

Air  
Land  
Sea  
Space  
Cyberspace

Innovation. In all domains.

# Super Computing with Embedded Efficiency: Electronic Warfare

Dr. Bo Marr

Ken Prager

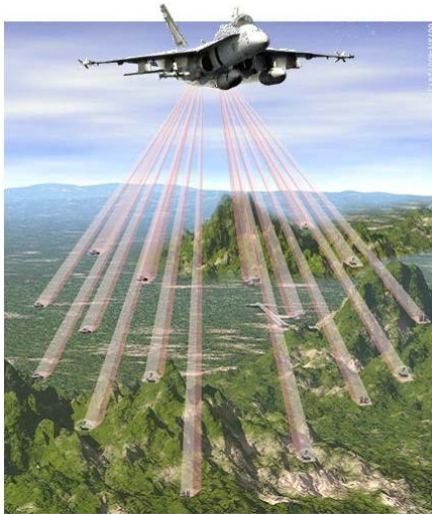
Raytheon (SAS) Engineering

Mark Trainoff

Raytheon Advanced Concepts and Technology

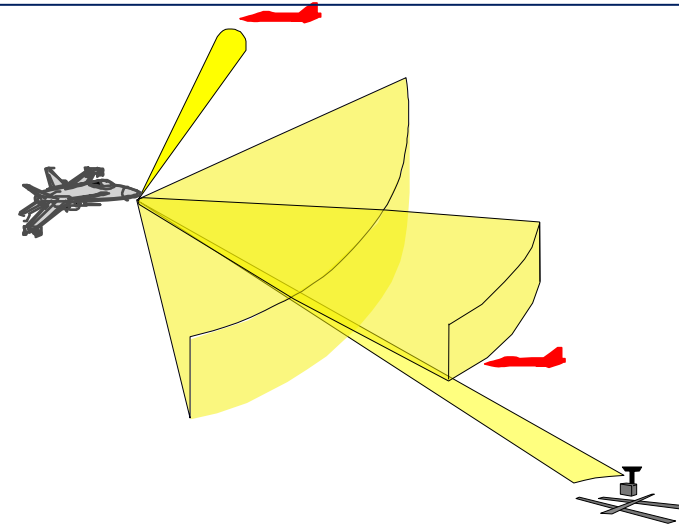
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# Next Gen Electronic Warfare will employ multiple beams (U)



## Next Generation Electronic Warfare Sense and Attack Systems

- Multiple simultaneous targets present in current environments
- Digital techniques allow efficient scaling to large number of beams (> 2)
- Digital techniques allow neutralization of large number of simultaneous targets (> 10)
- Systems must be lighter and more efficient = more functionality moved on-chip



## Active Electronically Scanned Array (AESA) Enables Near-Simultaneous Multi-Mission Capabilities

- Air-to-Air and Air-to-Ground with One Search-Track Mode
- Detect/Track Multiple Targets
- Connectivity with On-board and Off-board Sensors
- AESA Transmitters enables simultaneous protection of the Strike Package

**Next gen systems require 30 – 300+ GOPS/W  
in processing power efficiency**

**Next gen military systems will require a 10x-100x  
leap in processing power efficiency**

# Growing gap in processing power efficiency between on-board DoD needs and current technology

