

ProdInCosyVerif, Small Memento for Formulæ

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Structure of a Formula	
query [verbose] [node] formula	If node is set, the formula is evaluated on all reachability graph's nodes. Otherwise, it is evaluated on the initial state only? If verbose is set, the verbose mode will be activated. Important: all nodes in the reachability graph are numbered. You can use these identifiers to point out some nodes.
Atomic propositions (to be hold in formulæ)	
PlaceName1 \rangle = PlaceName2	PlaceName1 contains less tokens than PlaceName2.
PlaceName != \langle .. \rangle	PlaceName marking is different from one single non colored token.
PlaceName == 2 \langle .1,2. \rangle + \langle .1,3. \rangle	PlaceName marking is equal to one composed colored token \langle 1,3 \rangle plus two composed colored tokens \langle 1,2 \rangle .
card (PlaceName) \rangle 1	The number of tokens in PlaceName is greater than 1.
card(PlaceName:(field[0]==2)) \rangle = 1	The number of composed tokens in place PlaceName for wich the first field is "2" is greater or equal to 1 (be aware that field numbering starts from 0).
and/or/not	Usual logical operators
Temporal formulæ	
AX (ϕ)	ϕ is true for the text state on all futures.
EX (ϕ)	ϕ is true for the text state on at least one future.
AG (ϕ)	ϕ is globally true on all futures.
EG (ϕ)	ϕ is true globally true on at least one future.
AF (ϕ)	ϕ is ventually true on all futures.
EF (ϕ)	ϕ is eventually true on at least one future.
AU (ϕ_1, ϕ_2)	ϕ_1 is true until ϕ_2 becomes true on all futures.
EU (ϕ_1, ϕ_2)	ϕ_1 is true until ϕ_2 becomes true on at least one future.
implies (ϕ_1, ϕ_2)	ϕ_1 implies ϕ_2 .

You may also replace `query` by `check`, the answer is then easier (false or true instead of a number of paths). However, we observed that some interactions with the CTL macro we use and that are referenced in this table sometimes raise strange behaviors. So we strongly suggest to restrict the use of `check` to reachability formulæ.