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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 | FairnessH  $\triangleq$ 
25 |    $\wedge WF_{varsH}(SRevH \vee \exists c \in Client : RevH(c))$ 
27 | SpecH  $\triangleq InitH \wedge \Box[NextH]_{varsH} \wedge FairnessH$ 
28 |-----|
   | Weak List Consistency (WLSpec) |
32 | WLSpec  $\triangleq Comm(Cop)!EmptyChannel$ 
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 Sat Dec 15 17:53:03 CST 2018 by hengxin
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