

# **Panel 1: Mechanisms and ideas to design the 5G radio layer for resilient service**

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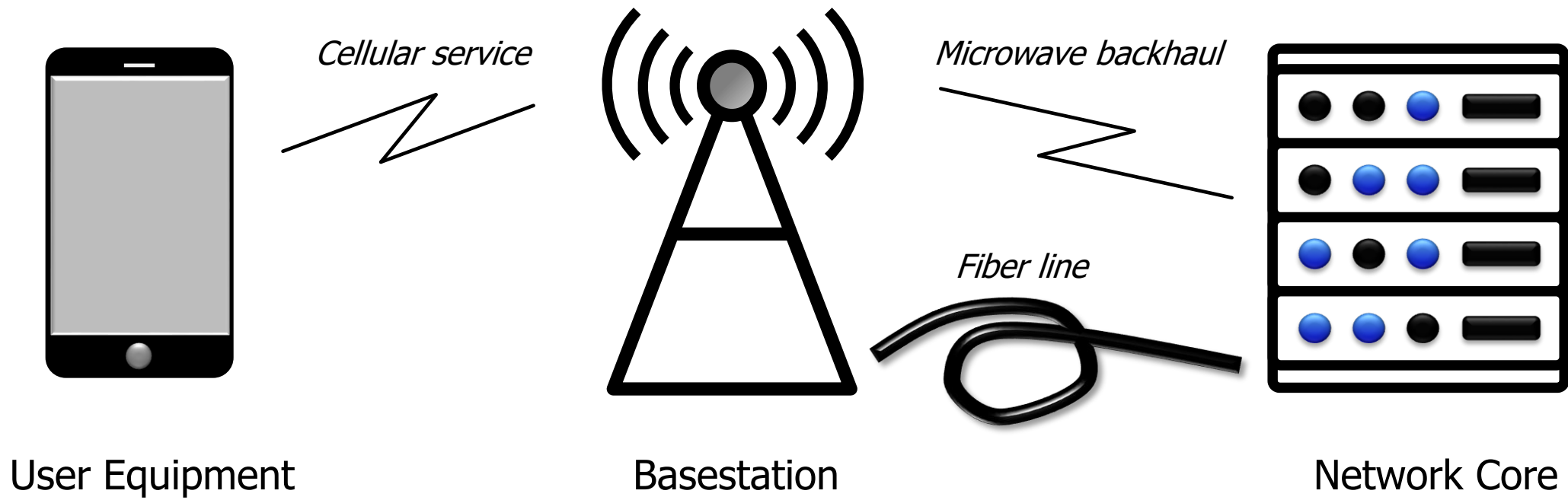
Tom Rondeau

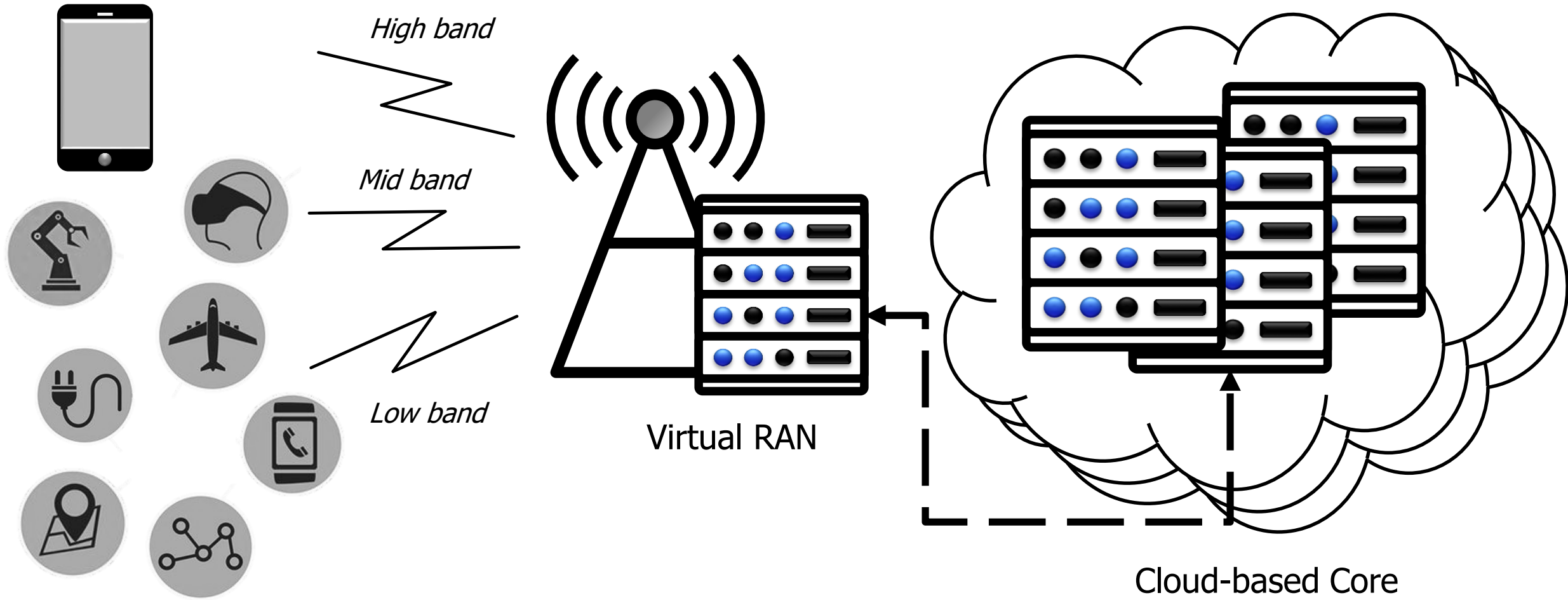
ISART 2020





# Traditional Cellular Connection Model (an over-simplification)

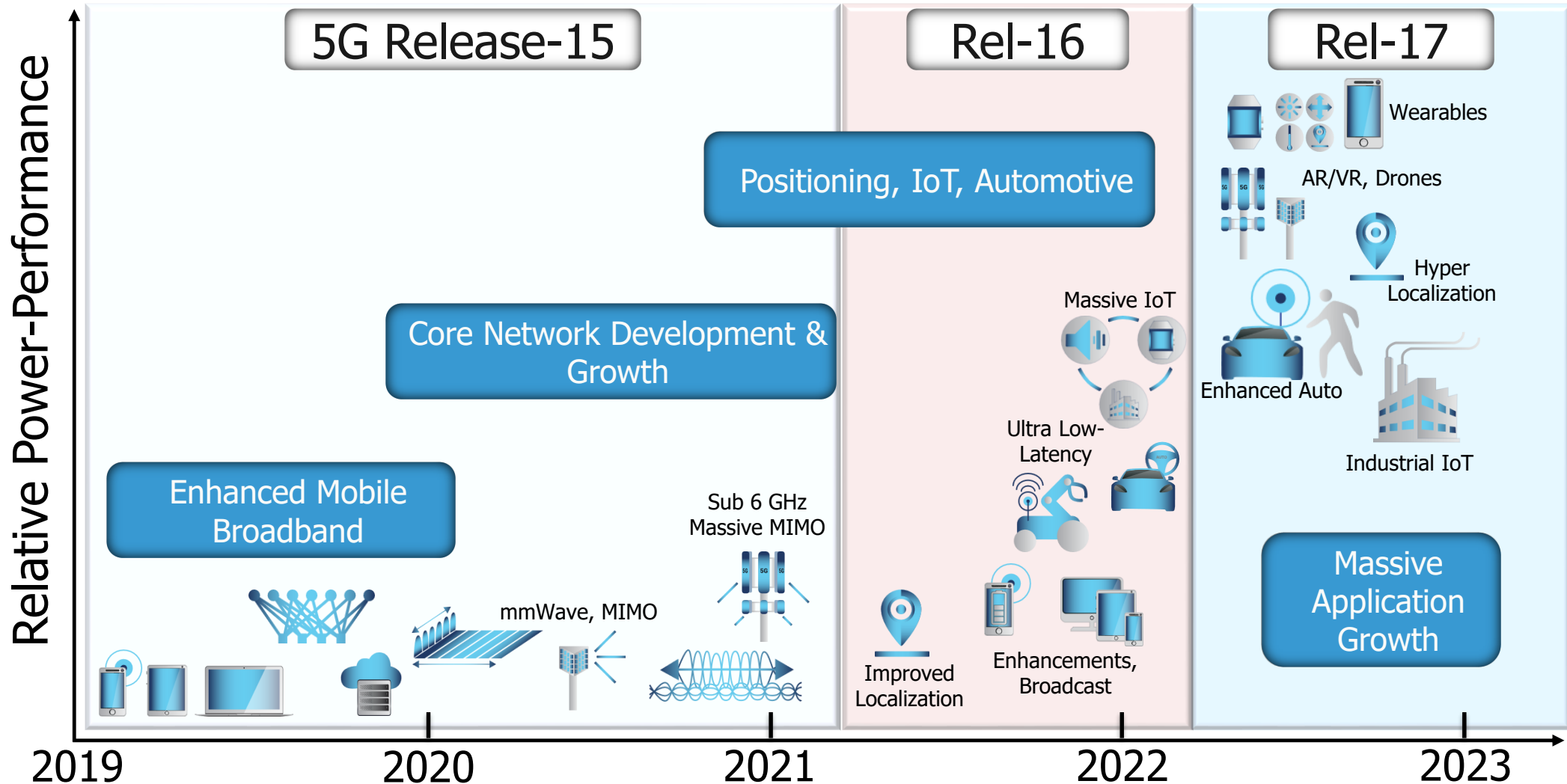




Internet of Things



# Explosions of challenges and opportunities





## MODEMS

Discrete Hardware  
components



RFICs and  
ASICs



RFICs and  
Software  
Defined Radios

## Core

Specialized  
everything



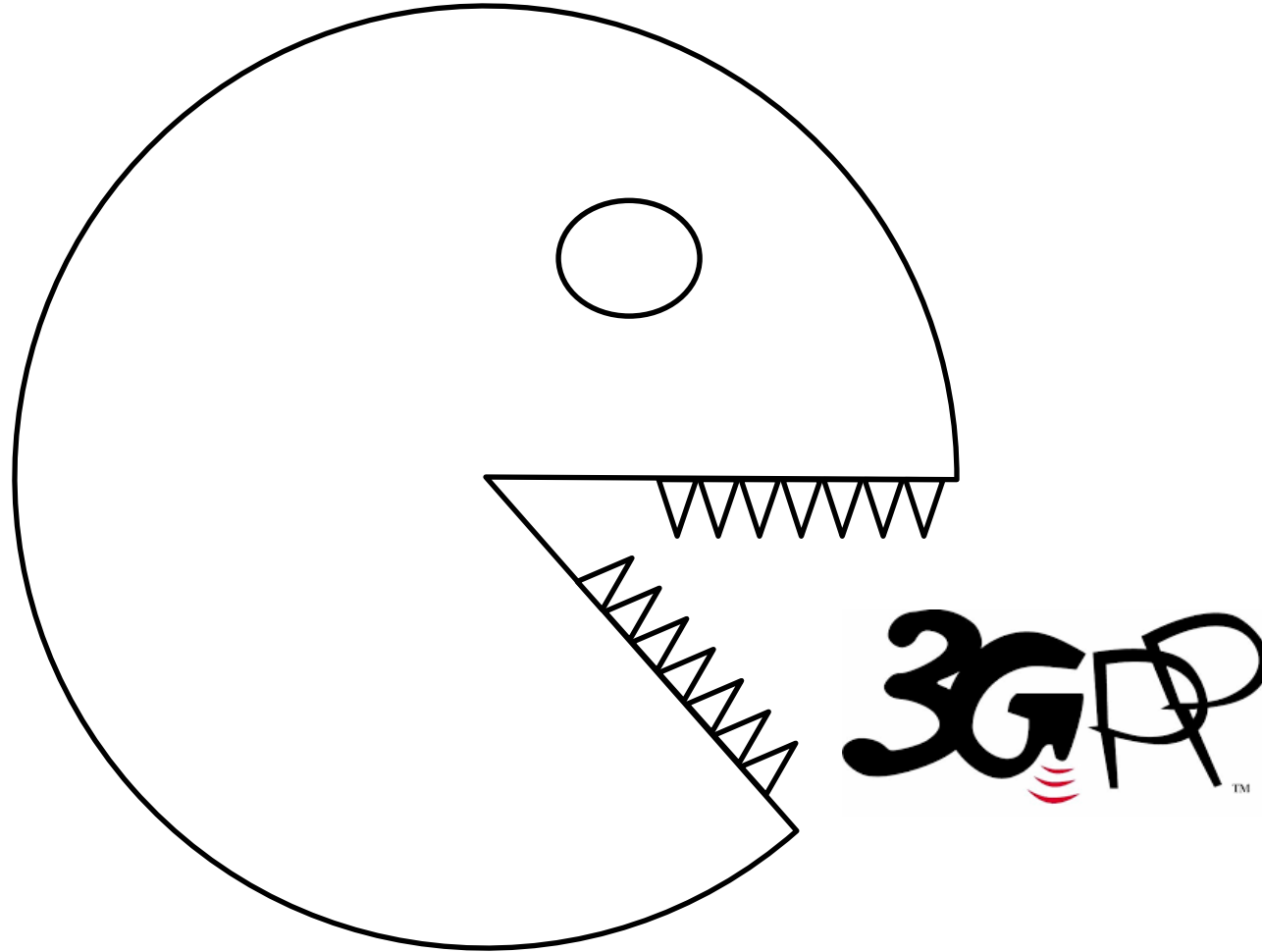
Cloud of  
specialized  
computing



Cloud  
processing



# Software is still hungry, apparently



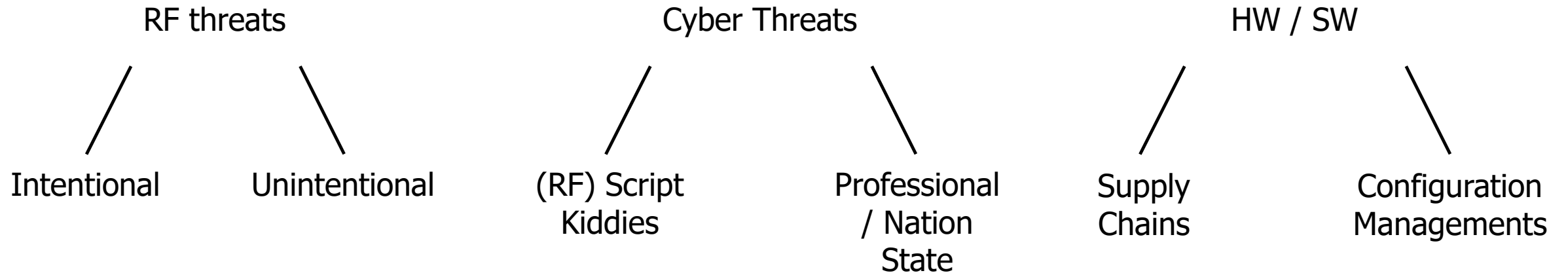
Credit: 3gpp.org for 3GPP logo

Context: Why Software Is Eating The World, Marc  
Andreesen, Wall Street Journal, Aug. 20, 2011



Which means that resilience is an RF, hardware, *and software* problem

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