

## **event-correlation**<sup>0,22</sup>

DIR: ecl\_object\_directory

STM: ecl\_subtype

ABS: ecl\_halt( $ds;da;x$ ) **ecl-halt**

STM: ecl\_halt\_wf

STM: ecl\_halt\_nil

STM: ecl\_halt\_unique

ABS: ecl\_halt\_kind( $x$ ) **ecl-halt-kind**

STM: ecl\_halt\_kind\_wf

STM: ecl\_halt\_kind\_last

ABS: ecl\_halt\_type( $da;x$ ) **ecl-halt-type**

STM: ecl\_halt\_type\_wf

STM: ecl\_halt\_type\_last

ABS: ecl\_act( $ds;da;m;x$ ) **ecl-act**

STM: ecl\_act\_wf

STM: ecl\_act\_halt

STM: ecl\_act\_nil

ABS: ecl\_trans\_tuple $\{i:l\}$ ( $ds;da$ ) **ecl-trans-tuple**

STM: ecl\_trans\_tuple\_wf

ABS: ecl\_trans\_type( $A$ ) **ecl-trans-type**

STM: ecl\_trans\_type\_wf

ABS: ecl\_trans\_state\_from( $v;z;L$ ) **ecl-trans-state-from**

STM: ecl\_trans\_state\_from\_wf

ABS: ecl\_trans\_init( $v$ ) **ecl-trans-init**

STM: ecl\_trans\_init\_wf

ABS: ecl\_trans\_h( $v$ ) **ecl-trans-h**

STM: ecl-trans-h\_wf  
 ABS: ecl-trans-ks( $v$ ) **ecl-trans-ks**  
 STM: ecl-trans-ks\_wf  
 ABS: ecl-trans-a( $v$ ) **ecl-trans-a**  
 STM: ecl-trans-a\_wf  
 ABS: ecl-trans-state( $v;L$ ) **ecl-trans-state**  
 STM: ecl-trans-state\_wf  
 ABS: ecl-trans-es( $v$ ) **ecl-trans-es**  
 STM: ecl-trans-es\_wf  
 STM: ecl-trans-state-from-append  
 STM: ecl-trans-state-append  
 ABS: ecl-trans-reachable( $ds;da;v;L;x$ ) **ecl-trans-reachable**  
 STM: ecl-trans-reachable\_wf  
 ABS: ecl-trans-normal( $x$ ) **ecl-trans-normal**  
 STM: ecl-trans-normal\_wf  
 ABS: combine-ecl-tuples( $A;B;f;g$ ) **combine-ecl-tuples**  
 STM: combine-ecl-tuples\_wf  
 ABS: combine-halt-info( $ea;eb;f;g;x$ ) **combine-halt-info**  
 STM: combine-halt-info\_wf  
 ABS: combine-ecl-tuples2( $A;B;f;g$ ) **combine-ecl-tuples2**  
 STM: combine-ecl-tuples2\_wf  
 STM: combine-ecl-trans-state0  
 STM: combine-ecl-trans-state1  
 STM: ecl-normal-combine  
 STM: ecl-normal-combine2  
 ABS: reset-ecl-tuple( $A$ ) **reset-ecl-tuple**  
 STM: reset-ecl-tuple\_wf

ABS:  $\text{add-ecl-act}(A;m)$  **add-ecl-act**  
 STM:  $\text{add-ecl-act\_wf}$   
 ABS:  $\text{ecl-base-tuple}(k;test)$  **ecl-base-tuple**  
 STM:  $\text{ecl-base-tuple\_wf}$   
 ABS:  $\text{ecl-add-throw}(A;m)$  **ecl-add-throw**  
 STM:  $\text{ecl-add-throw\_wf}$   
 ABS:  $\text{ecl-add-catch}(A;l)$  **ecl-add-catch**  
 STM:  $\text{ecl-add-catch\_wf}$   
 ABS:  $\text{ecl-kinds}(x)$  **ecl-kinds**  
 STM:  $\text{ecl-kinds\_wf}$   
 ABS:  $\text{ecl-trans}(x)$  **ecl-trans**  
 STM:  $\text{ecl-trans\_wf}$   
 STM:  $\text{ecl-kinds-ecl-trans}$   
 STM:  $\text{atom-free-ecl-trans-type}$   
 ABS:  $\text{ecl-trans-halt2}(ds;da;A)$  **ecl-trans-halt2**  
 STM:  $\text{ecl-trans-halt2\_wf}$   
 STM:  $\text{ecl-trans-halt2-bound}$   
 STM:  $\text{combine-ecl-trans-state2}$   
 ABS:  $\text{ecl-trans-act}(ds;da;A)$  **ecl-trans-act**  
 STM:  $\text{ecl-trans-act\_wf}$   
 STM:  $\text{ecl-trans-act-last}$   
 STM:  $\text{ecl-trans-act-nil}$   
 STM:  $\text{ecl-trans-act\_functionality}$   
 STM:  $\text{ecl-trans-act-functionality2}$   
 STM:  $\text{ecl-reset-lemma}$   
 STM:  $\text{ecl-reset-state}$   
 STM:  $\text{ecl-reset-init}$

STM: ecl-reset-halt  
 STM: ecl-trans-halt2-add-catch  
 STM: ecl-trans-halt2-add-throw  
 STM: ecl-trans-property  
 ABS: ecl-max( $x$ ) **ecl-max**  
 STM: ecl-max\_wf  
 ABS: ecl-ex( $x$ ) **ecl-ex**  
 STM: ecl-ex\_wf  
 STM: ecl-halt-ex  
 ABS: ecl-es-halt( $es;x$ ) **ecl-es-halt**  
 STM: ecl-es-halt\_wf  
 STM: ecl-es-halt-ecl-halt  
 ABS: ecl-es-act( $es;m;x$ ) **ecl-es-act**  
 STM: ecl-es-act\_wf  
 STM: ecl-es-act-ecl-act  
 STM: decidable\_\_ecl-es-act  
 STM: decidable\_\_ecl-es-halt  
 ABS: action[[ $a\ n$ ]][ $e_1;e_2$ ] **es-bact**  
 STM: es-bact\_wf  
 STM: assert-es-bact  
 ABS: msg-item( $ds;da;k;l$ ) **msg-item**  
 STM: msg-item\_wf  
 ABS: msg-spec( $ds;da$ ) **msg-spec**  
 STM: msg-spec\_wf  
 ABS: msg-spec-links( $snd$ ) **msg-spec-links**  
 STM: msg-spec-links\_wf  
 ABS: msg-spec-loc( $snd;i$ ) **msg-spec-loc**

STM: msg-spec-loc\_wf

ABS: msg-spec-loc-decl( $snd; i; da$ ) **msg-spec-loc-decl**

STM: msg-spec-loc-decl\_wf

STM: msg-spec-loc-decl-implies

ABS:  $k$  sends on  $l$  with tag  $tg$  [ $s, v.f(s;v)$ ], at marker  $n$  **msg-spec1**

STM: msg-spec1\_wf

ABS:  $a \oplus b$  **msg-spec-join**

STM: msg-spec-join\_wf

STM: msg-spec-links-spec1

STM: msg-spec-loc-spec1

STM: msg-spec-loc-decl-spec1

STM: msg-spec-loc-decl-join

ABS: ecl-tags( $l; snd$ ) **ecl-tags**

STM: ecl-tags\_wf

STM: member-ecl-tags

STM: no\_repeats-ecl-tags

STM: ecl-tags-spec1

ABS: update-spec( $ds; da$ ) **update-spec**

STM: update-spec\_wf

ABS: update-spec-vars( $upd$ ) **update-spec-vars**

STM: update-spec-vars\_wf

ABS: update-spec-decl( $upd; ds$ ) **update-spec-decl**

STM: update-spec-decl\_wf

ABS: update-spec1( $k; x; n; s, v.f(s;v)$ ) **update-spec1**

STM: update-spec1\_wf

STM: update-spec1\_wf2

ABS:  $a \oplus b$  **update-spec-join**

STM: update-spec-join\_wf  
STM: update-spec-join-vars  
STM: update-spec-join-decl  
STM: update-spec1-decl  
STM: update-spec-empty-decl  
ABS:  $@i[[x;snd]]$  **ecl-mng-sends**  
STM: ecl-mng-sends\_wf  
STM: ecl-mng-sends-single  
ABS:  $@i[[x;upd]]$  **ecl-mng-update**  
STM: ecl-mng-update\_wf  
ABS:  $@i[[x;snd;upd]]$  **ecl-mng**  
STM: ecl-mng\_wf  
ABS:  $\text{ecl-machine1}\{\$ecl:ut2\}(i; ds; da; A)$  **ecl-machine1**  
STM: ecl-machine1\_wf  
STM: ecl-machine1-realizes  
ABS:  $\text{ecl-machine2}(i; ds; da; x; T; ks; a; upd)$  **ecl-machine2**  
STM: ecl-machine2\_wf  
STM: ecl-machine2-realizes  
STM: ecl-machine2-loc  
ABS:  $\text{ecl-m3}(a; snd; x; l)$  **ecl-m3**  
STM: ecl-m3\_wf  
ABS:  $\text{ecl-machine3}(ds; da; x; T; ks; a; snd)$  **ecl-machine3**  
STM: ecl-machine3\_wf  
STM: ecl-machine3-realizes  
STM: ecl-machine3-loc  
ABS: ecl-machine at  $i$  with state  $\$ecl$

*A*

state variables *ds*

actions *da*

sends *snd*

updates *upd*

**ecl-machine**

STM: ecl-machine-wf

STM: ecl-2-3-compat

STM: ecl-1-2-compat

STM: ecl-1-3-compat

STM: ecl-realizes

STM: ecl-feasible

STM: ecl-machine-loc

STM: ecl-machine-R-da

STM: ecl-machine-R-da-dom

STM: ecl-machine-icompat

STM: ecl-disjoint-compatible

STM: ecl-precond-compatible

STM: es-sends-iff-bact

STM: ecl-mng-sends-single2

STM: duplicate-and

STM: ecl-es-halt-example1