Operation WhiteBerry

Open BlackBerry… and very much more

Partnership & Competition
based on the LEAP Protocols and the
Open Mobile Messaging Industry

An Open Invitation

An Open Mobile Messaging Industry Model

NOT

A Proprietary Products & Services Model

- **Let us build the open Mobile Messaging Industry together**
- **Let us profit from it:**
  - Based on truly open protocols
  - Based on free competition and partnership

Initial Goals

Establish Common Understanding

- **Come up to speed on BlackBerry**
- **Come up to speed on LEAP**
- **Define the WhiteBerry concept**

Move Forward

- **Agree upon roles, responsibilities & deliverables**
- **Coordinate dates & releases**
- **Joint promotion of the WhiteBerry concept**
- **Joint marketing: press releases, etc.**

The BlackBerry Solution

- Total validation of Mobile Messaging

BUT…

- A closed, single-vendor system
- Based on proprietary protocols

The WhiteBerry Solution

- **A completely open Mobile Messaging solution**
- **Based on the LEAP protocols: open, patent-free, RFC published**
- **Equivalent Mobile Messaging functionality to BlackBerry, on *any* device**
- **Not theoretical: can be implemented *immediately***

BlackBerry vs. WhiteBerry

	BlackBerry	WhiteBerry
Mobile Device	Only the two RIM-manufactured devices	Any suitable mobile device
Wireless Modem	Only the integral RIM modem	Any suitable wireless modem
Wireless Network	Only the BellSouth Intelligent Wireless Network	Any suitable wireless network
Message Center Service	Only the RIM-operated or RIM-licensed service	Any independent service provider; any corporate e-mail system
Protocols	Proprietary RIM protocols	Open LEAP protocols
Desktop Integration	Only Microsoft Outlook	Any desktop mail application
Message Center Integration	Only Microsoft Exchange	Any Message Center system
System Integration	Exclusively by RIM	Any systems integrator
Security	Not true end-to-end Implementation details unknown Precludes other implementations	Open paradigm permits external security implementation

Comprehensive Development Framework

- Free, open-source software implementations for major devices and Message Centers
- Open public forum for development & distribution of integration tools
- Initial free Subscriber Services
- Initial end-to-end WhiteBerry implementation

Anyone can create a complete WhiteBerry implementation *immediately*

Implementation Case Study: Lisa Simpson

WhiteBerry Step/Component	Lisa's Choice
1. Select a PDA	Lisa chose to use an HP 660LX palmtop device, running Windows CE 2.0
2. Select a wireless network	Lisa selected the CDPD network
3. Select a wireless modem	Lisa selected the Sierra Wireless AirCard 300, a CDPD modem which is compatible with her HP 660LX
4. Select a network Service Provider	Lisa chose AT&T since she resides in Seattle, and AT&T is the CDPD Service Provider for the Seattle area
5. Activate the modem	Lisa provided AT&T with the modem's EID (Equipment ID) number, received an IP address from AT&T, then configured the modem to use that address
6. Download the LEAP device software	Lisa went to the MailMeAnywhere.org website, and downloaded the appropriate Windows CE LEAP software – in this case SH3 Gold Version 1.2
7. Select a Message Center operator	Lisa set up a free e-mail account for herself at ByName.net
8. Select and install an e-mail forwarder	Lisa used FetchMail and Emacs Lisp code to define her directory and rule-based forwarding preferences

Operation WhiteBerry

- **Do everything that BlackBerry does**
- **Do it with a variety of related products & services based on an OPEN model**
- **Do it on all appropriate platforms:**

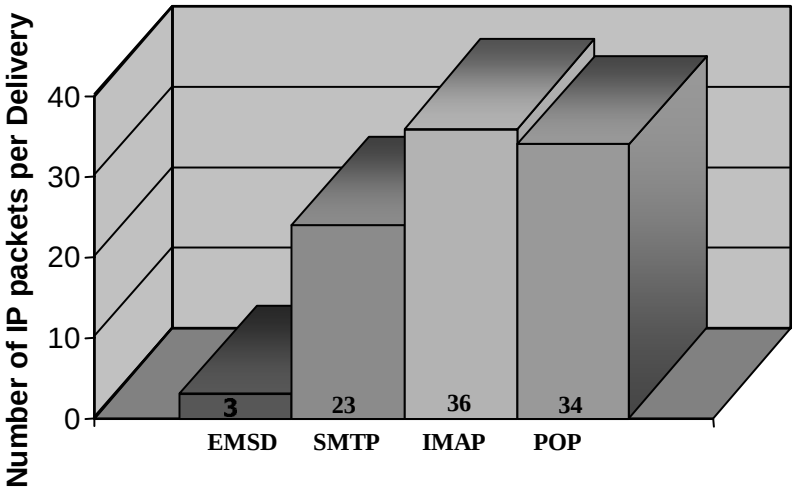
  Windows CE, Palm, Handspring, EPOC, etc.
- **Do it over all appropriate wireless networks:**

  CDPD, Metricom, Packet CDMA, GSM, etc.
- **Do it in all appropriate configurations:**

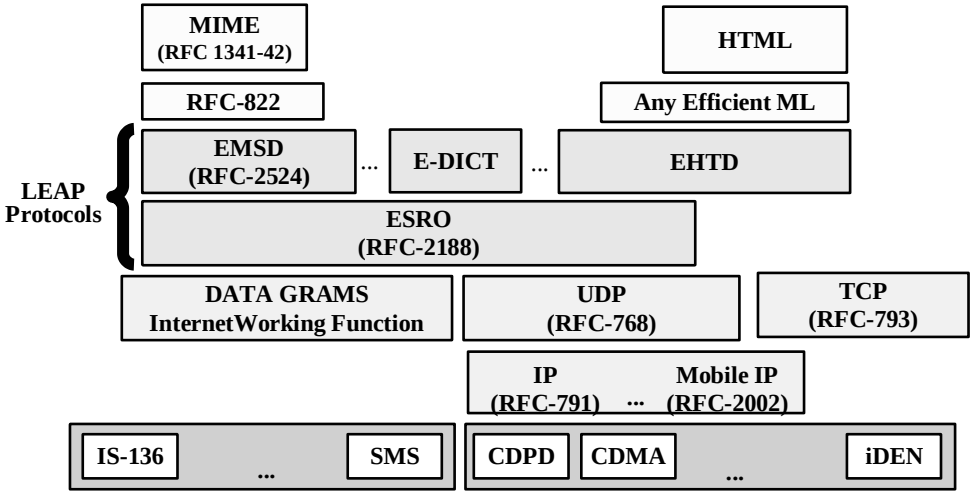
  Enterprises, ISP, Desktop Agents & Forwarders, etc.
- **Make it all be based on OPEN protocols:**

  LEAP Inside (EMSD, ESRO)

What is LEAP?



Bandwidth Efficiency



LEAP is a family of protocols:

- **ESRO: Efficient Short Remote Operations**
- **EMSD: Efficient Mail Submission & Delivery**
- **EHTD: Efficient Hyper Text Delivery (in progress)**
- **...**

- **Efficiency Benefits:**
  - Efficient use of carrier network
  - Lower costs per minute of use
  - Longer battery life
  - Reduced latency for user access

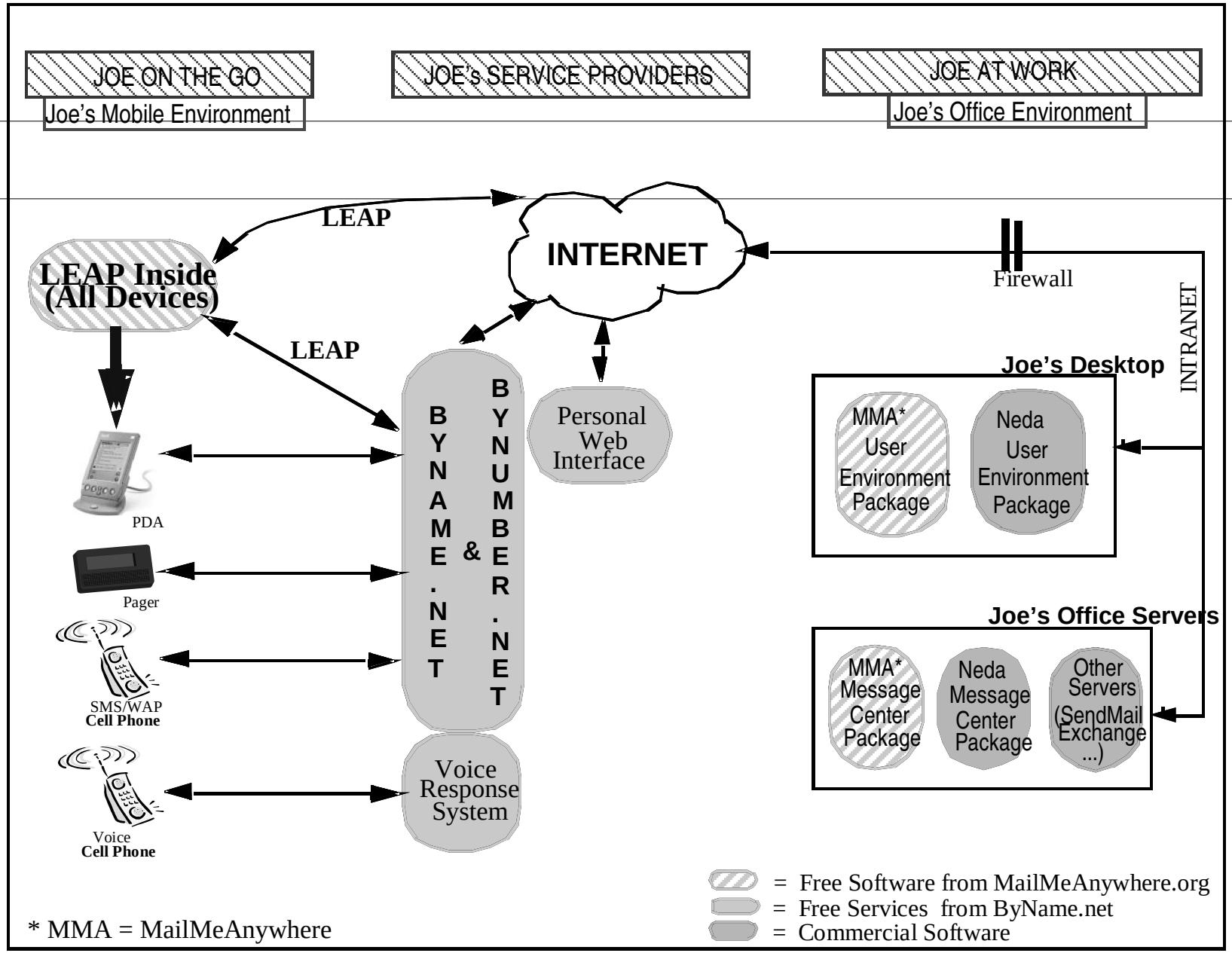
- **Technical Attributes:**
  - Technical excellence
  - Ideal for wireless & mobile applications
  - Native IP & wireless-IP
  - Truly open & patent-free
  - RFC published

A Brief History of LEAP

- **The Past**
  - In 1994 McCaw Cellular began work to optimize the transmission of short text messages over wireless-IP, and to create an efficient wireless e-mail system
  - This work was abandoned in 1997 when AT&T sold its paging licenses
  - Recognizing a unique opportunity, Neda, the lead developer, undertook to develop the protocols independently of AT&T. The result is LEAP
- **The Present**
  - LEAP protocols published as RFCs
  - LEAP implementations ready as open-source software
  - LEAP about to be announced
- **The Future**
  - Go head-to-head with WAP & other non-end-to-end solutions
  - LEAP will become the foundation of the Mobile Messaging industry

Initial Partners & Their Roles

	Device/User Agent	Subscriber Services	Neda
ASSETS	• Modems • Distribution Channels	• Service Center • Related Subscriber Services	• Protocol Specifications • Protocol Code
RESPONSIBILITIES	• Modem/Device/Mail Application Integration • Bundle forwarders with modem & device software	• Service Center • Desktop Forwarders (Agents & Servers)	• Protocols & Standards • Open-Source Software • Professional Edition Protocol Engines Software • Desktop Forwarders (Agents & Servers) • Corporate Intranet Server



Project Roll-Out Plan

	MODEMS	NETWORKS	PLATFORMS	SERVICES	PRODUCTS
Beta Release	AirCard 300 Minstrel V	CDPD	Windows CE PalmPilot	Neda + ….	
Phase I	AirCard 300 Minstrel V	CDPD	Windows CE PalmPilot	Neda + ….	CPMC
Phase II	AirCard 300 Minstrel V	CDPD Metricom	Windows CE Visor PalmPilot	WirelessNet Portal?	
Phase III					

LEAP: The Complete Picture

Our vision is described in The LEAP Manifesto

Standards & Technology

- Free Protocols Foundation – http://www.freeprotocols.org
- Lightweight & Efficient Application Protocols (LEAP) Forum – http://www.LEAPForum.org
- Efficient Mail Submission & Delivery (EMSD) – http://www.emsd.org – Home of RFC-2524
- Efficient Short Remote Operations (ESRO) – http://www.esro.org – Home of RFC-2188

Open-Source Software

- MailMeAnywhere – http://www.MailMeAnywhere.org

Subscriber Services

- ByNumber Services – http://www.ByNumber.net
- ByName Services – http://www.ByName.net
- Others to come

Supported & Commercial Software and Solutions

- Neda Communications, Inc. – http://www.neda.com
- Others to come

Everything is Complete and Ready

- **The protocols are mature and have been published as Internet RFCs:**
  - RFC-2188: ESRO Protocol
  - RFC-2524: EMSD Protocol

- **Protocol support organizations are in place:**
  - http://www.esro.org (home of RFC-2188)
  - http://www.emsd.org (home of RFC-2524)

- **Protocol Engine Reference Implementation will be available as free software, subject to the Gnu Public License (GPL)**

- **Initial free subscriber services are available at http://www.ByName.net**

Challenge to Modem Manufacturers

- The combination of your modem & its PDA is fully capable of being a true Mobile Messaging device

Our challenge:

What possible rationale can there be for just building a modem, when the proven market is Mobile Messaging (e.g. BlackBerry)?

- The costs are negligible!
- The benefits are huge!
- Pull your head out your ass!

The Benefits for Modem Manufacturers

- **Allows immediate entry into the applications market above Layer 3**
- **Makes your product of immediate value to the end user**
- **Allows you to establish a direct relationship with the end user, including brand-name awareness**
- **Distinguishes your product from generic competitors**
- **Opens the door to additional applications**

Challenge to Application Service Providers

- Wireless applications are undergoing explosive growth
- Wireless networks are converging on IP
- LEAP-based Message Center software is available as free, open-source software

Our challenge:

Why not integrate LEAP with your existing application services?

- The costs are negligible!
- The benefits are huge!

Neda Action Items

- **Support Modem Manufacturers**
- **Support Service Providers**
- **Add optional security to back-end transfers**
- **Promulgate The LEAP Manifesto**

Other Desired Partners

- **BSquare**
- **Tegic**
- **Microsoft (Windows CE)**
- **Handspring (Visor)**
- **EPOC**
- **Palm**
- **OmniSky (Minstrel V)**
- **… and many others**

Next Steps

- **Demonstrate proof of concept: get a working end-to-end system in place ASAP**
- **Periodic project plan reviews**
- **Marketing announcements & coordination**