

**CONTEXT** TrafficLights.ctx

**SETS**

*LIGHTS*

*DIRECTION*

**CONSTANTS**

*Red*

*Green*

*Amber*

*CONFLICT*

**AXIOMS**

*axm1* :  $LIGHTS = \{Red, Green, Amber\}$

*axm2* :  $Red \neq Green$

*axm3* :  $Red \neq Amber$

*axm4* :  $Green \neq Amber$

*axm5* :  $finite(DIRECTION)$

DIRECTION is a finite set of directions

*axm6* :  $CONFLICT \in DIRECTION \leftrightarrow DIRECTION$

CONFLICT relates conflicting directions

*axm7* :  $CONFLICT \cap id(DIRECTION) = \emptyset$

a direction cannot conflict with itself

*axm8* :  $CONFLICT^{-1} = CONFLICT$

conflicts are symmetric

**END**