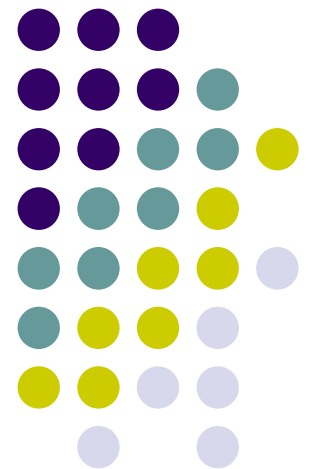# WAP

Bringing the internet to you

Overview

- What is WAP?

- WAP Architecture
  - Protocol Stack
  - Wireless Application Environment
  - Extra Features
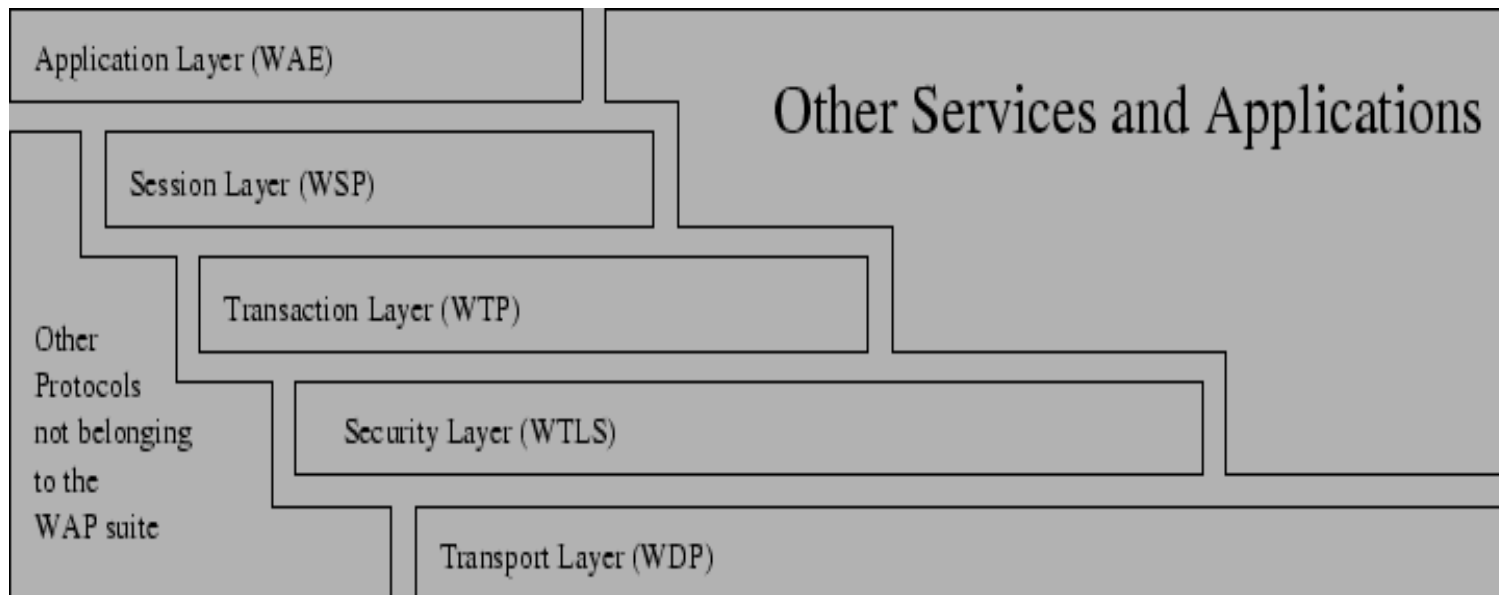
- Future of WAP

What is WAP?

- Wireless Application Protocol
  - Allows wireless devices to access the internet

  - Developed by Nokia, Ericsson, Motorola and Unwired Planet (formerly Phone.com) in mid 1997

  - Is an attempt to define the standard for how content from the Internet is filtered for mobile communications

 - WAP standards are created by members of the WAP Forum

The WAP protocol

- The WAP protocol stack
  - Defined in layers to distinguish the different data treatments during a transaction

Application Layer (WAE)	Other Services and Applications
Session Layer (WSP)	
Transaction Layer (WTP)	
Security Layer (WTLS)	
Transport Layer (WDP)	

Other Protocols not belonging to the WAP suite
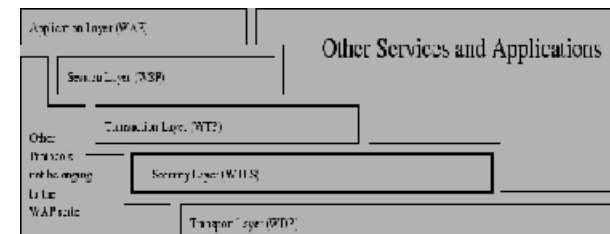
The WAP protocol (cont.)

- WDP (Wireless Datagram Protocol)
  - Modeled after the User Datagram Protocol (UDP)

  - Allows WAP to be bearer independent by adapting the transport layer of the underlying bearer
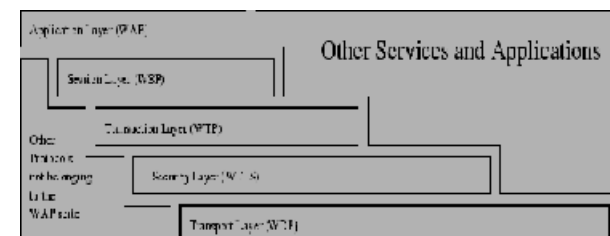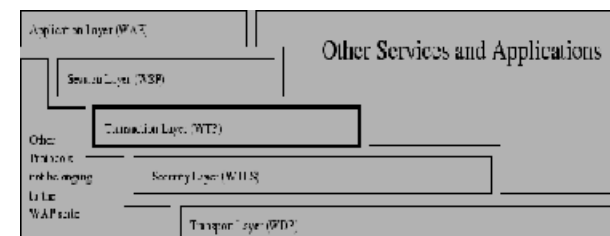
The WAP protocol (cont.)

- WTLS (Wireless Transport Layer Security)
    - Based on SSL (Secure Socket Layer)

    - Ensures transmitted data integrity

    - Provides a mechanism to encrypt data

    - Provides a method of authentication between server and terminal
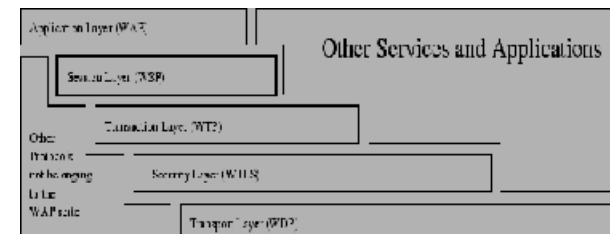
The WAP protocol (cont.)

- WTP (Wireless Transaction Protocol)
  - Handles the passing of packets (like TCP)

  - Prevents duplicate copies of packets from being received by a destination

  - Supports retransmission (if necessary), in cases where packets are dropped
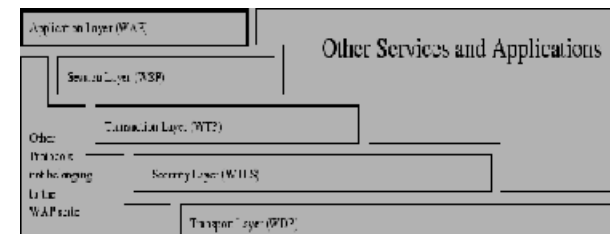
The WAP protocol (cont.)

- WSP (Wireless Session Protocol)
    - Designed to implement a request – response protocol

    - Two different services: connectionless or connection – oriented service

The WAP protocol (cont.)

- WAE (Wireless Application Environment)
  - Defines the basics for WAP user agents and gateways

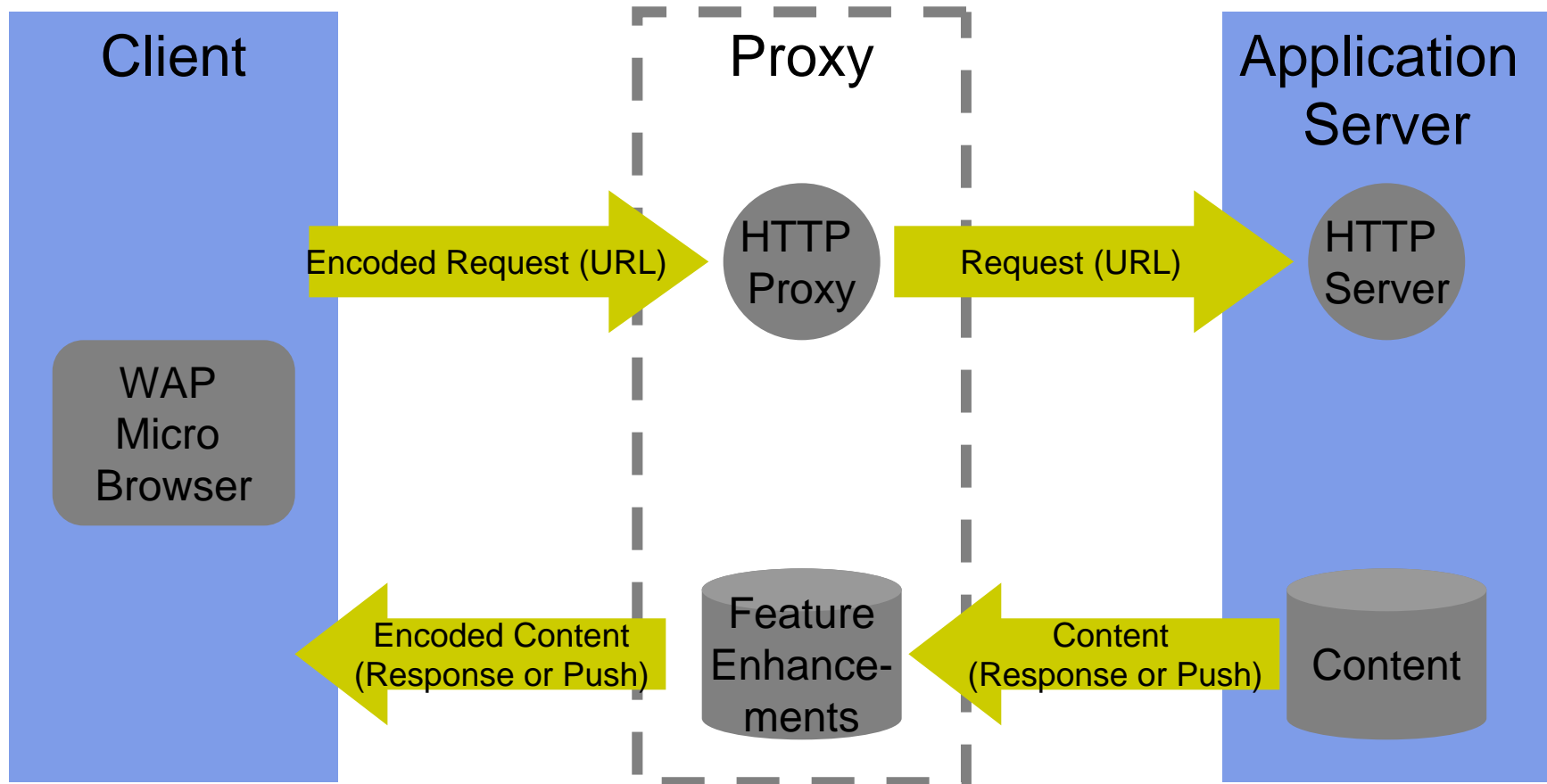 - Includes WML, WMLScript, and WTA

Overview

- ## What is WAP?

- ## WAP Architecture
  - Protocol Stack
  - **Wireless Application Environment**
  - **Extra Features**

- ## Future of WAP

WAP Programming Model

Wireless Application Environment

WAE

XHTMLMP
WML2

WAP CSS

WMLScript

WBXML

WBMP

vCard
vCalendar

BEGIN:VCARD
VERSION:2.1
N:Hans;Franzpopper
TEL;PREF:+49177123123
END:VCARD

Features

- WAP Push

- User Agent Profile (UAProf)

- Wireless Telephony Application (WTA)

- External Functionality Interface (EFI)

- Persistent Storage Interface

- Data Synchronization

- Multimedia Messaging Service

- Provisioning

- Pictograms ☺

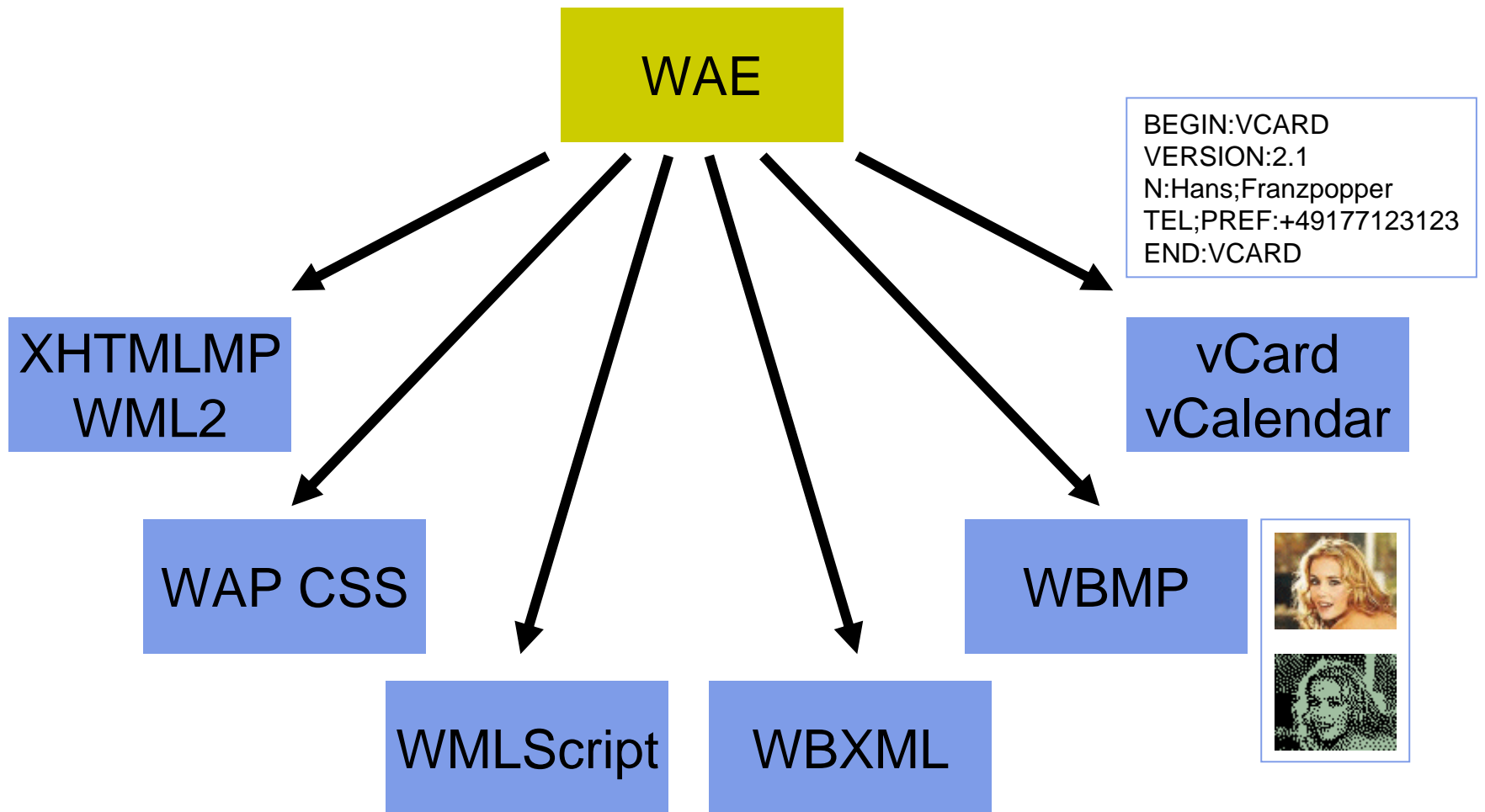# Overview

- What is WAP?

- WAP Architecture
  - Protocol Stack
  - Wireless Application Environment
  - Extra Features

- **Future of WAP**

Mobile Data Applications

- WAP
  - a protocol independent of vendor and air link

  - allows mobile users to access personalized internet content

- Wapaka for the Web, a WML micro-browser for content providers

Examples of Mobile devices that support WAP

The Future of WAP

- Today, functionality of mobile applications is still very basic

- WAP Forum develops protocols for a common environment in the wireless market

- The open specifications of WAP will allow wide-ranging services for mobile users

- The market for WAP will become more profitable

- The competition

References

- http://simplex.hemmet.chalmers.se/Jwap/doc/node9.html

- http://194.51.152.252/WML/wapdocangl.htm

- http://www.mobileinfo.com/WAP/components.htm

- http://www.wapforum.org

- http://wap.sonyericsson.com/

- http://www.nokia.com/phones/9110/app.html

- http://www.iec.org/online/tutorials/wap/

- http://www.wapaka.com/wapaka/default.asp