WAP is a Trap

Alternatives to WAP

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Two Major Technological & Economic Forces

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

- 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

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

- 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.
>
> …..
>
> 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

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

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

WAP: A Procedural Fraud

- 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

- 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

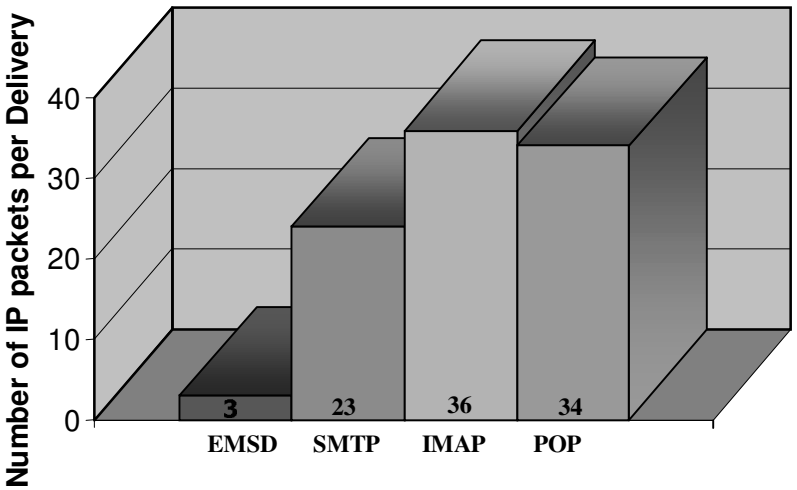
- The wrong answer initially: Mobile Web Browsing
- The right answer initially: Mobile Messaging
- Unsupported claims:
  - Wireless Internet
  - End-to-end
  - Not device-dependent
- Is it even really necessary?
  - Limited web browsing capabilities
  - Existing technology adequate
  - Voice interface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

LEAP: One Alternative to WAP
The Concept

- **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.

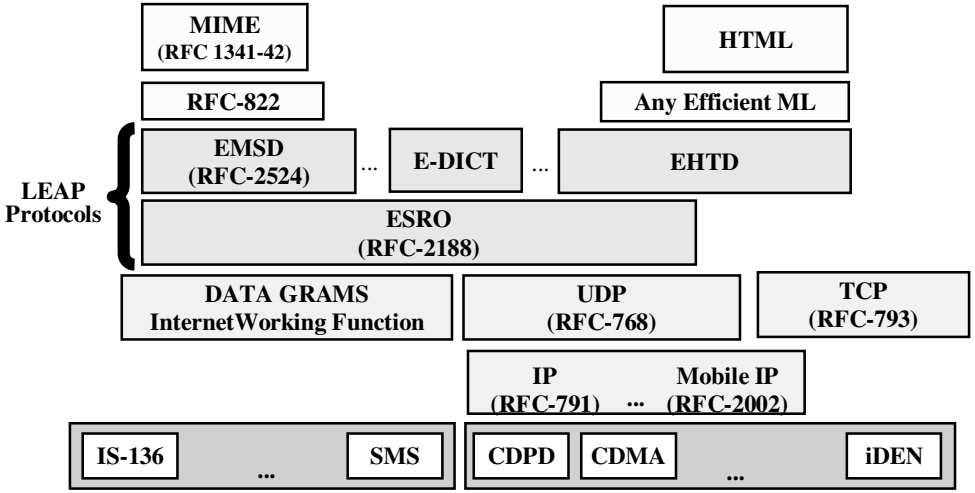
- **Solution**
  - LEAP: Lightweight & Efficient Application Protocols
  - Internet mainstream

What is LEAP?



Bandwidth Efficiency

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

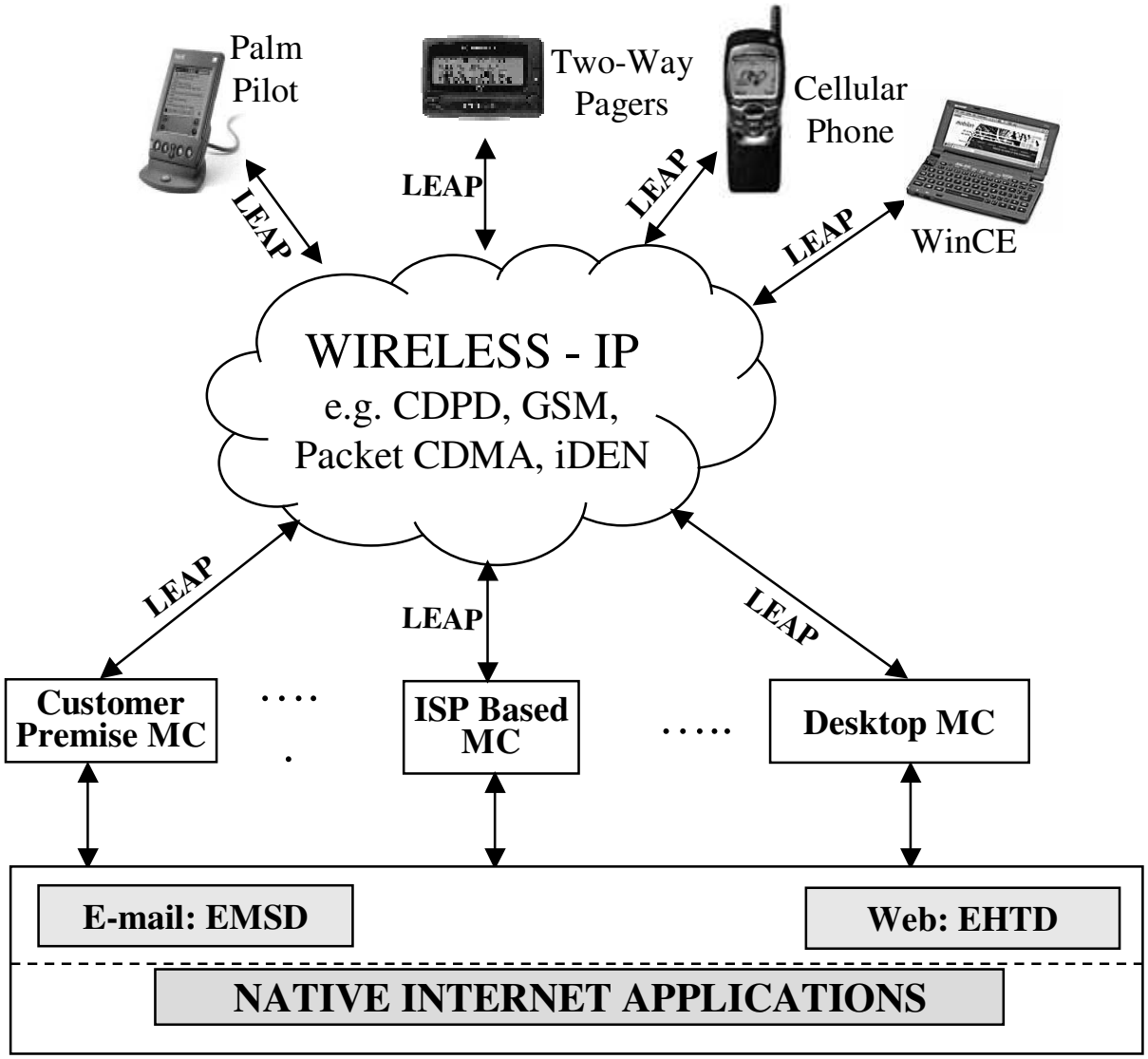


LEAP is a family of protocols:

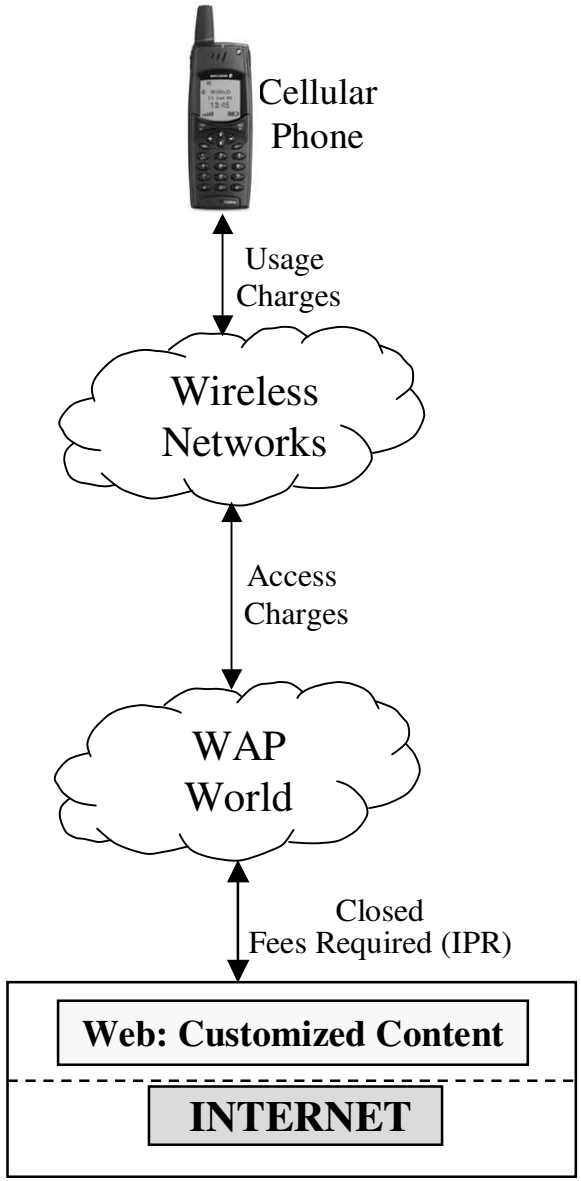
- **ESRO: Efficient Short Remote Operations**
- **EMSD: Efficient Mail Submission & Delivery**
- **EHTD: Efficient Hyper Text Delivery (in progress)**
- **...**

- **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

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

- **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

"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