Enabling Mobile IoT Applications over Satellite

Rajesh Suseelan
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Quick Facts & Stats

- Owned by ST Engineering
- Over 35 years of innovation
- Acquired Newtec in 2019
- 1,000 employees globally
- Centers of Excellence in USA, Singapore and Belgium

- Product portfolio branded under **iDirect** and **Newtec**
- Leader in Enterprise, Mobility, Broadcast and Government/Military Markets
- iDirect Government, wholly owned subsidiary, leader in US DoD

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Our Technology Vision

Make it possible for our customers to build multi-orbit strategies on the world's first cloud-based, multi-access technology platform.

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IoT Value Chain

MONITOR → CONNECT → PROCESS → ACT

INDUSTRIAL AUTOMATION

AUTONOMOUS VEHICLES AND ROBOTS

IoT AND TELEMETRY
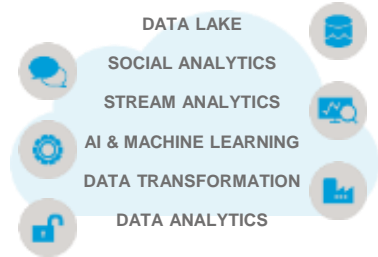
EDGE INTELLIGENCE NEAR DATA SOURCES AND USERS

SCALABLE COMPUTING RESOURCES

ACTIONABLE INSIGHTS

INTERNET /PRIVATE CLOUD

API

DATA LAKE

SOCIAL ANALYTICS

STREAM ANALYTICS

AI & MACHINE LEARNING

DATA TRANSFORMATION

DATA ANALYTICS

EDGE CLOUD

PUBLIC/PRIVATE CLOUDS

CLOUD MANAGEMENT PLATFORM

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IoT Use Cases

Road

Rail

Heavy Equipment
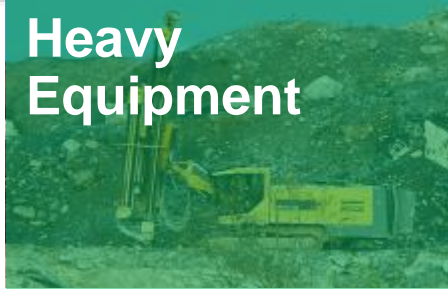
Maritime

Agriculture

Mining

Energy & Utilities

Environmental Monitoring

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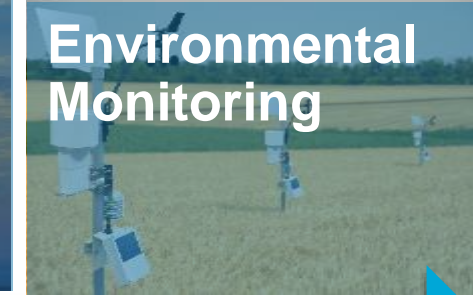
IoT is not a 'one size fits all'

Low Data Rate	Medium Data Rate	High Data Rate
Remote Monitoring, Smart Agriculture, Smart Metering, Asset Tracking, Fleet Management	Industrial Control, Heavy Equipment Telematics, Smart Grid Automation, Vessel VMS, SCADA	IOT Backhaul, Rail Telemetry, Oil & Gas, Critical Infrastructure, Vessel Monitoring
Low device cost, low operational cost, low energy, small data volumes massive numbers	Low data, time sensitive	High reliability, Low latency, high data volume, high availability, performance flexibility
Events-Based **Small data bursts of up to 30Kbps** **1-2MB per month usage**	**Events-Based or Demand-Based** **Higher Throughput 10-100Kbps** **eg: Up to 25MB per month usage**	**Demand-Based or Continuous** **Throughput 10-500Kbps** **eg: 100's MB per month usage**

Higher throughput and volume

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Satellite IoT adoption challenges

- Cost
- Size
- Power
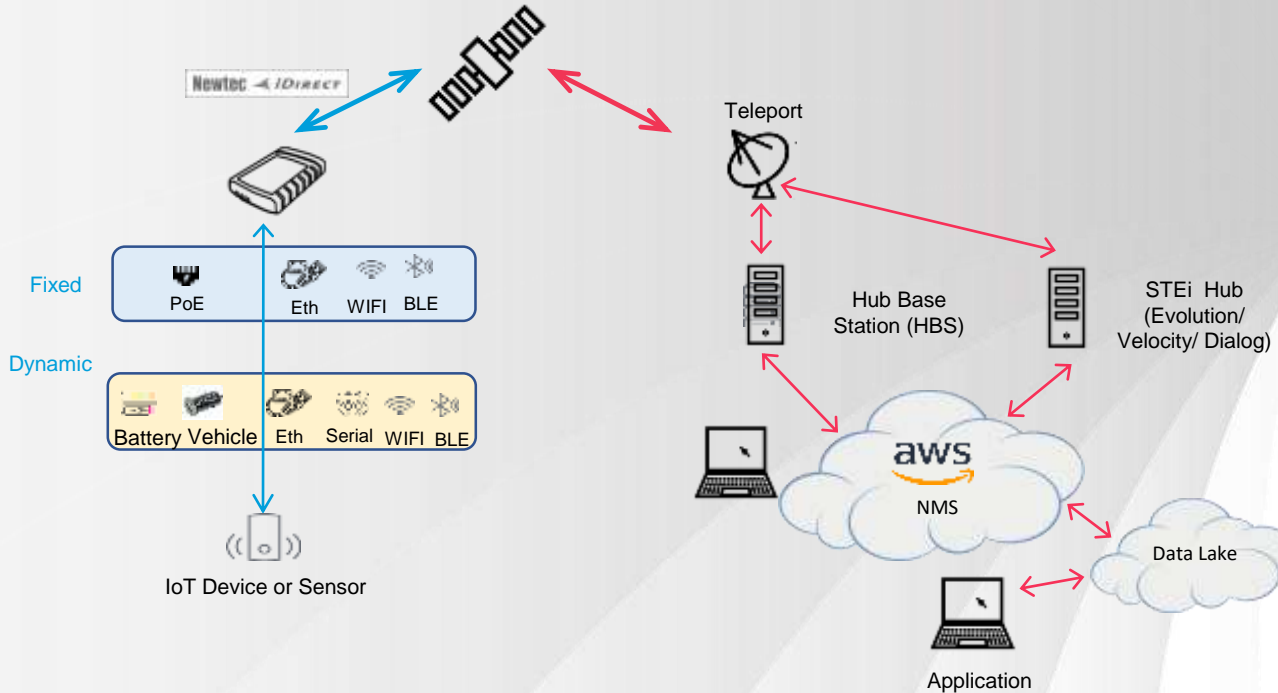- Interoperability
- Flexibility
- Deployment

Value Proposition IoT Solutions

- Complete IoT solution leveraging an IoT optimized waveform, cloud-based NMS and small form-factor IoT terminal

- Providing a flexible service enablement model for immediate market access

- Reducing the upfront capital investments and operational complexity

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Complete IoT Solution

Service Enablement

Cloud based NMS/OSS

Hub Enablement

IoT Optimized Waveform

IoT Terminals

Newtec ▲ iDIRECT

Teleport

Fixed

PoE   Eth   WIFI   BLE

Dynamic

Battery   Vehicle   Eth   Serial   WIFI   BLE

IoT Device or Sensor

Hub Base
Station (HBS)

STEi Hub
(Evolution/
Velocity/ Dialog)

aws
NMS

Data Lake

Application

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Terminals Designed for IoT

- Rugged and compact terminals
- Low Power
- IP enabled
- Support for Ka and Ku bands
- Easy set up and deployment
- Support Wi-Fi, Ethernet, Serial and BLE
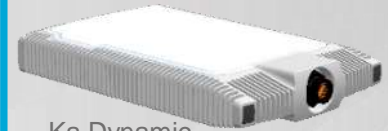- Phased Array Antennas for mobility applications

Fixed

Ka Fixed Terminal

Ku Fixed Terminal

Mobile

Ka Dynamic Terminal

Ku Dynamic Terminal

powered by
Newtec iDIRECT

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Enabling mobility applications

Maritime

- Real-time information on status and location of maritime assets
- Vessel performance management
- Fishing catch reporting

Fishing

Fleet Management

- Real-time tracking of vehicles and mobile assets
- Cold chain, cargo tracking
- Fleet Telematics
- Driver Safety
- Route Optimisation
- Despatch applications

Rail

- Rail telemetry and communications
- Rail condition monitoring
- Track side monitoring
- Positioning and Navigation

Mining & Construction

- Heavy Equipment Monitoring
- Asset Utilisation
- Telemetry reporting

Agriculture

- Telemetry reporting
- Predictive maintenance
- Fuel Monitoring
- Precision Agriculture

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Questions?

Get in touch

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