
MODULE *connected*

EXTENDS *Naturals, FiniteSets*

CONSTANTS Y , The set of individual systems
 T Tuple of time traces

VARIABLES $y0$, Initial set of ind. sys.
 $i0$, Initial time step
 $t0$ Initial traces

$Connected(y, i, tau) \triangleq \forall e \in tau : e.n \neq \text{"disconnect"}$

$Init \triangleq \wedge y0 \in Y$
 $\wedge i0 \in \{\}$
 $\wedge t0 \in T$

$Next \triangleq \wedge \forall y \in Y, i \in Nat, tau \in T :$
 $Connected(y, i + 1, tau)' = Connected(y, i, tau) \cup \{y\}$

$Spec \triangleq Init \wedge \Box[Next]_{\langle Connected(\{\}, 0, \{\}) \rangle}$
