Project Specification
Multimedia Session:
Planning, establishment, termination
Multimedia session planning, establishment and termination

- 1 - Overview and assumptions
- 2 - Breaking it into phases
- 3 - What students should do
Overview and assumption

Overview

• A client / server application running on top of TCP/UDP that allows an end-user to:
  1. Check the availability of other end-users for a multimedia session at a given time of the day
  2. Ask the end-users who are available for the session if they are willing to join at the given time
  3. Establish the session with the end-users who are available and willing
  4. Exchange media during the session
  5. Terminate the session
Overview and assumption

Assumption

Every end-user has an electronic agenda she/he can populate through an end-user interface
Breaking it into phases

Phase I

1. The end-user willing to establish the session sends an availability request to a centralized electronic session manager.

2. The centralized session manager consults electronically the agendas of the potential participants and replies back, specifying the time slot where all potential participants are available.
Breaking it into phases

Phase II

1. The end-user willing to establish the session sends a request (through the centralized session manager) to all potential participants to inquire whether they are willing to join at the given time

2. Every end-user who receives the request replies back and states whether or not she/he is willing to participate at the given time
Breaking it into phases

Phase III

1. The end-user willing to establish the session sends a session establishment (through the centralized manager) to all those who are willing to participate

2. The session is established
Breaking it into phases

Phase IV

Media is exchanged (text as a minimum)
Voice and video could be added
Breaking it into phases

Phase V

The session initiator sends a request (through the session manager) to end the session

Session is ended
What students should do

Scope
- Design and implement simple protocols for:
  - Participants availability checking
  - Session setup
  - Media exchange
  - Session termination

Note: The implementation should be done using socket programming
- However, existing application layer protocols (e.g. SIP) may also be re-used for parts of the project.
What students should do

Groups

• The project should ideally be done in groups of 4
• However groups of small size are allowed:
  – These groups should work on the whole project as specified, but will have bonus points.
    • Group of 3: 5 points bonus
    • Group of 2: 10 points bonus
    • Group of 1: 15 points bonus
• Note: The project will be graded nil if none of the phases could be demonstrated.
What students should do

Output

– Short presentation
– Live demo
– Project report
  • Should include
    – Which protocols were used/re-used and why?
    – Protocol design (e.g. messages, rules governing their exchange)
    – Implementation
    – Who did what?
  • Note: The report should be 20 pages max