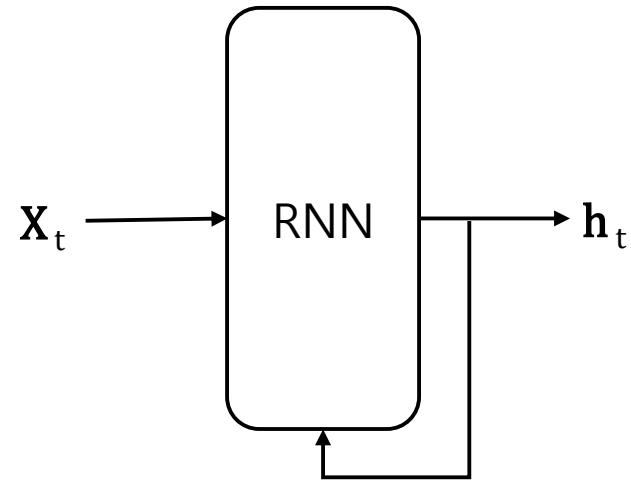
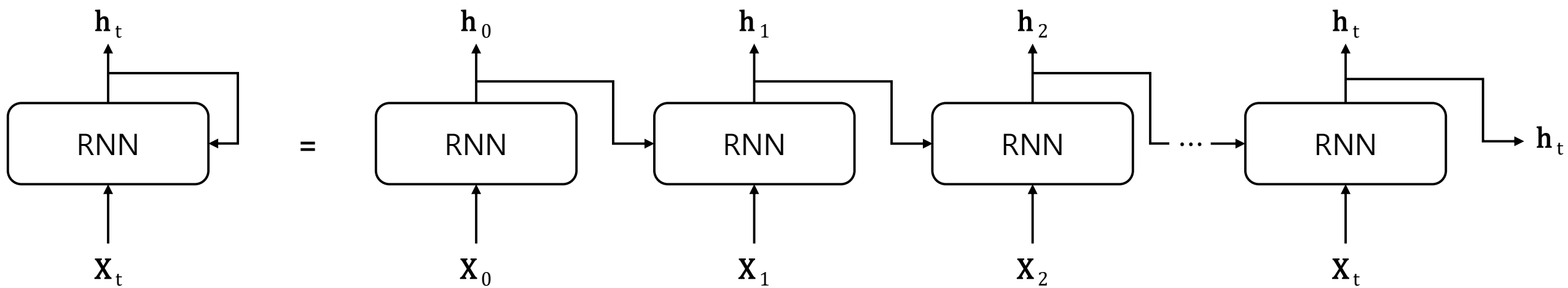


Recurrent Neural Network (RNN)

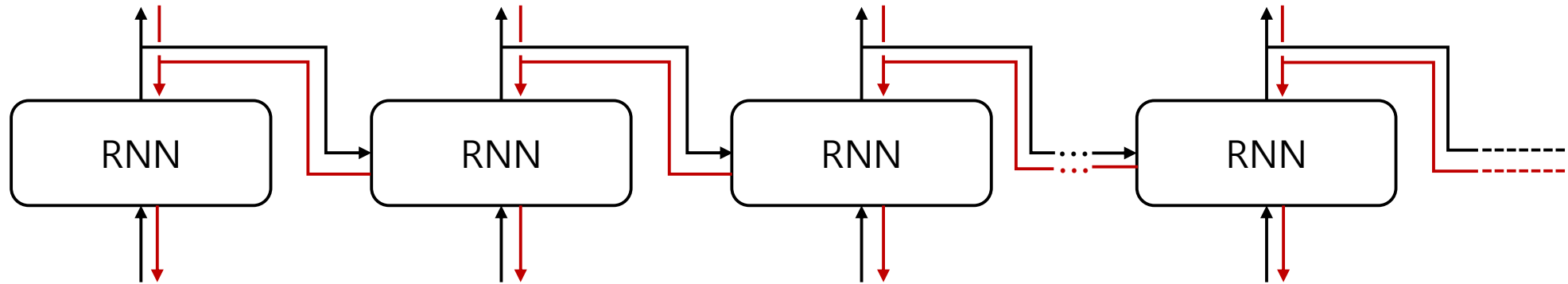


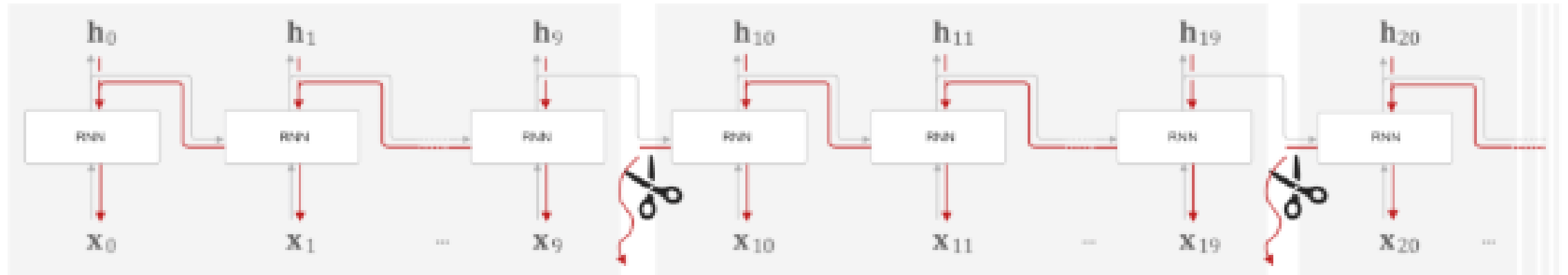
RNN 계층의 순환 구조 펼치기



Recurrent Neural Network (RNN)

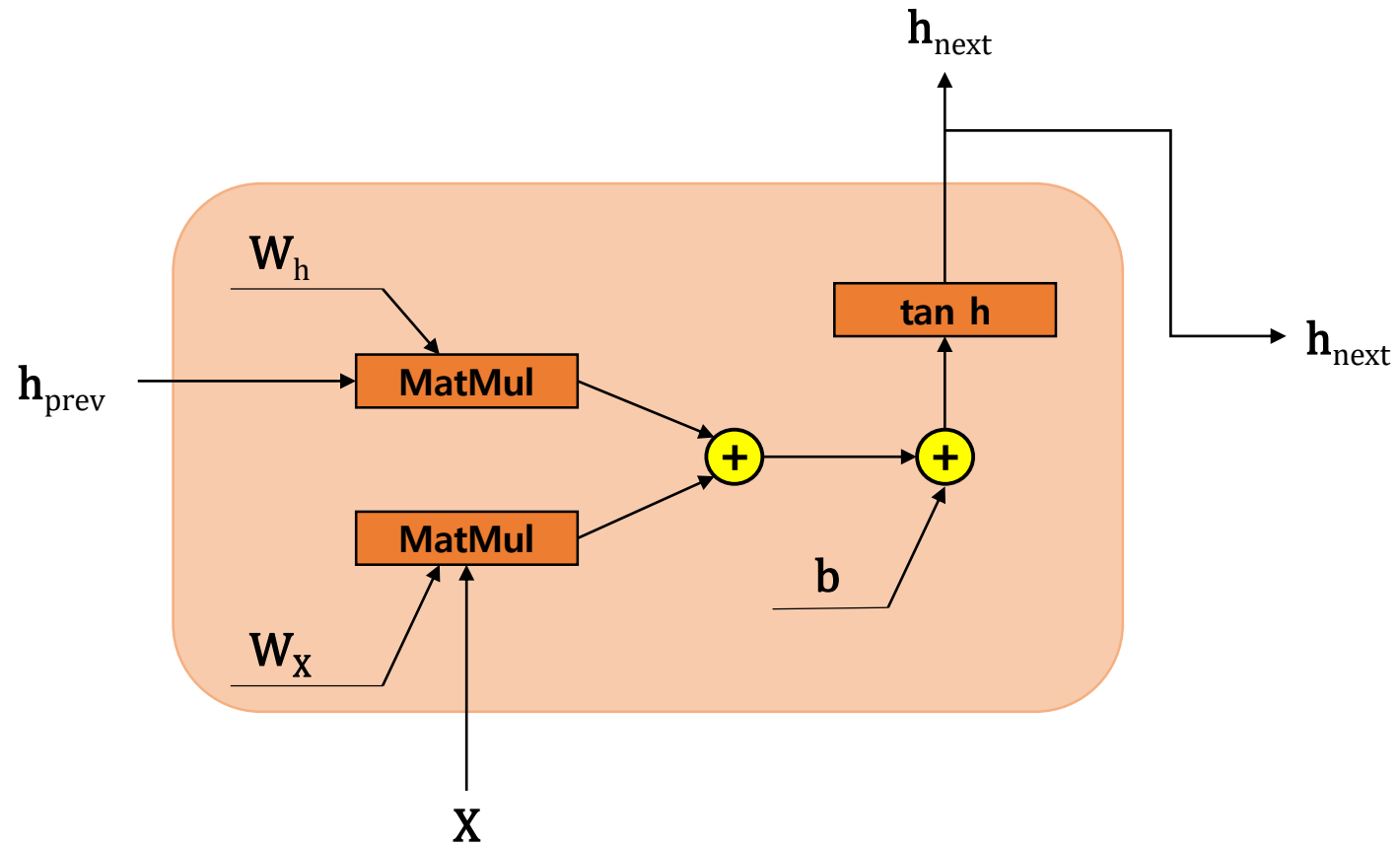
BPTT (Backpropagation Through Time)





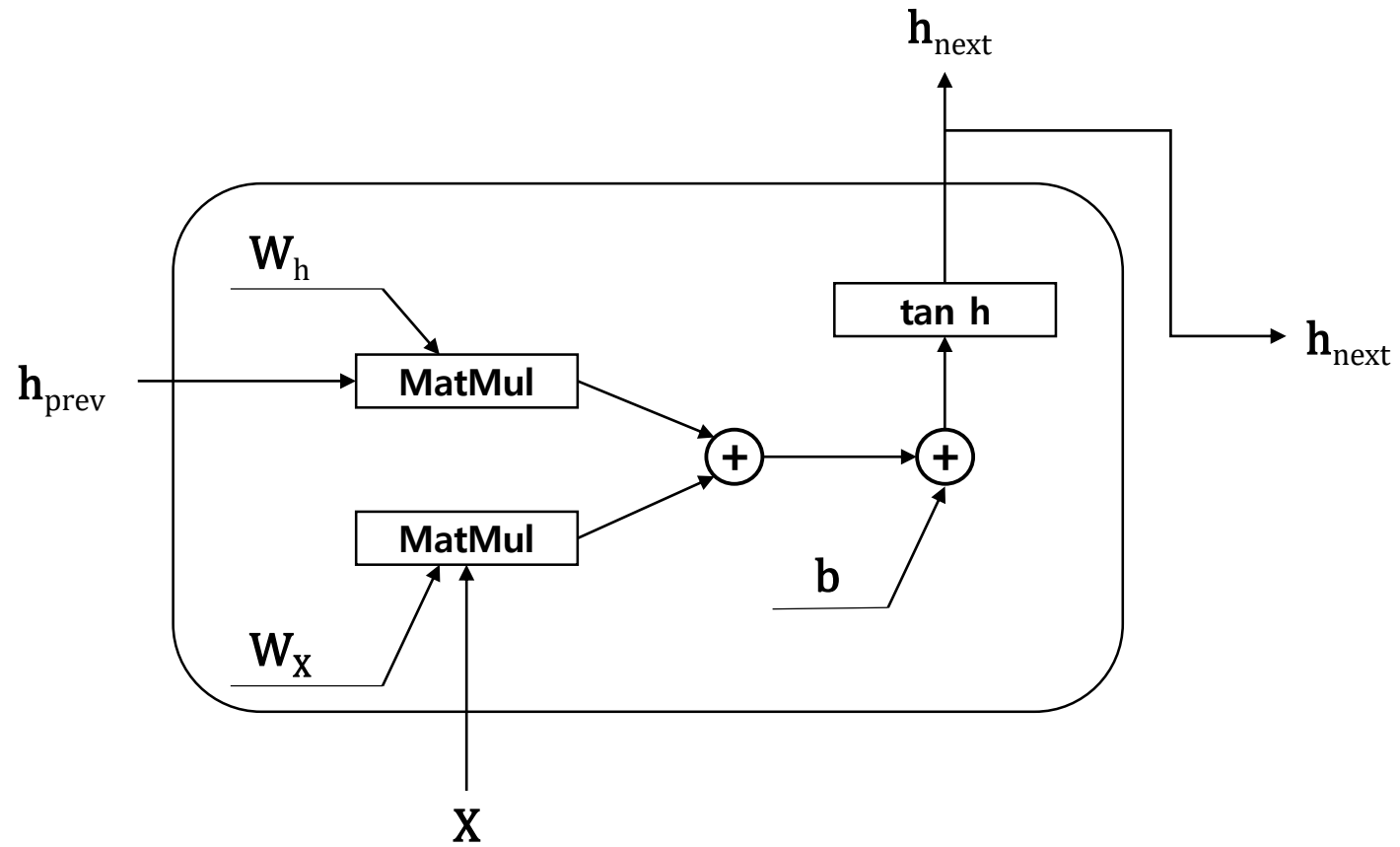
Recurrent Neural Network (RNN)

forward (순전파)



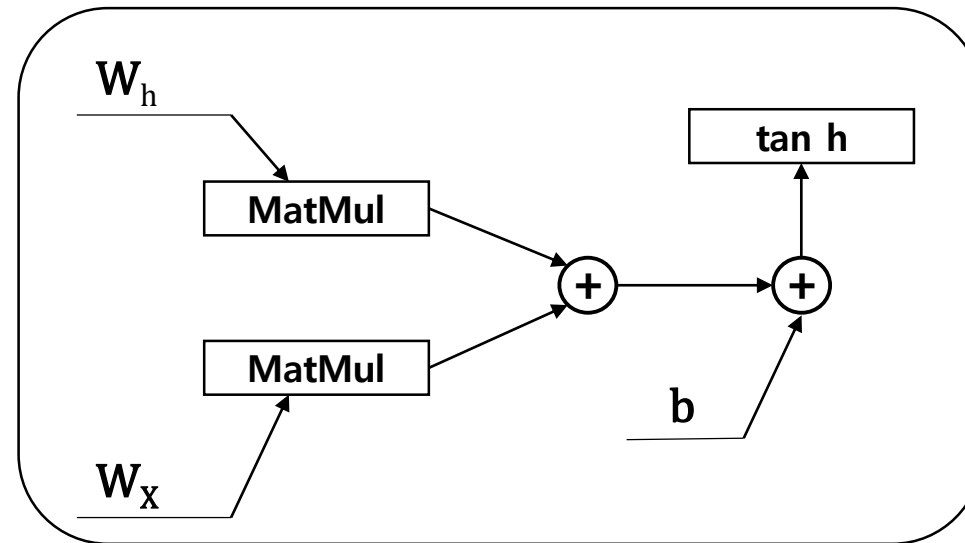
Recurrent Neural Network (RNN)

forward (순전파)



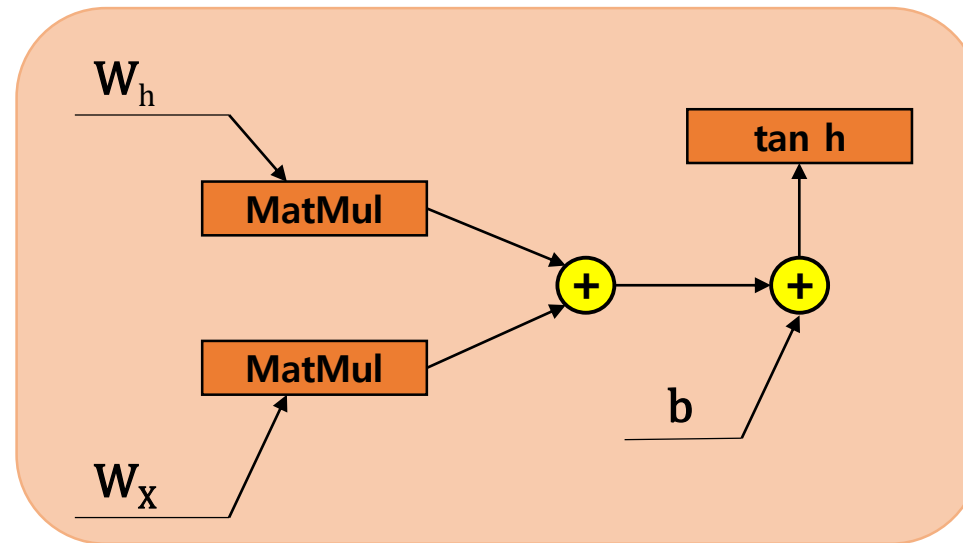
Recurrent Neural Network (RNN)

forward (순전파)



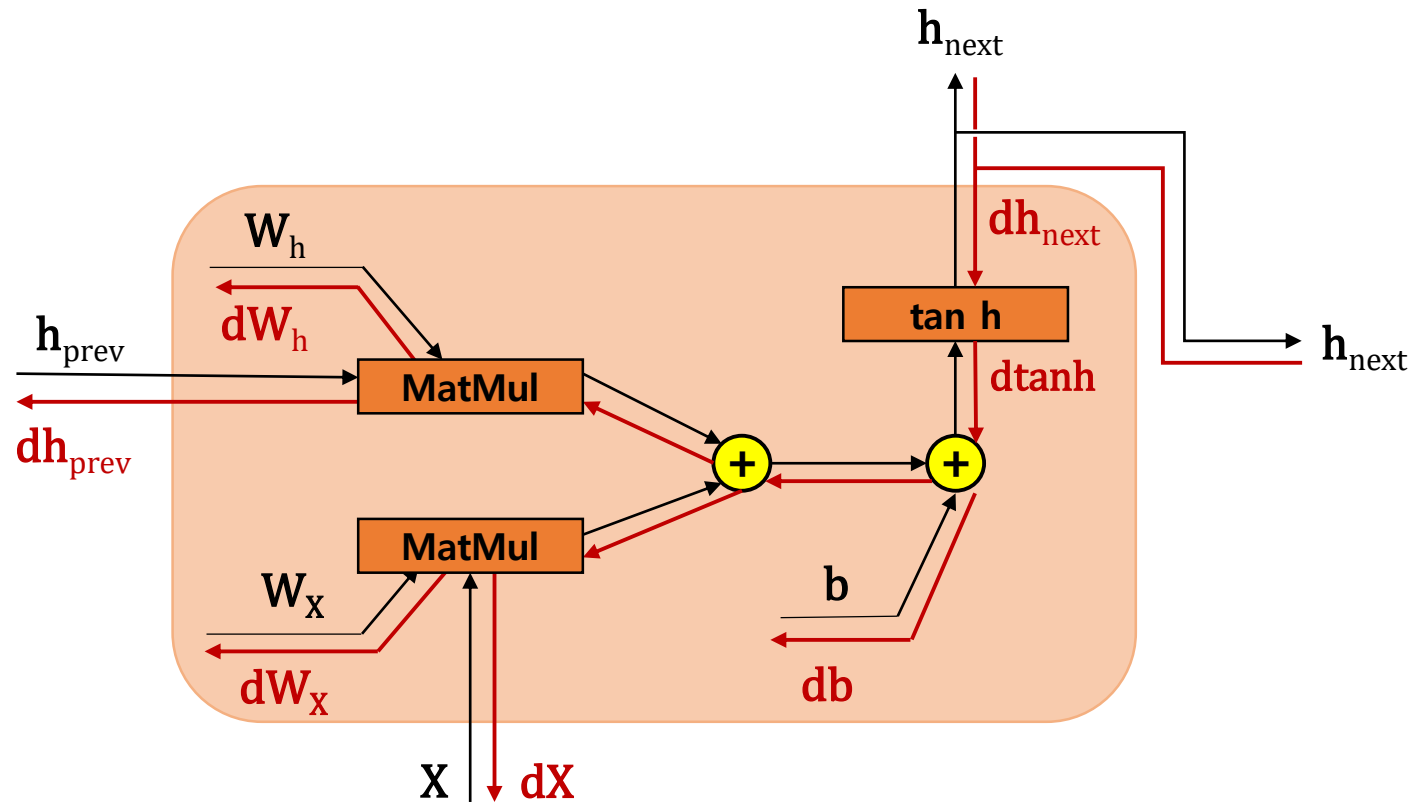
Recurrent Neural Network (RNN)

forward (순전파)



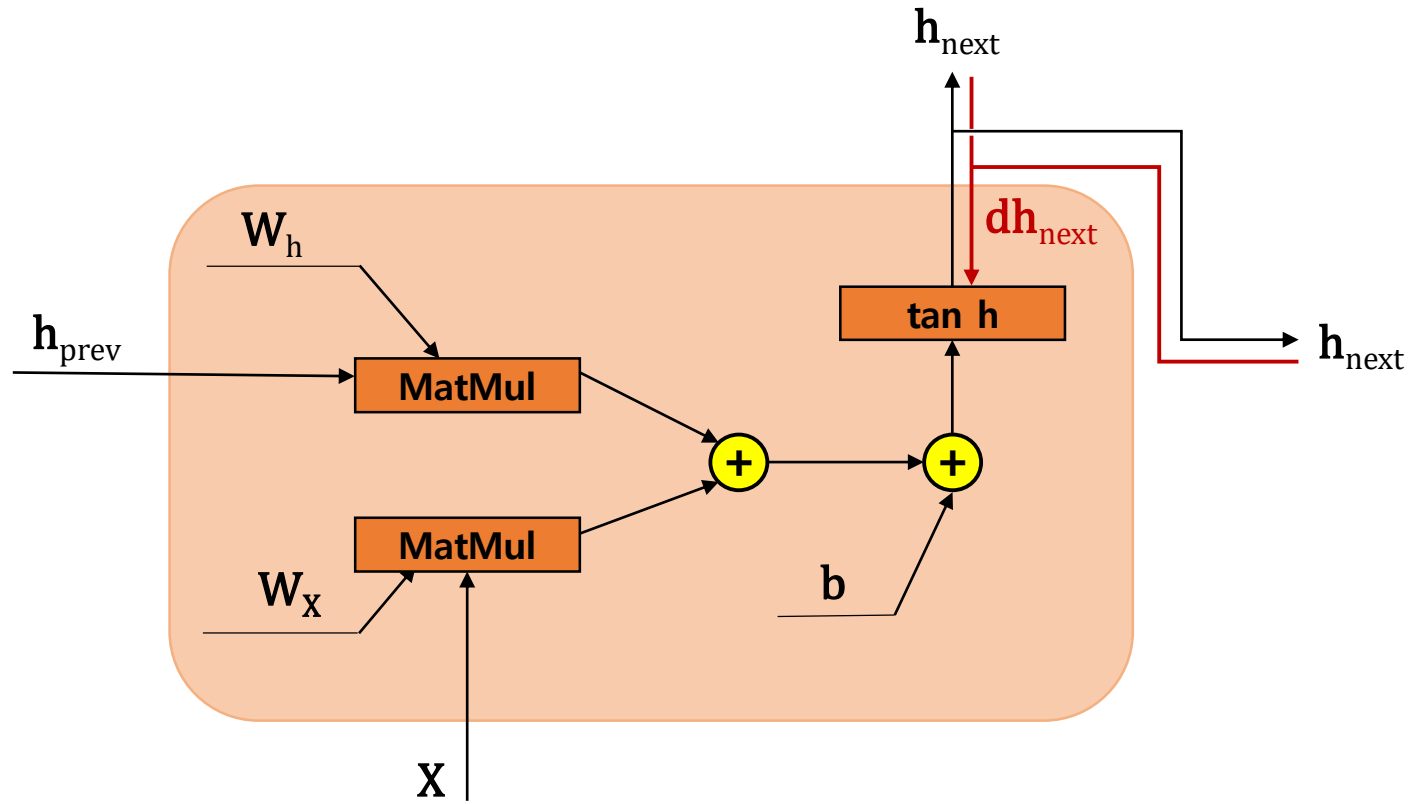
Recurrent Neural Network (RNN)

backward (역전파)



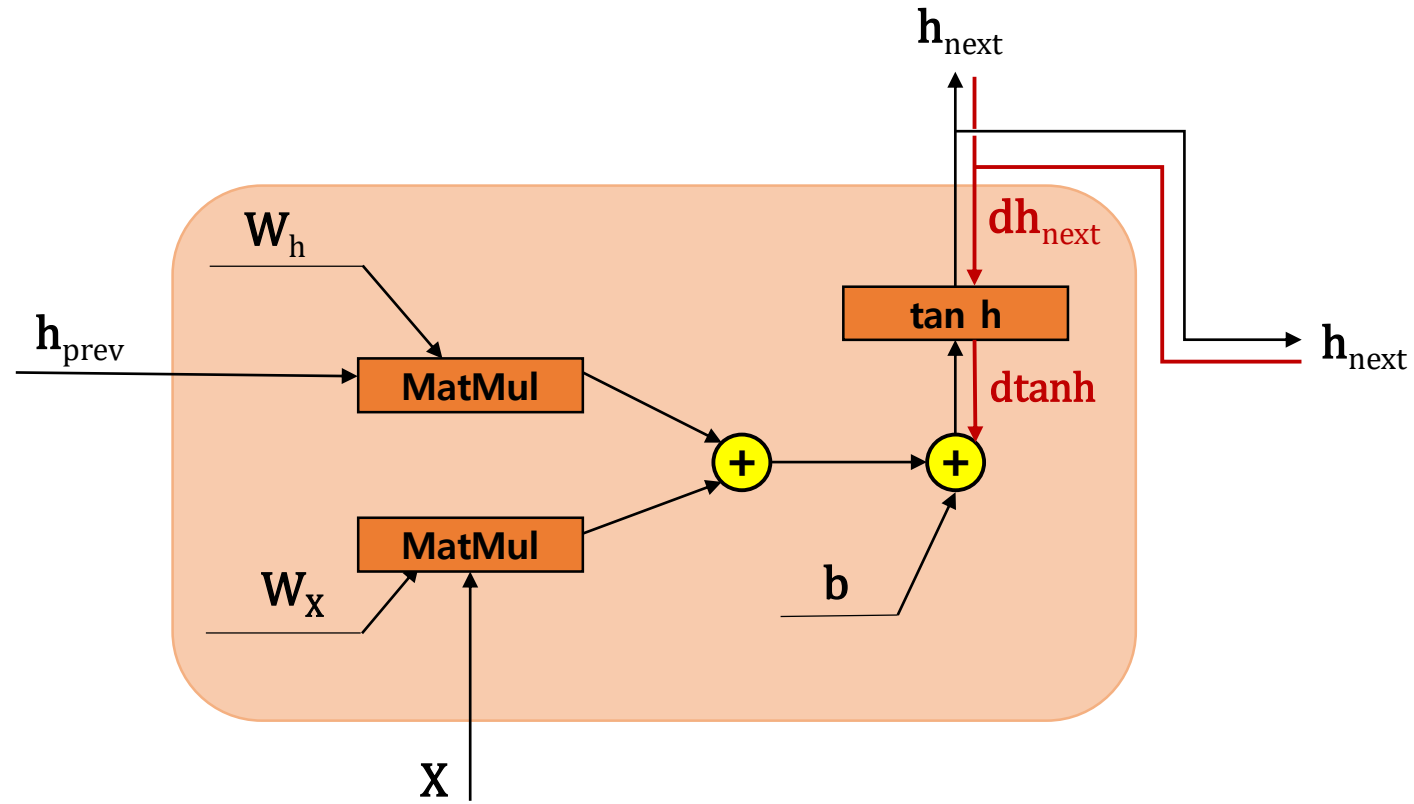
Recurrent Neural Network (RNN)

backward (역전파) - (1) dh_{next}



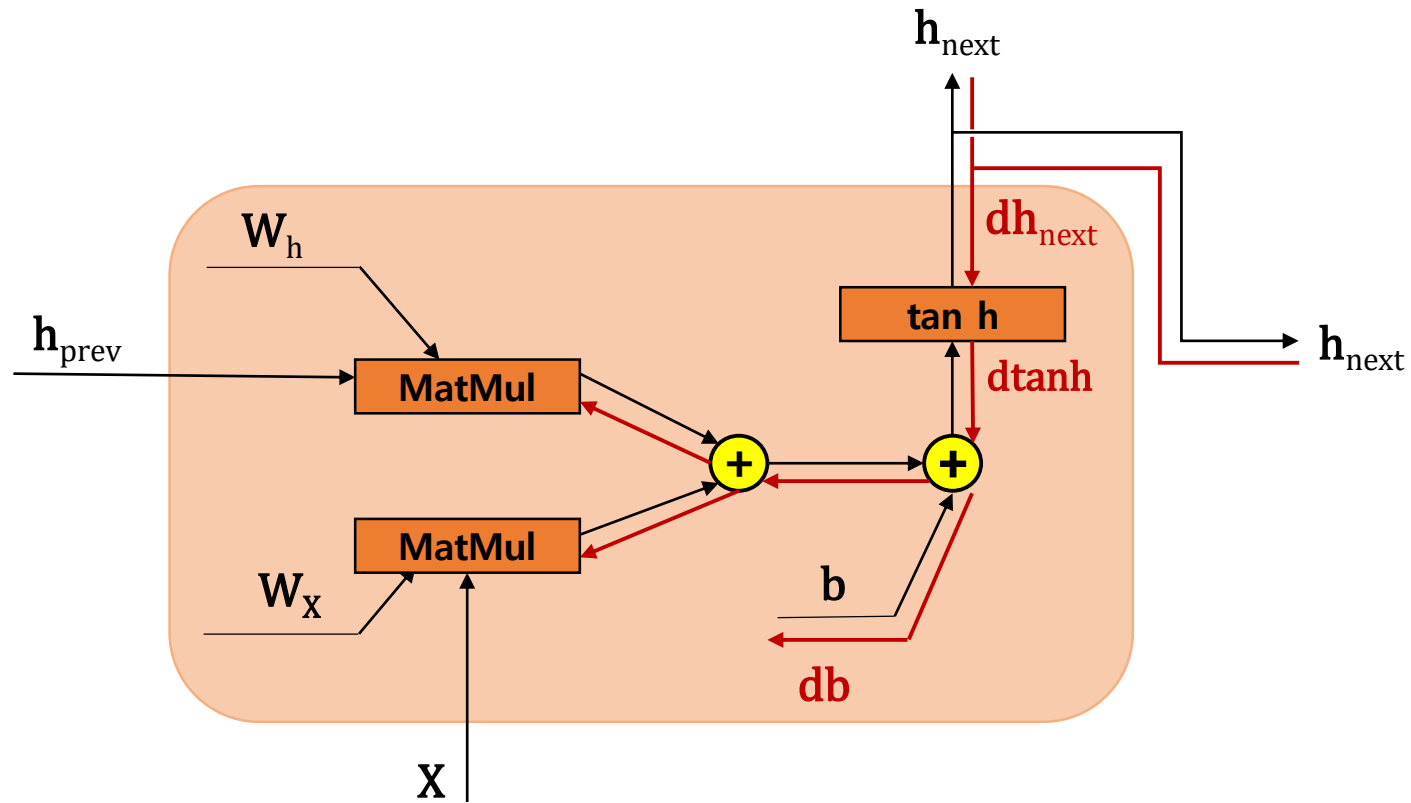
Recurrent Neural Network (RNN)

backward (역전파) - (2) dtanh



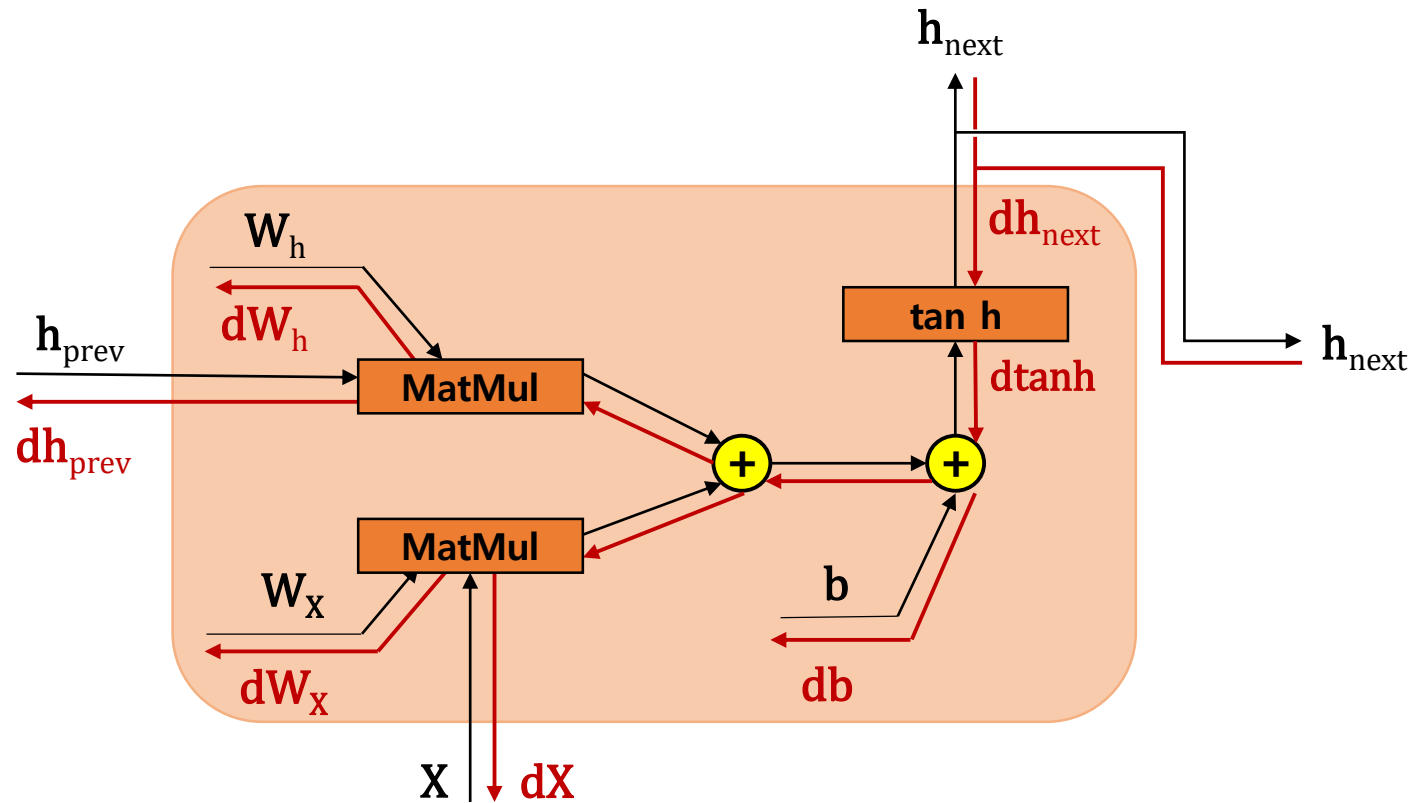
Recurrent Neural Network (RNN)

backward (역전파) - (3) 덧셈 노드

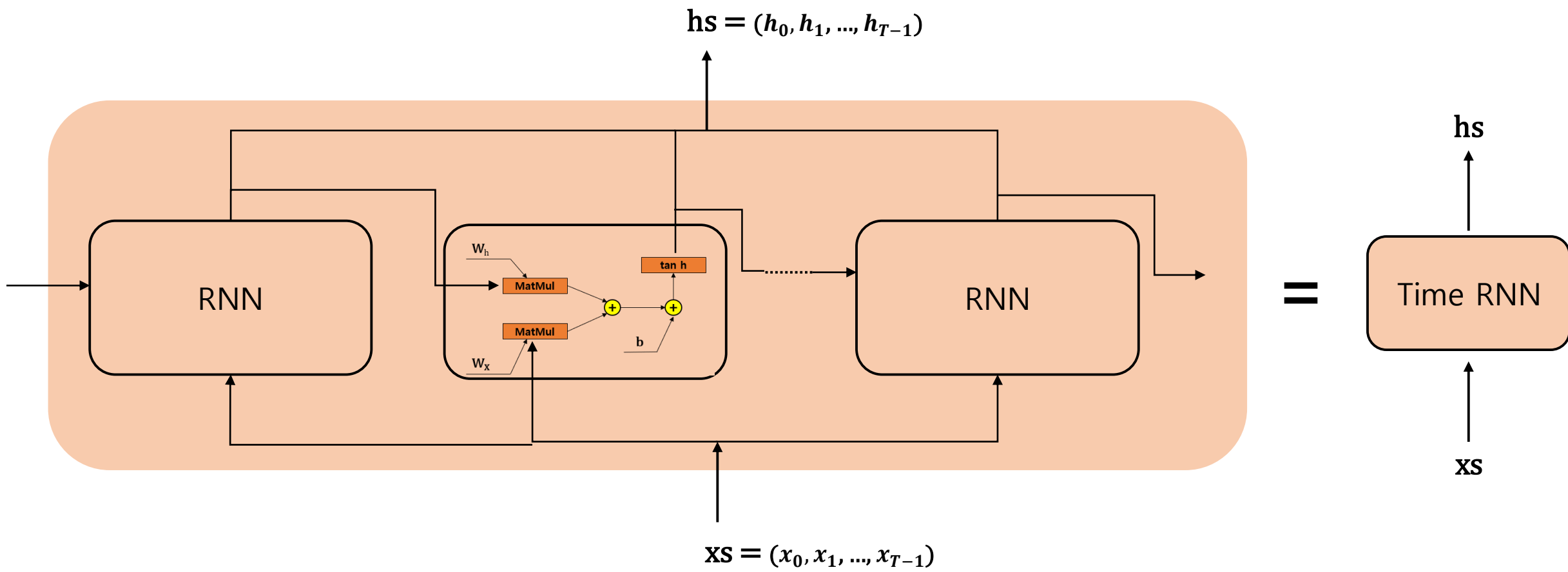


Recurrent Neural Network (RNN)

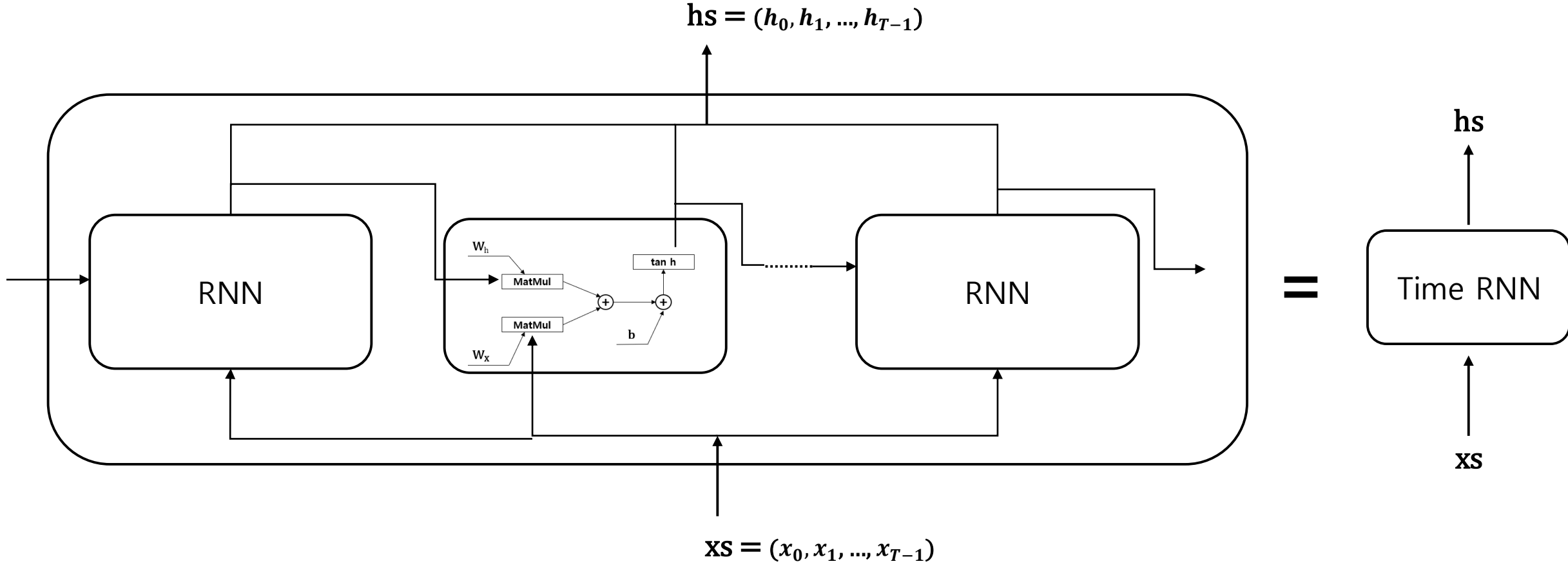
backward (역전파) - (4) 곱셈 노드



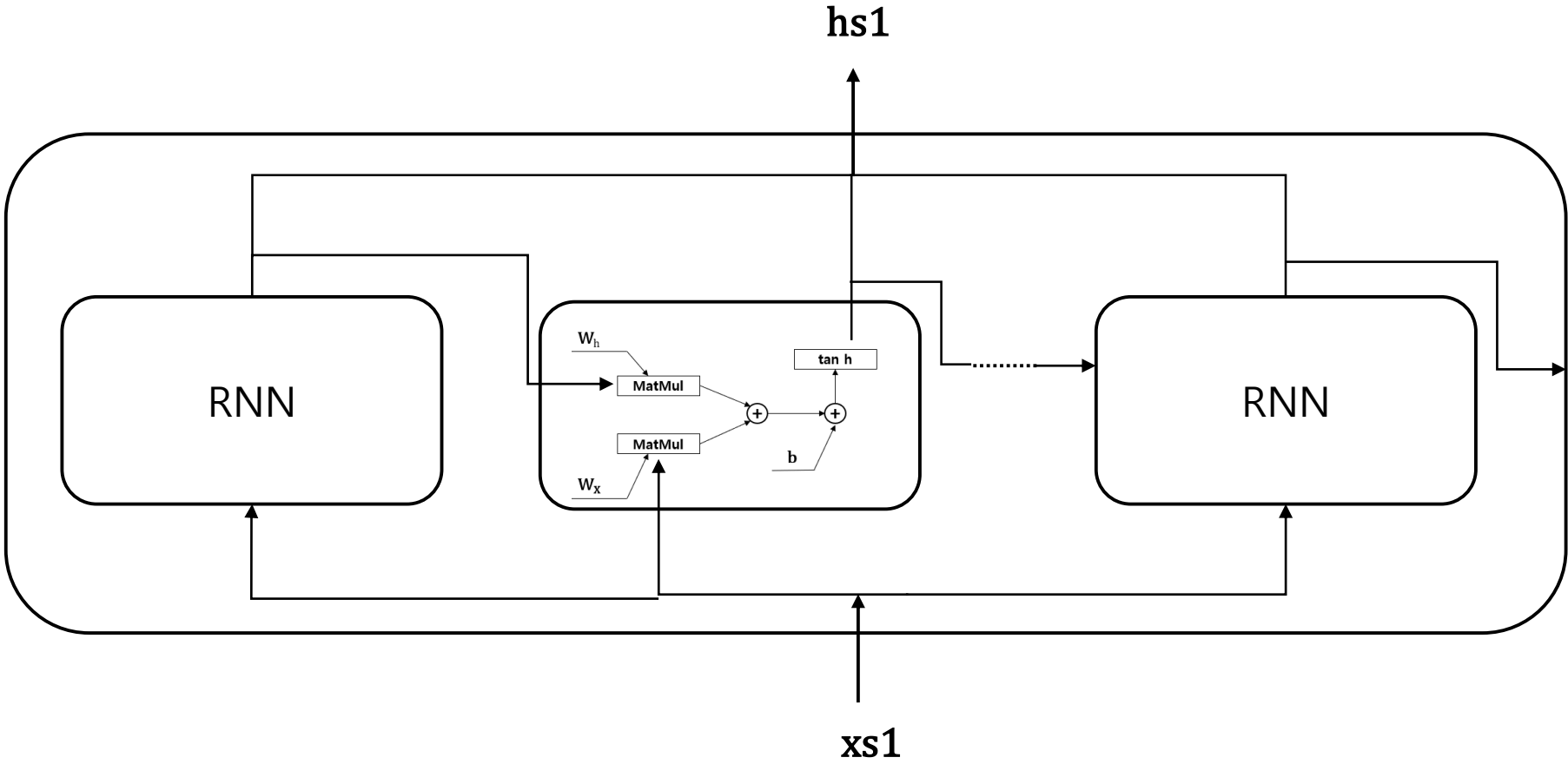
Time RNN 계층과 RNN 계층



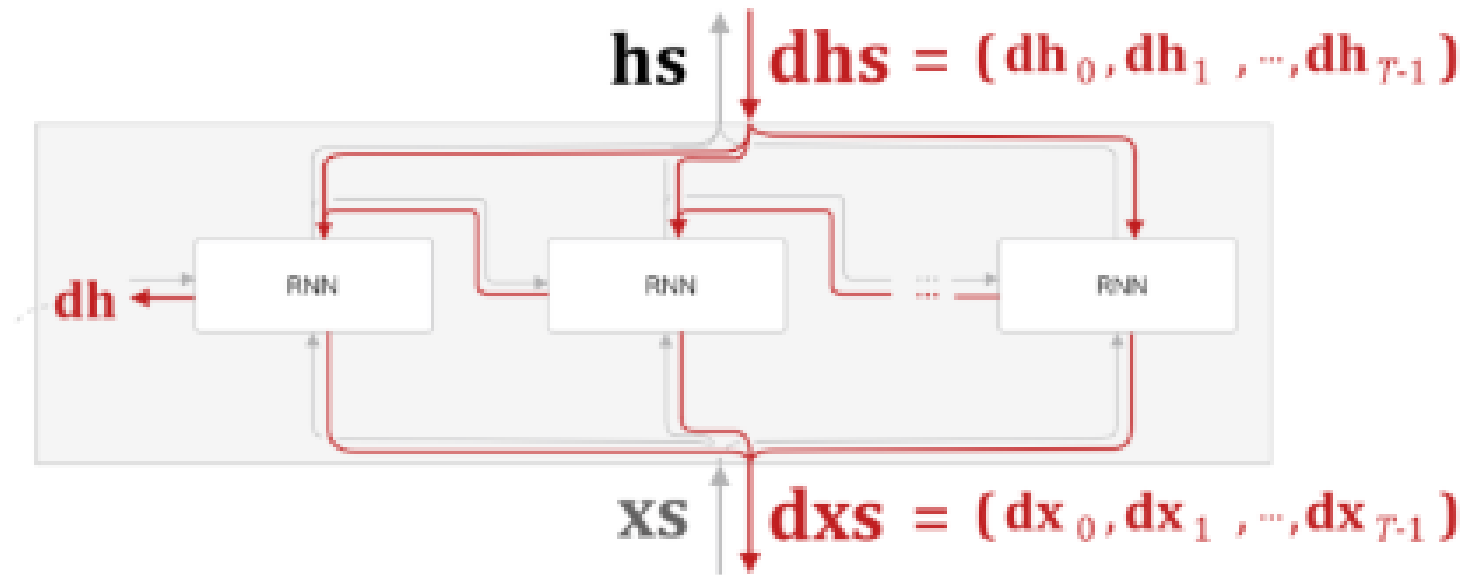
Time RNN 계층과 RNN 계층



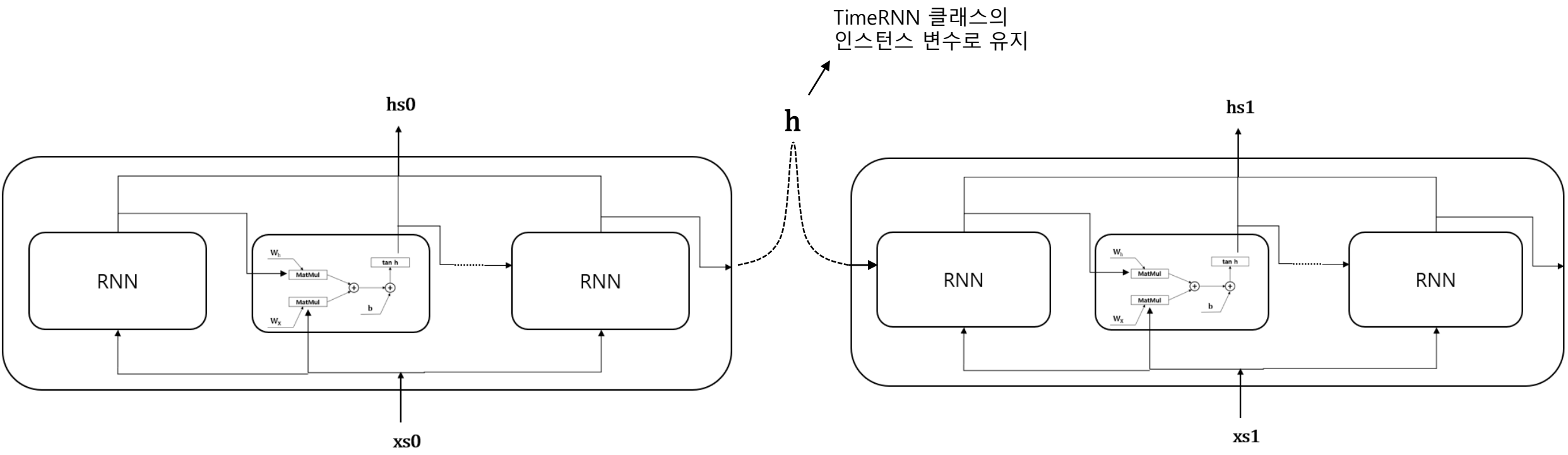
Time RNN 계층과 RNN 계층



Time RNN 계층의 역전파



Time RNN 계층과 RNN 계층



Long Short Term Memory (LSTM)

forward (순전파)

