UNIVERSITY OF OSLO

Faculty of Mathematics and Natural Sciences

Exam in INF5210 and INF9210
Exam hours: Start 26.11.2014 at 15.00, ends at 12.12.2014 at 15.00
This examination paper consists of 3 pages.
Permitted materials: Written, printed and digital information.

IMPORTANT INFORMATION
This exam is divided into three specific questions. The relative weight given to each of them is specified. You should use the course literature explicitly. Make sure to refer to the literature as is done in academic publications (select a referencing format of your choice and be consistent). Your text should not be less than 3500, and must not exceed 5000 words (references are not counted). You can write in English or Norwegian.

Do not include your name, only the candidate number that you will find in StudWeb.
Hand in your exam at: http://devilry.ifi.uio.no (no paper copy is required).

Plagiarism and written assignments:
The University of Oslo has a strict policy on plagiarism, as it is a breach of the trust to the institution. Plagiarism affects and reflects upon the University, fellow students and your future employers, and will have serious consequences for the individual student. Plagiarism in the context of a written home exam concerns the cases where the assignment is wholly or partly written by another person for the student turning in the paper. An assignment giving direct quotations and/or rewritings of published or unpublished material without giving proper referencing is also considered plagiarism.

EXAM ASSIGNMENT:

Question 1 (50%):

a) Define the concept of generativity in relation to Information Infrastructures. (10%)
b) Give a rationale for your definition and discuss the role of generativity in relation to information infrastructures. (10%)

Read *Joan Rodon and Ole Hanseth: Digital Infrastructure Innovation and Evolution: The Co-Functioning of Architecture, Governance and Process Strategy* and *Ole Hanseth and Stefan Henningson: Towards Information Infrastructure Theory: How process strategy, architecture and governance regime in interaction shape the evolution of information infrastructures.*

c) Discuss the generativity (or lack of) of the information infrastructures described in these two articles. (30%)

Question 2 (25%):

Read *Hanseth, O., Jacucci, E., Grisot, M., Aanestad, M.: Reflexive Standardization: Side-Effects and Complexity in Standard Making,* and *Ole Hanseth and Kristin Braa. Hunting for the treasure at the end of the rainbow. Standardizing corporate IT infrastructure.*

a) Define the concepts path-dependency and reflexivity. (5%)
b) Describe the reflexibility in the Hydro Bridge case. (10%)
c) Describe stabilizing and de-stabilizing processes and their interactions in both articles (10%).

Question 3 (25%):

Read *Panos Constantinides and Michael Barrett: Information Infrastructure Development and Governance as Collective Action, Ole Hanseth and Bendik Bygstad: Generative Information Infrastructure Architectures: A Longitudinal Study of eHealth Infrastructures in Norway* and *Ole Hanseth and Kalle Lyyttinen: Theorizing about the design of Information Infrastructures: design kernel theories and principles*.

a) Discuss briefly (i.e. point out similarities and differences) the findings and conclusion in the Constantinides and Barrett article in relation to the Hanseth and Bygstad article. (10%)
b) Propose "design principles" based on the Constantinides and Barrett article that can complement the "design principles" proposed in the Hanseth and Lyytinen article (15%)

All articles are available here:

1) Joan Rodon and Ole Hanseth: Digital Infrastructure Innovation and Evolution: The Co-Functioning of Architecture, Governance and Process Strategy
http://heim.ifi.uio.no/~oleha/Publications/Catalan_ePrescription_II_exam.pdf

2) Ole Hanseth and Stefan Henningson: Towards Information Infrastructure Theory: How process strategy, architecture and governance regime in interaction shape the evolution of information infrastructures.
http://heim.ifi.uio.no/~oleha/Publications/Assemblage_manuscript_241013.pdf

3) Hanseth,O., Jacucci, E., Grisot, M., Aanestad, M.: Reflexive Standardization: Side-Effects and Complexity in Standard Making
http://heim.ifi.uio.no/~oleha/Publications/misqsi3979r2.pdf

4) Ole Hanseth and Kristin Braa. Hunting for the treasure at the end of the rainbow. Standardizing corporate IT infrastructure.
http://heim.ifi.uio.no/~oleha/Publications/rainbow.pdf

5) Panos Constantinides and Michael Barrett: Information Infrastructure Development and Governance as Collective Action
http://heim.ifi.uio.no/~oleha/Publications/isre.2014.0542.pdf

6) Ole Hanseth and Bendik Bygstad: Generative Information Infrastructure Architectures: A Longitudinal Study of eHealth Infrastructures in Norway
http://heim.ifi.uio.no/~oleha/Publications/Generative_Architectures_16 nov.pdf

7) Ole Hanseth and Kalle Lyyttinen (2010) Theorizing about the design of Information Infrastructures: design kernel theories and principles.
http://heim.ifi.uio.no/~oleha/Publications/ISRinfrastructurefinal05-12-05.pdf