

<p>           MODULE <i>crackers3</i> </p>
<p>           CONSTANTS <i>Things, People</i>            VARIABLES <i>desires, holds</i> </p>
<p> <math>Init \triangleq \wedge desires = [p \in People \mapsto \{\}]</math>  <math>\wedge holds = [p \in People \mapsto \{\}]</math> </p>
<p> <math>Desire(p) \triangleq \wedge desires[p] = \{\}</math>  <math>\wedge \exists t \in Things :</math>  <math>\wedge desires' = [desires \text{ EXCEPT } ![p] = \{t\}]</math>  <math>\wedge \text{UNCHANGED } holds</math> </p>
<p> <math>Acquire(p) \triangleq \exists t \in desires[p] :</math>  <math>\wedge t \notin holds[p]</math>  <math>\wedge holds' = [holds \text{ EXCEPT } ![p] = holds[p] \cup \{t\}]</math>  <math>\wedge \text{UNCHANGED } desires</math> </p>
<p> <math>Satiated(p) \triangleq \wedge desires[p] \neq \{\}</math>  <math>\wedge \forall t \in desires[p] : t \in holds[p]</math>  <math>\wedge desires' = [desires \text{ EXCEPT } ![p] = \{\}]</math>  <math>\wedge \text{UNCHANGED } holds</math> </p>
<p> <math>Next \triangleq \exists p \in People :</math>  <math>\vee Desire(p)</math>  <math>\vee Acquire(p)</math>  <math>\vee Satiated(p)</math> </p>
<p> <math>Spec \triangleq Init \wedge \Box [Next]_{\langle desires, holds \rangle}</math> </p>