

---

MODULE *E2Sub*

---

The *E2Sub* module specifies the *E2Sub* service *API*, state, and controllers.

EXTENDS *Naturals*, *FiniteSets*, *Sequences*, *TLC*

The set of an *E2Sub* nodes

CONSTANT *Nodes*

Indicates a subscription being created

CONSTANT *PhaseCreate*

Indicates a subscription being deleted

CONSTANT *PhaseDelete*

Indicates a phase is pending

CONSTANT *StatusPending*

Indicates a phase is complete

CONSTANT *StatusComplete*

An empty value

CONSTANT *Nil*

---

The set of all subscriptions

VARIABLE *subscriptions*

The set of all subscription tasks

VARIABLE *subscriptionTasks*

$vars \triangleq \langle subscriptions, subscriptionTasks \rangle$

---



---

$Init \triangleq$   
 $\wedge subscriptions = [s \in \{\} \mapsto [phase \mapsto Nil, status \mapsto Nil]]$   
 $\wedge subscriptionTasks = [s \in \{\} \mapsto [phase \mapsto Nil, status \mapsto Nil]]$

$Next \triangleq \text{TRUE}$

$Spec \triangleq Init \wedge \Box[Next]_{vars}$

---

\ \* Modification History  
\ \* Last modified Sun Nov 15 18:17:31 PST 2020 by jordanhalterman  
\ \* Created Sun Nov 15 10:27:16 PST 2020 by jordanhalterman