

Technology Track: Hardware Selection: Embedded

Presented by:

Roger Dewey, Telit
Robert Dranter, Janus Remote Comm.

10:30 – 11:10 a.m.

Hondo Room

M2M Presentation

Presented by:

Robert Dranter

Janus Remote Communications

Why the Selection of Your
RF Modem does not have to be
REALLY FRUSTRATING

First and Foremost: CDMA or GSM

Location of Implementation

- *Europe / Middle East / Africa*
- *Rest of World*

Choice of Carrier

- *Coverage*
- *Service Plan*

In North America:

CDMA

Verizon

Sprint / Nextel

Alltel

GSM

Cingular

T-Mobile

Rogers

MVNO Data Specialists

Kore

Motient

Aeris.net

Numerex

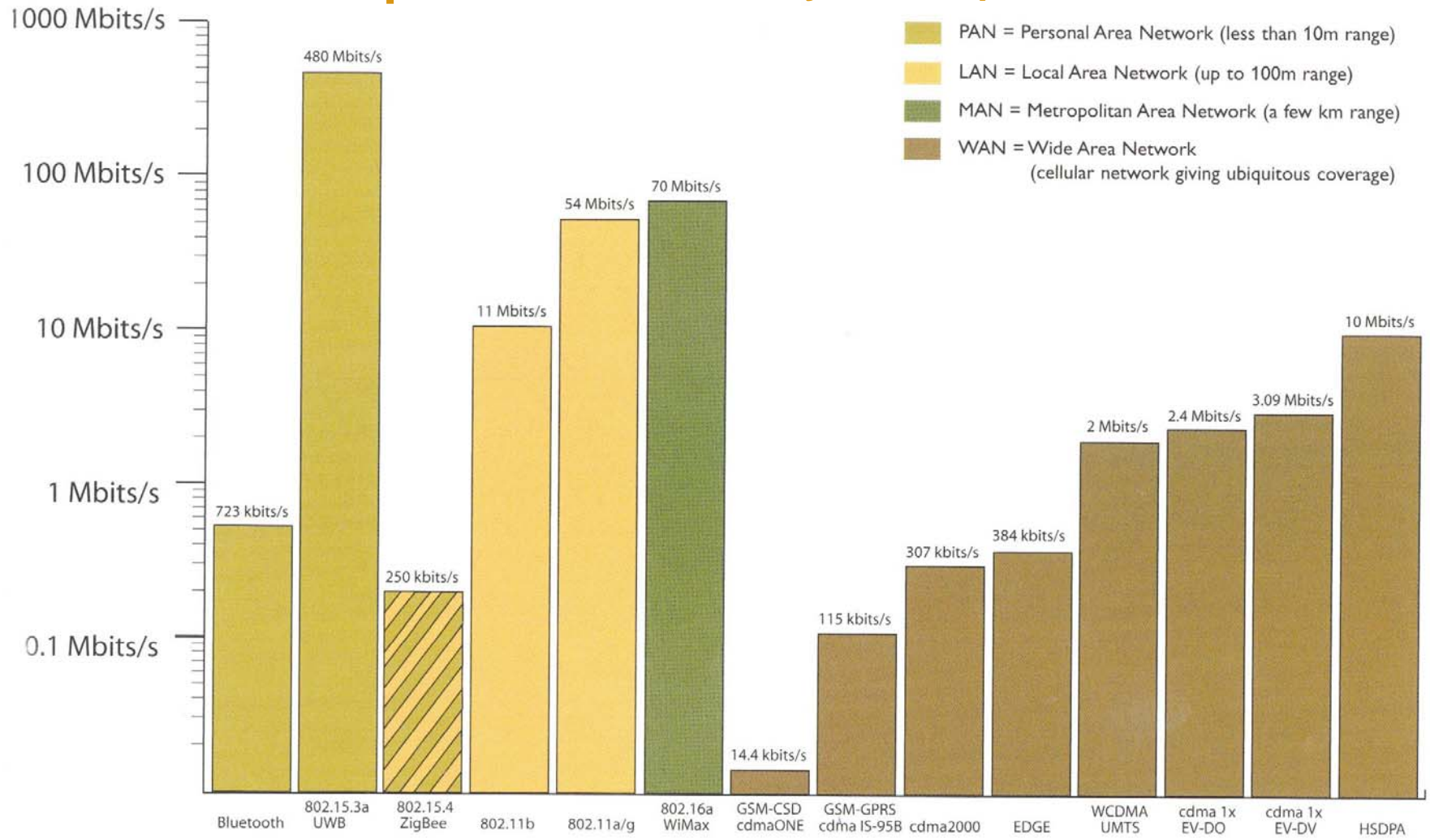


Key Features to look at

- *RF Frequencies (Dual or Quad Bands vs Tri-Mode)*
- *Data Rates*
- *Protocol Support*
 - *TCP / VDP / IP*
 - *At Commands*
 - *PPT*
- *Embedded Applications*
- *Field Upgrade Ability*
- *Bells and Whistles*
 - *Number of I/O's*
 - *Number of UARTS*



The Need for Speed – Data Courtesy of Phillips



CDMA

Pro's

- *Data Rate Capability*
- *Simpler Frequency Issues*

Con's

- *Higher Cost*

GSM

Pro's

- *Lower Cost*
- *Embedded Applications*

Con's

- *More Complex Certification*

Major Modem Suppliers

CDMA

Anydata

Kyocera

Motorola

Sierra Wireless

Sony-Ericsson / Wavecom

Wavecom

GSM

Aplicom / Nokia

Enfora

Motorola

Siemens

Sony-Ericsson / Wavecom

Wavecom

Industry Consolidation

Nokia / Aplicom

May, 2005

Sony-Ericsson / Wavecom

April, 2006

Siemens / ?

?

Certification

Regulatory Agency Compliance

FCC

CCF

PTCRB



Network Approval

<http://developer.cingular.com/developer/devices/modems/>

> devCentral

SEARCH

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[Home](#) > [Devices](#) > Modems

devCentral

Network

Technologies and Platforms

Devices




- Internet-enabled Phones
- PDAs and Handhelds
- Modems
 - Airlink
 - Audiovox
 - Bluetree
 - Enfora Wireless
 - Motorola
 - MultiTech
 - Nokia
 - Novatel Wireless
 - Option
 - Padcom
 - Siemens
 - Sierra Wireless
 - Sony Ericsson
 - Wavecom
- Non-Stocked Enterprise Devices
- All Devices
- Discontinued Devices
- Device Comparison Matrix
- Nokia
- Research in Motion
- Sony Ericsson

Developer Tools

Certification

Modems

Get specifications, product features and developer resources for modems supported by Cingular.

Manufacturer	Model	Network	Features	Launch Date	compare
MultiTech	MTCBA-G-F2 	■	GSM/GPRS Network, 850 MHz, 1900 MHz	2005 Q4	select to compare <input type="checkbox"/>
MultiTech	MTCBA-G-UF2 	■	GSM/GPRS Network, 850 MHz, 1900 MHz	2006 Q2	select to compare <input type="checkbox"/>
MultiTech	MTMMC-G-F2 	■	GSM/GPRS Network, 850 MHz, 1900 MHz	2006 Q1	select to compare <input type="checkbox"/>
MultiTech	MTCBA-E	■	GSM/GPRS Network, EDGE, 850 MHz, 900 MHz, 1800	2005 Q3	select to compare <input type="checkbox"/>

[print this](#)

Filter Modems

Select network, manufacturers and features below to filter by.

apply filter

[clear all](#)

Network

- Cingular
- Cingular, formerly owned by AT&T Wireless
- EDGE
- GSM/GPRS Network
- UMTS
- WLAN Network

Manufacturers

Features

apply filter

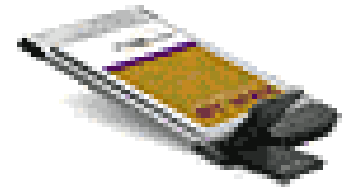
[clear all](#)

So Many Choices ...

Embedded Module

Off-the-Shelf Terminal

PCI Mini-Card



Topic: Hardware Selection – Embedded

Presented by:

Roger Dewey
Telit Communications
June 2006

Critical Embedded Device Evaluation Criteria

- **Open Systems for Development**
 - Maximize your flexibility now, and in the future
 - You own your approach and total solution
- **Uniformity of API and Form Factor**
 - Across Technologies – develop once, attack multiple markets
 - over product generations – e.g. RoHS
 - Technology evolution: i.e.: GPRS to UMTS
- **Ownership of Protocols IP**
 - Radio Vendors owning their Communication Protocol stacks are better positioned to assure continuity of API.
 - Decreases certification and approval risks throughout product evolution cycle
- **Remote Device Management and Control**
 - Over-the-Air Management of Radio and Application Software.
 - Eliminate need and associated cost to physically access the asset
- **Convergence**
 - Roadmap that broadens the technology coverage while retaining Form Factor and API as a matter of philosophy