```
1  ---------- MODULE XJupiterExtended ----------
   XJupiter extended with serial views. This is used to show that XJupiter implements CJupiter.
5  EXTENDS XJupiter, JupiterSerial
6  ----------
7  VARIABLES Simulate the behavior of propagating original operations in CJupiter.
8      cincomingCJ,   cincoming for CJupiter which contains original operations
9      sincomingCJ    (not used)

11 commCJVars ≜ ⟨cincomingCJ, sincomingCJ⟩
12 varsEx    ≜ ⟨commCJVars, serialVars, vars⟩

14 commCJ ≜ INSTANCE CSComm WITH Msg ← Seq(Cop),
15                       cincoming ← cincomingCJ, sincoming ← sincomingCJ
16 ----------
17 TypeOKEx ≜
18     ∧ TypeOK
19     ∧ TypeOKSerial
20     ∧ commCJ!TypeOK

22 InitEx ≜
23     ∧ Init
24     ∧ InitSerial
25     ∧ commCJ!Init

27 DoEx(c) ≜
28       ∧ Do(c)
29       ∧ DoSerial(c)
30       ∧ UNCHANGED commCJVars

32 RevEx(c) ≜
33     ∧ Rev(c)
34     ∧ RevSerial(c)
35     ∧ commCJ!CRev(c)

37 SRevEx ≜
38     ∧   SRev
39     ∧   SRevSerial
40     ∧   LET cop ≜ Head(sincoming)
41         IN  commCJ!SSendSame(ClientOf(cop), cop)
42     ∧   UNCHANGED sincomingCJ
43 ----------
44 NextEx ≜
45     ∨  ∃ c ∈ Client : DoEx(c) ∨ RevEx(c)
46     ∨  SRevEx

48 FairnessEx ≜
49     WF_varsEx(SRevEx ∨ ∃ c ∈ Client : RevEx(c))
```

51 $SpecEx \triangleq InitEx \land \Box[NextEx]_{varsEx} \land FairnessEx$

52

* Modification History
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