BF Cause-Consequence-Cause Relations

Cause for State$_1$

Consequence from State$_1$
Cause for State$_2$

Consequence from State$_{np}$
Cause for the Failure

Improper Operation

...

Improper Operand$_{2j}$

Exploitable Error

Improper State$_1$

(operation$_1$,
operand$_{11}$, ...
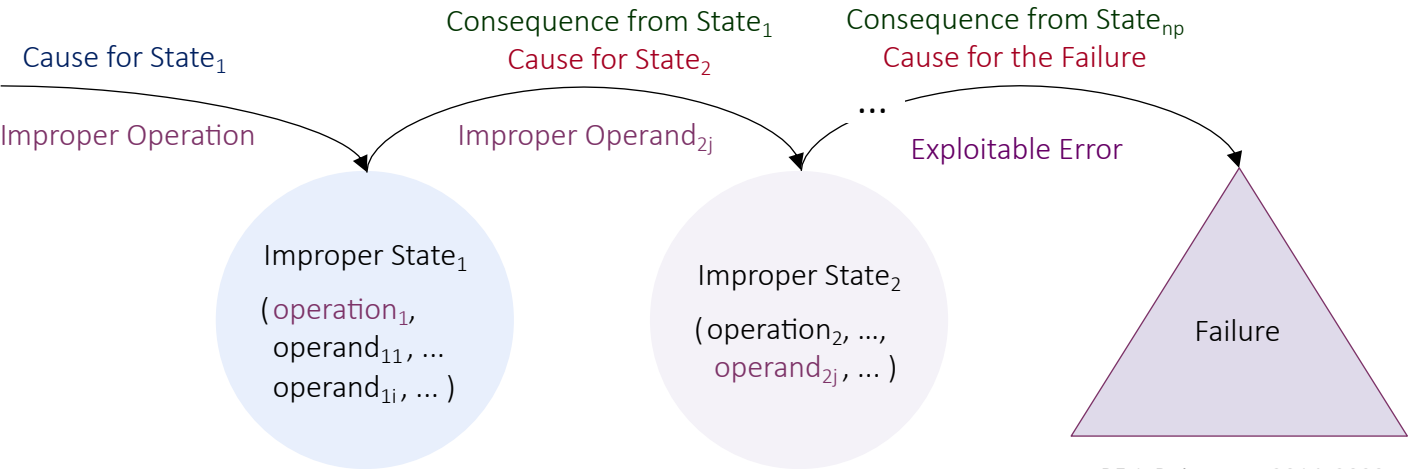operand$_{1i}$, ...)

Improper State$_2$

(operation$_2$, ...,
operand$_{2j}$, ...)

Failure

BF, I. Bojanova , 2014-2023

Initial State – caused by the Bug – the operation is improper

Intermediate, Propagation State – caused by at least one improper operand

Final State – results in a final, exploitable error

Failure – the result of a final error exploit