Smart Grid Communication Platform

Delta Networks Inc.
DNI Business Overview

- Founded in 1999
- One of the subsidiaries of Delta Biz Group
- Total R&D for 510 (HW:229, SW:232, SQA&QE:49)
- Total Employees for 2,800

By Product Category

- **LAN Switch**: 1,466K Units/ US$320M Shipped in 2010 & > 2,511K Units/ US$379M shipped in 2011
- **Wireless and Broadband**: 5,335K Units/ US$153M Shipped in 2010 > 7,611K Units /US$202M shipped in 2011

By Region

- US 50.13%
- EMEA 27.4%
- ASIA 22.47%
DNI Smart Grid at a glance

- **2009**: Participated Taiwan BOE AMI field test. Installed 2 DCUs and a number of Meters (Delta) in the field.

- **2011**: DNI formed a smart grid team and dedicated for smart grid products development. Provide communication/embedded hardware and software products for smart grid applications. Collaborated with Tatung and won the 1st AMI tender of Taipower LV AMI project. DNI will deliver more than 100 units DCU as well as about 8K units communication modules for this project.
**Smart Grid R&D Directions**

**Green Energy Platform**
- Comm. platform for smart metering applications.
- From HE to CM
- Customized software support
- With ANSI / IEC / proprietary metering protocols
- Field experienced solution

**Industrial Networking Solution**
- Industrial grade networking equipment
- Unmanaged / Managed / Wireless
- Generic platform w/ competitive features
- Certificates

**Generic DCU/CM Platform**
- ODM / turn key to SI
- Focus on DCU and CM
- Hardware + Software value added
- No / less customization
- FAE support
DNI Green Energy Platform (GEP)

- Advanced Metering Infrastructure (AMI)
- Home / Building Area Networks (HAN/BAN)
- Distribution Automation (DA)
- Distributed energy resources (DER)
## GEP software architecture

### Application layer
- AMI MDMS
- EMS
- MicroGrid app.
- M2M app.

### Application Gateway
- Head End / Comm. Server

### WAN
- WAN

### Sensor Gateway
- Concentrator / Data Collector
- CCM
- TCM
- RS232/485

### LAN / Sensor Networks
- LAN

### Sensor / Device layer
- Sensors / Devices

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**CCM**: Concentrator Communication Module  
**TCM**: Terminal Communication Module
Example: AMI networking platform

- User Interface
- AMI Head End + MDMS
- GPRS/3G
- Fiber
- Ethernet
- MV BPL HE + Media Converter
- BPL
- ZigBee
- G3-PLC
- BPL
- Smart Meter

Tools:
- Protocol testing tool
- DCU configuration tool
- Site survey tool
Example: PV Inverter monitoring
Example: Street lighting control
What we provide...

Data Concentrator / Data Collector / Sensor Gateway

Comm. solutions In WAN & LAN

Comm. Protocols / Metering Protocols / NWK management implementation
Existing smart grid products
Thanks for your attention.