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no_dup_send_induced  THM

⊢  ∀E:EventStruct, A:Type, evt:(A→|E|), tg:(A→Label), tr_l:A List.
|  No-dup-send(E)(map(evt;tr_l)) ⇒ No-dup-send(<A,evt,tg>(E))(tr_l)
| by Unfold ‘no_duplicate_send‘ 0 THEN Reduce 0 THEN Auto
|
1. E : EventStruct
2. A : Type
3. evt : A→|E|
4. tg : A→Label
5. tr_l : A List
6. ∀i,j:ℕ||map(evt;tr_l)||.
   is-send(E)(map(evt;tr_l)[i]) ⇒
   is-send(E)(map(evt;tr_l)[j]) ⇒
   (map(evt;tr_l)[i] =msg=(E) map(evt;tr_l)[j]) ⇒ i = j
7. i : ℕ||tr_l||
8. j : ℕ||tr_l||
9. is-send(<A,evt,tg>(E))(tr_l[i])
10. is-send(<A,evt,tg>(E))(tr_l[j])
11. tr_l[i] =msg=(<A,evt,tg>(E)) tr_l[j]
⊢  i = j
  by InstLemma ‘map_length‘ [A;|E|;evt;tr_l] THENA Auto

     ...
THEN BackThruSomeHyp THEN Auto

     THEN RWO "map_select" 0 THEN Auto’

     THEN All (\h. Unfold ‘event_msg_eq‘ h THEN Reduce h THEN Auto)
END
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