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ma-pre-sub  THM

⊢  ∀M1,M2:MsgA.
|  M1 ⊆ M2
|  ⇒
|  (∀a:Id, s:M2.state, v:M2.da(locl(a)).
|   M2.pre(a,s,v) ⇒ M1.pre(a,s,v))
| by RepeatFor 6 (Analyze 0 THENA Complete Auto) THEN Unfold_MsgA -6
|    THEN
|    Unfold_MsgA -5
|    THEN
|    SplitAndHyps
|    THEN
|    Unfold ‘fpf-val‘ 0
|    THEN
|    AllHyps
|    (λh.Unfold ‘fpf-sub‘ h THEN InstHyp [a] h THENA Complete Auto)
|    THEN
|    ExRepD
|    THEN
|    ThinTrivial
|
1. ds : x:Id fp-> Type
2. da : a:Knd fp-> Type
3. init : x:Id fp-> ds(x)?Void
4. pre : a:Id fp-> State(ds)→da(locl(a))?Top→Prop
5. ef : kx:Knd×Id fp-> State(ds)→da(1of(kx))?Top→ds(2of(kx))?Void
6. send :
   kl:Knd×IdLnk fp-> (tg:Id
                      ×State(ds)→da(1of(kl))?Top→
                      (da(rcv(2of(kl); tg))?Void List)) List
7. frame : x:Id fp-> Knd List
8. sframe : ltg:IdLnk×Id fp-> Knd List
9. Top
10. d1 : x:Id fp-> Type
11. d2 : a:Knd fp-> Type
12. i1 : x:Id fp-> d1(x)?Void
13. p1 : a:Id fp-> State(d1)→d2(locl(a))?Top→Prop
14. e1 : kx:Knd×Id fp-> State(d1)→d2(1of(kx))?Top→d1(2of(kx))?Void
15. s1 :
    kl:Knd×IdLnk fp-> (tg:Id
                       ×State(d1)→d2(1of(kl))?Top→
                       (d2(rcv(2of(kl); tg))?Void List)) List
16. f1 : x:Id fp-> Knd List
17. s2 : ltg:IdLnk×Id fp-> Knd List
18. Top
19. ds ⊆ d1
20. da ⊆ d2
21. init ⊆ i1
22. ∀x:Id. x ∈ dom(pre) ⇒ x ∈ dom(p1) & pre(x) = p1(x)
23. ef ⊆ e1
24. send ⊆ s1
25. frame ⊆ f1
26. sframe ⊆ s2
27. a : Id
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28. s : State(d1)
29. v : d2(locl(a))?Top
30. a ∈ dom(pre)
31. a ∈ dom(p1)
32. pre(a) = p1(a)
33. p1(a)(s,v)
⊢  pre(a)(s,v)  by HypSubst -2 0
END
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