

CnC Checkpoint Model with Trailing Edge

MODULE CNC-CHECKPOINT-SYNTAX

SYNTAX *InCommand* ::= (init)

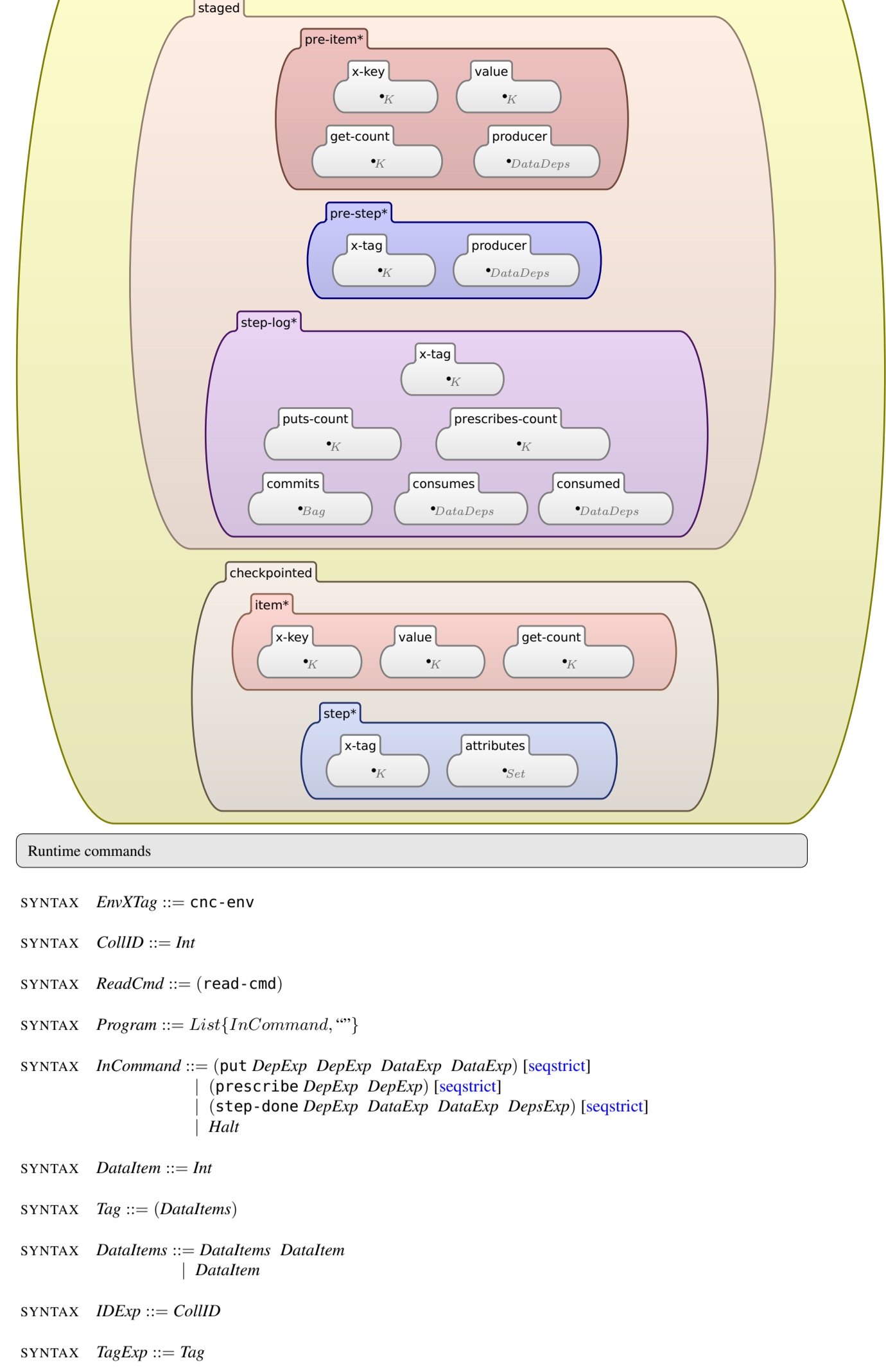
SYNTAX *Program* ::= *InCommand*

END MODULE

MODULE CNC-CHECKPOINT

CnC runtime state representation

CONFIGURATION:



Runtime commands

SYNTAX *EnvXTag* ::= cnc-env

SYNTAX *CollID* ::= Int

SYNTAX *ReadCmd* ::= (read-cmd)

SYNTAX *Program* ::= List{*InCommand*, ""}

SYNTAX *InCommand* ::= (put *DepExp* *DepExp* *DataExp* *DataExp*) [seqstrict]
 | (prescribe *DepExp* *DepExp*) [seqstrict]
 | (step-done *DepExp* *DataExp* *DataExp* *DepsExp*) [seqstrict]
 | Halt

SYNTAX *DataItem* ::= Int

SYNTAX *Tag* ::= (*DataItems*)

SYNTAX *DataItems* ::= *DataItems* *DataItem* | *DataItem*

SYNTAX *IDExp* ::= *CollID*

SYNTAX *TagExp* ::= *Tag*

SYNTAX *DataExp* ::= *DataItem*

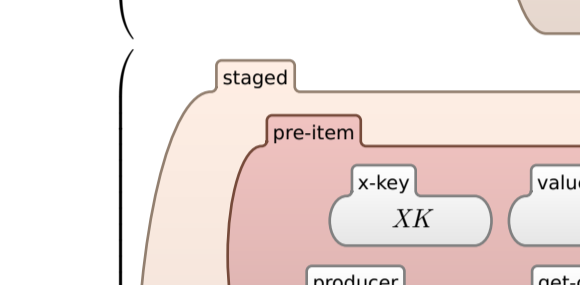
SYNTAX *DepPair* ::= *EnvXTag* | *IDExp* *TagExp* [seqstrict]

SYNTAX *DataDeps* ::= List{*DepPair*, ""} [seqstrict]

SYNTAX *Halt* ::= halt

SYNTAX *Attributes* ::= done

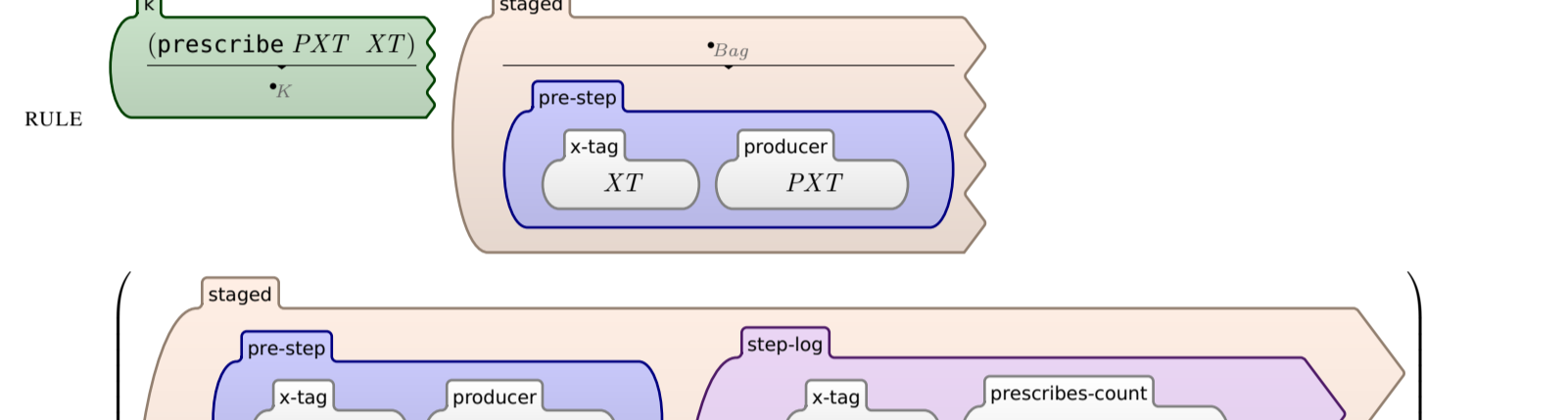
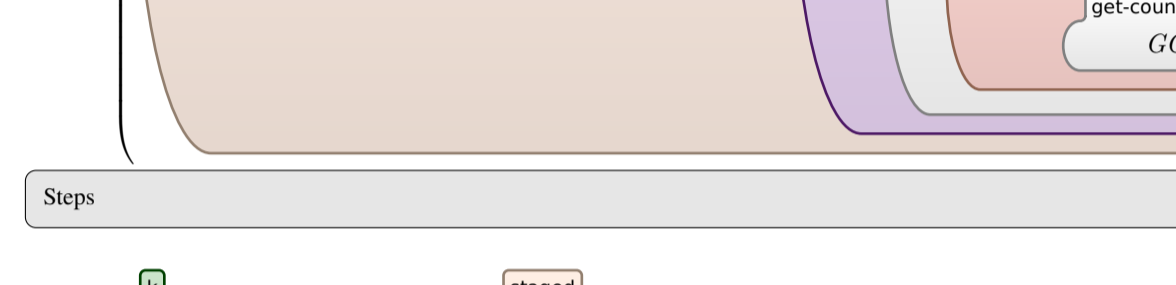
Init



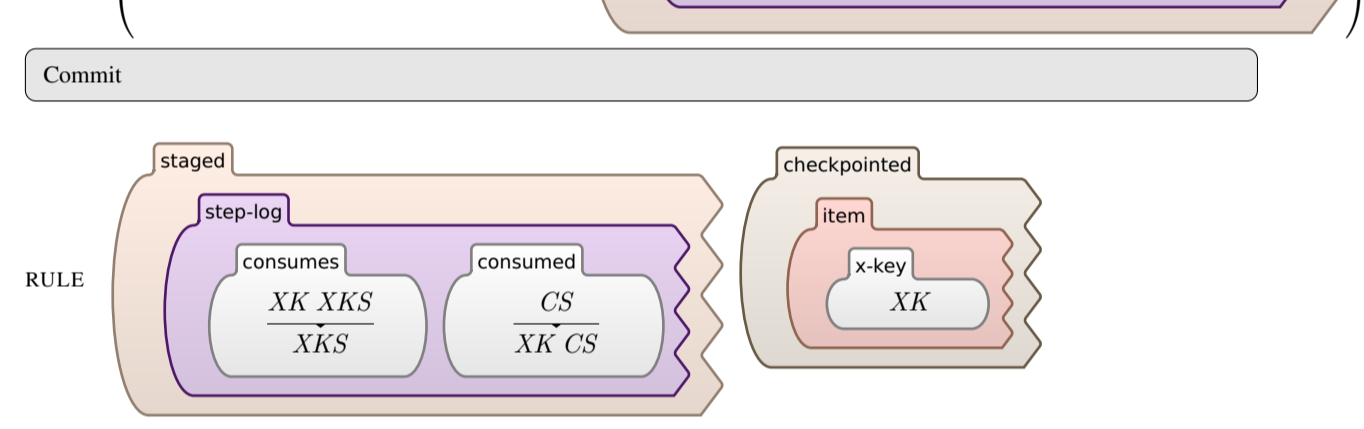
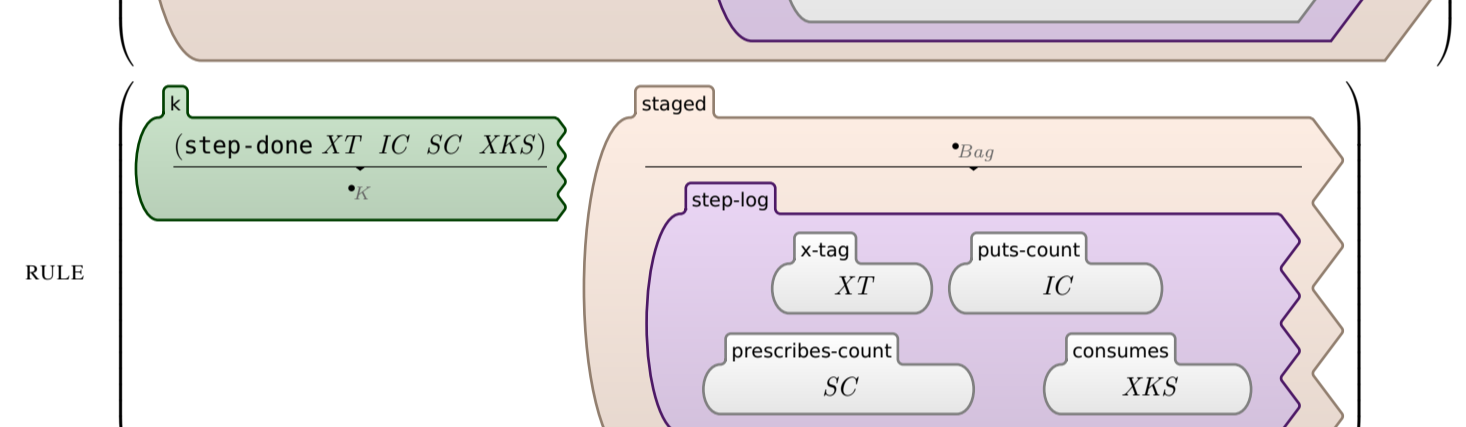
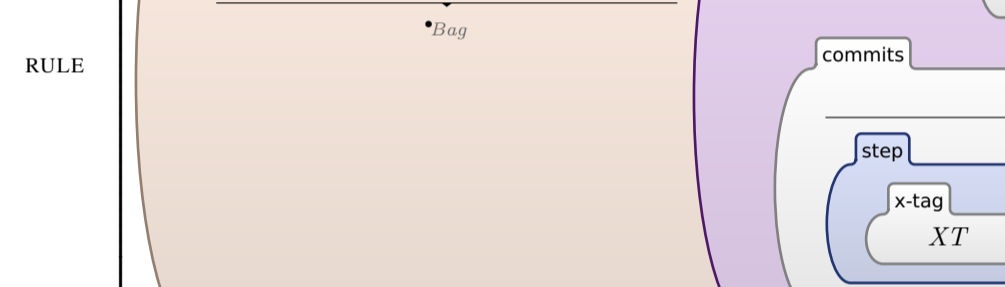
Read in calls to runtime



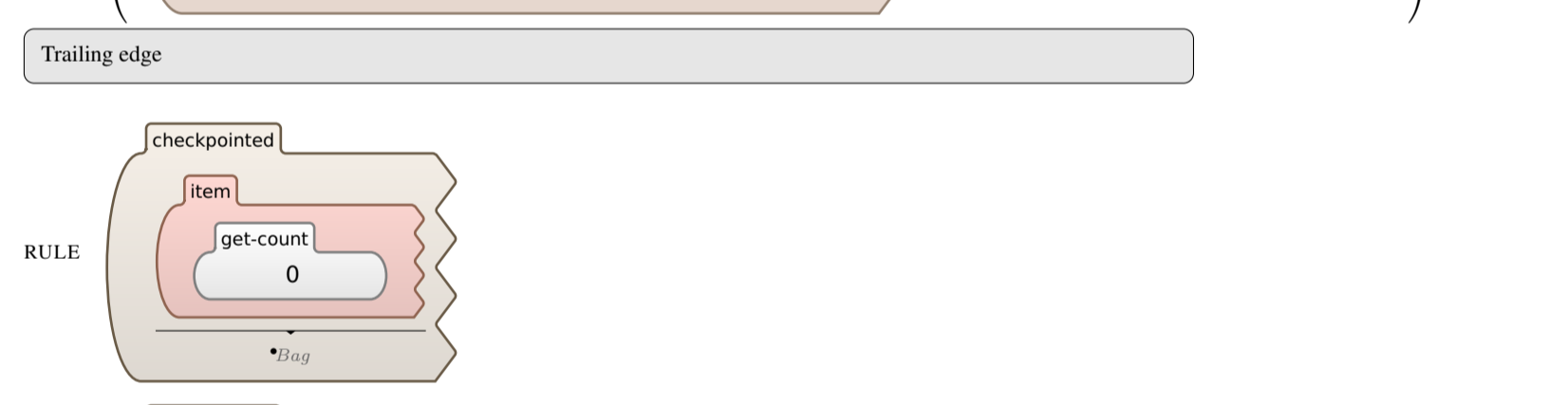
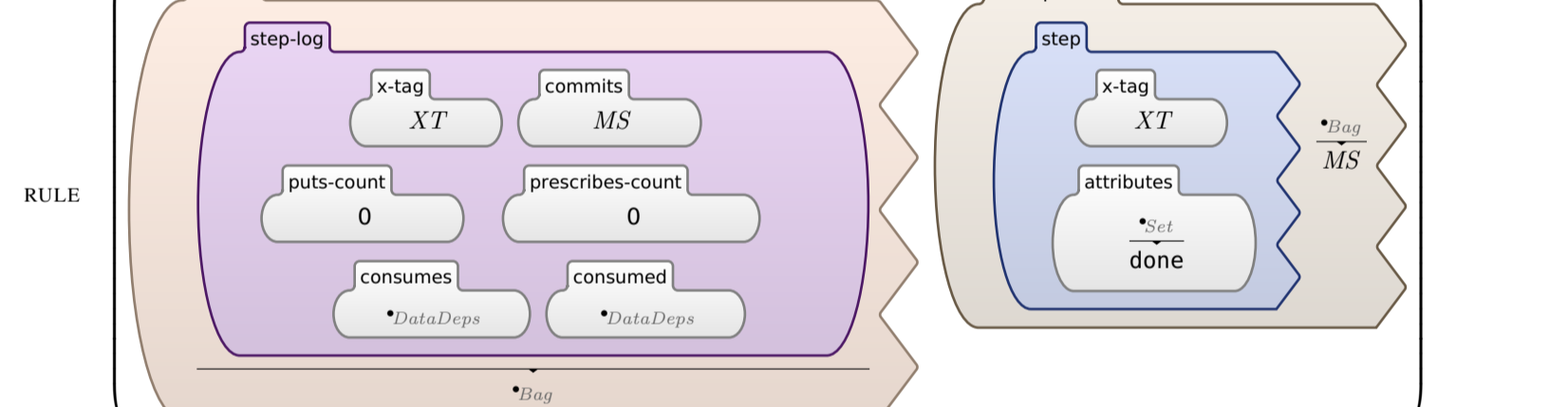
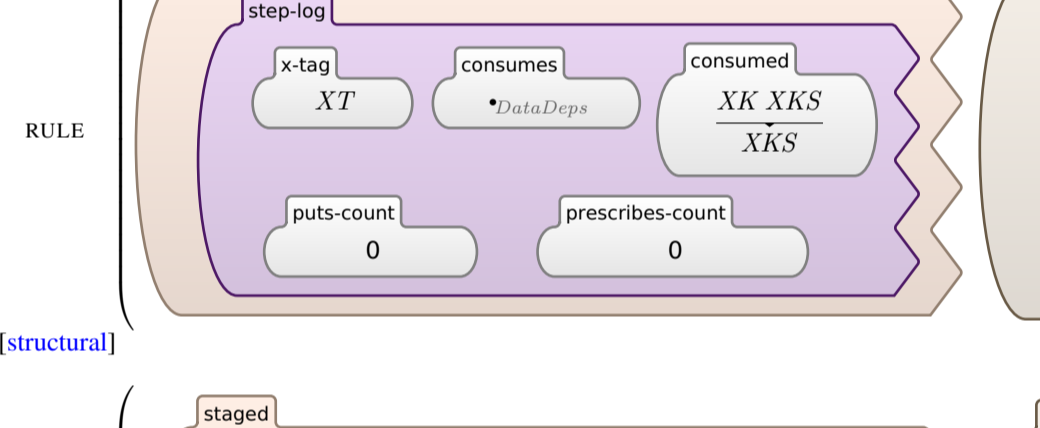
Data items



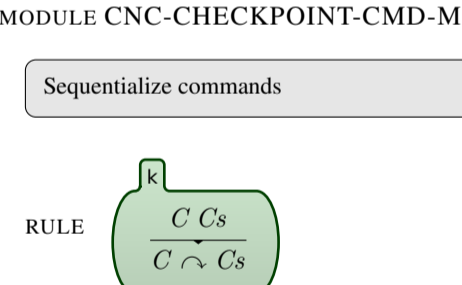
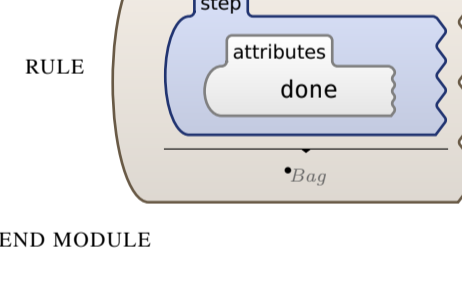
Steps



Commit



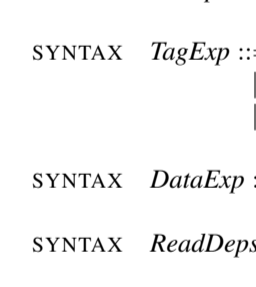
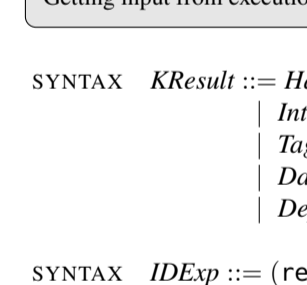
Trailing edge



END MODULE

MODULE CNC-CHECKPOINT-CMD-MAGIC

Sequentialize commands



Getting input from execution graph

SYNTAX *KResult* ::= Halt | *Int* | *Tag* | *DataDeps* | *DepPair*

SYNTAX *IDExp* ::= (read-id)

SYNTAX *TagExp* ::= (read-tag) | (read-n *Int*) | (read-n *Int* *Tag*)

SYNTAX *DataExp* ::= (read-data)

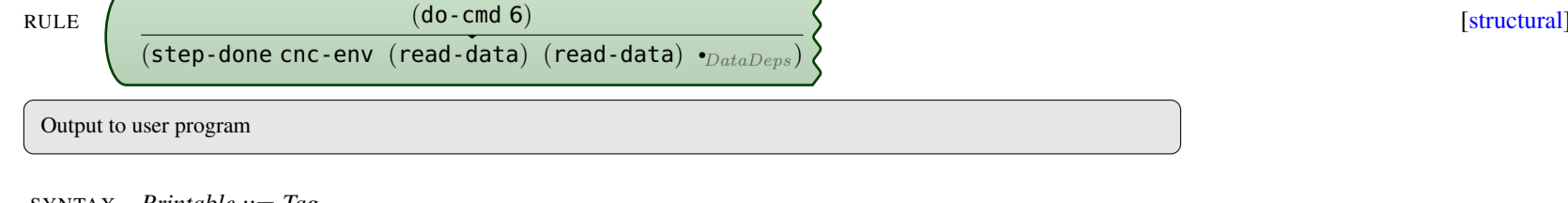
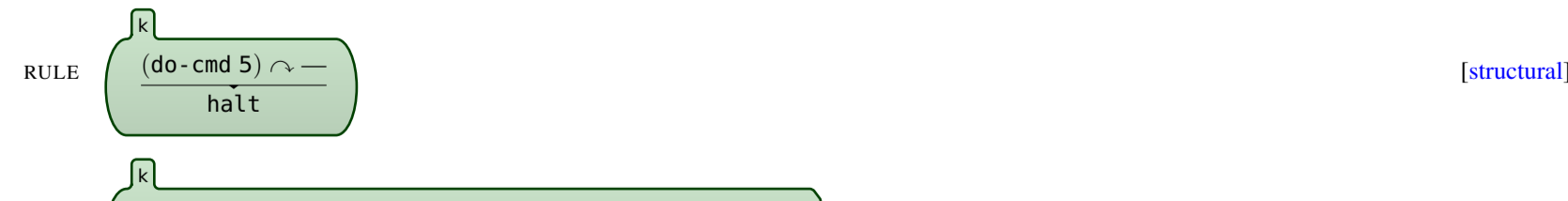
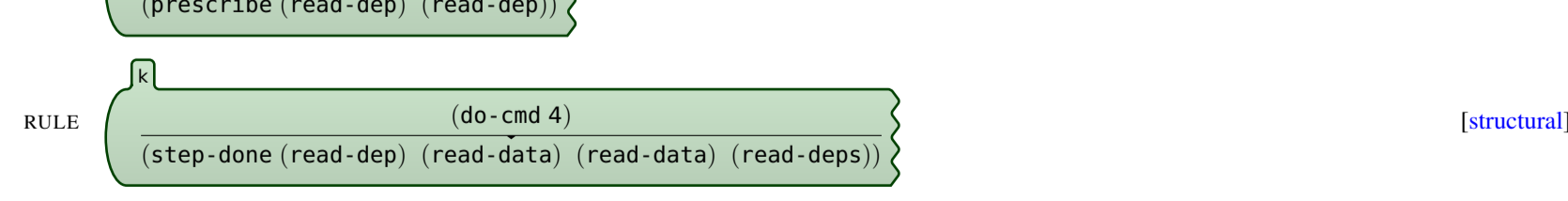
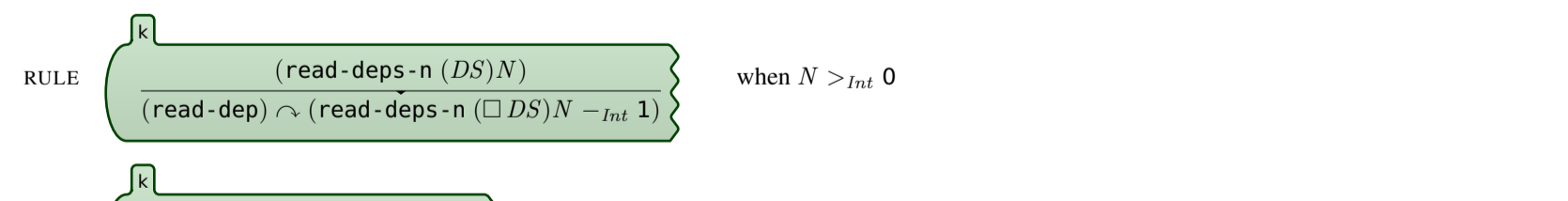
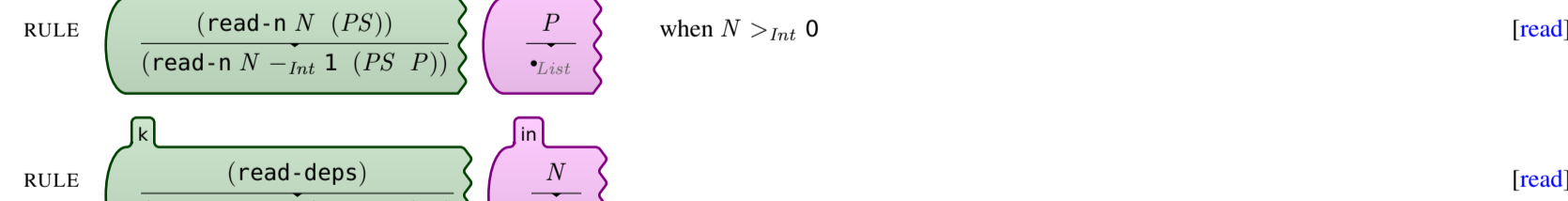
SYNTAX *ReadDepsCmd* ::= (read-deps) | (read-deps-n (*DataDeps*)*Int*) [seqstrict]

SYNTAX *DepsExp* ::= *DataDeps* | *ReadDepsCmd*

SYNTAX *DepExp* ::= *DepPair* | (read-dep)

SYNTAX *CommandID* ::= *Int*

SYNTAX *InCommand* ::= (do-cmd *CommandID*)



Output to user program

SYNTAX *Printable* ::= *Tag* | *Int* | *String*

SYNTAX *Printables* ::= List{*Printable*, ""}

SYNTAX *WriteCommand* ::= (print *Printables*) | (print-tag *Tag*)

END MODULE