SECURING THE CONNECTED ENTERPRISE.
IT’S ONLY A MATTER OF TIME. WILL YOU BE READY?

NITISH SHRIVASTAVA
DIRECTOR, HARMAN CONNECTED SERVICES
EVERYTHING WAS FINE...
THEN THIS HAPPENED.

- MIRAI: Internet goes down
- RECALL OF 1.4 MILLION JEEPS
- PRIVACY ATTACK: Sensor hacked
- DAMAGE OF DEVICES: Jet thrusters out of control
- LIGHTS WENT OUT: Endless start of systems
- NOT SO STRONG STEEL: Devices hacked
THE RISE OF IOT

BY 2020, MORE THAN 25% OF IDENTIFIED ATTACKS IN ENTERPRISES WILL INVOLVE THE IOT, ALTHOUGH THE IOT WILL ACCOUNT FOR LESS THAN 10% OF IT SECURITY BUDGETS.

*SOURCE: GARTNER REPORT & IOT ANALYTICS 2018
HARMAN AT THE CENTER OF DELIVERING CONNECTED EXPERIENCES

- **Employees**: 35,000
- **Countries**: 30+
- **Brands**: 16+

**HARMAN BUSINESSES**

**CONNECTED SERVICES**
- Platforms | Cloud Computing | Analytics | AI | IoT | TechOps | Mobility | OTA
- Leading Global R&D services provider
- Rated as leading IoT, Cyber Security, Communications & Digital Services
- New-age Technology Focus: AI, ML, Conversational UX, AR, VR
- Asset-led GTM

**LIFESTYLE AUDIO**
- Premium Branded Audio | Sound Management S/W for Car, Home and On-the-Go
- Largest supplier of premium branded audio solutions
- JBL, HARMAN-KARDON, MARK LEVINSON, AKG ++

**CONNECTED CAR**
- Navigation | Multimedia | Connectivity | Telematics | Safety and Security
- Market leader in connected car solutions to the world’s automakers
- Powering 8 of the 10 most reliable cars globally

**PROFESSIONAL SOLUTIONS**
- Audio-Lighting | Video Switching | Automation for Enterprise & Entertainment
- World’s largest professional audio, lighting, video and control products and systems company

**GLOBAL LEADER IN AUDIO, CLOUD, MOBILITY, ANALYTICS, COGNITIVE, IOT SERVICES & PRODUCTS**
THE CONNECTED ENTERPRISE: CONVERGENCE OF IT + OT

Information Technology
- ERP
- CRM
- Demand Management
- Financial Planning
- Network Optimization

Costs
Orders
Constraints
Specifications

Context
Visualization
Prediction
Monitoring

Operational Technology
- State
- Location
- Conditions
- Events

Control Systems
Smart Machine
Location Systems
Environment Sensors
Barcodes/RFID

✔ Smart Manufacturing
✔ Connected Cities
✔ Connected Vehicles
✔ Smart Agriculture
✔ Smart Grids
✔ Connected Homes
✔ Connected Fitness
IOT OR INTERNET OF ‘VULNERABLE’ THINGS

- Insecure Web Interface
- Insecure Network Services
- Privacy Concerns
- Ineffective Authentication/Authorization
- Lack of Transport Encryption
- Insecure Cloud Interface
- Insecure Device Interface
- Insufficient Security Features
- Insecure Software/Firmware
- Erasing All Personal Information
CALL FOR EXPANSION OF SECURITY NEEDS

INCREASED ATTACK SURFACE

THREAT DIVERSITY

IMPACT AND RISK

REMEDICATION

PROTOCOLS

COMPLIANCE AND REGULATION

Converged, Managed Network
Resilience at Scale
Security
Distributed Intelligence
Application Enablement
SUCCESSFUL STEPS IN SECURING IOT

✓ C-level visibility of service level risks & Infrastructure vulnerabilities
✓ Process maturity & compliance
✓ Securing network edge devices, and cloud operations
✓ Managed security services
✓ SecOps and Security Testing (penetration etc)
✓ Device reverse engineering and due diligence
✓ Improved logging within standard
✓ Security devices to interact with a multitude of network protocols
✓ Continuous Defense to limit the attack surface
✓ Government Regulations and Liabilities for Consumer Devices
WATCHDOG TECHNOLOGIES AT HARMAN

Identify & Trust
- Entrust Data Card

Communication
- Castanet IoT

Endpoint Mgmt
- Marimba & Redbend

Vulnerability
- Clarinet

Compliance
- Log sight

Others
- AI, Bigdata, Analytics…
PARTNERING FOR SUCCESS

HARMAN engineering capabilities in IoT domain

HARMAN product and vertical industry expertise

Entrust Datacard security offering and experience

Entrust Datacard security brand and track record

Collaborative team to accelerate opportunities in IOT
IoTrust: Compelling IoT Security Solution
Pre-Integrated Offerings

- Integrated Device and Data Security
- Identity Management: Manufacturing to Operations
- Authentication and Authorization for every class of device
- Data Acquisition Management
- Supply Chain Integrity
- Secure Auto Enrollment and Provisioning

IoTrust Value: Delivering secured infrastructure between “things” and applications

Cloud ready, Application and Data platform agnostic

Enabling different classes of “things” existing or greenfield

- Streamlined deployment for business outcomes
- Strong security aligned with operations requirements
- Scalable and aligned to evolving ecosystem
QUESTIONS?