Exam 03.01.2012

T-110.5121 Mobile Cloud Computing (5 cr)

Mark clearly on each paper:

- T-110.5121 Mobile Cloud Computing
- Exam 03.01.2012
- Family name, first name
- Degree programme, student number

Questions 1 and 5 are compulsory to all. Answer to two of the questions 2 – 4. All answers should only be based on the content of the required material and lectures. Try to structure your answer before starting to write and pay special attention to clear handwriting. Each question will be reviewed in scale 0-6 and the maximal score is accordingly 24.

1. Define the following concepts, in (mobile) cloud computing context, shortly (1p / each):

    a) Deployment model
    b) Availability vs. sustainability
    c) Data lifecycle management
    d) Total cost of ownership (TCO)
    e) Self-organizing network (SON)
    f) Virtualization benefits

Answer **only** to **two** of the questions 2-4:

2. Explain the main technologies that enable cloud computing

3. Define the opportunities and challenges of a Hybrid cloud

4. Review how mobile devices and networks can benefit from cloud computing

5. A new startup company called Event Experience limited (EE ltd) will start 2012 to sell globally tickets to social network events. The service is tailored to event organizers and their customers. When a user clicks an "Attend" button in a social network, she or he will be offered an opportunity to buy a ticket or other auxiliary service to the event. In the first year EE ltd plans to sell 1 million tickets, but already within three years a market size of 100 million should be reachable. Service demand peaks can be 1000 times larger than an average load.

    EE ltd is currently planning their service implementation. Define your high level proposal to the architecture and ticket delivery system. You might consider how they can utilize cloud computing technologies and, for example, open telecom APIs in their service architecture. What is the business logic? How does EE ltd differentiate from the current ticket providers such as Ticketmaster?