# 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


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# 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.**


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# The BlackBerry Solution

- Total validation of Mobile Messaging

BUT…

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


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# 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***


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# 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<br>Implementation details unknown<br>Precludes other implementations | Open paradigm permits external security implementation |


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# 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***


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# 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 |


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# 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)


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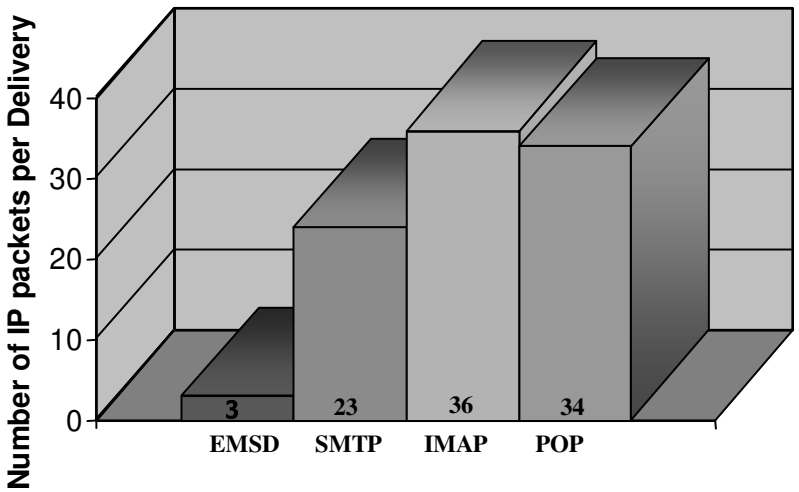
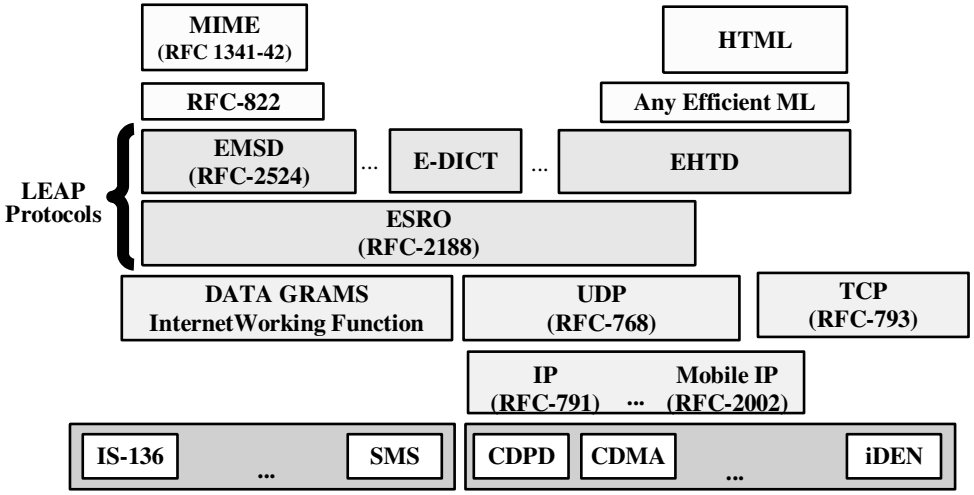
# What is LEAP?




**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



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# 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


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# Initial Partners & Their Roles

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


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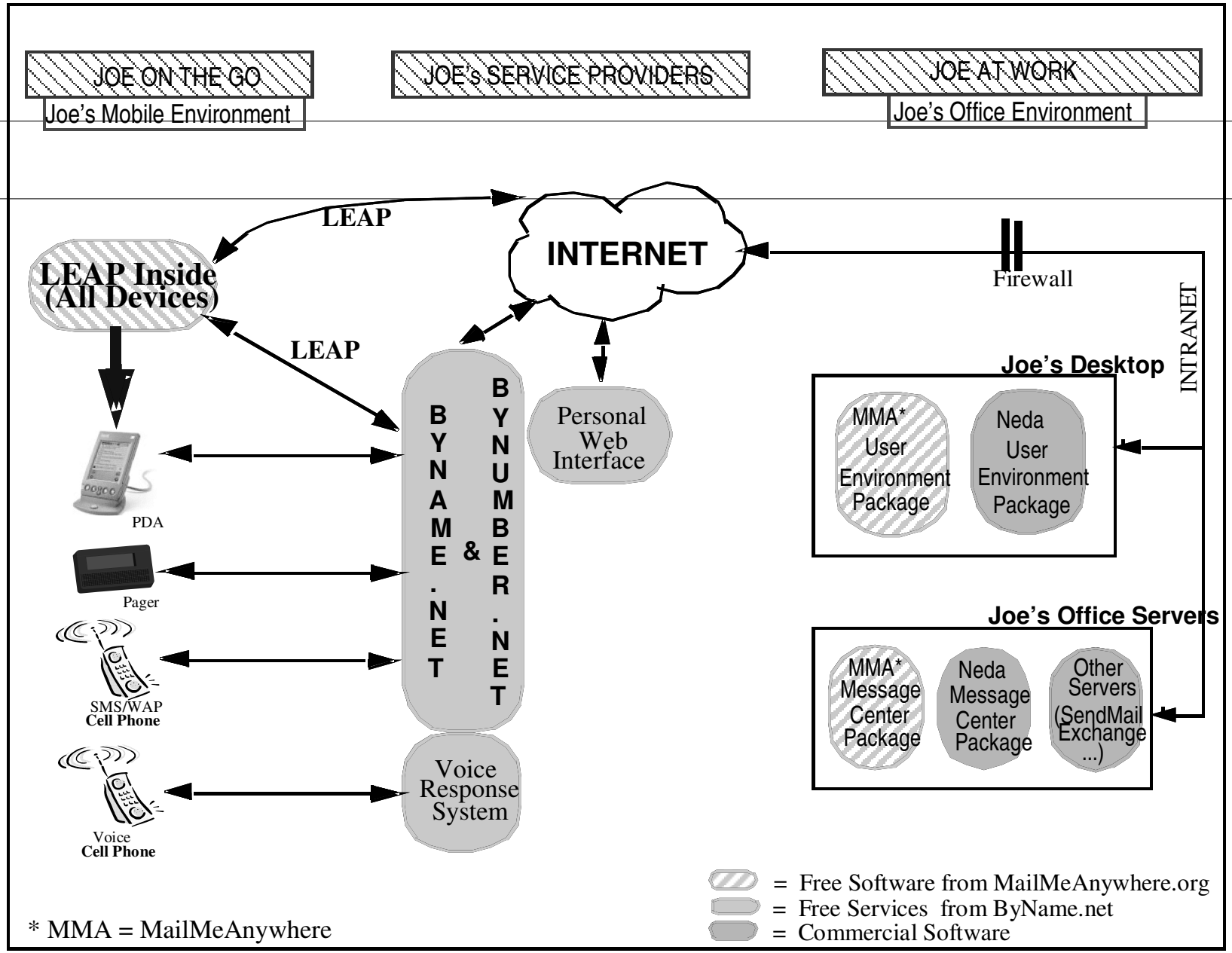



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# Project Roll-Out Plan

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


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# 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


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# 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**


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# 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!


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# 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**


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# 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!


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# Neda Action Items

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


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# Other Desired Partners

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


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# Next Steps

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


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