Seminar on Internetworking

Internet Protocols for Mobile Computing

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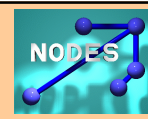
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Future Mobile Applications

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➢ communication characteristics

⇨ The most significant feature will be diversity

⇨ All kinds of applications will be in use.

⇨ QoS requirements and communication patterns will be numerous

⇨ Some applications will also adjust their behaviour according to the properties of connectivity

⇨ Future mobile terminals will have a few applications simultaneously active.

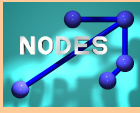⇨ Some terminals will also be able to use different access technologies either simultaneously or one at a time.
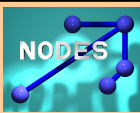
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➢ Communication types:

⇨ Human end-user

→ Messaging

→ Interactive content retrieval

→ Rich call
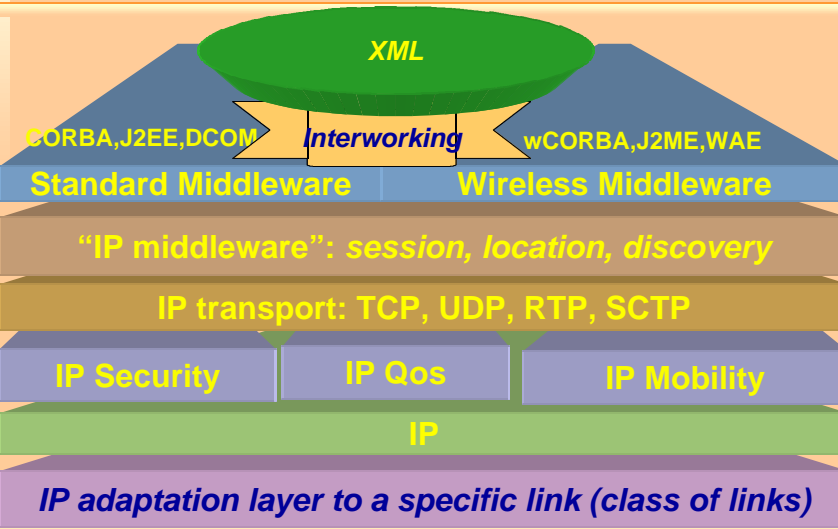
⇨ Machine-to-machine

→ Control and command

→ Management

Mobile Distributed Platform Architecture

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XML

CORBA,J2EE,DCOM   *Interworking*   wCORBA,J2ME,WAE

Standard Middleware   **Wireless Middleware**

"IP middleware": *session, location, discovery*

IP transport: TCP, UDP, RTP, SCTP

IP Security   **IP Qos**   **IP Mobility**

IP

***IP adaptation layer to a specific link (class of links)***

IETF Working Groups

- impp: Instant Messaging and Presence Protocol
- simple: SIP for Instant Messaging and Presence Leveraging Extensions
- ipv6: IP Version 6 Working Group
- mobileip: IP Routing for Wireless/Mobile Hosts
- pana: Protocol for carrying Authentication for Network Access
- zeroconf: Zero Configuration Networking
- aaa: Authentication, Authorization and Accounting
- ngtrans: Next Generation Transition
- policy: Policy Framework

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NODES
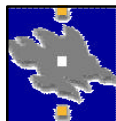
IETF Working Groups
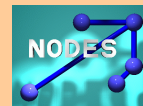
- rap: Resource Allocation Protocol
- bgmp: Border Gateway Multicast Protocol
- ipsec: IP Security Protocol
- ipsp: IP Security Policy
- ipsra: IP Security Remote Access
- diffserv: Differentiated Services
- midcom: Middlebox Communication
- nsis: Next Steps in Signaling
- pilc: Performance Implications of Link Characteristics

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NODES

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- ➢ rohc: Robust Header Compression
- ➢ seamoby: Context Transfer, Handoff Candidate Discovery, and Dormant Mode Host Alerting
- ➢ sip: Session Initiation Protocol
- ➢ sipping: Session Initiation Proposal Investigation
- ➢ tsvwg: Transport Area Working Group