

**CURTISS -
WRIGHT**

Defense Solutions Division



A Bigger Tent

Expanding VITA into Broader Markets



Embedded Tech Trends 2024

Boards and Backplanes in Boxes

Boards & Backplanes in Boxes isn't new

Well understood...

- Maintenance Concepts
- Cost / Value trades
- Architectures
- Environments
- Performance
- Security

This concept has been around awhile...



**TV Cameras
(1980s)**



**Dolby Stereo
(1970s)**



**Saturn V
(1960s)**

What are we doing now?

Aerospace & Defense drives certain optimization:

- “Extreme” environmental considerations
- Generally driving performance over cost
- Meeting defense buying behaviors (including cycles), long term sustainment

How does this impact us?

- How we design and specify within the standards – always about “more” of the A&D optimizations (consider VITA 47)
- Continual focus on top performance in most extreme environments

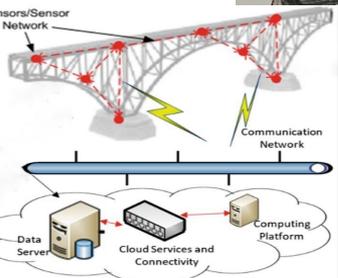
What can we do to broaden the tent?

Potential new markets

Not this ...



Let's consider everything else "non-consumer" ...



THE ROUTE 66 OF INTELLIGENT INFRASTRUCTURE
PUBLIC PRIVATE PARTNERSHIP

AUTONOMOUS MOBILITY ZONES

DISTRIBUTED WORK CENTERS

PUBLIC SAFETY & RESPONSE

INTELLIGENT INFRASTRUCTURE:
200 FPMU Units, 2 Micro Data Centers
HVDC Power and Fiber
3.5 MW Computing Cluster
Smart Ducts and Smart Vaults
PMU support for 12 modules
Dozens of Community Services

Control | Operate | Manage

ADDED VALUE

- TIME SAVING
- REDUCED RISK
- DATA MANAGEMENT
- IMPROVED SECURITY
- INTEGRATED SERVICES

AUTONOMY



Target “Markets”

- **Critical Infrastructure**
- **Industry 4.0**
- **Supercomputing**
- **Medical**
- **Broadcast / Entertainment**
- **Heavy Industry (including Off-World)**
- **IoT throughout infrastructures**



Critical Infrastructure Sectors
Chemical Sector
Commercial Facilities Sector
Communications Sector
Critical Manufacturing Sector
Dams Sector
Defense Industrial Base Sector
Emergency Services Sector
Energy Sector
Financial Services Sector
Food and Agriculture Sector
Government Facilities Sector
Healthcare and Public Health Sector
Information Technology Sector
Nuclear Reactors, Materials, and Waste Sector
Transportation Systems Sector
Water and Wastewater Sector

Call to Action

UNDERSTANDING

- What are the optimizations for target market environments, including cost?
- Which have no “standards” (real or de facto) and which do?
- New markets vs old – which are ready for change and innovation?
- Entrenched vendors vs dynamic markets?
- What’s the need today? Tomorrow?

APPLICABILITY

- Compare and Contrast – what applies and what doesn’t from our current A&D market?
- Performance
- Environments
- Maintenance
- Security
- Etc.

ACTIONS

- VITA 47 – expand to capture more environments
- VITA 62 – more options for power inputs
- VITA 65 – more topologies and modules?
- VITA 48 – more options?
- VITA “new” – what else can we capture

How do we go forward?

ETT in 30 years...

Prompt: Create a picture of a gigantic tent with the Earth, Moon, and Mars inside, and add the VITA logo to it.



...perhaps AI will follow instructions as well as my 12-year-old

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Q&A

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