

1 Semantics

The semantics of the logical conjunction $\&\&$, logical disjunction $\|\|$, logical implication \Rightarrow and conditional operator $?$ has changed in C32SAT 1.4. The semantics of all other operators remain the same.

1.1 Logical conjunction

Operand 1	Operand 2	Condition	Result
a	b	-	$a \&\& b$
a	U	$a \neq 0$	U
a	U	$a = 0$	0
U	b	-	0
U	U	-	U

Table 1: Updated semantics of $\&\&$

1.2 Logical disjunction

Operand 1	Operand 2	Condition	Result
a	b	-	$a \ \ b$
a	U	$a \neq 0$	1
a	U	$a = 0$	U
U	b	-	U
U	U	-	U

Table 2: Updated semantics of $\|\|$

1.3 Logical implication

Operand 1	Operand 2	Condition	Result
a	b	-	$a \Rightarrow b$
a	U	$a \neq 0$	U
a	U	$a = 0$	1
U	b	-	U
U	U	-	U

Table 3: Updated semantics of \Rightarrow

1.4 Conditional operator

Operand 1	Operand 2	Operand 3	Condition	Result
a	b	c	-	$a ? b : c$
a	b	U	$a \neq 0$	b
a	b	U	$a = 0$	U
a	U	c	$a \neq 0$	U
a	U	c	$a = 0$	c
U	b	c	-	U
U	b	U	-	U
U	U	c	-	U
U	U	U	-	U

Table 4: Updated semantics of ?

2 Input language

They keywords INT_MIN and INT_MAX have been added to the input language. They respectively represent the smallest and biggest signed integer value in the two's complement for the selected bit width.