

# Cblock with buffer – summary of changes

Martin Takac, 19/03/19

## 1 Introduction

- A n A Afb A A Afbn A A A w Aw A fA c A A A A  
Ay A A A w A n Ac AA Afb A A Afb Afb A A  
Afbn A Ac A A fb A A Afb A A A n A A w Afb .AA
- / c / c fA A fb An A A Afb A c Aw A) A  
c ffb AN A fA A ffb A A Aw A A ffb A c A A A n A
  - W / c 2 c n AA Aw A Ac Ac A AA y A n A A  
r A A A A A A A Ac AA n A A A  
A A Ay n A AA A A A Afb A
  - W / c n n AA Aw A An A w Ac A AA  
ffb c A A A Aw A A A A Afb A w Ac w A  
A A A A A A ffb A n A fA A A A  
) n AA n A A A A Ay n A A A A  
AA r A A Ac w A A  
A A A Aw Afb A A Ac A Ac ffb .A
  - W / c c ffb / c c fbc A A n A fA Afb A fA c A A  
c ffb A A Ay n A fA A r A
  - W / c c ffb / c c fb AA Aw An Aw A c Afb A A  
fA c A A A fb A A A A A A  
Aw A A c A fb A AA n n An A A A A

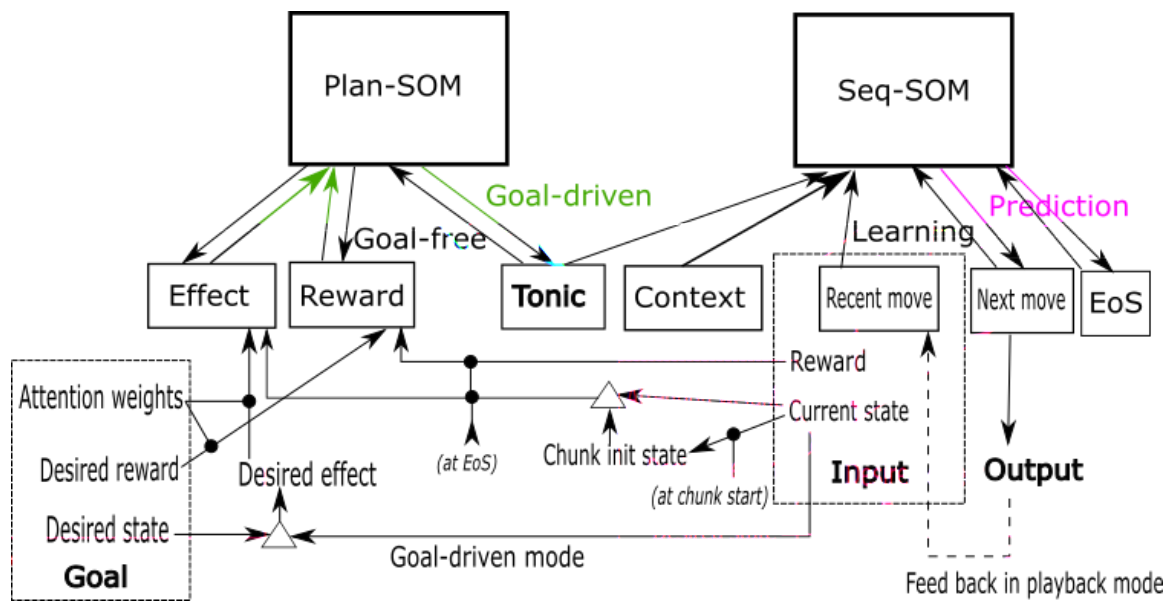
A

## 2 Main changes

### Buffer for sequences added

c A A Afb A n .Ar A NA r NA A A NA r NA A A A  
Ac A Afbn A A Ac A r A n A A A A w A  
Afb A r A A A Afb A A A w A r A  
NA A A A An A AA A observedA Ac A r A n A A  
A A A Ac A cc A A A A r A A A A c Afb A AAA  
ffb AA r Afb A AA Ac ffb A A A A Afb A Afb AA A A  
A A Ac ffb A r A Ac A A A A A A A A A  
r A NA A A AgoodA r A A A n A Ac A A A Ac A  
A A n A An .AA A A A w Afb A A n A Ay A  
fA A r Ac Ac A AA Ay A Ac AA

A



### Prediction is separate from training

A y Ac fbA fb Ac ffb AA A A AA A n A Ab n A A A  
A r .A A A n A n A A A A Ac ffb A A A A w w A  
w / A A fb A A r A A A A A Afb A A  
r A Ac ffb A A A r A A A A A A A A A  
w A A A fb A A A n A n Ac A A A  
A An A A yA n A A AA Ac A r A NA A A NA  
A A A n A A A w AA A A Ac A A A w w Ab n A  
fb A A AA Ac ffb A A A A NAfb AA n A A A A  
Ab n A A A r NA Ac A A A w A A A A A y A  
A A Afb A An A A yA n A A Ac AA A A A A fb  
r A Ac A A n AA A A Ac A A A A A  
A A A n A n A An A A Ab n A A w An A Ac A A A  
w An A fb A w A fb A w Ac A A A c A A  
A A n A Ac A AA AA A A A A r NA Afb A A  
A A A A A A An A A Ab n A A A n A A A y A A  
) fb A A A A NAfb A Ac n A A A A AAA  
A Ac AA A Afb A r NA A A A A yA A A w A  
A A yA n A  
Ac A A r A n A A A A A A Ac ffb A A r NA  
A Ac A A A A c A A A A A A An n A A  
fb A r NA A

A

### Inference of the most likely plan, effect, reward

C A A N A A A A A A A A A w w A n A A A f b A  
f b A  
n A A f b A A A A w A A A A A A A A f b A A w A n . A f b  
A c A A A A A A f b A A A c A A A A c A A A A A A A  
r A f b / w A A A A A A A A A n A y A A A A A  
w A c A f b A A n A A A A A A A A A A A A A n A n A A  
A A A A A A n A A f b A A A A A A A A A A A A  
A A b A  
A A A A A A A / A A A A y A A A A A f b A A r A  
. A c A A A A f b f b A A f b  
f b A A A A A A A A f b A A A A A A A A A A  
f b f b A

A

### More consistent tonic input in the seq-SOM

A A A c A A r N A A A A A A n A A w A A n A A A  
A A f b A A r A A A c A c f b A A A n . A A A f b  
A r A A A A f b n A f b A A r A A f b A A A A A A A  
c A A w A w A A A A A A n A A A A A A A  
A n A A A A A A c f b A A r N A A A A f b A A A  
r A A c A A A A A A A A A n A A A A n n A f b A  
A A A A A A A A n A f b A A A A r A A A A A A c A A  
A A A A n A w A A A w A n f b A w A A

A

### Result, reward and eos needn't be in sync with the last element of the sequenceA

n A A A f b A f b f b A A c A A A n A A A A r A A c A  
A A c f b A A A A A A A A N A A A A n n A A f b n A  
n A n A A A A c A A A A n A A A A A w A f b A A n A f b A  
r A A A c n A A A A f b A r A c A A A A w A f b A  
A A A A n A A A A A A N A A A A f b A  
A A A n n c A f b A A A r A A A A A A A  
f b A A n A n A f b A A A A A A r A A A A A c A A A  
r A A A A A A A A A A A A A A w A after A A A  
n A A A A A A A r A A c A c A A n A A A w A f b A  
A A A

A

### Explicit prediction of eos, separate from elements

C A A f b A r A A A f b A A A n A A A c A A A A A  
A A A r N A A A r N A A A A A A A n A A A r A  
A A A A f b A A A n A A A A A A A A A A c A f b A A  
A A A A A A A A c . A A A A A A A f b A A c A A  
) A c A A A f b n A f b A A A n n A

### 3 How to connect the cblock

n A A A A Aw A A A n A A Ac Afb A A n n A A A A fba A  
 n Aw A c c n A A c c n A A A A fba c A A A  
 W / c c ffb / c c fb A A A n A A w A fb A A  
 y A fba A fb A fb A fb n A A Ac A fb A AA / c  
 / c fba A A A c A A AA Aw A  
 .Afb Afb A A A A n A Ac Afb A A A fb Aw A fba n A n A  
 A A A A n A A Ac Afb Ac Aw AA fb c c A Afb n Ac w A  
 Aw A A Aw A Ac Aw A y A n AA Ac AA

A

#### cblockInputs

A A A w Aw Ac A A A A Afb A w Ac / AA  
 A A A An n Aw A A A A A w Aw .A  
 y n AAA A n A w A  
 r AAA A A A A Ac ffb A A Ac A A A  
 A r NA  
 fb r AAA A A A A r A A Ac ffb A A fb A A A  
 c A A A r NA A A Afb A A AA NA  
 AA A c Afb A A An A Ay A Afb A Aw c A A A  
 A A A Ac A A A An A A A A r A A A A A  
 c Ac A A A A A n A A .A  
 • Afb A A r A A n A A ffb A A AA A A A A A A A  
 AA A NA  
 • A AA A r A A n n c A A A A  
 • A w Afb A A n AA w An A A A A A A Ac A A  
 Ac Aw c A A Ac fb A A A n n A A Ac c n Afb A

AA

#### cblockOutputs

A A AA A Afb Afb A A Afb A w A Ac Ac A  
 A A A Afb A A n A Ac / A A / A  
 An n A A Ac fb A A Afb A r A A A A A A  
 c A A A A Ac A n Afb A A fba r AA A A  
 Ac AA w An Afb A A An fb A fba n A A A A A  
 A An A A A r A A A n A A A A A A  
 w An A An AA r Afb Ac A fb A A Ac ffb A A n AA A  
 AA A A AA Afb Afb A n A A A A AA Aw A A  
 A A AA Aw A AA y n A A A Ac A AA Aw A  
 AA Ac Ac / Afb A A A A n A Ac A  
 A

#### 4 Displays vs debug displays

A

