schema construction

The *schema construction* command replaces schema operations by schema construction expressions. In each of these rules, the lists of declarations ds, ds_1 and ds_2 in the operand schemas comprise only simple variable declarations, i.e. no schema inclusions. These rules essentially offer to the interactive user the same auxiliaries as the *schema expansion tac* command uses.

$$
\begin{array}{rcl}
\neg\,[ds \mid p] & \Longrightarrow & [sig(ds) \mid \neg\,(pred(ds) \land p)] \\
[ds_1 \mid p_1] \land [ds_2 \mid p_2] & \Longrightarrow & [sig(ds_1);\ sig(ds_2) \mid pred(ds_1) \land p_1 \land pred(ds_2) \land \\
 & & \text{with identical decs not normalized} \\
[ds_1 \mid p_1] \lor [ds_2 \mid p_2] & \Longrightarrow & [sig(ds_1);\ sig(ds_2) \mid pred(ds_1) \land p_1 \lor pred(ds_2) \land p \\
[ds_1 \mid p_1] \Rightarrow [ds_2 \mid p_2] & \Longrightarrow & [sig(ds_1);\ sig(ds_2) \mid pred(ds_1) \land p_1 \Rightarrow pred(ds_2) \land \\
[ds_1 \mid p_1] \Leftrightarrow [ds_2 \mid p_2] & \Longrightarrow & [sig(ds_1);\ sig(ds_2) \mid pred(ds_1) \land p_1 \Leftrightarrow pred(ds_2) \land \\
[ds_1 \mid p_1] \trianglelefteq [ds_2 \mid p_2] & \Longrightarrow & [sig(ds_1);\ sig(ds_2) \mid pred(ds_1) \land p_1 \trianglelefteq pred(ds_2) \land p \\
[ds_1 \mid p_1] \upharpoonright [ds_2 \mid p_2] & \Longrightarrow & [projected\_decs \mid \exists\, not\_projected\_decs \bullet p_1 \land p_2] \\
pre[ds \mid p] & \Longrightarrow & [input\_and\_current\_state\_decs \\
 & & \exists\, output\_and\_next\_state\_decs \bullet p] \\
Qds_1 \mid p_1 \bullet [ds_2 \mid p_2] & \Longrightarrow & [ds_2 \setminus ds_1 \mid Qds_1 \mid p_1 \bullet pred(ds_2) \land p_2] \\
[ds \mid p] \setminus (x1, ..., xn) & \Longrightarrow & [not\_hidden\_decs \mid \exists\, hidden\_decs \bullet p] \\
undecor + [d_1+;\ d_2;\ ... \mid p] & \Longrightarrow & [d_1 \mid \exists\, d_1+ == d_1;\ d_2;\ ... \bullet p]
\end{array}
$$

1. Tactic example

"schema construction" e_1 e_2

This example applies the *schema construction* command to expressions e_1 and e_2.

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