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1  |----- MODULE AJupiterH -----|
   | AJupiter with a history of all list states across the system. |
5  | EXTENDS AJupiter |
6  |-----|
7  VARIABLE list
8  varsH  $\triangleq \langle vars, list \rangle$ 
10 TypeOKH  $\triangleq TypeOK \wedge (list \subseteq List)$ 
11 |-----|
12 InitH  $\triangleq Init \wedge list = \{InitState\}$ 
14 DoH(c)  $\triangleq Do(c) \wedge list' = list \cup \{state'[c]\}$ 
16 RevH(c)  $\triangleq Rev(c) \wedge list' = list \cup \{state'[c]\}$ 
18 SRevH  $\triangleq SRev \wedge list' = list \cup \{state'[Server]\}$ 
19 |-----|
20 NextH  $\triangleq$ 
21    $\vee \exists c \in Client : DoH(c) \vee RevH(c)$ 
22    $\vee SRevH$ 
24 FairnessH  $\triangleq$ 
25    $WF_{varsH}(SRevH \vee \exists c \in Client : RevH(c))$ 
27 SpecH  $\triangleq InitH \wedge \Box[NextH]_{varsH} \wedge FairnessH$ 
28 |-----|
   | Weak List Consistency (WLSpec) |
32 WLSpec  $\triangleq Comm(Msg)!EmptyChannel$ 
33    $\Rightarrow \forall l1, l2 \in list :$ 
34      $\wedge Injective(l1)$ 
35      $\wedge Injective(l2)$ 
36      $\wedge Compatible(l1, l2)$ 
38 THEOREM SpecH  $\Rightarrow WLSpec$ 
   | Strong List Consistency (SLSpec) |
42 |-----|
   \ * Modification History
   \ * Last modified Tue Dec 04 21:13:19 CST 2018 by hengxin
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