



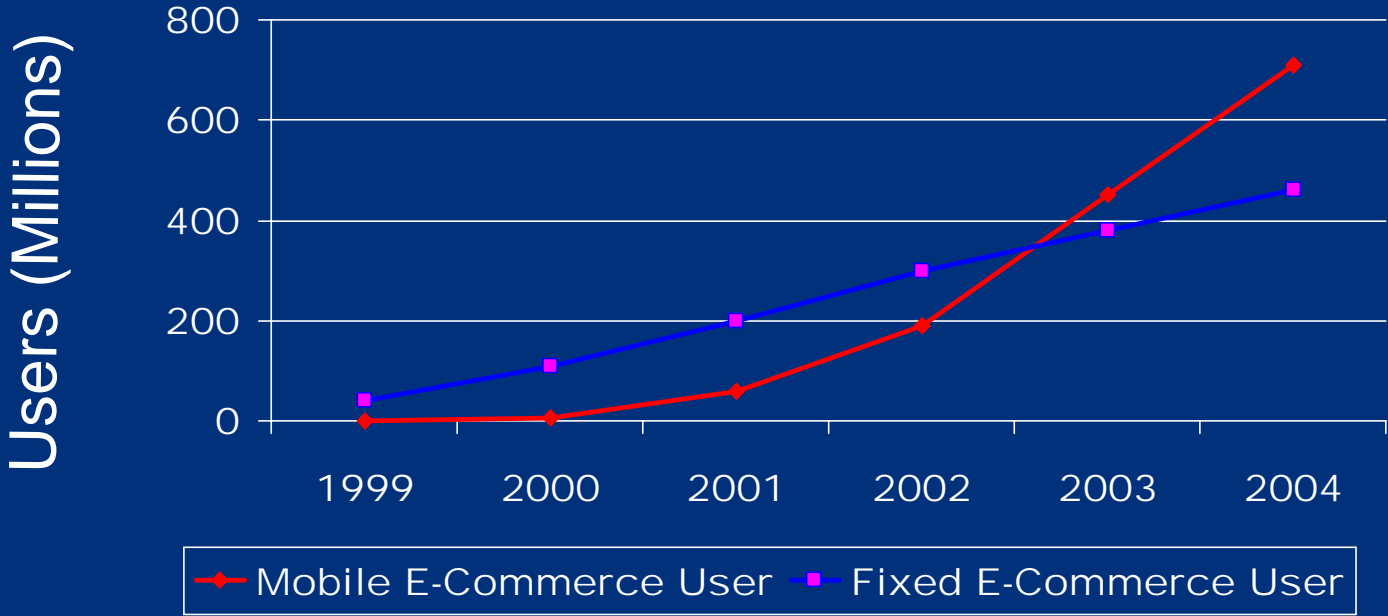
i n v e n t



David Isaacson
hp/bluestone

Dealing with Device Proliferation

The World Is Going Mobile



Source: ARC Group

Analysts Predict



15 million PDAs by 2002

(Source: The Industry Standard)

500 million smart phones by 2003

(Source: Lehman)

860 million devices by 2002

(Source: Yankee Group)

1 billion mobile phones by 2004

"The opportunity for wireless data communication is huge, with 25.3 of the 112.1 million person workforce having a mobile computing job requirement"

(Source: Gartner group)

Terminology

Wireless

How you connect.



Mobile

How you work and live.



Alternative Application Approaches and Markets

Connected



Connected Applications

Browser-based

Stock Quotes

Driving directions

Weather

Dining

Traffic Status

Movie Guide

Short Messaging

Yellow Pages

Package Tracking

Lottery

Horoscope

Dining Guide

Food Take-out

Health Care Locator

Call Taxi

Currency

Translator

Dictionary

Auctions

Calendar

To do list

Contact Management



Alternative Application Approaches and Markets

Connected



Disconnected



Disconnected Applications

Field Service
Training
Warehouse Management
Shipping/Receiving
Calendar
Task Management
Scheduling
Spreadsheet
Time Reporting
Entertainment
Lifestyle
Games
Maintenance



Alternative Application Approaches and Markets

Connected



Disconnected



Sometimes Connected



Sometimes Connected Applications

Multiple net aware multifunction devices at home, at work, in the car on the road, everywhere!

Work in connected and disconnected modes. Devices sense connectivity.

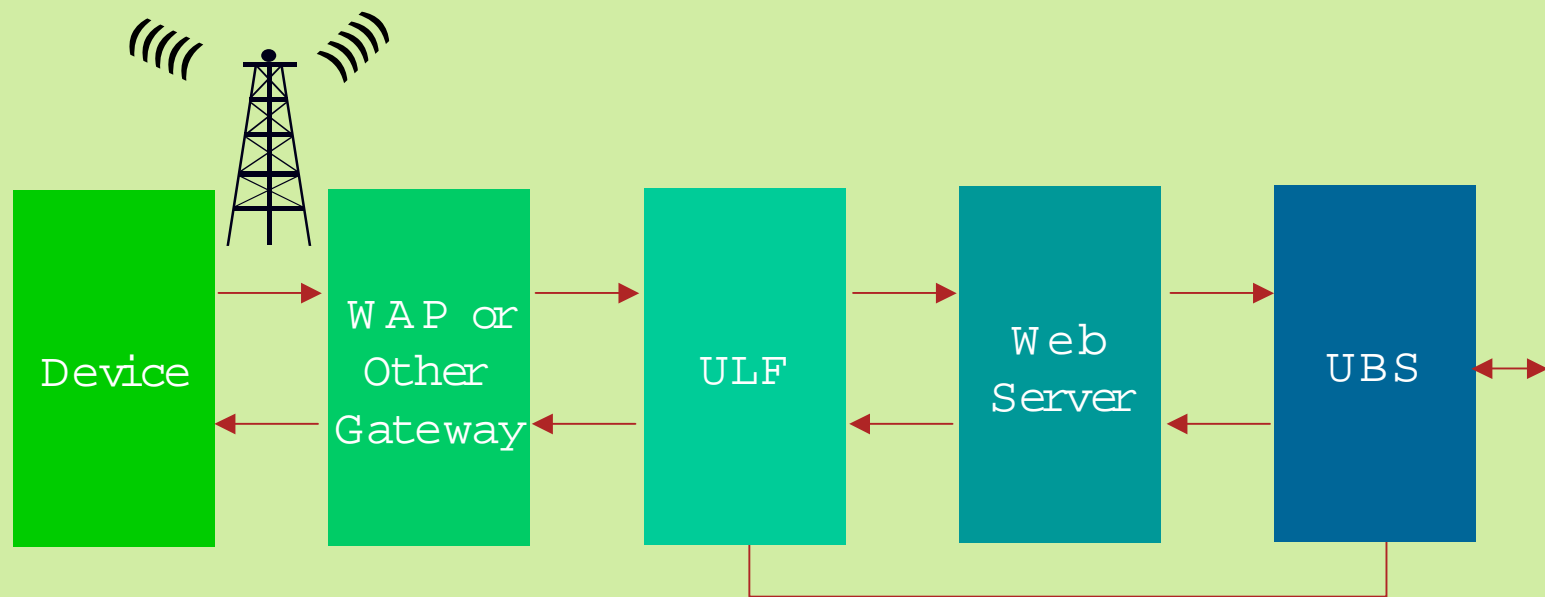
- Client-Server
- J2ME
- Chai



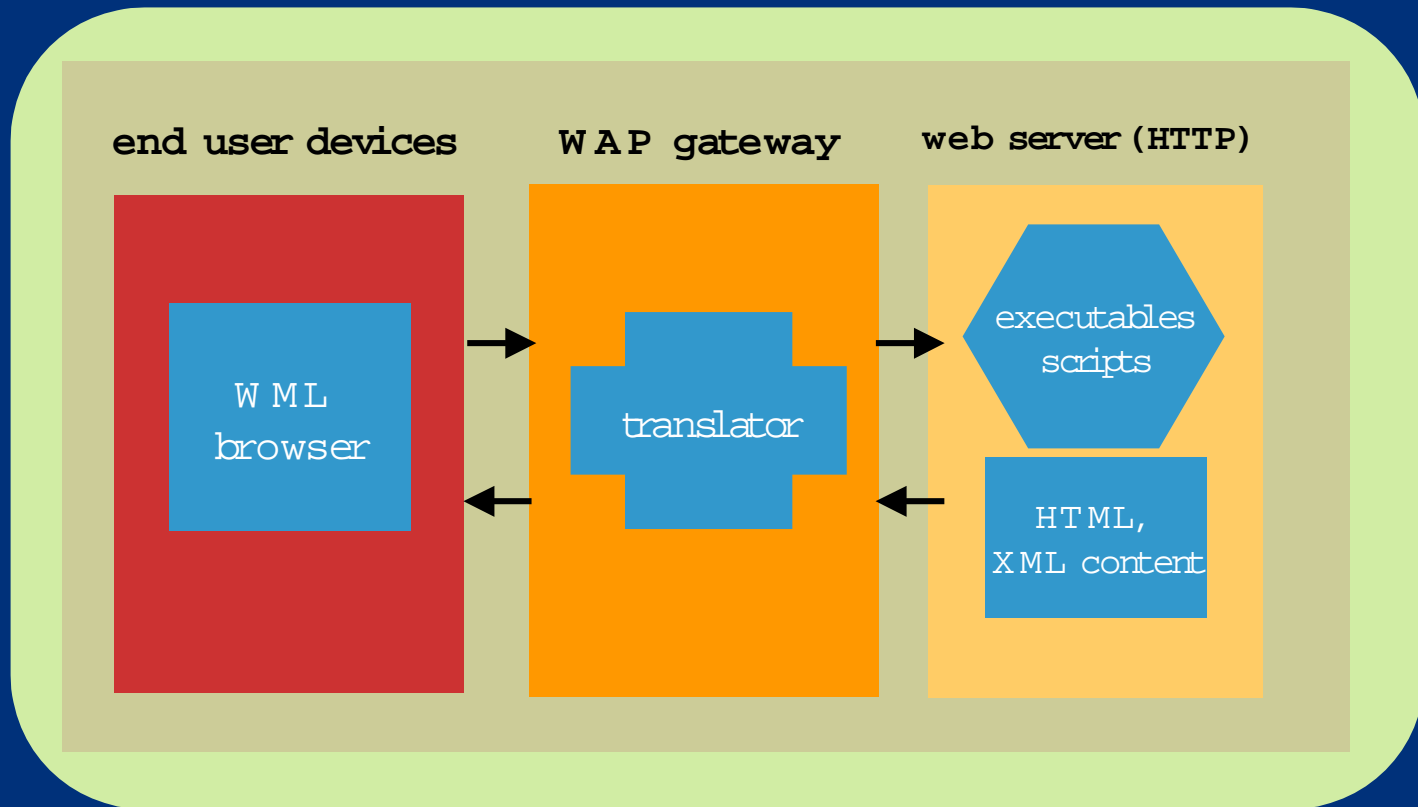
Application Types

- Information, broadcast or subscribed to.
(news, weather, sports, business, entertainment, traffic, etc.)
- Request-based - provides information in response to a specific request on a one-time basis.
(Flight Arrival/Departure/Gate Information, Location-based information, event times for entertainment and sports, stock quotes, etc.)
- Transaction-based - allow the user to conduct actual commerce using a mobile device.
(shopping, reserving/purchasing tickets for travel or entertainment, buying stocks, etc..)
- Corporate - Personal productivity applications such as e-mail and mission-critical applications such as sales force automation.

Basic Mobile Architecture

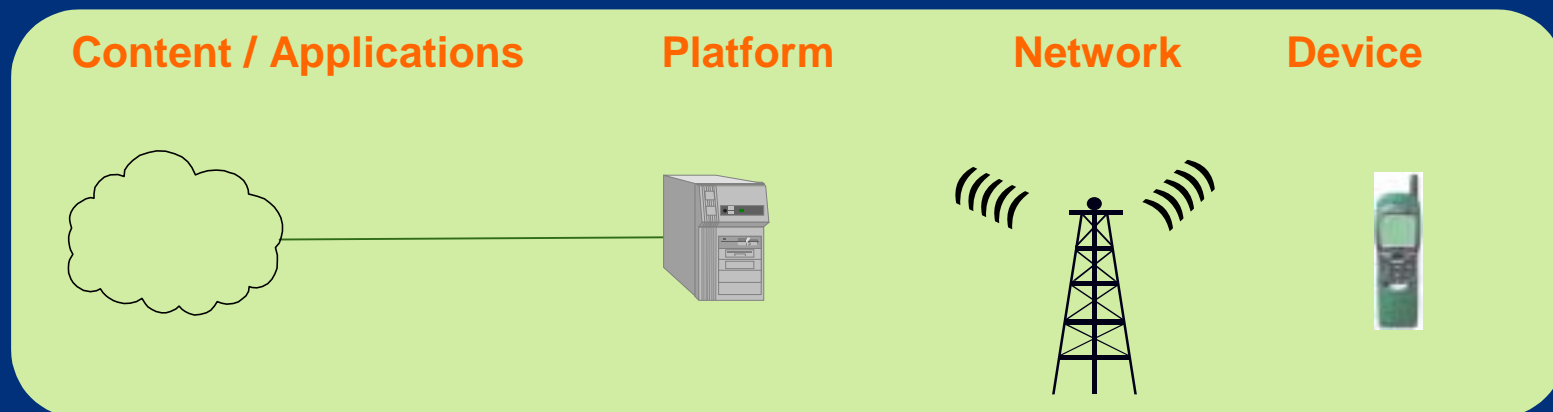


WAP



Going Mobile

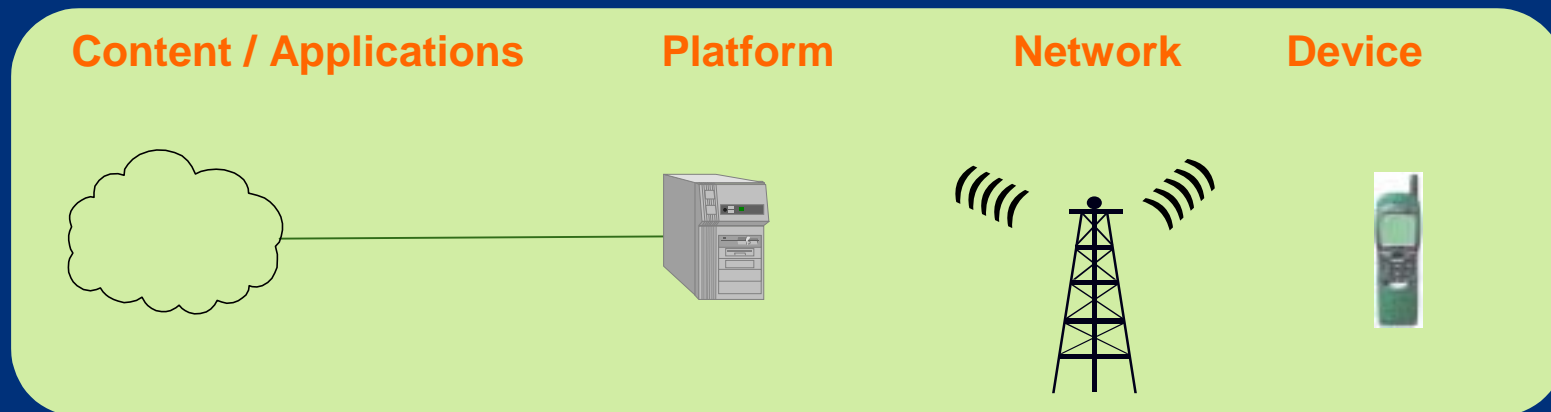
connected application challenges



Going Mobile

connected application challenges

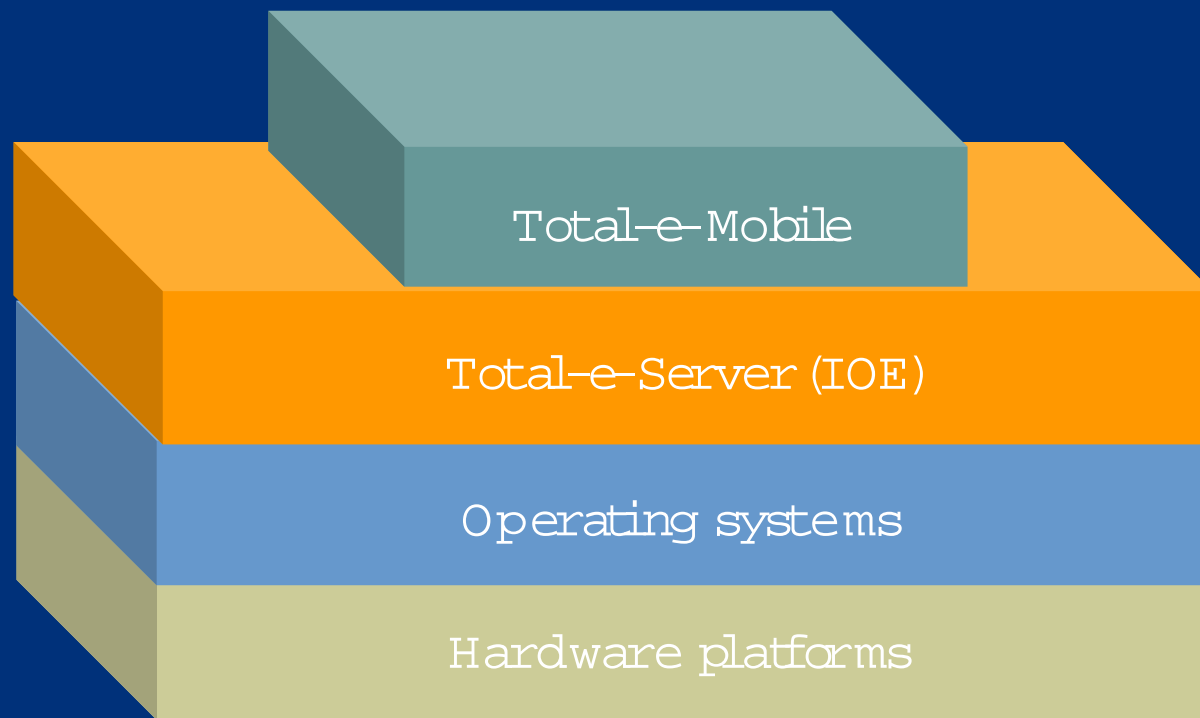
- e-Business Infrastructure Issues
- New Development Paradigm
- Multiple Versions of Same Web Site
- Application Reuse
- GUI Design
- Emerging Standards



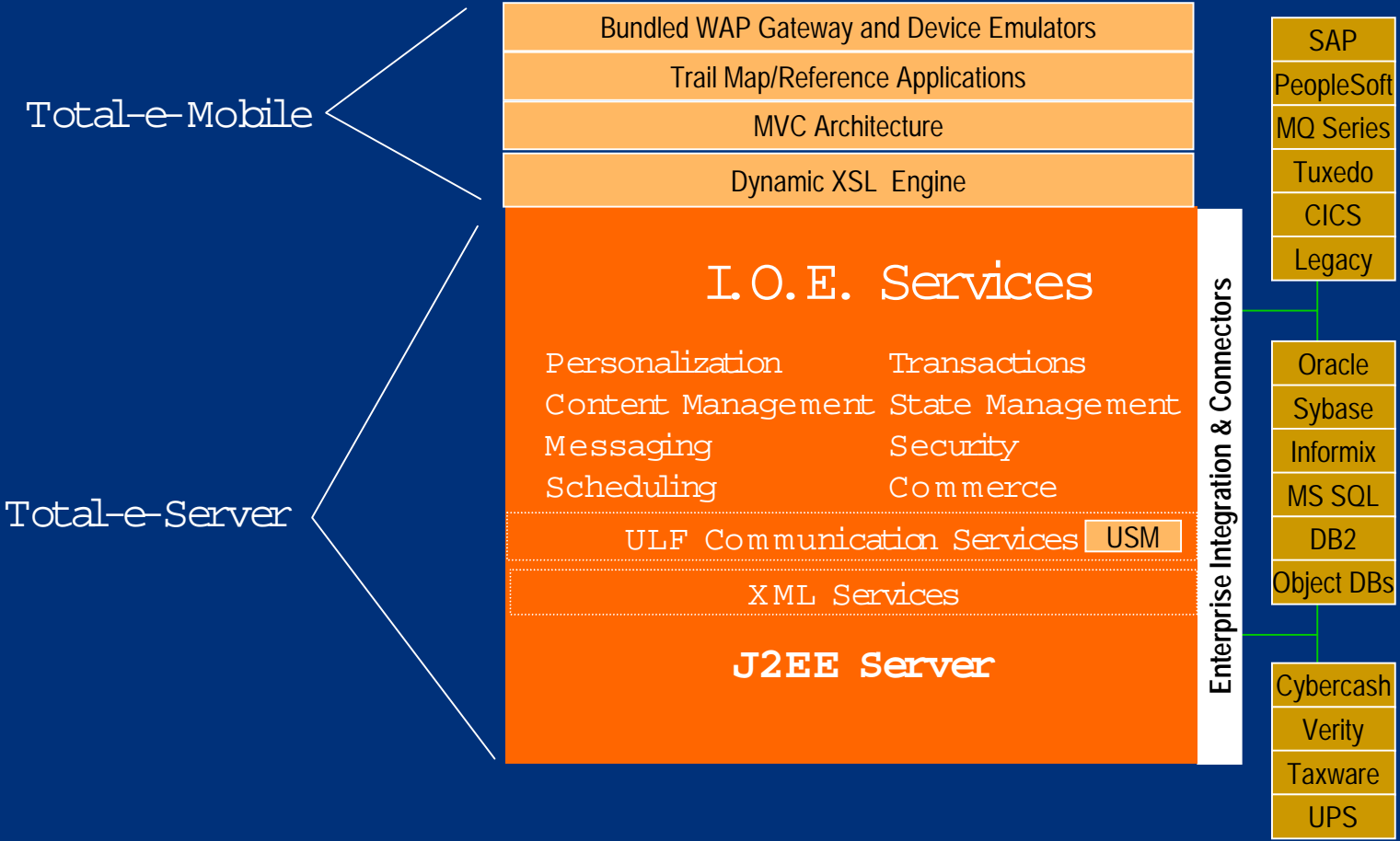
What is Total-e-Mobile?

An extension of Bluestone's Internet Operating Environment that addresses the challenges of building and deploying applications that deliver real-time, personalized information in a secure environment to any device, any time, anywhere.

Where Does Total-e-Mobile Fit?



Total-e-Mobile Components



Total-e-Mobile

Built on I. O. E.

Dynamic XML Stylesheet Engine

Mobile Trailmap - step by step
guide to developing mobile applications

Reference applications built with Model
View Controller (MVC) architecture

calendar

task list

address book

Universal Session Manager - HTTP
Cookie Proxy and URL masking

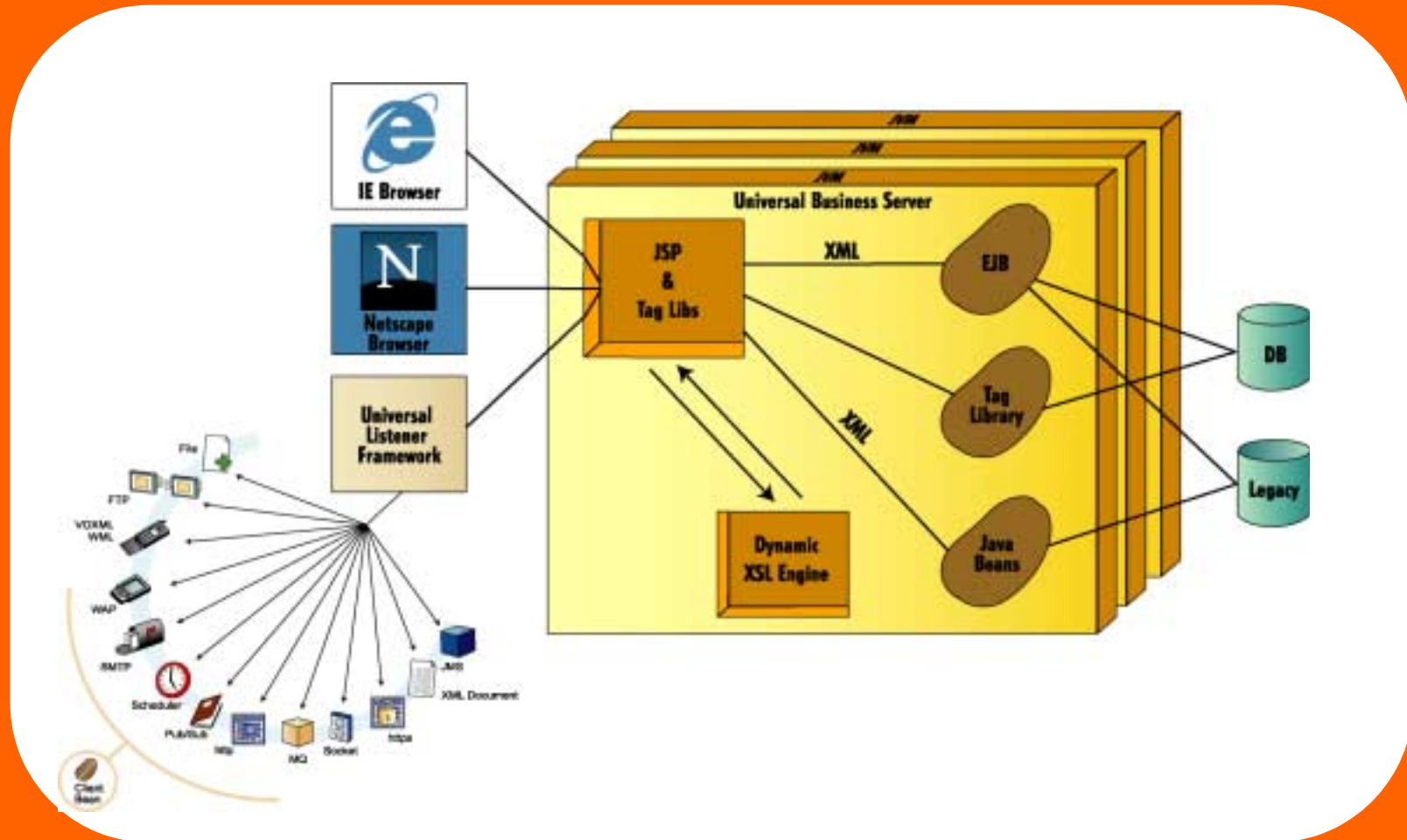
Bundled WAP gateway

Bundled emulators and Sdks

Dynamic Stylesheet Engine

Device determination – Content formatting

One URL Fits All™





June 26, 2001

Client Sensing

- Determine Client Type: Browser, WAP phone, other

Dynamic Stylesheet Engine

- Formatting Content For Different Devices

Displaying HTTP Header Values

- Determine device parameters

Hello World Demonstration

- Build Simple Wireless Application

MobileContact

- Address Book Demonstration and Reference Application

MyMusic

- Search your Personal Music Catalog - Mobile Search and Query Reference Application

BSIShop

- Mobile e-commerce Demonstration and Reference Application

Mobile devices are slipping in the backdoor

Demand for anywhere, anytime access and transactions will drive enterprise adoption of mobile web applications. Be Proactive!



Swisscom Quote:

"Bluestone's **step-by-step tutorials and reference implementations** are greatly expediting the learning process for our team. As a result, we have been able to dramatically accelerate the time-to-market for our portal."

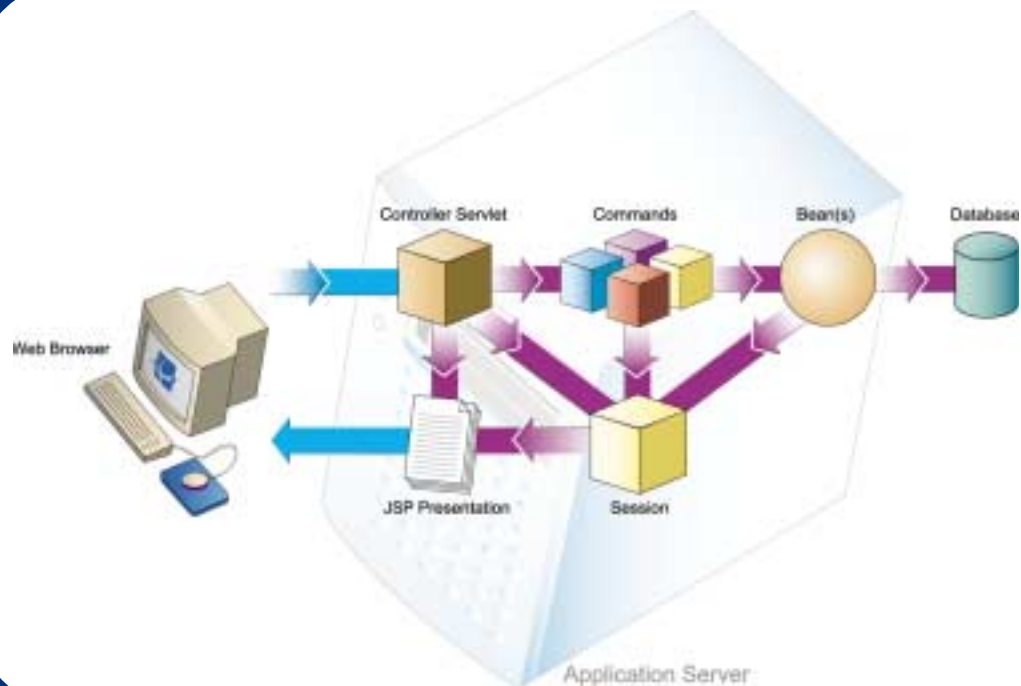
Adaptable Architecture (J2EE, XML, MVC)

No Technology Lock-in

- Built on Total-e-Server - J2EE Application Server
- Advanced Integrated Dynamic XML Server
- Universal Communication Facilities
- MVC Architecture for Ultimate Application Reusability

Model View Controller (MVC)

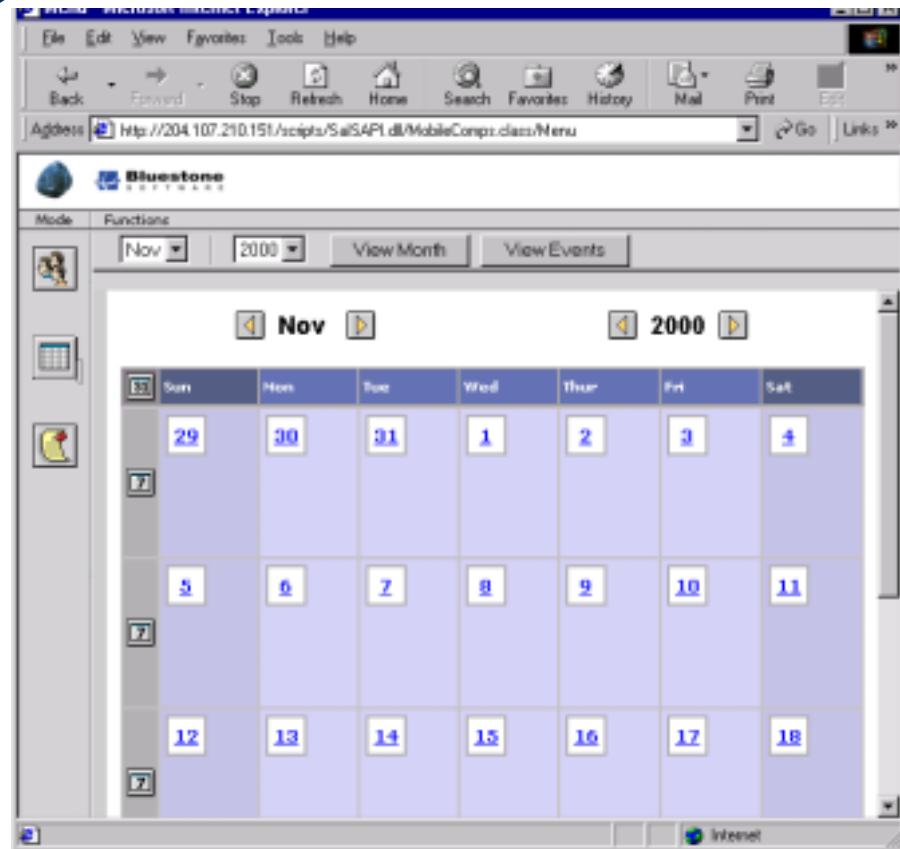
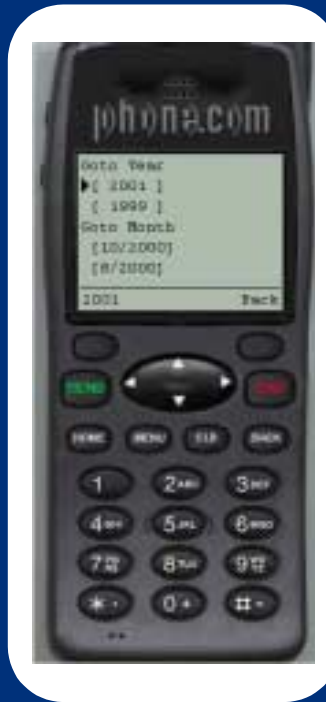
Separate process, presentation, business logic



- Reusability
- Rapidly Deploy To New Devices

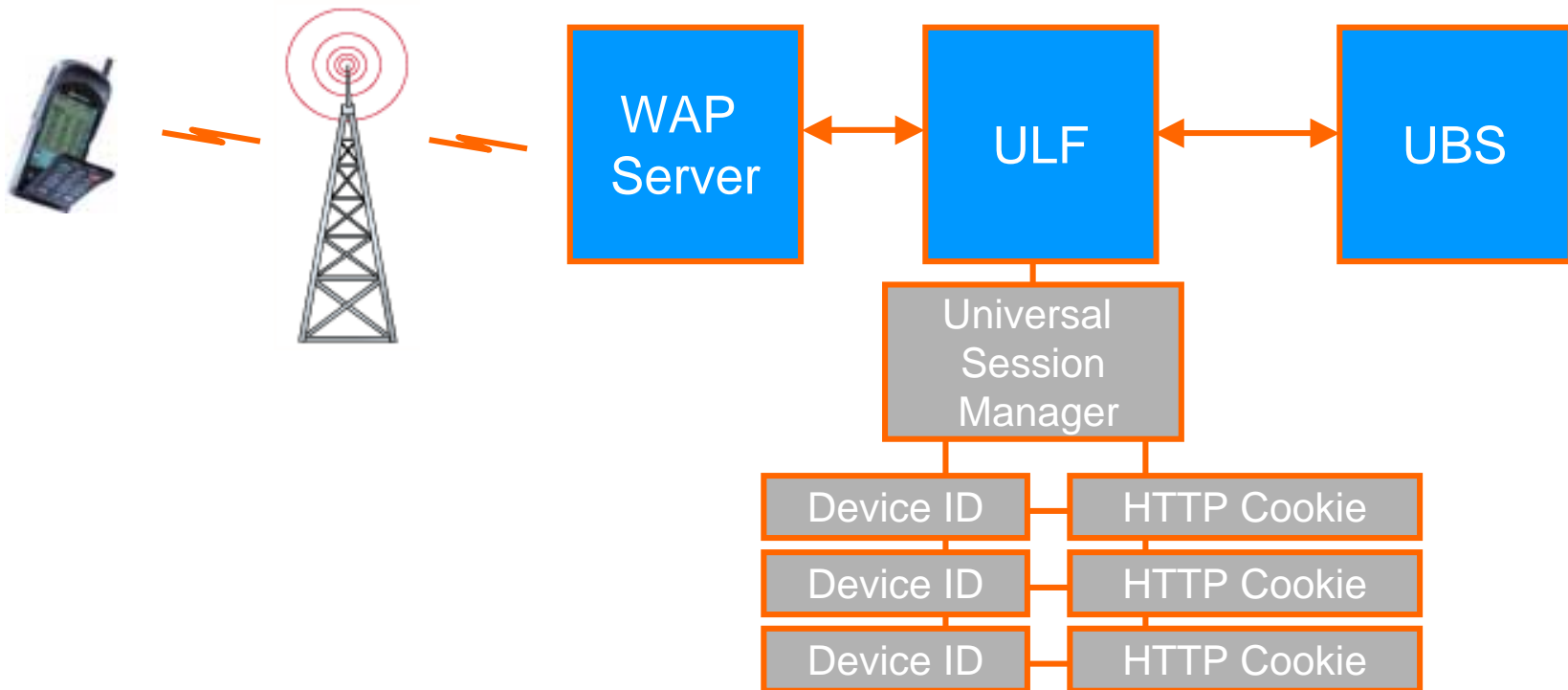
Calendar, Task List, Address Book

- Same Application on Browser or Mobile Device
 - Use As Is
 - Customize
 - Expand



Universal Session Manager

Cookie Proxy for Devices, Phones, Appliances



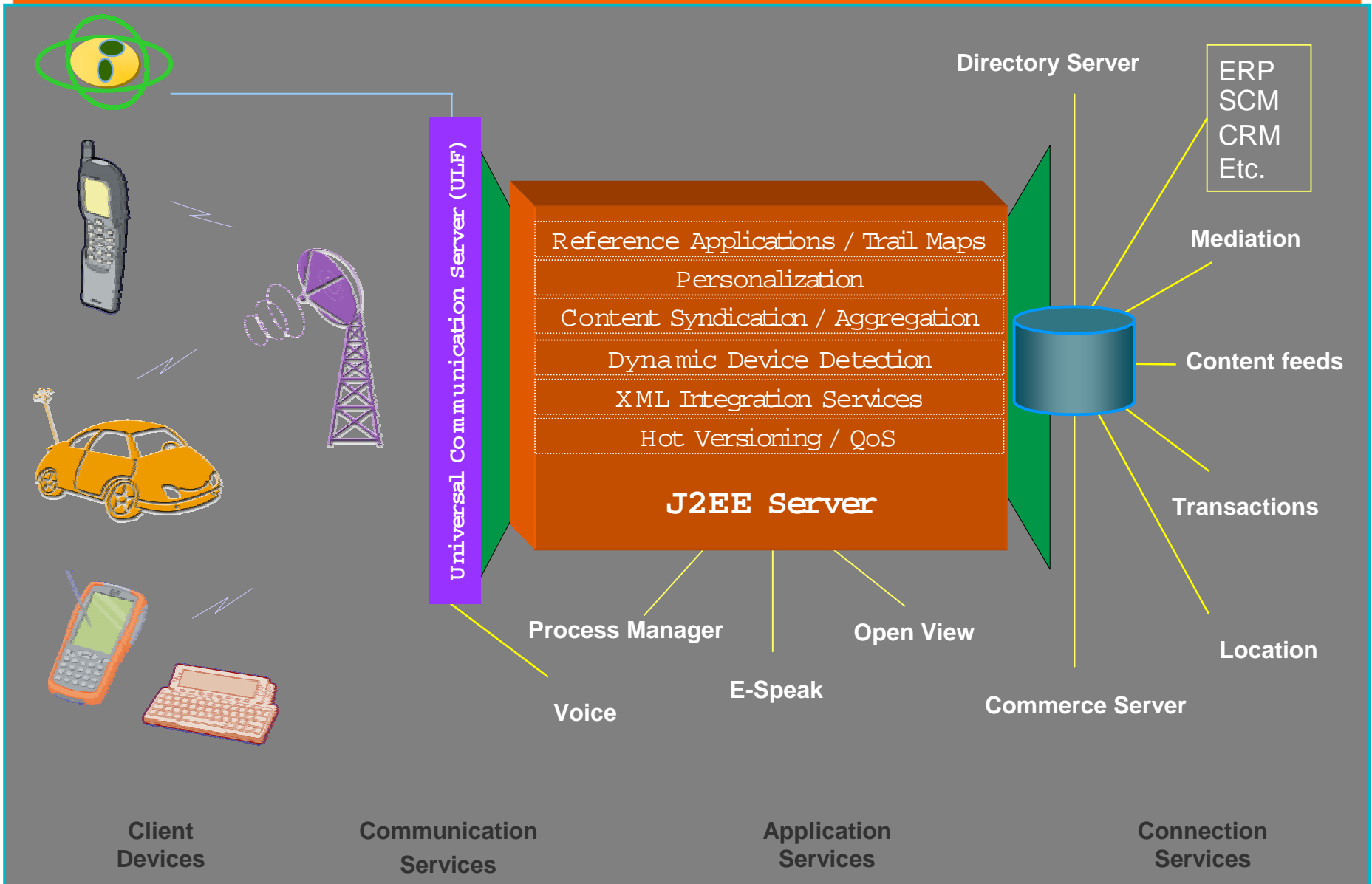
swisscom



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Urs Loher, head of Mobile e-Business Services for Swisscom.

I.O.E. Portal Framework Services



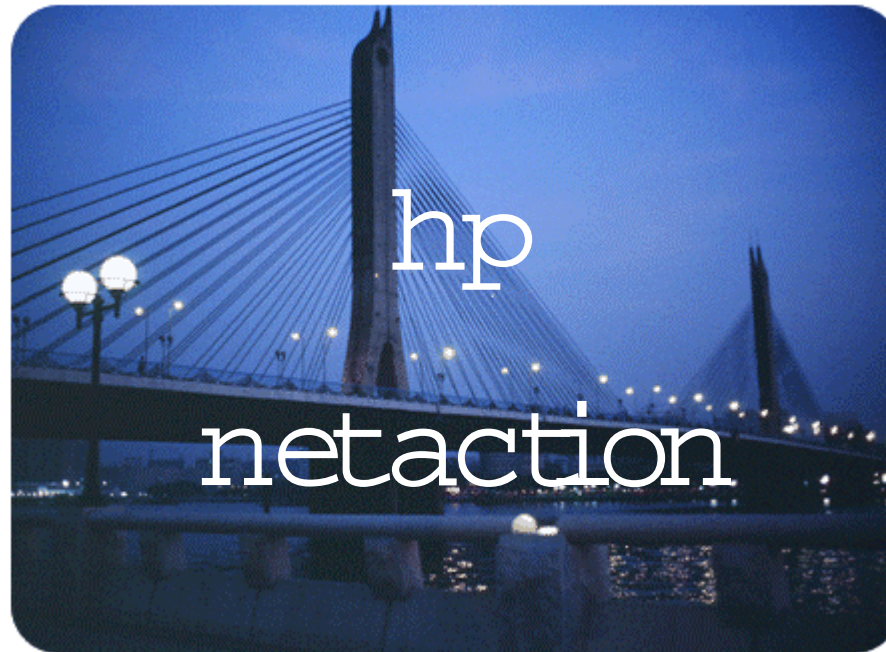
hp
software
strategy

develop

integrate

deploy

hp bluestone



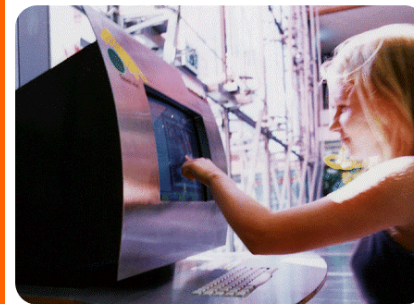
hp opencaII

hp process
manager

hp internet
usage
manager

hp e-speak

hp chai



hp security

Summary

- Market is Emerging
- Total-e-Mobile meets Business Needs TODAY!
- Sales Channels/Collateral Exist
- WE HAVE AN OPPORTUNITY TO DOMINATE

