

TLA⁺ Versions of Examples from A Science of Concurrent Programs

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The directory containing this pdf file contains many of the examples from the book *A Science of Concurrent Programs* written in TLA⁺. If you have read or are reading this book but are not familiar with TLA⁺, you should read the note in the file `tlaplus-notation.pdf` in this directory.

The TLA⁺ specifications all have extensions `.tla`. For each of those specifications, a pretty-printed version appears in the file with the same name but extension `.pdf`. The pdf versions are produced automatically, so they contain occasional weird bits of formatting.

Most of the `.tla` files of TLA⁺ specifications have corresponding directories whose name ends in `.toolbox`. If you open them with the TLA⁺ Toolbox, you will find predefined models that were used to check the specifications. Comments in the TLA⁺ files and in the models can help you learn TLA⁺. See the TLA⁺ web site at

<https://lamport.azurewebsites.net/tla/tla.html>

for how to install the Toolbox and other TLA⁺ tools.

Some of the TLA⁺ specifications have proofs. Those specifications have corresponding `.tlaps` directories that contain unformation used by the TLAPS proof checker.

Increment: The *Increment* algorithm of Figure 3.5.

Fischer: Fischer's algorithm from Section 5.2.1.

ICen1: The *ICen1* program of Figure 7.4.