

# **WAP is a Trap**

## **Alternatives to WAP**

**Mohsen Banan**

**public@mohsen.banan.1.byname.net**

**for the**

**Free Protocols Foundation**

**<http://www.freeprotocols.org>**

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# Two Major Technological & Economic Forces

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1. Rise to supremacy of:

**The Internet End-to-End Model**

2. Transition from:

**Material Capitalism**  
to  
**Non-Material Capitalism**

# The Internet End-To-End Model

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- New applications at either end can accomplish whatever they want without participation or interference by middlemen.
- Middlemen are always bypassed.
- Gatekeepers & toll collectors will become extinct.

# Internet End-To-End Model: Lessons from History

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## **Success Stories**

- The Internet itself
- The World Wide Web
- GNU/Linux
- PGP
- CDPD
- Napster/Gnutella

## **Failures**

- SNA (IBM)
- Minitel
- WAP
- CDPD

# WAP is Not Wireless Internet

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- WAP claims to be Internet End-to-End, but is not

From: Phil Karn <karn@qualcomm.com>  
To: public@MOHSEN.BANAN.1.BYNAME.NET  
CC: ietf@ietf.org, karn@qualcomm.com  
Subject: Re: WAP Is A Trap -- Reject WAP

.....

One thing missing from most block diagrams of WAP is the chute on the bottom of the carrier's WAP gateway pouring out money. It's safe to say that this chute is WAP's primary reason for existence.

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The Internet end-to-end model will once again prevail, putting the cellular service providers back into their proper place as providers of packet pipes, nothing more. And life will be good again. :-)

- Is a WAP operator an ISP / ASP?

# Material Capitalism vs. Non-Material Capitalism

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**Domain of Things  
(The Microsoft/WAP Way)**

**Domain of Ideas / Art / Information  
(The Linux/LEAP Way)**

|                       |                              |
|-----------------------|------------------------------|
| Ownership             | Identification of origin     |
| Competition           | Cooperation                  |
| Confrontation         | Collaboration                |
| Royalties & Licenses  | Sharing - Services & Support |
| Secrecy               | Public                       |
| Specification control | Specification stability      |
| Patents               | Usage freedom                |
| Copyright             | Copyleft                     |
| Trademarks            | Trademarks                   |
| Capital at work       | Creativity at work           |

# Tip of the Iceberg: Success Stories in Non-Material Capitalism

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- GNU/Linux
- Internet Protocols
- GPL
- Apache
- Napster/Gnutella

# WAP: A Procedural Fraud

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- Not open in terms of development and maintenance
- Not patent-free
- No assurance of availability and stability
- No legitimacy as a standard: self-published & self-promoted
- Not end-to-end: gateways and middlemen



# WAP: A Technical Failure

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- Excessive re-invention in the name of wireless
- User interface assumptions
- Extreme accommodation to existing networks
- Vulnerable Wireless Transport Layer Security (WTLS)
- Bungled protocol number assignment

**Ask your own engineers!**

# WAP: A Basic Misconception

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- The wrong answer initially: Mobile Web Browsing
- The right answer initially: Mobile Messaging
- Unsupported claims:
  - Wireless Internet
  - End-to-end
  - Not device-dependent
- Is it even really necessary?
  - Limited web browsing capabilities
  - Existing technology adequate
  - Voice interface adequate

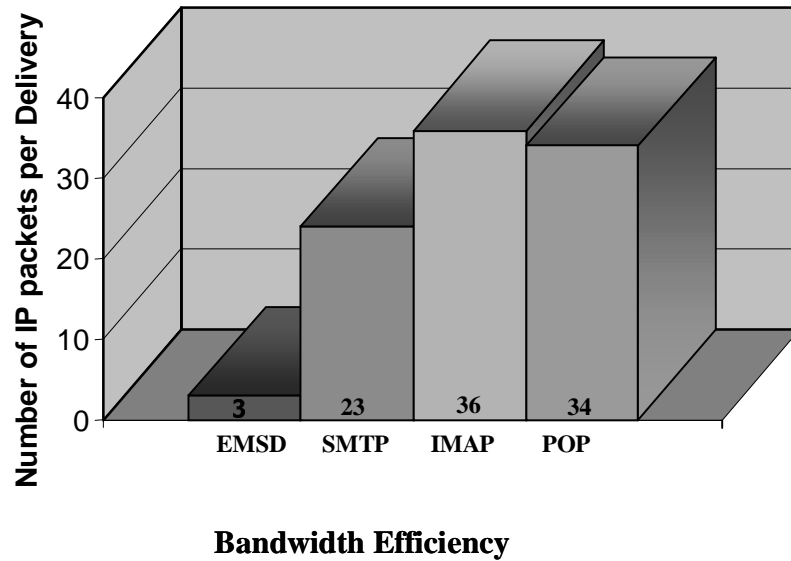
# LEAP: One Alternative to WAP

## The Concept

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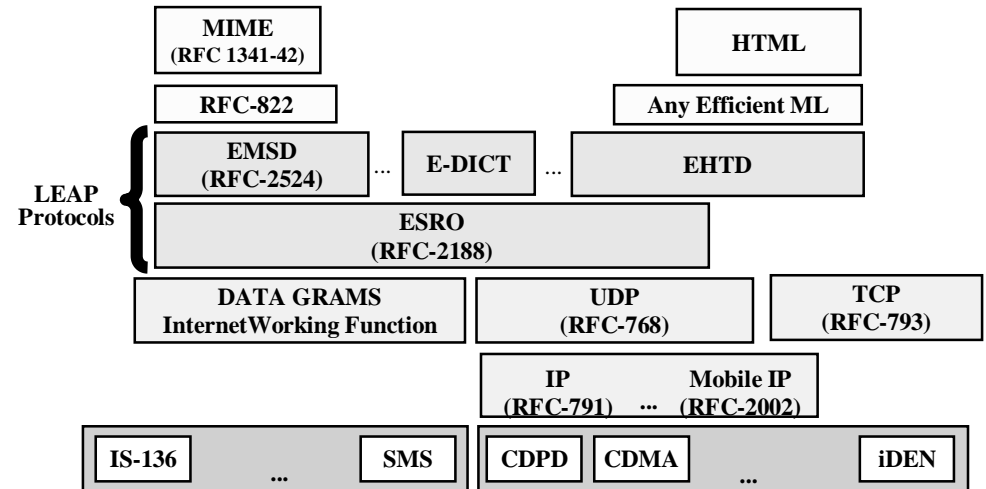
- **Opportunity**
  - There is a need for a new generation of truly open efficient Internet protocols which address wirelessness, mobility, & miniaturization.
  - WAP is not it. WAP is a trap.
- **Solution**
  - LEAP: Lightweight & Efficient Application Protocols
  - Internet mainstream

# What is LEAP?



## • Efficiency Benefits:

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



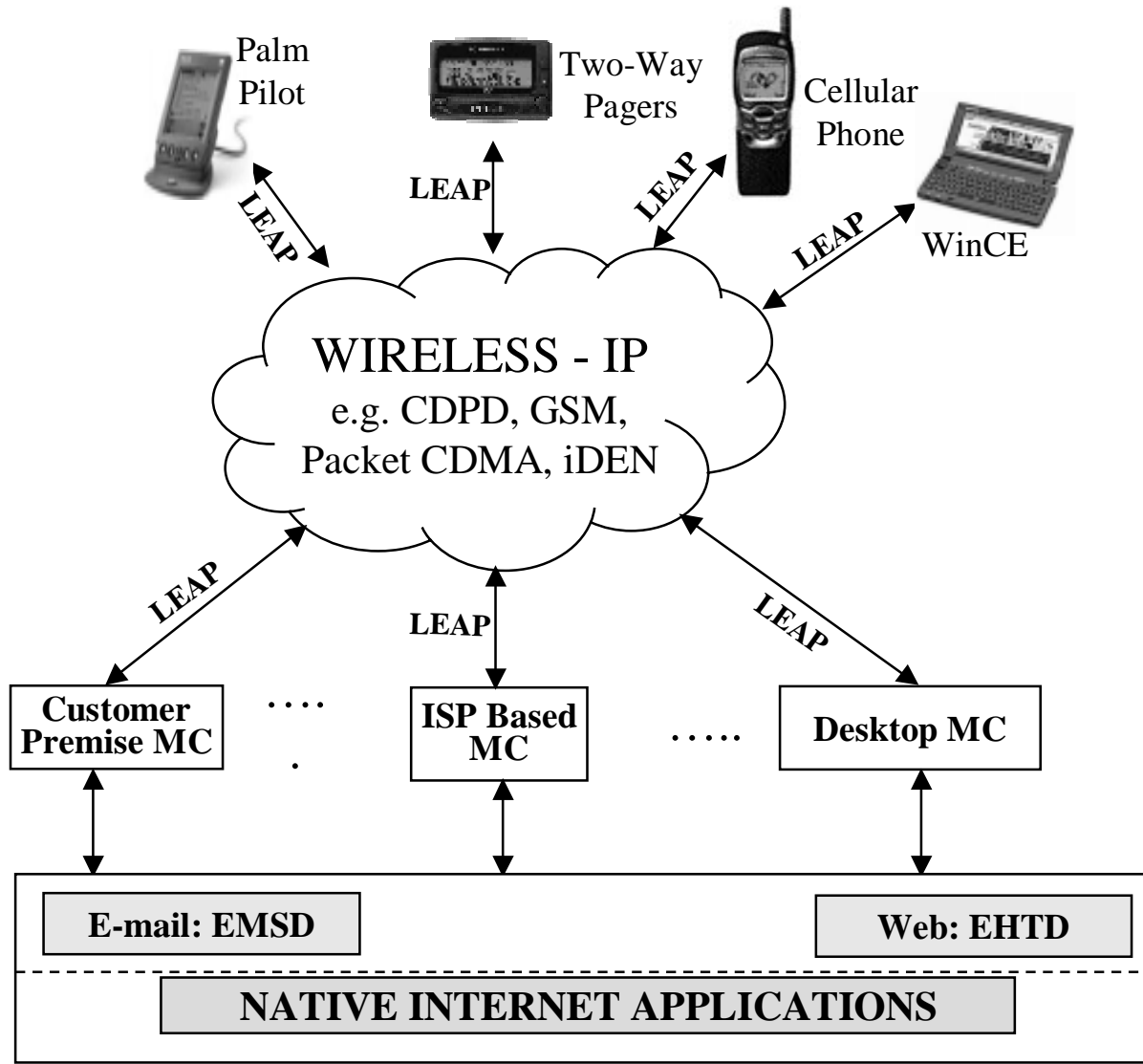
## LEAP is a family of protocols:

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

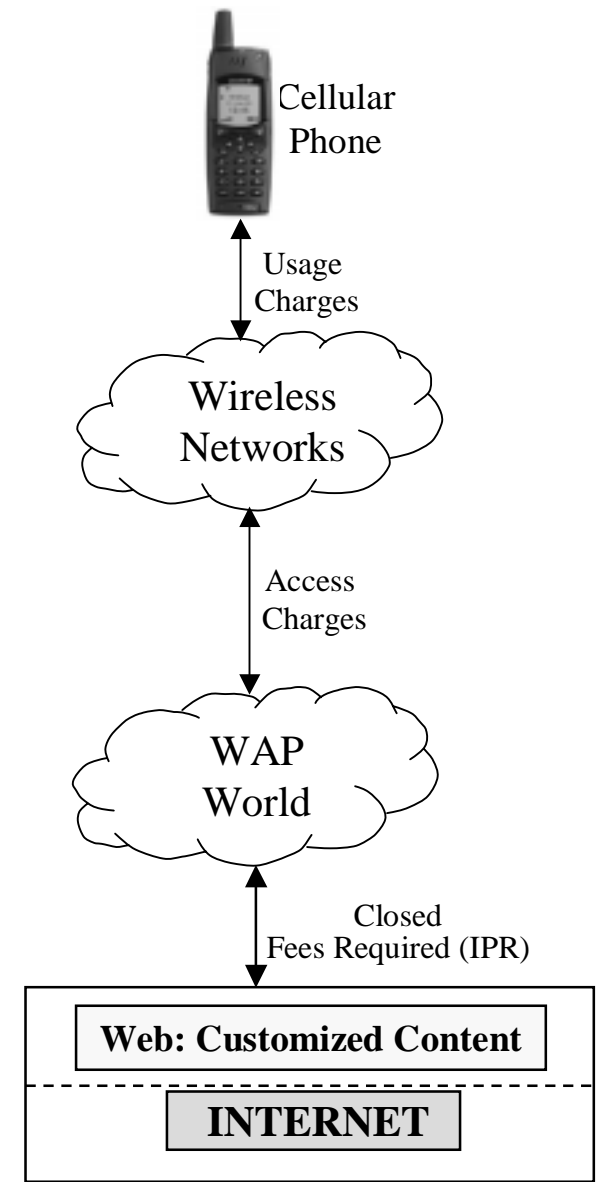
## • Technical Attributes:

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

## How LEAP Works



## How WAP Fails



# A Brief History of LEAP

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- **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

# LEAPing over WAP

## WAP

versus

## LEAP

|   |   |
|---|---|
| <b>Patented</b><br><b>Self-published by WAP Forum</b><br><b>Subject to change without notice</b><br><b>Maintained by the WAP Forum</b><br><b>Re-invention of existing protocols</b><br><b>Tailored to mobile phone interface</b><br><b>Security vulnerability</b><br><b>Inconsistent protocol number assignment</b><br><b>Poor technical design</b><br><b>Initial focus: web browsing</b><br><b>Treats wireless as a special case</b> | <b>Patent-free</b><br><b>Published as Internet RFCs</b><br><b>Revisions permanently fixed</b><br><b>Maintained by open working groups</b><br><b>Optimizing extensions to existing protocols</b><br><b>User interface independent</b><br><b>No security assumptions</b><br><b>Consistent protocol number assignment</b><br><b>Good technical design</b><br><b>Initial focus: messaging</b><br><b>Treats wireless as an extension of Internet</b> |
| <b>Read: <u>The WAP Trap</u></b>  | <b>Read: <u>LEAP: One Alternative to WAP</u></b>  |

- **A patent fiasco:**
  - Geoworks patent assertion
  - Phone.com patent assertion
  - Phone.com suing Geoworks

- **WAP is facing intense criticism**
- **WAP -- Where Are the Phones?**

# LEAP: The Bigger Picture

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“The LEAP Manifesto” -- describes our vision.

## **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