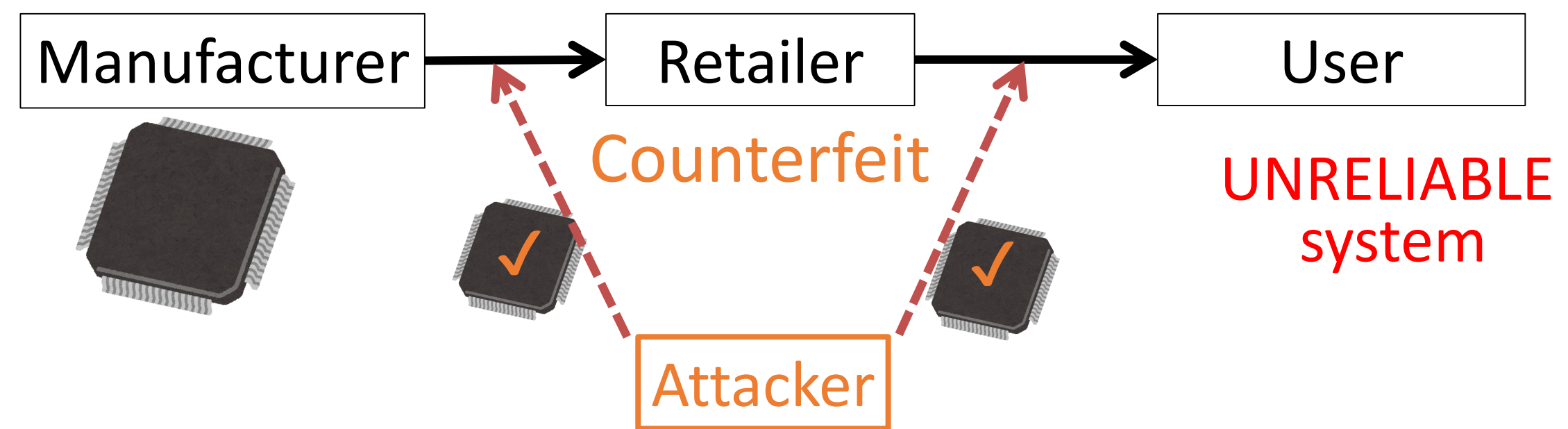
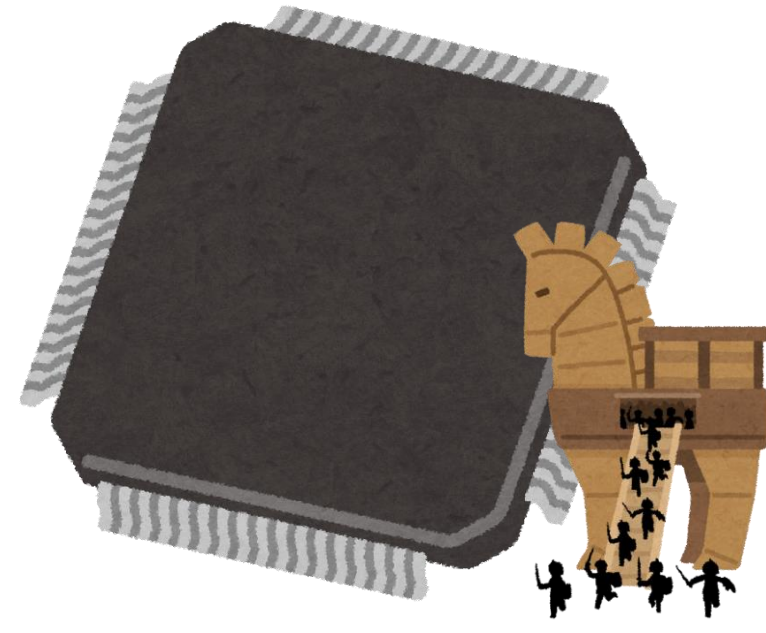


Background:

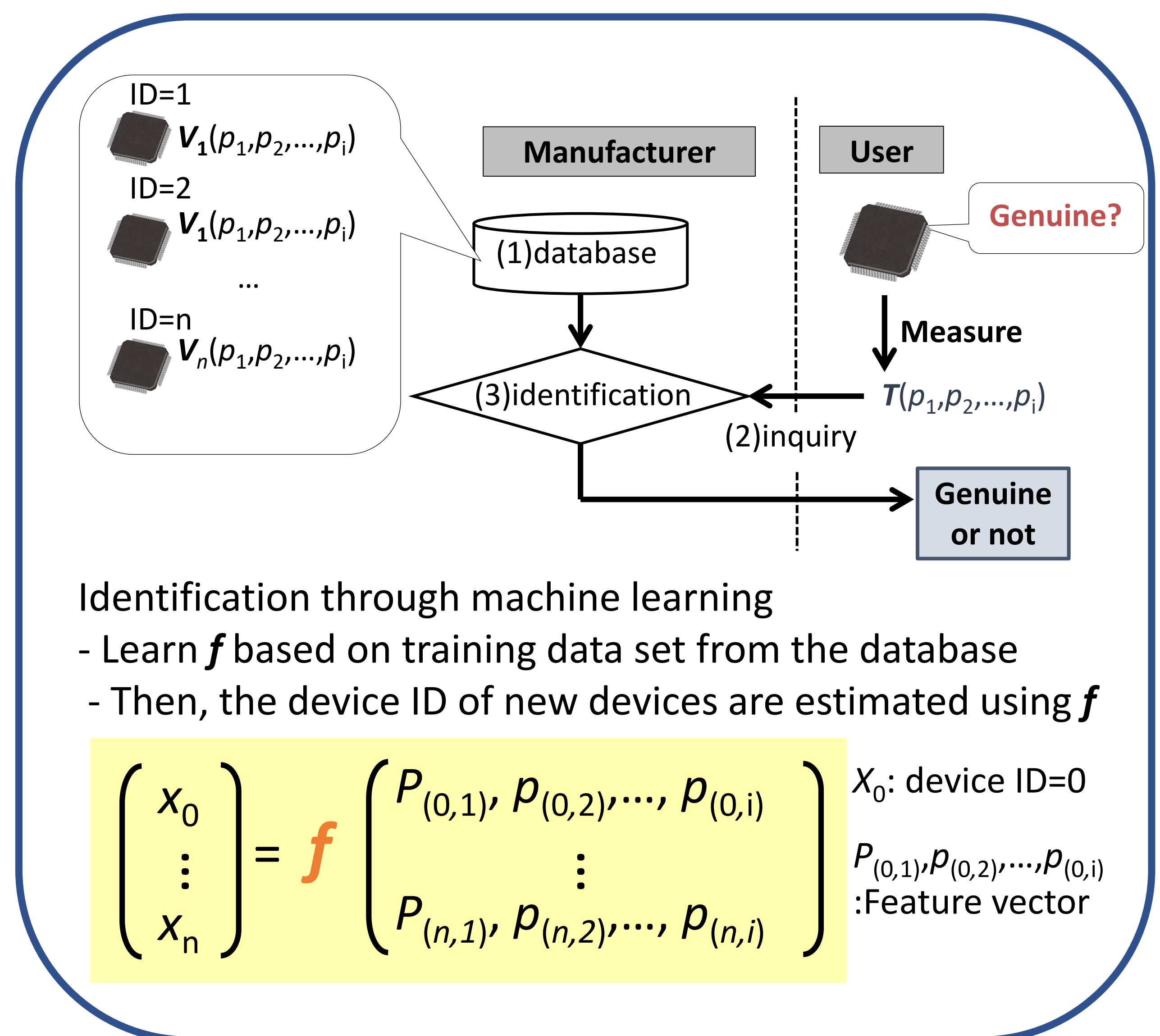
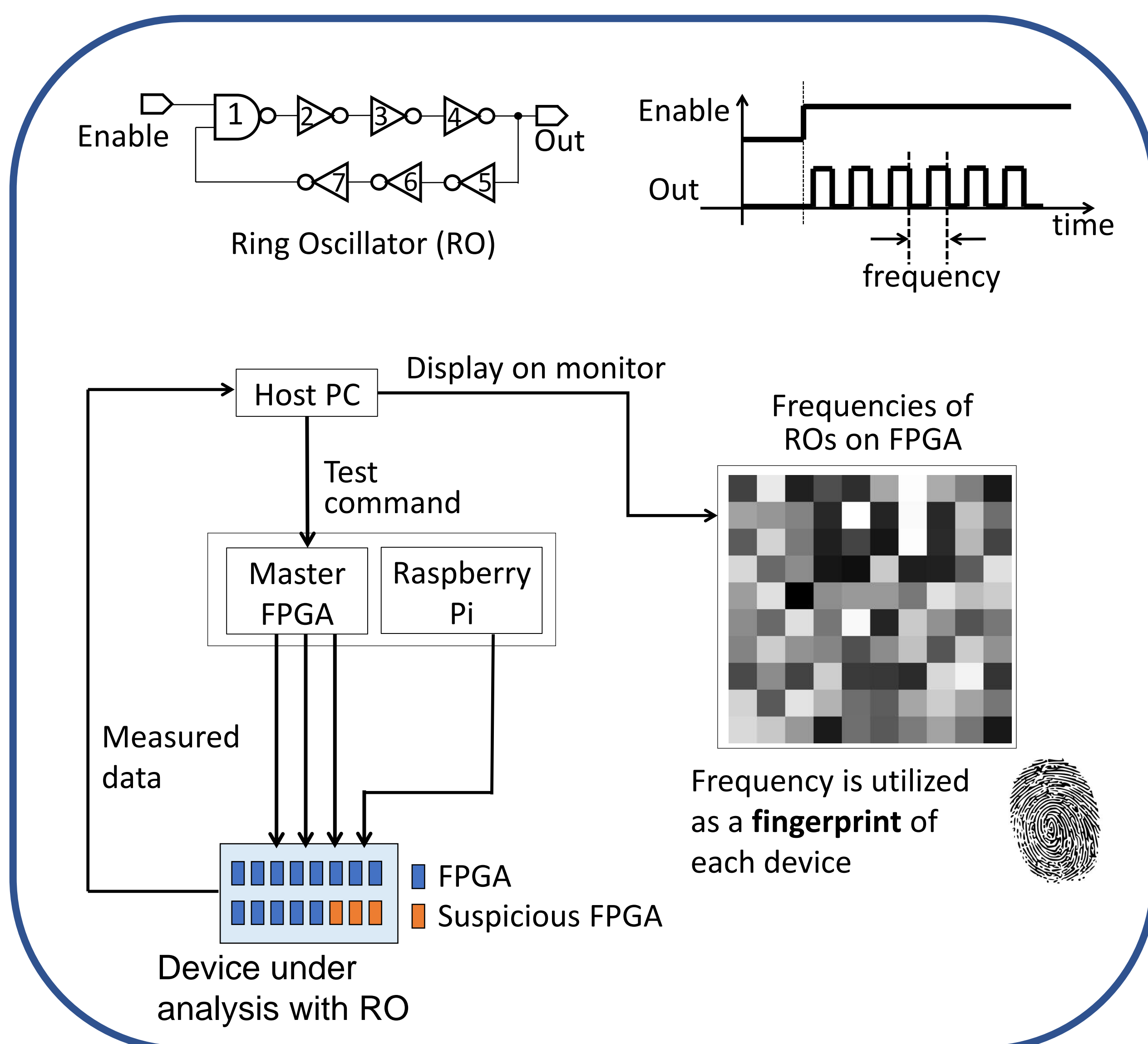
Reliability and security of FPGA devices are now much more concerned issues due to **counterfeiting device** and **Hardware Trojan (HT)**



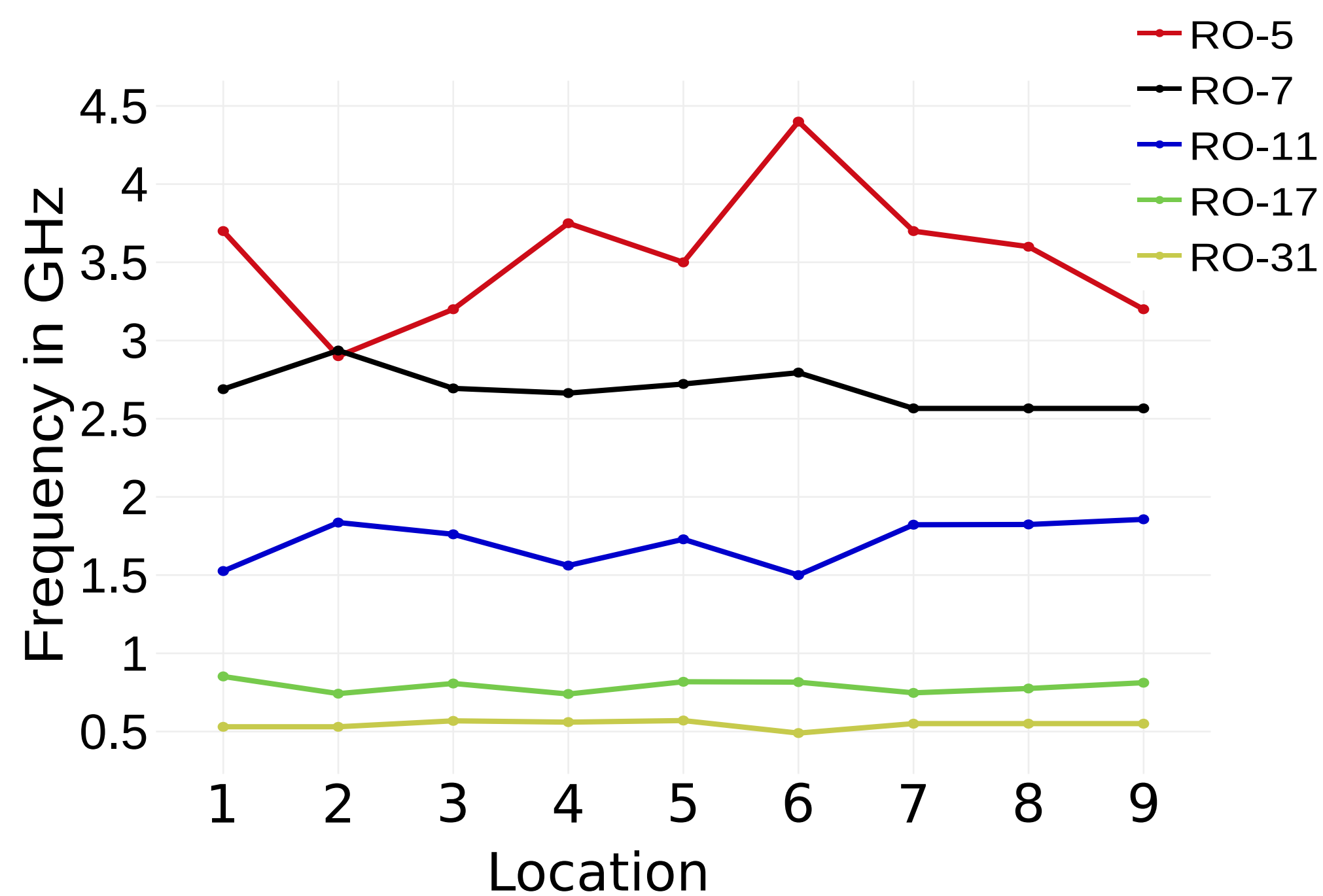
Objective:

Development a system to detect counterfeiting devices and HT for reducing probability of catastrophic consequences on safety critical applications such as defense, aerospace, medical, nuclear plant etc.

Proposed System to Detect Counterfeiting device

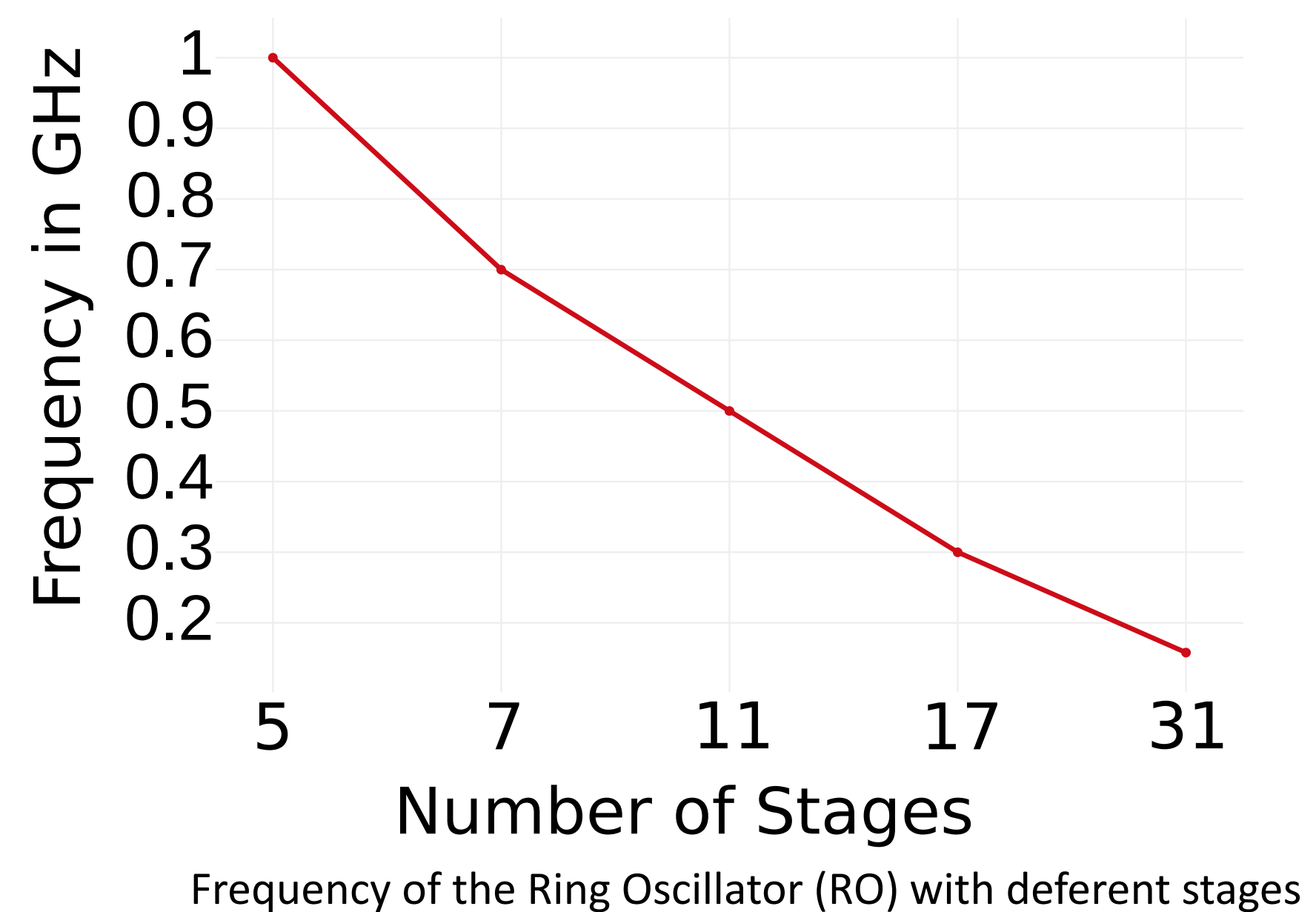


Result and Future Work



Frequency of the Ring Oscillator (RO) with different stages at the different location

- Altera Cyclone III board was used for hardware observation
- The frequencies of same stage ring oscillator were observed in different FPGA locations and varying of the result focuses the FPGA aging



Frequency of the Ring Oscillator (RO) with different stages

- Synopsys CAD tools was used to observe the frequency degradation of Ring Oscillator (RO) as the number of inverter stages increasing.

Future work:

- Currently we have focused only on the FPGA reliability
- As the future work, we can extend our current work for security issue more elaborately, specially for Hardware Trojan detection.