

Exemplifying clause ( $c_l$ )	Natural Language Specification for Traces	LT $L_f$ Semantics ( $\llbracket c_l \rrbracket$ )
Init( $A, p$ )	The trace should start with an activation	$A \wedge p$
Exists( $A, p, n + 1$ )	Activations should occur at least $n$ times	$\mathbf{F}(A \wedge p [\wedge \mathbf{X}(\llbracket \text{Exists}(A, p, n) \rrbracket)]_{n>0})$
Precedence( $A, p, B, q$ )	Events preceding the activations should not satisfy the target	$\neg(B \wedge p) \mathbf{W} (A \wedge p)$
ChainPrecedence( $A, p, B, q$ )	The activation is immediately preceded by the target.	$\mathbf{G}(\mathbf{X}(A \wedge p) \Rightarrow (B \wedge q))$
Response( $A, p, B, q$ )	The activation is either followed by or simultaneous to the target.	$\mathbf{G}((A \wedge p) \Rightarrow \mathbf{F}(B \wedge q))$
ChainResponse( $A, p, B, q$ )	The activation is immediately followed by the target.	$\mathbf{G}((A \wedge p) \Rightarrow \mathbf{X}(B \wedge q))$
RespExistence( $A, p, B, q$ )	The activation requires the existence of the target.	$\mathbf{F}(A \wedge p) \Rightarrow \mathbf{F}(B \wedge q)$
CoExistence( $A, p, B, q$ )	RespExistence, and vice versa.	$\llbracket \text{RespExistence}(A, p, B, q) \rrbracket \wedge \llbracket \text{RespExistence}(B, q, A, p) \rrbracket$
Succession( $A, p, B, q$ )	The target should only follow the activation.	$\llbracket \text{Precedence}(A, p, B, q) \rrbracket \wedge \llbracket \text{Response}(A, p, B, q) \rrbracket$
ChainSuccession( $A, p, B, q$ )	Activation immediately follows the target, and the target immediately precedes the activation.	$\mathbf{G}((A \wedge p) \Leftrightarrow \mathbf{X}(B \wedge q))$
AltResponse( $A, p, B, q$ )	If an activation occurs, no other activations must happen until the target occurs.	$\mathbf{G}((A \wedge p) \Rightarrow (\neg(A \wedge p) \mathbf{U} (B \wedge q)))$
AltPrecedence( $A, p, B, q$ )	Every activation must be preceded by an target, without any other activation in between	$\llbracket \text{Precedence}(A, p, B, q) \rrbracket \wedge \mathbf{G}((A \wedge p) \Rightarrow \mathbf{X}(\neg(A \wedge p) \mathbf{W} (B \wedge q)))$