IoT CONFERENCE 2014 | ASIA

IoT 503
Business Opportunities in Cellular

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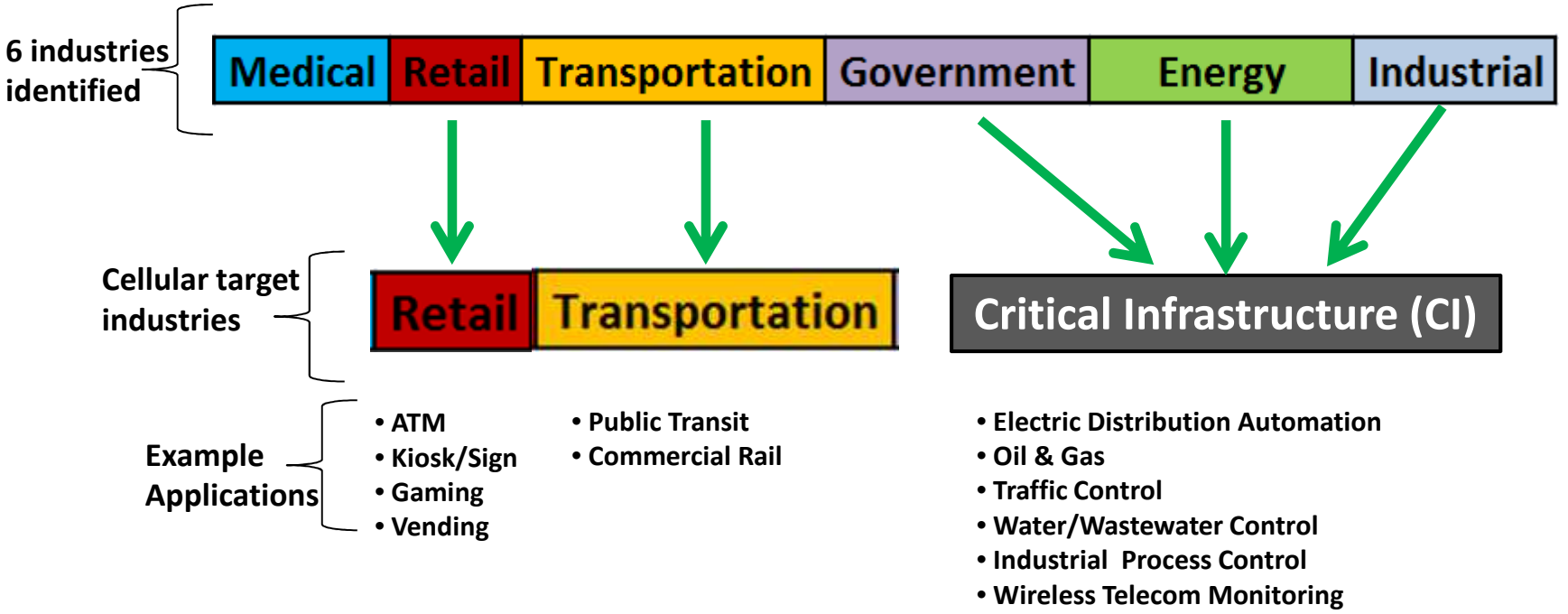
Vice President Product Management,
Cellular Products

3 Key Target Markets



RETAIL

Typical Retail Application

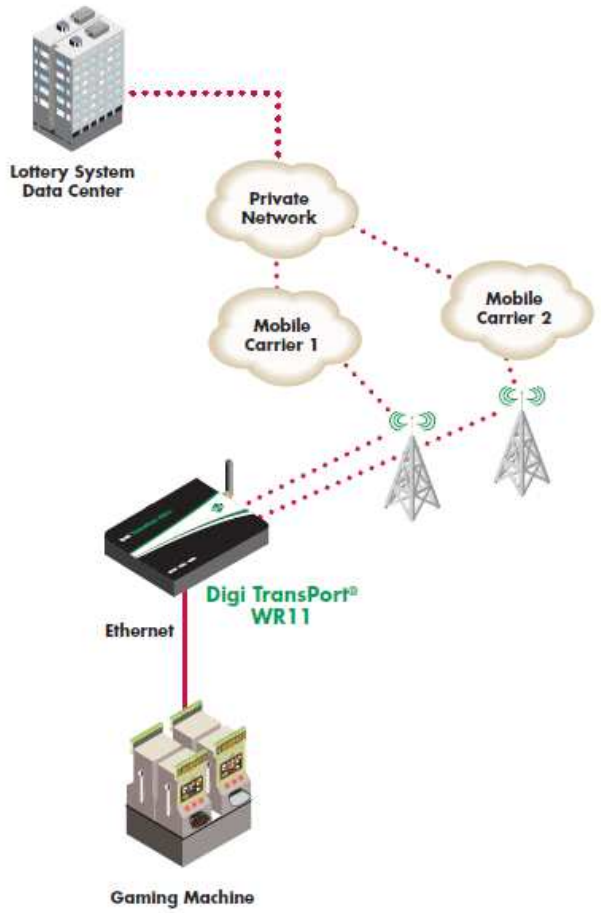
Overview

In a typical retail application, a Digi TransPort is connected to a payment or content terminal via Ethernet or serial and connected to the cellular network via the TransPort's embedded 3G or 4G LTE radio. The Digi TransPort's WWAN connection gives the operator a path to the terminal, and it gives the terminal a path to web-based applications.

This basic architecture is then customized to support several different types of applications:

- Digital signage
- Bill-pay terminals
- Self-service kiosks
- ATMs
- Lottery/gaming terminals
- Vending machines

Example customers include JCDecaux (signage) GTECH (gaming), and Euronet (ATM)



Target Customers & Attributes

Sample Applications

ATM MSP

Bill Pay Solution Providers

Kiosk Solutions Provider

Lottery Solution Providers

Customer Attributes

- Manage geographically distributed terminals
- Terminals installed on 3rd party sites
- No onsite IT staff
- Emphasis on Security- PCI compliance
- Buy (not build) their CPE

Digi Offer

- Hardware
  - TransPort WR11 and WR21 with advanced routing capabilities
- Software
  - Device Cloud for remote management, security compliance
- Value Proposition
  - “We give MSPs a secure, reliable connection to their managed terminals as well as the software tools to monitor and maintain that connection”

Buyer Persona

- Level of engagement:
  - Large global MSP: Engineering & Operations Management, CTO
  - Mid-size or regional MSP: Executive , CTO, VP Product Management
  - Top Concerns:

Concern	Summary	Digi Value
Efficiency	Need to scale the operation w/o adding cost	Track record of large deployments around the globe TransPort: built for management (SNMP, Device Cloud, Remote Manager)
Security	Must pass PCI audits & maintain compliance	TransPort: VPN, firewall, logging, etc Device Cloud: Profile Manager & alarms; PCI ROC

Market Dynamics

- 7.81M cellular-connected retail M2M devices forecast to ship in 2015:
  - POS Terminals: 7,250,000
  - ATMs: 100,000
  - Vending Machines: 340,000
  - Parking Meters: 90,000
  - Ticket kiosks: 30,000
  - Lottery Terminals 100,000
- Growth driven by increasing use of ATMs and kiosks in emerging markets
  - Example: TNS Malaysia ATM project: http://www.tnsi.com/au/latest-news/2014/jul/15/meps-chooses-tnslink-to-provide-dual-carrier-wireless-atm-services-to-malaysia

•Machina, 2014
•RBR, 2013

CRITICAL INFRASTRUCTURE

Typical Infrastructure Application

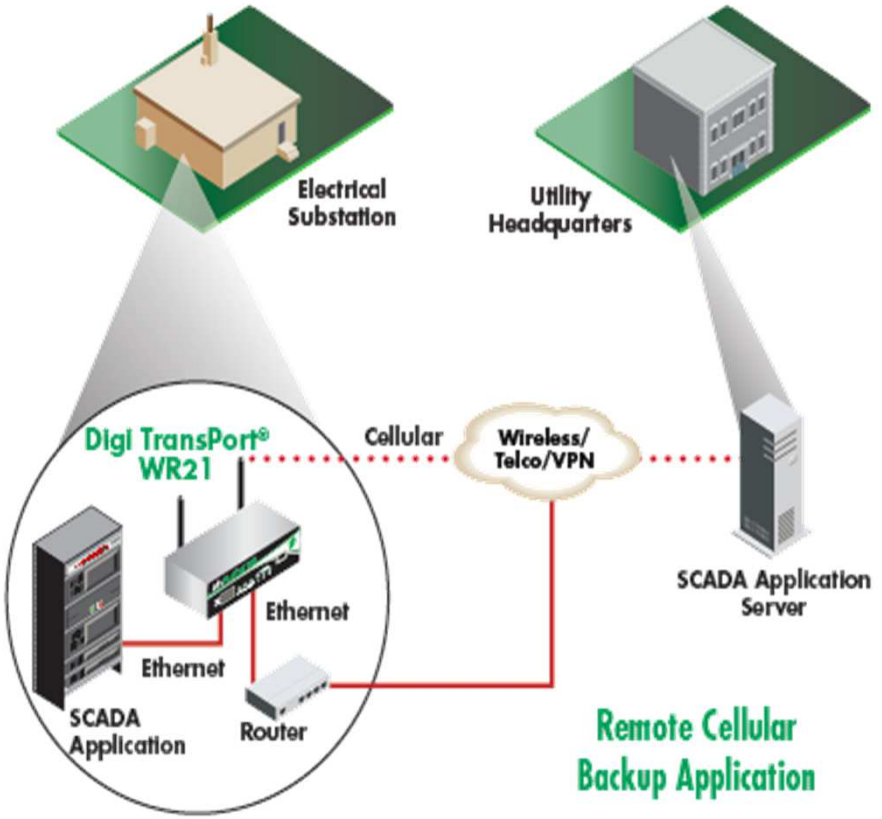
Overview

In a typical infrastructure application, a Digi TransPort is connected to an industrial controller or SCADA device via Ethernet or serial and connected to the cellular network via the TransPort's embedded 3G or 4G LTE radio. The Digi TransPort's WWAN connection gives the utility or service company a path to the remote device.

This basic architecture is then customized to support several different types of applications:

- Commercial & industrial metering
- Distribution automation
- Wireless Cell Tower monitoring
- Traffic and highway signage
- Water/Wastewater lift station monitoring

Example customers include Xcel Energy (metering), Centerpoint (distribution automation), AT&T Wireless and Crown Castle (tower monitoring), International Tower Lighting



Digi Offer

- Hardware
  - TransPort WR21, WR41, WR44, WR44R
- Software
  - SAROS Advanced Routing and Security
  - Device Cloud for remote management
- Value Proposition
  - “We give utilities and private infrastructure operators control and visibility for the safe, reliable operation of their business”

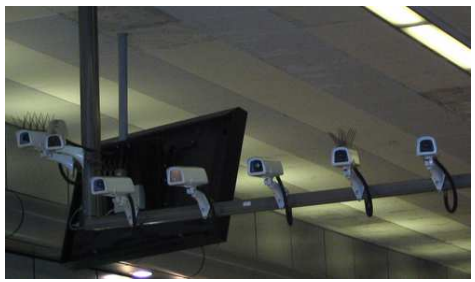
Target Customers & Attributes

Example Applications

Distribution Infrastructure

Water Lift Stations

Traffic control



Security

Cell Tower Monitoring

Customer Attributes

- Public works/infrastructure provider (electric, water, traffic control, telecomm) OR
- Private company that manages industrial processes
- Investing in “smart” IP-based technology
- Subject to regulatory oversight (EPA, PUC, etc)

Buyer Persona

- Level of engagement:
  - Engineering and Operations Management
  - Product Management
- Top Concerns:

Concern	Summary	Digi Value
Reliability	"It just works"—maintains network connection, behaves as expected	Brand equity and track record of reliability, 5 year warranty,
Longevity	Connecting to long-life assets, in the field for 5-10 years	10 year history of WWAN deployments, track record of making last time buys to support customers; FP&L success story
Security	NERC-CIP Compliance	TransPort configurable for compliance (NERC-CIP whitepaper), DeviceCloud Universal Profile Mgr.

Market Dynamics

- Market Size
  - Distribution Automation cellular connections (2015, APAC region): **514,000**
  - Traffic Management cellular connections (2015, APAC region): **354,000**
  - Cell Towers Worldwide: **6,000,000, 39% in Asia**
- Majority of transmission & distribution automation investments will be in southeast Asia.
- Smart grid testing advanced in 2014 in Japan, Taiwan, South Korea, Singapore, and Malaysia

•Machina Research , Oct 2014
•Frost & Sullivan, Jan 2014

TRANSPORTATION

Bus/Transit Application

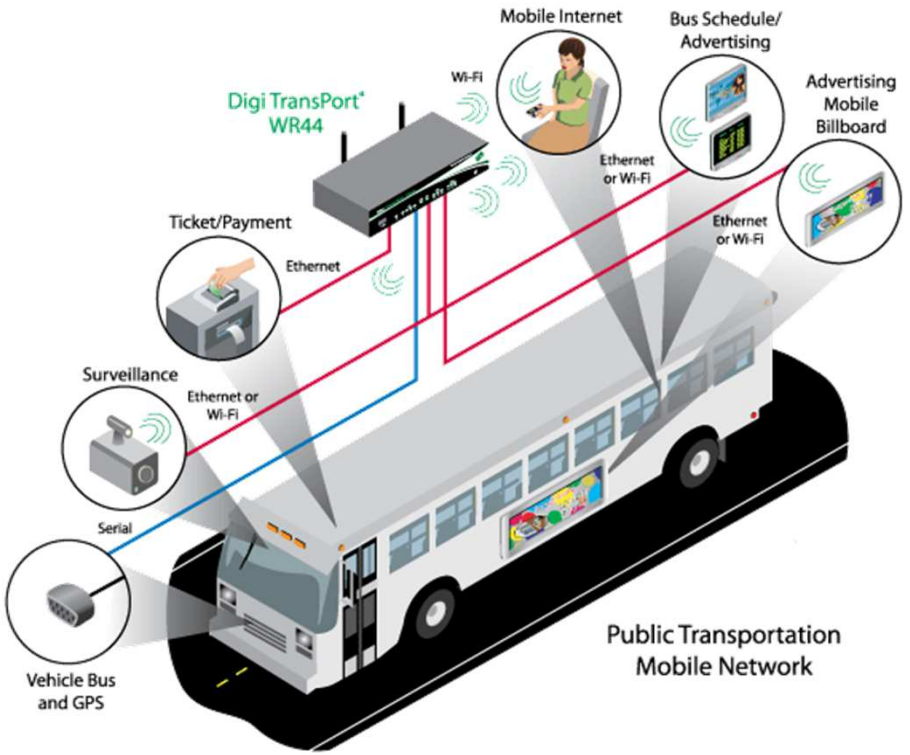
Overview

In a typical transportation application, a Digi TransPort is mounted in a bus connected to one or more secondary devices via ethernet (e.g. ticket machine or camera) and/or used to provide WiFi access to passengers.

This basic architecture is then customized to support several different types of applications:

- Passenger WiFi
- Payment Terminal Data backhaul
- Surveillance Camera backhaul
- Remote vehicle diagnostics
- Computer Aided Dispatch (CAD) and Automatic Vehicle Locator (AVL)

Example customers include: NYC Transit (fare collection), Pittsburgh Transit (smart dispatch), Louisville Transit



Rail Applications

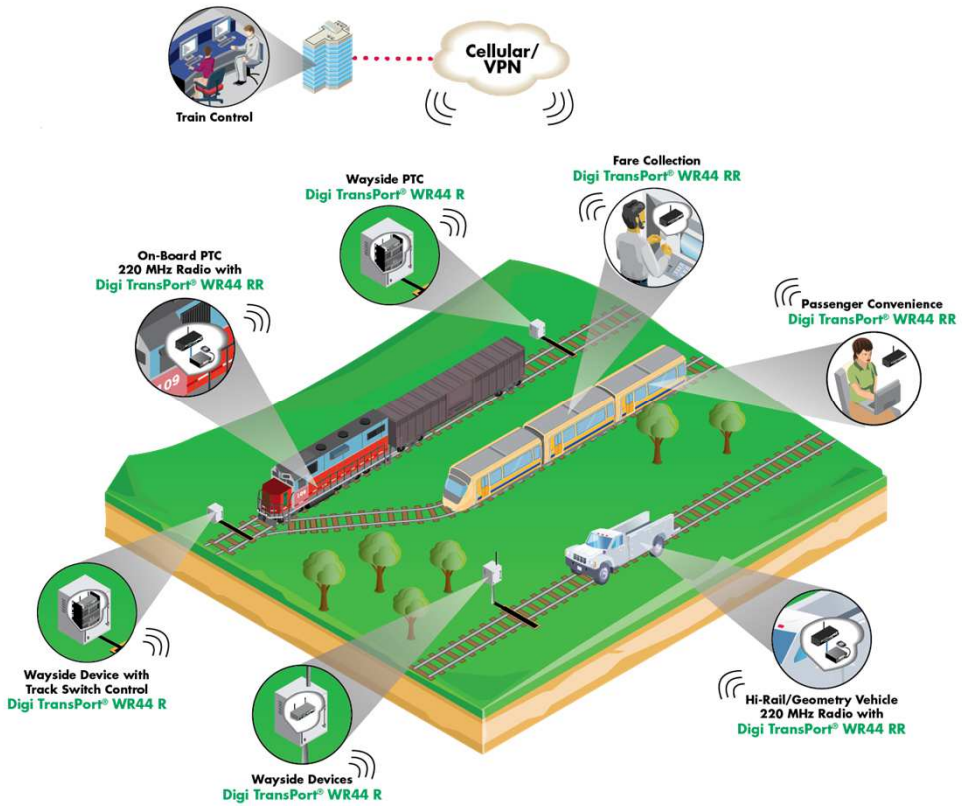
Overview

In a typical transportation application, a Digi TransPort is installed on a locomotive, passenger car connected to one or more secondary devices via Ethernet (e.g. ticket machine or camera) and/or used to provide Wi-Fi access to passengers or in a Wayside Hut

This basic architecture is then customized to support several different types of applications:

- Positive Train Control
- Passenger WiFi
- Payment Terminal Data backhaul
- Surveillance Camera backhaul
- Wayside Communications
- Hot Bearing Detection

Example customers include: Union Pacific, Canadian Rail, Canadian Northern, Burlington Northern, SEPTA



Target Customers & Attributes

Example Customers

Attributes

- **Transit:** Government agency that manages bus or rail passenger transit service
- **Commercial Rail**: Railroad or Rail solution provider.

Digi Offer

- Mobile Applications
  - WR44R: For on bus applications
  - WR44RR: For on rail application
- Fixed Applications
  - WR21,44,44R: For industrial temp: Waysides, Digital Signs
  - WR11: For commercial temp: Kiosks, Ticketing Terminals
- Software
  - Advanced Routing and Security of SAROS
  - Device Cloud, SNMP for remote management
- Value Proposition
  - “Digi has built devices targeted at the transportation market. Our line of transport routers and device management create a complete solution for both on vehicle and passenger terminal applications”

Buyer Persona

- Level of engagement:
  - Director of IT Services
  - Project Manager (When opportunity is out for bid)
- Top Concerns:

Concern	Summary	Digi Value
Reliability	"It just works"—maintains network connection, behaves as expected	Custom built products for this industry. Years of experience making mission critical products. Device Cloud for health monitoring.
Cost	Project dollars allocated by Government agencies with limited budgets.	Lower cost routers than most of our competitors in this space. Lowest cost of ownership due to quality products.
Ease of Install	Transit agencies have limited workforces for install, that are not IT professionals	Transport routers ease of configuration and out of the box functionality.

Customer Success: SEPTA Rail

Problem:
SEPTA , the nation's sixth-largest public transportation system in the United States was implementing a Positive Train Control system to improve safety and be in compliance with new regulation. SEPTA implemented a 220MHZ radio system, but do the criticality of the radio system, a redundant data network was required on their trains.

Solution:
SEPTA Integrated Digi's WR44RR into their Mobile Communications Package to create a redundant cellular data path to go with their 220 HZ PTC radios.

The increased network reliability and rail system visibility extended the performance beyond PTC, toward Communications- Based Train Control (CBTC), which leads to more efficient scheduling, increased capacity, and fuel savings

Customer Success: OEM Technology

Problem:

- Asset utilization and incident management are major issues for the modern rail operator
- Offer Passenger WiFi: "From airplanes to coffee shops, customers expect Wi-Fi connectivity wherever they go," Gobee said. "For train operators to remain competitive, offering passengers Wi-Fi connectivity is critical.“

Solution: OEM Technology Solutions used the Transport WR44 cellular gateway to implement remote connectivity and passenger WiFi

"In order for us to offer preventative service or conditioned-based monitoring technology, we needed a way to connect our controllers to the Internet."

- Richard Gobee, Managing Director, OEM Technology Solutions

Market Dynamics

- Public Transit
  - Estimated $30M Worldwide growing at 35%
- Commercial Rail
  - Estimated $13M Worldwide growing at 20%

QUESTIONS ?