The Action-Composition Operator

The action-composition operator $\cdot$ (typed `\cdot`) is a TLA$^+$ primitive operator. For any actions A and B, the action $A \cdot B$ is defined so that a step $s \to t$ is an $A \cdot B$ step iff there exists a state u such that $s \to u$ is an A step and $u \to t$ is a B step. In other words,

$$[\![A \cdot B]\!](\langle s, t \rangle) \;\equiv\; \exists\, u \,:\, [\![A]\!](\langle s, u \rangle) \wedge [\![A]\!](\langle u, t \rangle)$$

This operator is rarely used. It is not currently supported by the TLC model checker or the TLAPS prover.

CLOSE