NDIA Trusted Microelectronics Joint Working Group

Team 1:

Future Requirements

Presented by
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Team Members

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Approach

What are the microelectronics capabilities needed by defense contractors to maintain our technical advantage, and in the future? Are there ways to quantify the value of hardware performance in the context of systems? Are there new hardware paradigms on the horizon that could be disruptive?

Our team has broken up this problem as follows:

1. **What are the Future System Needs and System Capabilities ?**
2. **What are the up and coming Technologies Enabling These Capabilities at the component level?**
3. **How do we ensure that any gaps can be closed and the desired future system capabilities enabled?**
4. **What are the other Emerging Factors?**

Deliverable

The team will develop a document that will clearly define and **discuss** each of the following areas:

1. What are the Future System Needs and System Capabilities ?

Understand key upcoming future systems needs in the military / IC, and trends in the Defense Market. This covers man portable components to Space systems to Sustainability in all products.

2. What are the up and coming Technologies Enabling These Capabilities at the component level?

Understand and prioritize the key developing capabilities at the research and university levels. This includes 3D packaging to deep node CMOS, and other developing technologies.

3. How do we ensure that any gaps can be closed and the desired future system capabilities enabled?

Trust and Assured Access Plan for Emerging Technologies of interest

An analysis on the origin / Availability/fragility of Emerging Technologies, along with recommendations for paths forward.

4. What are the other Emerging Factors?

Cyber hardened, and increased threat vectors driven by increased level of sophistication and the widening gap between commercial adoption speed of electronics and DoD adoption rates/speeds