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**Guidelines for the examination paper in Telecommunications Economics. Winter 2012/2013, date 21.02.2013.**

**Criteria for top performance in assessments of examination in 'Telecommunications Economics'.**

*To obtain the highest grades in the assessments of examination in 'Telecommunications Economics' the following general criteria shall be met:*

*The student shall*

- *demonstrate knowledge of all the relevant concepts and factual items regarding the questions raised and of the relationships between these*
- *be able to design an analysis to give a thoroughly description of the problem and find possible solutions to the questions raised*
- *give a survey of the relevant economic issues regarding the questions raised*
- *explain constraints and uncertainties in the presented solutions, often in the form of trade-offs between different objectives.*

*As more concrete criteria - depending on the actual questions raised in the examination - the following shall be demonstrated:*

*Knowledge of*

- *the main trends and relationships in the ICT sectors (ICT=Information and Communication Technology) regarding demand, supply, prices, market players, technical solutions, regulation etc.*
- *the main economic and technical concepts and items used in the ICT sectors, especially for telecommunication, the Internet and supply of radio and TV channels.*

**The minimum criteria for passing the examination.**

*The student shall demonstrate knowledge of*

- *the most important concepts and factual items that are relevant for answering the questions raised*
- *the most relevant trends and relationships in the ICT sectors*
- *the possibilities and limitations of the use of relevant economic analyses.*

*Acceptance of a limited amount of small and medium failures in the analysis presented, but normally no major failures can be accepted.*

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### Question A.

There are different ways to answer the question. It is important to show an understanding and overview of different relevant concepts and to organise the presentation in a well-structured way.

The answer shall include several of the following issues:

- Definition of privatization and liberalization.
- The recommendation from EU about the goal of liberalization in member countries at latest in 1998.
- The possibilities of having full competition, oligopoly or private monopoly after privatization and liberalization. The role of the regulator in that context regarding price decisions, industrial structure, discrimination etc.
- The EU market analyses.
- Public Private Partnerships (PPP) in the field of FTTH investments.
- The objectives of PPP, including the relation to the present macro economic circumstances.
- Differentiation in relation to rural districts and urban areas.
- The cases of Australia, New Zealand and Singapore.
- How to reverse the development towards privatization?

### Question B.

There are different ways to answer the question. It is important to show an understanding and overview of different relevant concepts and to organise the presentation in a well-structured way.

The answer shall include several of the following issues:

- Economies of scale and scope.
- Definition of a natural monopoly and of essential facilities/bottlenecks. Present the question of natural monopoly not as an 0/1 issue.
- The trade off between having competition on the one hand and missing the benefit of economies of scale on the other hand.
- Discuss different examples of duplication of infrastructure: harbours, airport, natural gas pipelines, telecommunication networks etc.
- Present the access network as an essential facility and discuss the present situation with at least 4 competing access networks.
- Present how to obtain competition, even when only one access network owned by one player is in use; for example the incumbents copper access network or a coming FTTH access network owned by a dominant player in a region.