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1 |----- MODULE XJupiterH -----|
  |XJupiterH: XJupiter with a history of all list states across the system.
5 | EXTENDS XJupiter, TLCUtils
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 | SpecH  $\triangleq InitH \wedge \Box[NextH]_{varsH} \wedge WF_{varsH}(NextH)$ 
25 |-----|
  |Weak List Consistency (WLSpec)
29 | ASSUME (TLCSet(1,  $\langle "EmptyChannel", 0 \rangle$ ))
30 | WLSpec  $\triangleq (Comm(Cop)!EmptyChannel \wedge TLCCnt(1, 100))$ 
31 |    $\Rightarrow \forall l1, l2 \in list :$ 
32 |      $\wedge Injective(l1)$ 
33 |      $\wedge Injective(l2)$ 
34 |      $\wedge Compatible(l1, l2)$ 
36 | THEOREM SpecH  $\Rightarrow WLSpec$ 
  |Strong List Consistency (SLSpec)
40 |-----|
  | * Modification History
  | * Last modified Tue Dec 04 21:15:55 CST 2018 by hengxin
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