

```

1  |----- MODULE CJupiterH -----|
   | CJupiter with a history of all list states across the system. |
6  | EXTENDS CJupiter |
7  |-----|
8  | VARIABLE list |
9  | varsH  $\triangleq \langle vars, list \rangle$  |
11 | TypeOKH  $\triangleq TypeOK \wedge (list \subseteq List)$  |
12 |-----|
13 | InitH  $\triangleq Init \wedge list = \{InitState\}$  |
15 | DoH(c)  $\triangleq Do(c) \wedge list' = list \cup \{state'[c]\}$  |
17 | RevH(c)  $\triangleq Rev(c) \wedge list' = list \cup \{state'[c]\}$  |
19 | SRevH  $\triangleq SRev \wedge list' = list \cup \{state'[Server]\}$  |
20 |-----|
21 | NextH  $\triangleq$  |
22 |    $\vee \exists c \in Client : DoH(c) \vee RevH(c)$  |
23 |    $\vee SRevH$  |
25 | SpecH  $\triangleq InitH \wedge \Box[NextH]_{varsH} \wedge WF_{varsH}(SRevH \vee \exists c \in Client : RevH(c))$  |
26 |-----|
   | WLSpec: the weak list specification |
30 | WLSpec  $\triangleq comm!EmptyChannel$  |
31 |    $\Rightarrow \forall l1, l2 \in list :$  |
32 |      $\wedge Injective(l1)$  |
33 |      $\wedge Injective(l2)$  |
34 |      $\wedge Compatible(l1, l2)$  |
36 | THEOREM SpecH  $\Rightarrow WLSpec$  |
   | SLSpec: the strong list specification |
40 |-----|
   | \ * Modification History |
   | \ * Last modified Tue Nov 06 20:41:18 CST 2018 by hengxin |
   | \ * Created Tue Oct 09 09:28:48 CST 2018 by hengxin |

```