

# 2012 DHS S&T/ASD(R&E) CYBER SECURITY SBIR WORKSHOP



Homeland  
Security  
Science and Technology



## Cyber S&T Related Needs

Honeywell International

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## Protected Systems Architectures

- Space & Missile Platforms
- Military Aircraft Platforms
- Electronic Warfare Systems
- C4ISR Systems
- Ground Sensor Systems



## Defense & Space Systems

- Flight Platforms
- Tactical Platforms
- Strategic Platforms
- Space Payload & Small Satellite
- Electronic Warfare
- Network Centric Platforms

SMARTGRID  
Security  
Architectures

## Collaborative, Interoperable Systems

- Logistics for High-Value Assets & Long-term Asset Management
- Small Radius / Access-Controlled Env.
- Command & Control



## Cyber Security

- Identity Management
- Supervisory Control & Data Acquisition
- Security Management Systems
- Trusted Software
- Standards Compliance

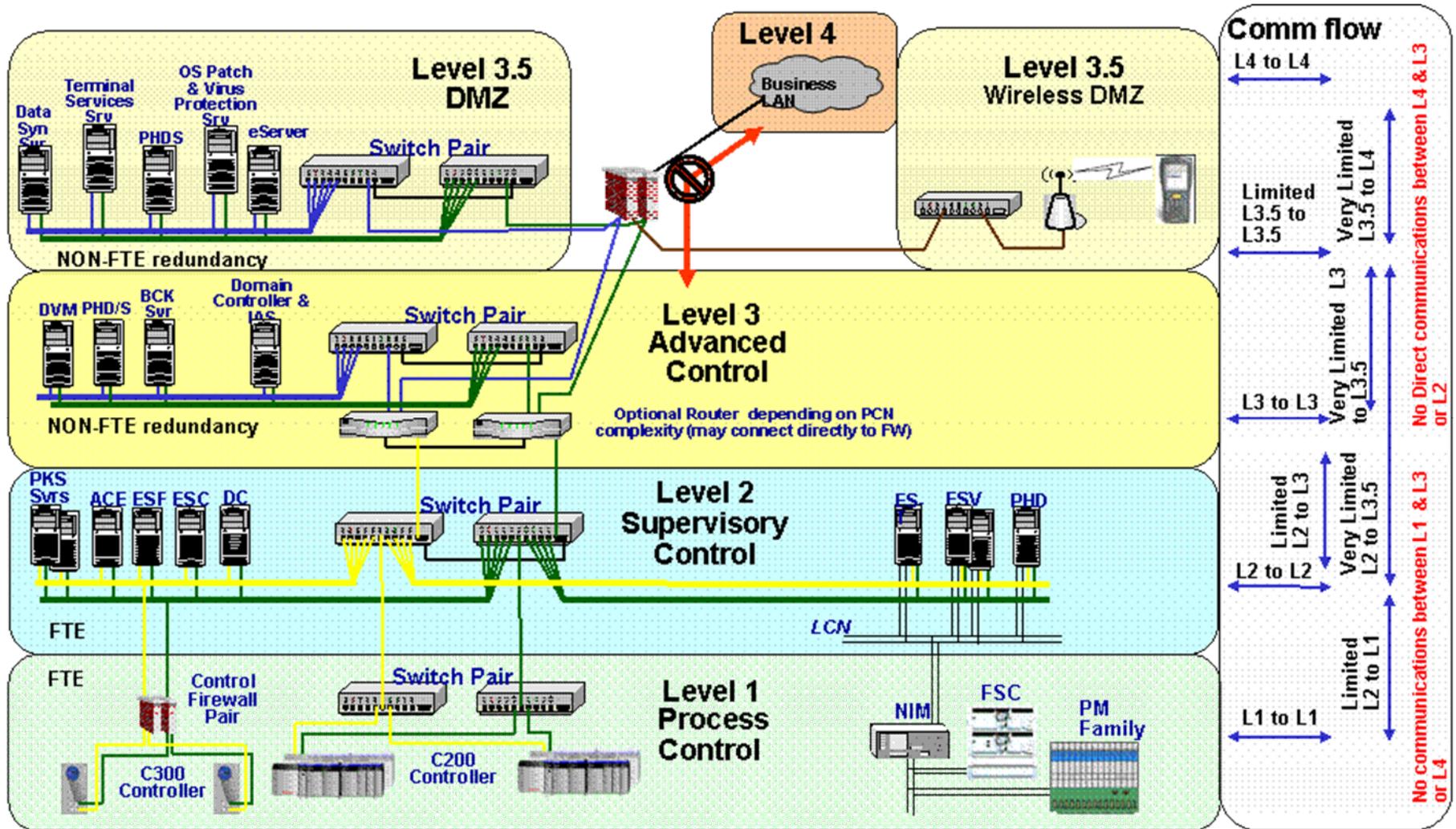
***Cyber can cross multiple lines of Honeywell's business areas***



## *Advancing how we do our Defense-in-Depth strategy*

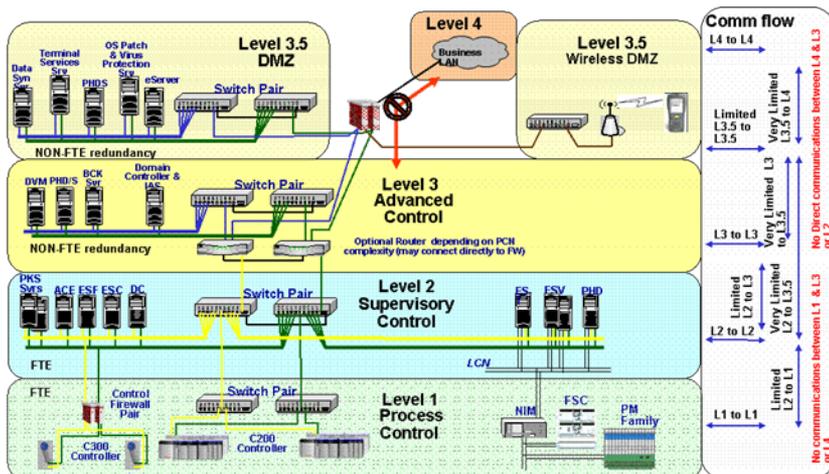
Class of Attack	First Line of Defense	Second Line of Defense
Passive	Link and Network Layer Encryption	Security Enabled Applications
Active	Defend the Network Boundary	Defend the Computing Environment
Insider	Physical & Personnel Security	Authenticated Access Controls & Audits

# Cyber Needs for High Security Architecture Tools



*Cyber needs include the tools for network components and supporting software*

## Site Security – Products and Services



### Overview:

Industry cyber needs include:

- Cyber tools for managing all critical security network information
- Cyber tools for managing all critical security network operations
- Tools for maintaining network security policies.

### Technology for Advancement:

- System topology analysis (What's hot)
- SW integrity analysis
- Log analysis
- Visualization layers

### Technology for Enabled Systems

- Cyber Bubble - Threat Detection/Characterization
- Anti-Virus Tools – Update Management
- Network Visibility – Health Assessment
- Patch Management - Maintenance Summaries
- Compliance Management – Keeping Pace

### Offering Benefits

- High-Security Access and Remote Access Control
- Novel ways to manage network security complexity

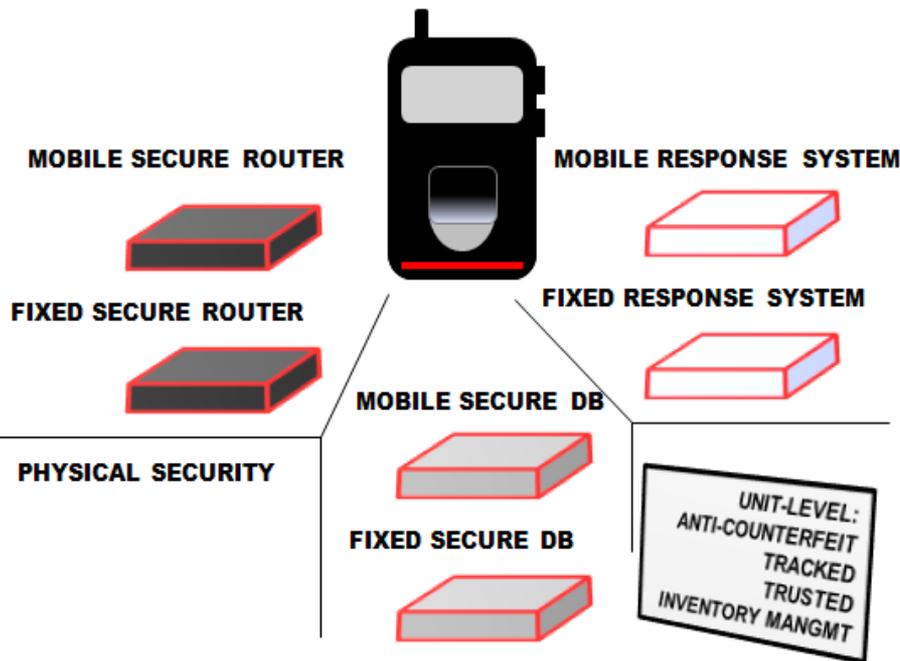
Seeking Technologies that support these high-level site management priorities



- Analysis/ Deep Drive
- Incident Response
- Premium DNS
- Endpoint Monitor
- Perimeter monitor (IDS)

## LOGISTICS – Network Products

Authentication			
Reader/Cipher	Biometric	RF	KEY MNGMT
Communication			
Network	Encryption	GPS	Multi-Spectral
Data Processing			
Data Mgmt	Multi-Integrated SP	RE-Response	
Autonomous			
Smart	Robust	Response & Recovery	Ethernet



### Overview:

- Peripherals for example Hand-Held Product
- Anti-Counterfeit Methods with Certification
- Robust Multi-Level Authentication/Protection
- Static or Mobile Network of Information Systems
- Enabled Alarm/Response/Monitoring

### Technology for Advancement:

- Integrate Secure Processing
- Integrate GPS/Biometrics and Inventory Mgmt.
  - Container Level
  - Multiple Containers & Multiple Hand-Held
- Add secure RF Comm and Data Management
- Apply Unique Enterprise IA-SW protection

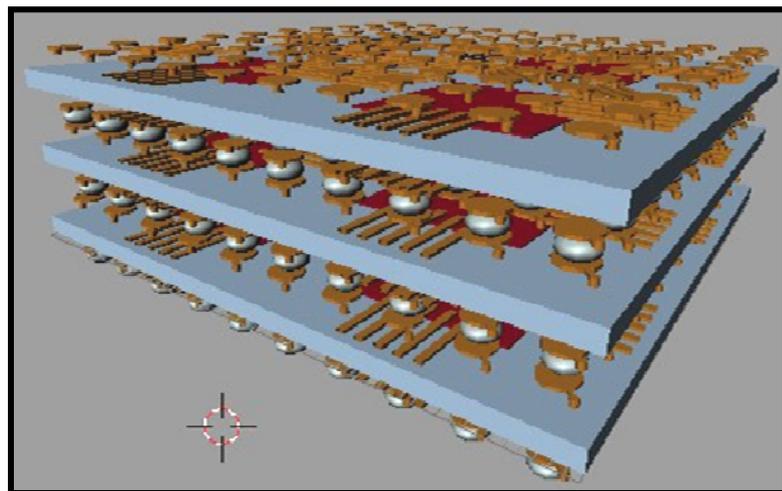
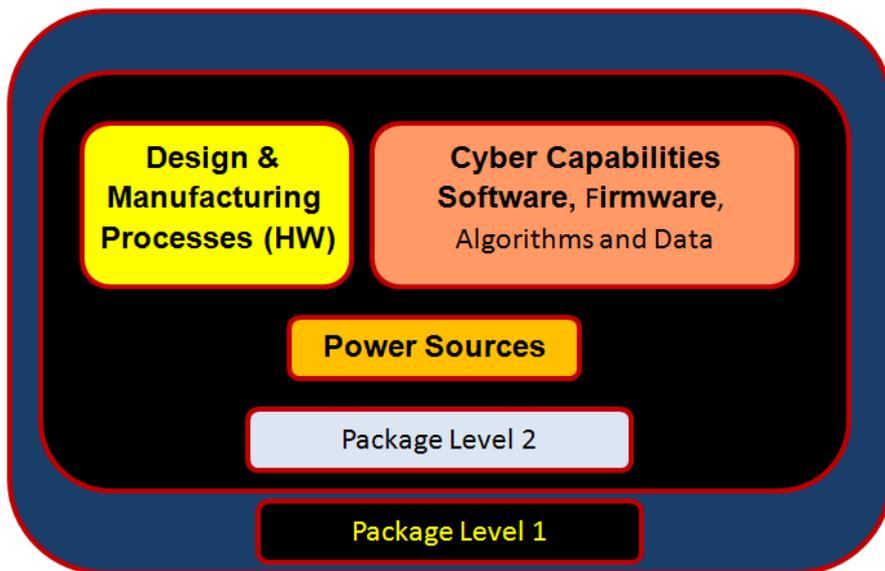
### Technology for Enabled Systems

- Hand-Held Logistics Management/Communication Network
- DoD - Compliant Security Features
- Multi-Level Authentication Tools
- Reconfigurable – Cost-to-options
- Supports Real-Time Database retention / update

### Technology for Human Factors

- Autonomous – Remote Assets Management
- Robust, Smart Security System.

## HW Physical Security Elements – Design



### Overview:

- Re-Configurable Secure , RT Communications & IT HW Management
- Robust Multi-Level Protection of Authentication Technology
- Full Range of Information Systems Platform
- Enables Detection and customizable Response

### Technology for Advancement:

- Algorithms or code supporting protection and exclusivity of embedded cyber security tools
- Securing cryptographic keys/ciphers
- Unique, secure cryptographic engines
- Isolated secure processing architectures.
- 3-D alternative packaging

### Technology for Enabled Systems

- Secure Processing [Data and communications)
- DoD - Compliant Security Features
- High use of COTS
- Reconfigurable – Cost-to-options
- Allows autonomous “no man in the loop” system security
- Highly portable Command and Control capability

### Offering Benefits

- Re-configurable enterprise environment
- Robust, Smart Security System.

- **Trends in Cyber Technology continue to need solutions for HW.**
- **Programs need technologies that provide protection of the cyber security measures and solutions themselves.**
- **Need technologies that enhance cyber systems trust features against malicious content, counterfeit devices and other vulnerabilities.**
- **Need tools for proficient identification, escalation and resolution.**
- **The need continues to exist for efficiency and speed in cyber security.**