Significant acceleration of development by automating quality assurance of a medical particle accelerator safety system using a formal language driven test stand
The problem: Patients safety system QA
The solution: Automated test bench for unit tests

Sequential stimuli

\[
\text{SIGNAL\_A} \leftarrow \text{NOK}; \\
\text{wait for} \quad \text{t\_PAUSE}; \\
\text{SIGNAL\_B} \leftarrow \text{OK};
\]

Assertions

assert \text{SIGNAL\_C} = \text{NOK} \quad \text{report} \quad "\text{SIGNAL\_C not in state NOK at start of test" severity FAILURE};

Measurements

\text{measure falling\_edge}(\text{SIGNAL\_1}) \text{to rising\_edge}(\text{SIGNAL\_2}) \quad \text{name} \quad "t\_RTI";