

# **Joint ITU-IEICE-CTIF-GISFI Workshop on Education about Standardization**

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## **Incorporating aspects of Standardization into a Course on Digital Business**

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# Outline

- Course Overview
- Syllabus
  - Learning outcomes
  - Structure
- Student Activities
- Student Feedback
- Lessons Learned

# Course Overview

- “Electronic Commerce and Standardization” (“Digital Business and Standardization”)
  - Supported by APEC SCSC (Sub-Committee on Standards and Conformance); APEC Strategic Standards and Conformance Education Program 2007-2011
  - A Master-level course in International Management Program, Graduate School of International Studies
  - 3 credit (3 hours per week); Five weeks dedicated to standards out of 14 weeks
  - 1<sup>st</sup> semester in 2011 (and 2012)
  - 18 students from 10 countries
  - Textbooks: Laudon & Traver <*E-Commerce 2010*>; APEC <*Standardization: Fundamentals, Impacts, and Business Strategy*>

# Course Overview: Rationale

- Designed to help students understand contemporary digital business environments
  - Standards and standardisation(SS) are a core notion of digital business; increasingly important in digital business and EC
  - All the topics in DB are related to SS in some way and another
  - To understand and win competition in DB and ICT sectors today, it is essential to know SS and how they work
  - For this purpose, the relationships between standards, innovation, strategies (competitive and collaborative) and intellectual property rights are highlighted in the course

# Syllabus: Learning Outcomes

- The course aim is to help students understand the concepts, business models, and technologies surrounding DB, including SS
- It also seeks to enable students to assess both the opportunities and the risks for those firms involved in DB
- After completing the course, students will be able to:
  - Explain the basic concepts and technologies of DB and standardisation,
  - Discuss organizational, business, and social issues of DB and standardisation, and
  - analyse and evaluate DB and standardisation strategies currently in practice

# Syllabus: Structure

## Cluster 1: Foundation of Digital Business (EC)

In this cluster, basic concepts and definitions of DB (EC) are introduced. The cluster provides an overview of the implications of EC on the industry and market structure, EC applications, and basic EC technologies and infrastructure. Other topics include:

- Convergence
- Mobile commerce (e.g. location based services)
- Broadband networks
- Business models

## Cluster 2: Business-to-Business

This cluster examines issues related to business-to-business (B2B) EC. In particular, the concept of supply chain and the problems associated with the traditional supply chain are explored. The bullwhip effect is learned by playing the beer game.

## Cluster 3: Current Issues in DB

This cluster deals with current issues, including Smart phone, Smart TV, SNS, cloud computing, Smart work, etc.

## Cluster 4: Standards and Standardisation

Topics in this cluster include:

- Economics of standards
- Standardization and innovation
- Competitive and collaborative strategies for standardization
- Platforms: A new basis of competition

# Student Activities

- Group assignment
  - A team project for case writing
  - Encouraged to select a case of SS relevance
  - 'alliance of Nokia and Microsoft', smart grid, smart TV from the SS perspective
- Field Trip
  - '2011 World IT Show', May 11-14
  - Asked to find one item of relevance to SS
- Exam
  - Two reports on Google Wallet given, and asked to answer the following questions
  - "Google Reveals Mobile Payment"; "Android Mobile Wallet Service Planned for US"

# Student Activities

## ■ Exam (continued)

**Question 1. Read the articles given and answer the following questions. (60 marks = 60 minutes)**

1. Why do you think Google chose MasterCard, Citigroup and Samsung Electronics as partners? Give a reason(s) for each. (15 marks)
2. What is Google's business model for their new payment service? (15 marks)
3. Will this new service succeed or not? By 'succeed', Google may mean 'widely adopted and used in a relatively near future in the payment market'. Based on what grounds do you agree? Justify your answer. In answering this question, you may include 'barriers for success' or 'conditions for success' in your discussion (30 marks)

- ◆ Students with high performance expected to use the notions from a platform and/or standards wars.

## ■ Individual essay on Standards

- ◆ asked to write an individual essay on standards; the same question from the exam given for this essay, and three days to complete the essay.
- ◆ Some students submitted a high quality essay that was much improved from their exam answer



# Student Feedback

## Positive

- ▶ “the follow-up essay was a highly effective learning method, because it required the development of two different responses over a short period of time on the same topic”
- “the diversity among the topics”
- “was able to learn a lot about DB and standardization, something I was never aware of”
- “Varied approaches to a common subject helped to open up the different concepts, and multiple examples further drove the point home”
- “Overall, the sessions were beneficial to widen the views of standard in various industries and businesses”

## For Improvements

- “a rather fractured picture of standards”
- “since most guest speakers do not know what we have gone through in class, they tended to give an introduction to the topic from the start”
- “overlapping issues”
- “lack of dealing with current issues”
- “some aspects of the history of standards did not need to be emphasized as much”

# Lessons Learned

- **Course design**
  - Too much to teach and learn
  - Guidelines for instructors needed
    - e.g. for the APEC textbook, which chapters in what sequence
- **Content**
  - Old, though classical, examples or cases
  - New examples needed from contemporary businesses
  - For high-performer, intellectually stimulating; for low-performer, not easy to follow
- **Student assessment**
  - The follow-up essay found to be very effective in terms of students' learning. By answering the same question twice, once in the exam, and the second time in an essay with additional research, students could enhance their level of knowledge on the key aspect of the course; all the students demonstrated considerable development in their discussion and analysis from the exam answer to the essay content
- **Teaching materials**
  - Two textbooks; too much
  - Precise guidelines on what to cover need to be offered to those who will teach in a similar way
  - Readings including contemporary examples (e.g. Samsung vs. Apple; China's Rise) can raise the level of student interest and participation