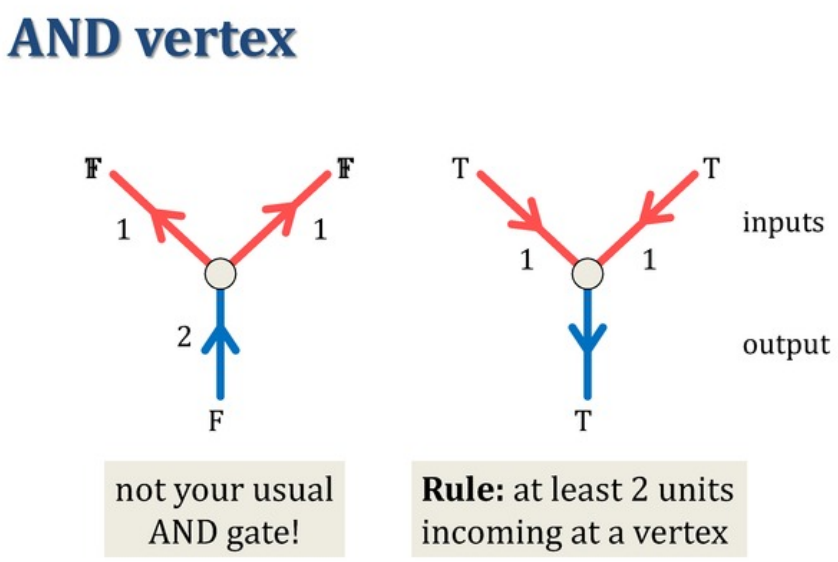
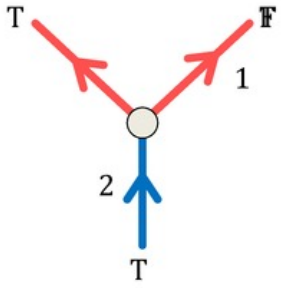
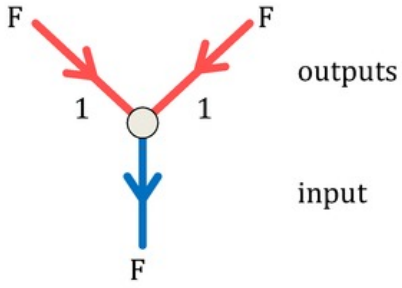
Gadget Framework

written by Hypersurreal on Functor Network
original link: https://functor.network/user/425/entry/197



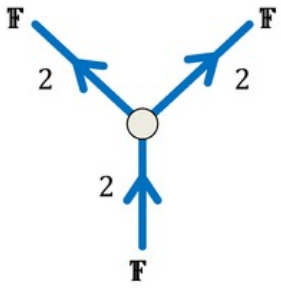
SPLIT vertex



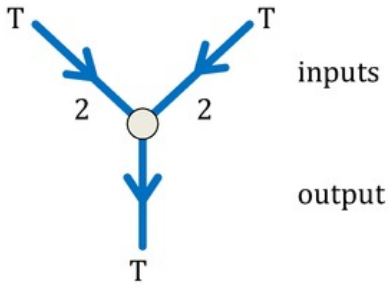


Rule: at least 2 units incoming at a vertex

OR vertex

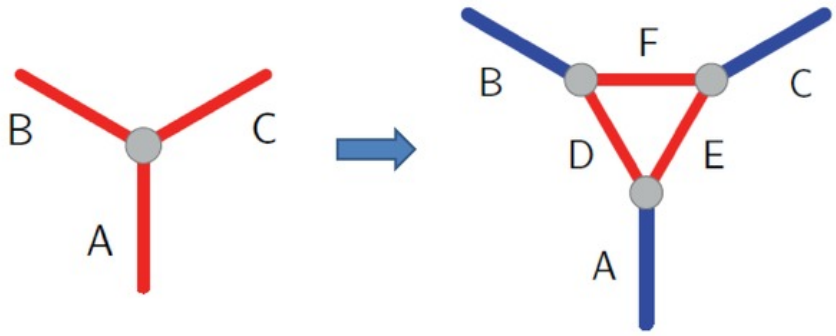


not your usual OR gate!

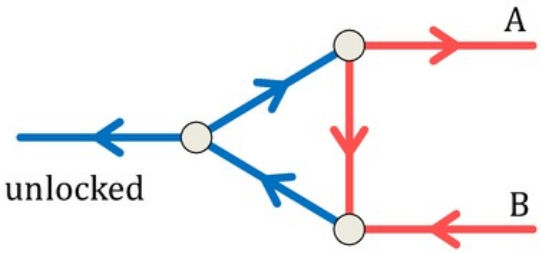


Rule: at least 2 units incoming at a vertex

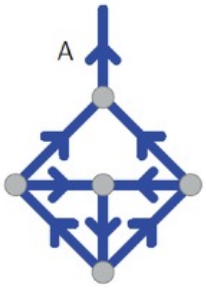
CHOICE vertex



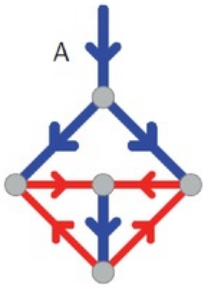
Latch



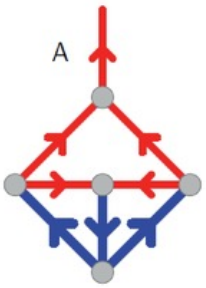
Wire Terminators



unconstrained blue terminator

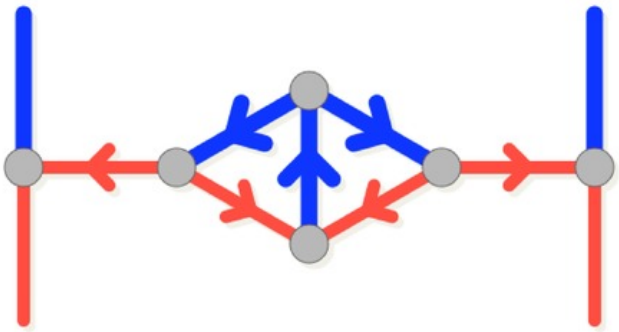


forced-inward blue terminator



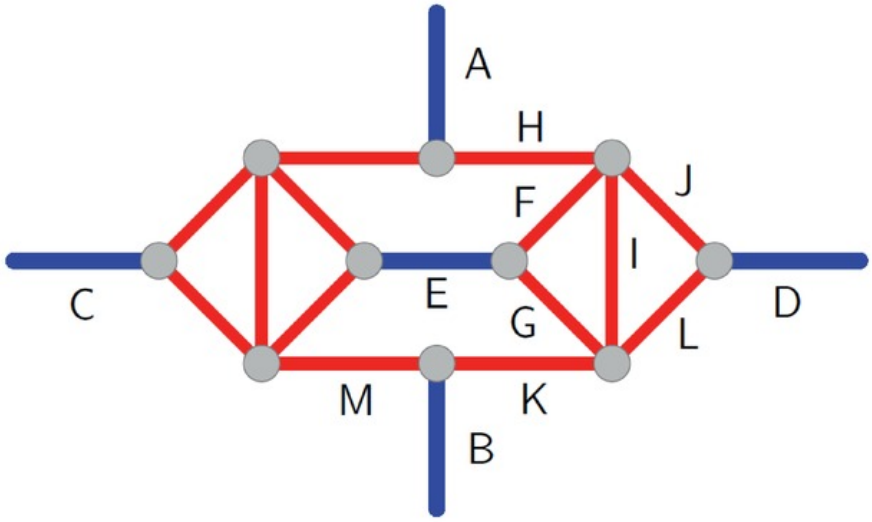
unconstrained red terminator

Red-Blue Conversion

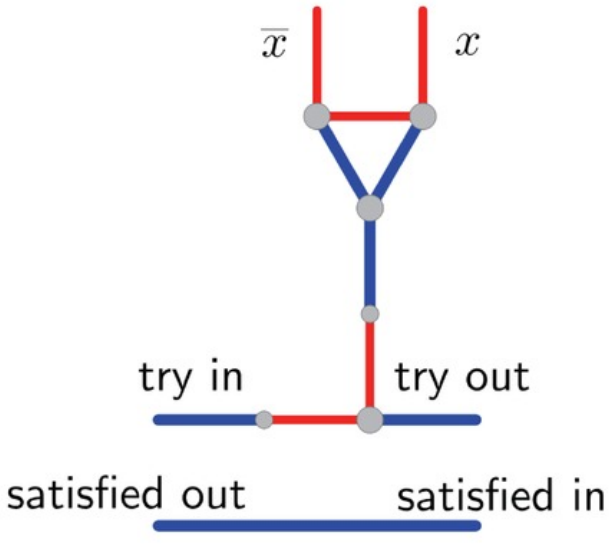


assume an even number of conversions

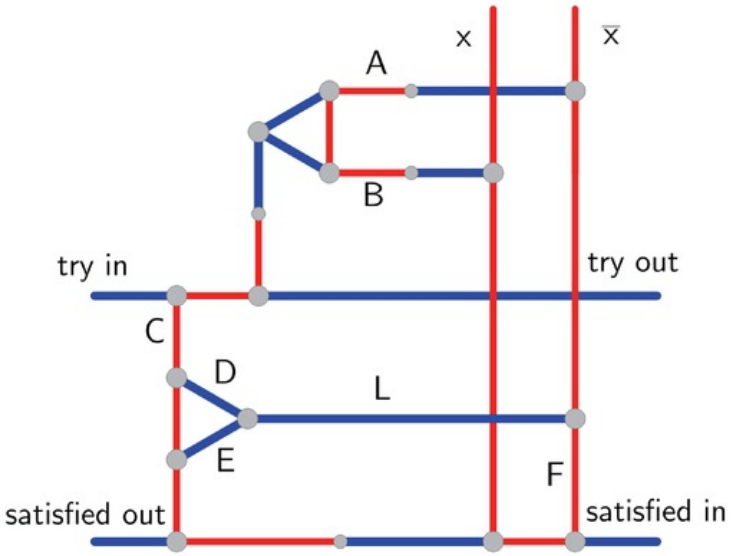
Crossover Gadget



Existential Quantifier

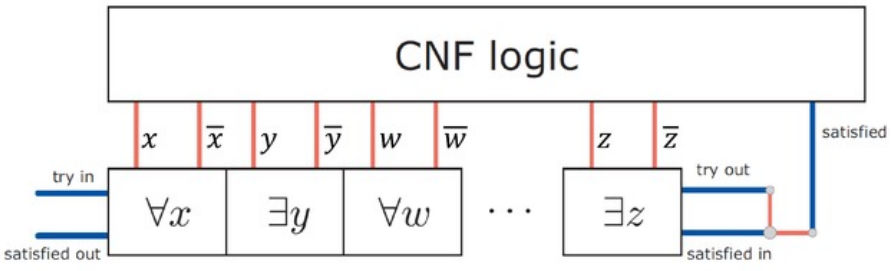


Universal Quantifier



Quantified Boolean Formulas (QBF/QSAT)

$$\forall x \exists y \forall w \cdots \exists z \left[(x \vee y) \wedge \cdots \wedge (\overline{z} \vee x \vee \overline{w}) \right]$$



Source: Visual Overview of Algorithmic Lower Bounds - Demaine