MIS382 – Strategies for Networked Economy

Fall 2012

Unique Numbers: 04045; T Th 12:30pm – 2:00pm
Class room: CBA 4.328

<table>
<thead>
<tr>
<th>Professors</th>
<th>Dr. Prabhudev Konana (03625)</th>
<th>Office</th>
<th>CBA 5.218</th>
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</thead>
<tbody>
<tr>
<td>E-mail</td>
<td><a href="mailto:Prabhudev.Konana@mccombs.utexas.edu">Prabhudev.Konana@mccombs.utexas.edu</a></td>
<td>Office Hours</td>
<td>T Th 2:30 pm-4 pm (Office hours on some days will be cancelled due to scheduled meetings. Feel free to email me if you want to meet at any other time/day)</td>
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<td>TAs</td>
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<td>Office Hours</td>
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Course Web page: Login to Blackboard for Case Questions and additional reading material

Course Objectives

From a mere 2% of the gross domestic product (GDP) in early 1990, the IT sector now constitutes over 12% of the GDP and continues to grow. IT sector is now the single largest sector in S&P500. In the U.S., over 50% of the capital expenditures are related to IT while globally IT spending is about $3.6T. With this growth, firms have become globally interconnected creating a complex network of customers, suppliers and partners. New forms of IT-enabled and IT-driven services (e.g., Google Trends, OnStar, cloud services, Netflix, Healthcare clouds) and platform-mediated networks (e.g. Mastercard, Google, Apple, eBay, Facebook, gaming networks, etc) are mushrooming globally connecting millions of different entities. There are numerous opportunities and challenges for both producers and users from these IT innovations. This class explores the competitive dynamics of IT evolution and platform-mediated networks and how they create value or creatively destroy value (e.g., Blockbuster, Borders, Kodak). This is an interdisciplinary class that integrates concepts and principles from different areas and complements other classes from strategy, marketing, and finance. The class will address the following: How is digitization impacting competition and enabling industry transformation? What are some unique characteristics of, and how are producers competing in, the software, hardware, and communication ecosystems? How are new innovations like social networking and cloud computing impacting competition? Is IT changing industry structure, making markets more efficient, or altering a firm’s boundary and competitive positioning? Are there profound changes in product and process design resulting from IT capabilities? How to
extract meaningful information from massive amounts of data about customer preferences/satisfaction/loyalty? How to create an IT infrastructure that will enable global sourcing? How to justify IT investments? How to manage IT-enabled transformation (change management)? How to assess and manage risks?

This class will explore the above (and more) issues in a case-based learning environment. The subject matter is interdisciplinary in nature that brings concepts from economics, strategy, marketing, accounting, organizational behavior, and finance.

I have structured the class along the following based on my understanding of the world and research, and feedback from students and industry executives.

**First Half:**

The first half will focus on broader issues related to strategic issues resulting from IT, and the IT ecosystem.

1. **Strategic issues:** Here we will explore how IT is changing industry structure due to product digitization, product IT enrichment, and product/service substitution. New issues emerge as more and more physical products incorporate IT. We will explore various issues involved with cases and new ventures.

2. **Software, Hardware and Communication Ecosystem:** We will explore how the IT sector is structured and what are some fundamental characteristics and industry dynamics of the different layers of the software and hardware ecosystem. We will investigate the role of network externalities, standards, open source movement, and other competitive dynamics using Microsoft, Google, Apple and Linux.

3. **Emerging issues:** We will the role of platform development to mobilize networks and create business value (e.g., Facebook or Google).

**Second Half:**

The second half will focus on the use of IT in improving supply chain and customer relationship, and managing the change (change management, justifying IT investments, global sourcing)

1. **Role of IT in supply chain management:** Using cases we will explore how IT can transform supply chain. We will particularly focus on the need to recognize supply chain principles in enabling change, rather than IT functionalities. In doing so, we will explore emerging IT-based (e.g., vendor managed inventory and RFID) process management.
2. Role of IT in customer relationship management: We will study how IT can be effectively used in understanding and acquiring customer preference/knowledge. We will explore emerging methods to extract hidden knowledge from databases.

3. Global sourcing: No study in IT is complete without understanding global sourcing of IT and IT-enabled services (i.e., business process outsourcing). We will discuss this topic through guest speakers and my research on how to exploit global sourcing for strategic and tactical benefits. We will study what processes are desirable to insource or outsource and when to keep those domestic vis-à-vis offshore. We will study risk assessment and management.

4. IT Governance: We will explore emerging technologies and governance mechanisms. We will discuss issues related to running IT organization as a business center, and seeking IT services like utility. We will discuss the pros and cons of emerging IT business practices.

Required Material

1. Material is available at Harvard’s Coursepack
2. Additional material will be posted on Blackboard well in advance
3. You will need the following software: XLMiner, @Risk, NodeXL

Grading

Your course grade will be based on the following point distribution:

<table>
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<th>Assessment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Class participation</td>
<td>10%</td>
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<tr>
<td>Group case analysis/short write up (4)</td>
<td>15%</td>
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<tr>
<td>Semester project &amp; presentation</td>
<td>20%</td>
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<tr>
<td>Midterm Exam (in class)</td>
<td>35%</td>
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<tr>
<td>Final (take home – group work)</td>
<td>20%</td>
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The letter grade will be based on a curve. Based on past distribution of grades, you may expect the following distribution: approximately 40% - 50% will receive a grade A- or above, 10% below B, and rest B or B+. However, if the overall class performance exceeds the professor’s expectations, the percentages of A, A-, B+, B and B- may change.

A grade of X (incomplete) is very uncommon and will be given only for very unusual circumstances as determined by the professor (e.g., medical emergencies for you or your immediate family members that occur after the official drop date). You are required to provide sufficient evidence of the problem and notify your professor as soon as it occurs.
Class Participation

In this class much of the learning is dependent on active participation of the students. Students’ collective knowledge and experience add to the learning experience. It is everyone’s job to keep the discussion productive and moving forward. For each class/case/reading material, I will randomly select 2-3 students or a group to discuss the issues. If any student is unprepared or absent then s/he will lose much of their class participation grade. Therefore, it is in your best interest to come prepared for each class and to actively participate. In evaluating your class participation grade, I take the following into consideration:

- useful arguments expressed coherently and succinctly
- good analysis supported by case facts or your own experience
- constructive disagreement
- readiness to contribute upon receiving a “cold call”.

I expect that students to arrive on time to class. Coming in late and leaving during class time distract class proceedings.

No LAPTOP Policy

Based on overwhelming feedback from previous students, the use of laptops is not allowed in this class. This is a simple rule; please respect it. I recognize some students prefer to take notes electronically on PPT slides. However, there is no way of controlling students from checking email/stocks, using IM, and surfing the web once a laptop is allowed. The quality of discussion and the flow will be affected severely. I will make PPT slides available on the Blackboard in time for you to bring copies to class, or will make PPT copies available in class. Please make sure you keep Cellphones, Pagers, iPods, and other devices switched off during class time.

Group Assignments

Class work comprises of case write-ups (as PPT slides), short overview presentations, and hands-on exercises. All these can be done in a group of max 5 students. Tentatively these cases will require a short write-up or PPT slides:

a) Apple case
b) METRO ROI
c) Data mining
d) Social network analysis
**Students with Disabilities**

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 (voice) or 471-4641 (TTY for users who are deaf or hard of hearing) as soon as possible to request an official letter outlining authorized accommodations.

**Scholastic Dishonesty**

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Please refer to the Student Judicial Services Website at [http://www.utexas.edu/depts/dos/](http://www.utexas.edu/depts/dos/) or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty. In this class, all cases must be done individually. You are free to seek help from the professor or the TA.

**Exams**

There will be a mid-semester exam (October 25 in the evening) and a group final case (deadline TBD). On the midterm exam, you will be responsible for the material presented in class, in the reading packet, and any required readings distributed in class/or on Blackboard. Questions on the exam may be true/false with justification, short answers, or case analysis. Any appeals about grades should be emailed to me or the TA within a week after the exam or project has been returned to you.

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**Instructions for Mac Users**

Some of the assignments involving databases and Excel add-on may require you to use Windows. There is Access database for Mac OS. You can address this issue in two ways:

a) Install Windows XP/Windows 8 or other versions on your Mac. You can run both Mac OS and Windows using Bootcamp, VMWare Fusion or Parallels. Bootcamp comes with your Mac but in order to switch from Mac OS to Windows you may have to reboot each time. VMWare or Parallels will let you run both OSs at the same time and switch instantaneously (Professor Konana uses Parallels).

b) Or, you can choose to install VMWare View client for Mac and use any of the programs installed in the Millennium lab without installing Windows OS. Check out the following link for information. [https://vdesk.utexas.edu](https://vdesk.utexas.edu).

**Tentative Schedule (BB → Blackboard)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Topic</th>
<th>Articles Listed from your HBS packet – There are articles posted on BB that is not listed here</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/30</td>
<td>Introduction: Class Overview</td>
<td>• Please see BB for details</td>
</tr>
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</table>
| 2   | 9/4  | IT Evolution and Business Implications | • IT-Enabled Transformation, P. Konana 2011 (BB)  
• Please see additional articles on BB |
| 3   | 9/6  | Disruptive Innovations and Creative Destruction Case: Kodak | • See BB for more details |
| 4   | 9/11 | Understanding Software Ecosystem Case: Microsoft | • Microsoft Case  
• How to Leverage Switching Costs, Shapiro & Varian  
• How to exploit network effects, Shapiro Varian |
| 5   | 9/13 | Characteristics of Software Ecosystem Case: Microsoft (cont’d) | • Strategies for Two-sided Markets  
• Microsoft Case  
• See BB |
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<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Additional Information</th>
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| 6    | 9/18 | Platform-based Competition Case: Apple | • Apple case  
• See BB for additional material |
| 7    | 9/20 | Platform-based Competition Case: Google | • Google Case; See BB |
| 8    | 9/25 | Cloud Computing Case: Oracle versus Salesforce.com | • Please see BB for additional reading |
| 9    | 9/27 | Guest Speaker | • Ranjit Nayak from Cisco; co-founder of eVapt technologies now sold to another firm (www.evapt.com) |
| 10   | 10/2 | Search Ecosystem | • Google |
| 11   | 10/4 | Wireless Ecosystem | • No case |
| 12   | 10/9 | Content Distribution Network Case: Akamai | • See BB |
• IT and SCM by P. Konana  
• Please see BB |
| 14   | 10/16 | IT & SCM Case: Zara’s | • H. Lee, “Aligning supply chain strategies with product uncertainties,”  
• Lee, Padmanabhan and Whang, The Bullwhip Effect in Supply Chain |
<p>| 15   | 10/18 | Enterprise Resource Planning System Case: Nestle’s ERP Odyssey | • Please see BB |
| 16   | 10/23 | Catch up and review | |
| 17   | 10/25 | Midterm | |</p>
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<tr>
<th>Date</th>
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| 18 10/30 | **Business value of IT**  
Case: METRO ROI  
- Strategic Alignment: Leveraging Information Technology for Transforming Organization, IBM Systems Journal  
- Please see BB for additional articles and videos |
| 19 11/1 | **Customer Relationship Management**  
Case: RBC  
- Diamonds in Data Mine, Harvard Business Review, |
| 20 11/6 | **Data Mining**  
- Please See BB for articles and notes |
| 21 11/8 | **Recommendation systems & Social Network Analysis**  
- Please see BB for articles and notes |
| 22 11/13 | **Recommendation systems & Social Networks Analysis**  
- Guest Lecture – Erin Defosse; Vice President of Strategy, Bazaarvoice |
| 23 11/15 | **Business Process Sourcing**  
Case: P&G  
- Please see BB for notes and chapter on unbundling the value chain by P. Konana et al. |
| 24 11/20 | **Global Sourcing**  
- Please see BB for articles |
| 25 11/27 | **Risk Management**  
- Please see BB for articles |
| 26 11/29 | **Project presentation** |
| 27 12/4 | **Project presentation** |
| 28 12/5 | **Summary & Conclusion**  
Last day – Wrap up |