

Convergent Services and Technologies

Person in charge:

Prerequisite: Mobile Networks, Local Area Networks

Organization: Lectures 36h

Evaluation: 2 written exams

ECTS: 5 credits

Context

This module discusses the different technologies and protocols used for deploying convergent services over the network and telecommunications infrastructures. The focus is put on major services, like Voice over IP, Video conferencing or Cloud Computing.

Objectives

Skills

In terms of skills, this module aims to enable students to:

- Understand advanced services and their specific requirements.
- Design network architectures to support these services.
- Understand underlying technologies to the major service infrastructures.

Knowledge

This module makes reference to some: Networks fundamentals (mostly in IP environment), Wireless communications (advanced mobile architectures), Services (Voice, data, Video ...).

This module enables students to develop the following concepts and skills.

- **Concepts**
 - Integration (convergence) of data networks and voice networks (both computer and telecom worlds)
 - Architecture and engineering of IP infrastructures supporting advanced services, like telephony (dimensioning, signaling protocols, codecs, ...)

- IP infrastructure within an IMS environment
- Identification of relevant quality of service parameters, using adequate technologies and models (IntServ, DiffServ, ...)

- **Know-How**
 - Planning, dimensioning and deploying telephony over IP solutions.
 - Analyzing and integration of IP networks in an IMS environment.
 - Identifying the relevant quality of service parameters, and the technologies to be implemented (IntServ, DiffServ, ...).

- **Keywords**
 - Planning, dimensioning and deploying telephony over IP solutions.
 - Analyzing and integration of IP networks in an IMS environment.
 - Identifying the relevant quality of service parameters, and the technologies to be implemented (IntServ, DiffServ, ...).

Pedagogical Approach

This module is made of lectures, and evaluation will be based on written exams.