NFP $energy$
$prob$ $[0,1]$
$\qquad 80\% \quad 20\%$
$time \rightarrow$
R^+
$[a,b]$
$f(x) =$
$\lambda e^{-\lambda x} >$
$0 \lambda >$
0
$t 1-$
$e^{-rt} \lambda$
$\tilde{c}$

$$\phi_{distr} := \tilde{c}[type, a, b] \qquad (1)$$

$type$ $type$ $Unif$ a b $type$ $Expa$ λ b
$diff()$
x
$evn_x \prec$
evn_y evn_x evn_y
$evn_x \succ$
evn_y evn_x evn_y
$evn_x \approx$
evn_y evn_x evn_y
$evn_x \sim$
evn_y evn_x evn_y
$TRUE$ $FALSE$ **??**
$$\phi_{bol} ::= A(x) \,|\, \phi_1 \bowtie \phi_2 \,|\, \neg\phi \,|\, \phi_1 \vee \phi_2 \,|\, \phi_1 \wedge \phi_2 \,|\, \forall x \cdot \phi(x) \,|\, \exists x \cdot \phi(x)$$
(2)

$A(x)$ x
$\bowtie < = = >$ ϕ_{bol_1} ϕ_{bol_2}
$\neg \vee \wedge$
$\forall x \cdot$
$\phi_{bol}(x) \exists x \cdot$
$\phi_{bol}(x) x x \phi_{bol}(x) x x \phi_{bol}(x)$

$$\phi_{diff}(x, dx/dt) = 0$$
(3)

$\qquad m(t) \, m(t) \, \phi_{diff}(x, dx/dt) =$
0
$y <$
800

$$\phi_{inv} ::= A(x) \,|\, \phi_1 \bowtie \phi_2 \,|\, \phi_1 \wedge \phi_2$$
(4)

$A(x)$ $x \bowtie < = >$
$x a$
$\phi_{assig} ::= x := a$
(5)
$a x$

$\qquad HW Power$ $HW Power Supply$ $HW Battery$ $HW Power Supply$ **??**
$\qquad$ **??** $Resource Usage$ HW $Have$ $store$ $energy$ $Type$

$$Sequence Diagram \; SD = < Obj, Msg, Exec, Frag, Point, Evn >$$
(6)
Obj $printer :$
$Appliance$
Msg $msg =$
(ctn, src, tgt) ctn $id :$
$operation(parameters)$ 0 2 $0 :$
$sendTempData(td)$ 0 2 0 td
$Exec$ $exec \in$
$Exec$ $exec.obj \in$
Obj
$Frag$ $frag \in$
$Frag$ $frag =$
$(name, type, area)$
$p \in$
$Point$ $p(exec, frag, rs, order)$ $exec$ $frag$ rs $\{0,1\}$ 0 1 $p.order$
$m \in$
Msg $!m?m!m?m$ Evn evn $evn =$
(msg, p) evn $evn.p.rs$ SE RE $SE \cap$
$RE =$
$\emptyset$
opt opt
alt
par
$loop$ $loop$ $loop(1, 10)$
$\qquad$ **??**
$\qquad alt$ $area_i$ $[0,1]$ $prob_i$ **??** a 80% $sendRight(rData)$ 20% $sendWrong(wData)$
$\qquad$ **??** b m 5 x y
$evn_x.p.exec.obj ==$
$evn_y.p.exec.obj \wedge$
$evn_x.p.order <$
$(>$
$) evn_y.p.order \Longrightarrow$
$evn_x \prec$
$(\succ$