Unified Communication: A Review

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Outline

• Motivation
• Key points
• Advantages
Motivation

• Information (and therefore communications) is more and more important in today’s work
• New ways to work
• New ways to communicate
• Internet Protocol convergence

New ways to work
New ways to work

- Workgroup
- Tele-work
- Work travels
- Flexible work schedule (e.g., vertical/horizontal part-time)
- Office sharing
- Remote call center

New ways to communicate
New ways to communicate

- Telephone:
  - prompt answer (if present)
  - which phone to dial: Office? Mobile?
- E-mail:
  - Big text
  - written proof of the transaction
  - delayed answer
- Instant messaging:
  - small text
  - prompt answer
- SMS
  - small text
  - mobile reachability
- Audio/Video/Web Conference
  - work together even in different countries
  - application and blackboard sharing
- Voicemail
  - voice messages in emails

Internet Protocol convergence

- Email, voicemail and Instant Messaging are traditional IP applications
- Telephone and audio/video conference are NOW IP applications
Unified Communications (UC)

UC: architecture

- A centralized application
  - Keep track of people presence and preferences
  - Instant Messaging function
  - PBX function
  - Connection to the Web server, directory server, mail server
  - Audio/Video/Web conference server
UC: architecture (2)

• An application on each employee's PC or on each mobile terminal to manage:
  – softphone
  – instant messaging client
  – personal directory
  – integration with personal calendar
  – preferences (e.g., do not disturb, call redirection, etc...)

• Phones (old fixed, mobile, IP phones)
  – Directly managed by the server

UC: advantages

• Answer to the following questions:
  – Presence (Are you online ? )
  – Modality (How many ways can I interact ? )
  – State (Are you available, away, on the phone, etc ? )
  – Context (What device are you using now ? )
  – Preference (What method do you prefer ? )
UC: advantages (2)

- Cost reduction for communications
  - Call me on the office phone instead of cell phone
  - Routing internal calls over Internet is cheaper
    - Between different office branches
    - When I am on travel with a (free) Internet access

UC: advantages (3)

- Integration with other applications
  - Calendar
    - E.g., if I am abroad only emails are allowed
  - Simple access to the people addresses
    - E-mail addresses, phone numbers, Instant Messaging nicknames
    - Just click on the number instead of dial it on the phone keyboard