Some WAP History

IAB Wireless Workshop
Jerry Lahti, Nokia

NOKIA

The Starting Point

- In 1996 mobile phone vendors rushing to sell wireless information
  - Nokia had Smart Messaging for GSM SMS
  - Unwired Planet had HDML+HDTP
  - Ericsson had ITAP (at least in the lab)

- Carriers had a split personality
  - desperate to find added value services
    - bring in more money
    - increase customer loyalty
  - ultraconservative
    - very concerned about use of bandwidth and network resources
    - concerned about investment cost
    - Internet alien and even scary thing
  - you still have to deal with carriers to create the wireless internet

- Terminal technology quite constrained
  - low cost critical especially in the US market
  - available spare processing and battery power rather marginal

NOKIA

Why a Common New Specification?

- The proprietary solutions had limited success in some areas, but
  - being tied to a single vendor unacceptable to carriers and users
  - user base not large enough to attract 3rd party content and services

- A common specification looked like the solution
  - the situation resembled quite a bit the BlueTooth one...

- What would be the common ground?
  - use of an existing proprietary solution unacceptable to competitors
    - none of them addressed the sum total of the use cases, anyway
  - true Internet appeared infeasible
    - some research was saying that TCP was bad for the envisioned major application
    - some carriers simply did not want to go IP at that point
    - terminal people could not do the features using the standard Internet protocols

- So it seemed necessary to create something new

NOKIA

Goals in Design of WAP

- Force a single new box upon carriers => WAP gateway
  - minimal initial investment
  - minimal disruption to existing network infrastructure

- Do not force all the protocol stacks on the Internet to change

- Do not force IP on carriers at that point in time (1997)
  - WDP & WTP

- Keep IP as an option
  - escape hatch to the future

- Make sure carriers are willing to run it on existing networks
  - incredible paranoia about protocol overhead

- Provide security compatible with limited devices

- Make the content to work on one-handed devices

- Integrate telephony functions

NOKIA

What Went Wrong - IMHO

- Of course assuming that there is something right in WAP :-)

- The content language did not map one-to-one to HTML
  - would have made life in some ways rather simpler
  - would have been compatible with the proprietary Nokia solution
  - WML has its advantages, though

- The layering proposed by Nokia was not preserved
  - WDP-WTP-WTLS-WSP instead of WDP-WTLS-WTP-WSP as it is now
  - would have been rather more aligned with Internet stacks

- Too many ports
  - something of a personal peeve

NOKIA