

Business Track: Deployment Lifecycle

Presented by:

George DeVoe, L.M. DeVoe Co.

Jeffrey Kischuk, Incerno

10:30 – 11:10 a.m.

Bandera Room

M2M Deployment Lifecycle Hardware Development

Presented by:

George DeVoe

L.M. DeVoe Company, Manufacturer's Representatives

Major Steps for M2M Hardware Deployment

- 1.) *Develop a Business Plan* | Market Research and general Due-Diligence
- 2.) *Choosing a Technology* | What best fits your needs?
- 3.) *Form-Factor Selection* | Pre-Engineered Modem/Terminal or embedded module
- 4.) *Engineering and Development* | Time and costs.
- 5.) *Certification and Carrier Approval* | What to expect.

Developing a Business Plan: Do your Homework first.

• *Conduct a Needs Analysis* |

- What do you hope to accomplish?
- How will the customer benefit?
- What are they willing to pay for it?
- What are your time-to-market goals?
- What is your projected EAU?,
- How much data needs to be sent? How often?
- Where will they be deployed?
- What is your development budget?

Doing your Homework cont.

- **Special assignment for Cellular and Satellite developers** |
- *Talk to potential Service Providers about Rate-Plans up front.*
- *Learn about their Certification requirements and Approval process.*

Device Selection: Choosing the right technology

- **Options include:** | *Bluetooth, Wifi, Zigbee, 900MHZ/2.4Gig, Cellular, Satellite*
- **Considerations:** | *Distance, Speed requirements, Location, Packet size, Fixed or Mobile, Power requirements, Form-factor, Cost*

Form-Factor Selection

• *Options:* |

- Modem / Terminal box
- Embedded module
- Chipset

• *Determining factors:* |

- EAU
- Target cost/unit
- Time-To-Market
- Development costs

Design Costs and Time Required

• *Costs for “Simple” module integration (Replacing an existing modem with a wireless solution.) |*

• 100-160 Engineering Man/Hours*

• \$8k to \$22k based on hourly cost of \$80 to \$135.

• *Costs for “New Product” with wireless interface |*

• Up to 1,000 Man/Hours*

• \$80k to \$135k

**80-90% of your design time is Software related.*

Cellular – Certification/Testing costs - GSM

- *For Quad-Band module Integration, GSM Test Lab:* |
- \$27 to \$35k (CTIA Registration, PTCRB, FCC)
- 1 to 2 weeks in the lab, plus 4 weeks lead-time
- *GSM Carrier Testing* |
- No Cost
- 5 weeks and UP to get through their test labs.

CDMA Certification and Testing

- *For standard module Integration, CDMA Test Lab:* |
- \$15k-20k typical test lab fees.
- 1 to 2 weeks in the lab, 4 weeks notice recommended.
- *CDMA Carrier Testing* |
- No Cost
- 2 to 4 weeks typical, up to 90 days in peak times.

Steps to minimize costs:

- ***Do Your Homework*** | Know ALL the facts before you start work.
- ***Plan Ahead*** | Talk to Carriers and MVNO's during the investigative stages.
- ***Talk to your test lab 4-6 weeks before you need them.*** | Ask your module supplier if they have a "Certification SWAT Team" who can help.
- ***Do not re-invent the wheel*** | Consider a pre-Engineered solution.
- ***Use an experienced M2M design house*** | Look for a proven track record with the technology you need.

When Competitors Become Adopters

Presented by:

Jeff Kischuk

INCERNO

Source to Solution for M2M

INCERNO:

- A web-based data service, delivered as a platform independent ASP
- Provide a cost effective, highly flexible means of gaining and presenting real-time data for proactive management

Topic – Answered Jeopardy Style:

- What happens when clients enter into the M2M Deployment Lifecycle thinking that it's just a matter or networking “stuff”, and getting the data somewhere to use?

Warning Signs:

- “We already do that”
- “We can build that in-house”
- “We have to own all our IP”

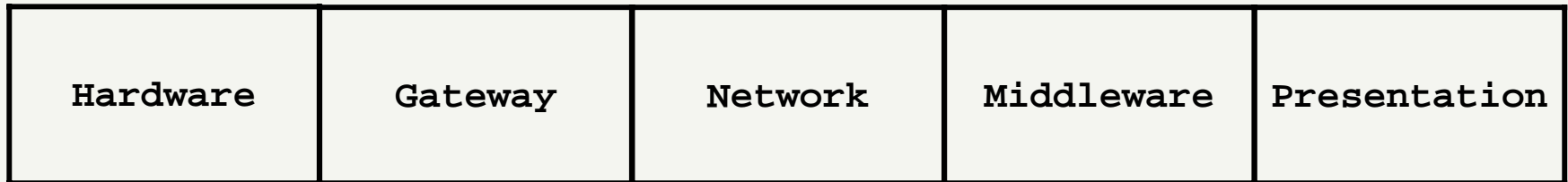
What are the risks?

- Time to Market
- Quality & Completeness
- Cost

Can it be avoided?:

- Understand Deployment Lifecycle & M2M Ecosystem
- Have clear business requirements
- Know your core competencies

Deployment Lifecycle – M2M Ecosystem



Case Study – Commercial Pump Company

Hardware	Gateway	Network	Middleware	Presentation
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*Customer
Core \$\$*

*Customer
New \$\$*

Timeline:

- *November 2002* | First RFP submitted to client's engineering group
- *February 2003* | Project "On Hold"
- *July 2003* | Re-submitted detailed solution & proposal

Quiet time...

- *October 2004* | Re-engage with Product Director - Marketing
- *February 2005* | Client discloses "internal solution is being developed"
- *June 2005* | Participate in product review process
- *August 2005* | Client "scraps" solution
- *February 2006* | INCERNO engaged to propose solution

Source to Solution with INCERNO



Customer

Customer

Timeline:

- *May 2006* | INCERNO Awarded Project
- *May 2006* | Client's Business Application Functional
- *Duration* | 10 Days, 6 man hours

Recommendations:

- *Understand Deployment Lifecycle*
- *Stick with Core Business Competencies*
- *Adopt Proven M2M Solution Providers*
- *Embrace M2M for additional service revenues & operational benefits*