MIT SLOAN SCHOOL OF MANAGEMENT

15.567 THE ECONOMICS OF INFORMATION
FALL 2010

TEAM PROJECT

SUMMARY

A major assignment in this course is completion of a team project. Students should work in groups of four or five. You will be responsible for assembling your team, meeting with your teammates and choosing one of the two project options listed below. Each student team will give a presentation in class and submit a joint paper.

TEAM FORMATION

I'd like each team to be diverse as possible. Thus, when choosing teams, please adhere to the following guidelines.

1. Each team should have at least one non-MBA student (e.g. Sloan Fellow, Undergrad, Engineering);
2. Each team should have students from both the USA and other countries;
3. Each team should have both male and female students;
4. Each team should include team members with as varied educational and business experiences as possible.

OPTION 1: STRATEGIC AND ECONOMIC ANALYSIS

For this option, teams can either evaluate how a specific business initiative related to the economics of information has been implemented in an organization, or analyse a specific initiative that is being considered but has not yet been implemented. In either case, you will work directly with the relevent executives at the organization.

For initiatives that have been implemented, you should describe the organization, its business strategy and environment, the technological or business initiative and its strategic fit for the organization at hand. For initiatives that are being considered but not yet implemented, teams will write a management report that describes the strategic, economic and technological issues facing the company, evaluate the company's current strategy and options, and recommend a course of action. In either case, seek to document the organization's own metrics for measuring the business value of the system and, where appropriate, suggest ways to improve on these measures.

example i groupon

Student teams should pick a company and business initiative for which they have access to key contacts, subject to the approval of the course instructor. Some examples of appropriate systems to analyze are listed on the last page of this document.

Woot

With the instructor's permission, two teams may coordinate their projects to do a comparison of two sites, two companies or two related technologies or two initiatives. Studies of phased roll-outs (e.g. a new knowledge management system across 30 sites over 3 years), or natural experiments (e.g. different regulations governing or affecting use of consumer data in different countries or jurisdictions) are especially encouraged.

OPTION 2: ISSUE BRIEFING

For the Issue Briefing, teams will explore, in detail, a particular technology or business issue of relevance to the Economics of Information. Your analysis should draw on industry contacts and interviews, library resources, course materials, and/or web-based information. The end result is a tutorial-style presentation and report that will educate and engage your fellow students as it brings them to the frontier of knowledge on this topic. Project will need to be approved by the instructor in advance for relevance and to avoid duplication with other teams.

micropayments
NFC

Both types of project options are described in detail below. They share the same deadlines and include a detailed outline, a preliminary summary, a slide presentation suitable for delivery in class and a final written report.

Timetable

Thur 9/23	Team formation. You should meet with your teammates this week and decide on a project/company/initiative.
Thur 9/30	Each team must send ONE e-mail (cc: all team members) to hekim@mit.edu with a title and one page description of the project/company/initiative/issue they plan to work on, including relevant parties to contact, and a timetable for the team.
Thur 10/14	Email a one-page topic summary and progress report to erikb@mit.edu and hekim@mit.edu. Progress report should be in outline format and list parties contacted and appointments arranged, background research completed and planned and your preliminary hypothesis and insight (which may be proved, disproved or and modified by the data you eventually gather). Include dates for key milestones completed and remaining.
Tues 11/4	Email draft presentation slides to erikb@mit.edu and hekim@mit.edu. For option 2, email your proposed blog post as well.
Tues 11/9 through Tues 12/7	Selected student presentations in class
Thurs 12/10	Final project paper due

Option 1: Strategic and Economic Analysis/Case Study

Overview

This is an opportunity for you and your teammates to explore, in depth, the use of a digital technology in a business setting. Your analysis should draw on different views and information on the company and its competitors, on interviews with key people at the firm and its customers; the readings and discussion in the course; library and web-based research; and personal contacts and experience as appropriate.

Detailed Description

Groups of 4-5 people will work directly with an organization to analyze the strategic and economic implications of a business application initiative using some type of digital technology. You may pursue one of the follow two suboptions.

- Assess the economics of a significant digital initiative which has been completed or is underway. Your analysis should apply insights from the readings, cases, lectures and discussion of the course to clarify the issues involved.
- Analyze a digital information opportunity that the company is contemplating, evaluate the company's current strategy and its strategy options, and recommend a course of action. New ventures are acceptable for this option.

The results of your project will be delivered in both written and oral presentation formats. Your final written report should be no more than 10 pages long (2500 word maximum) and should include a 1 page executive summary. Your presentation should be 8-10 minutes long, plus another 2-3 minutes for questions and discussion. Both written reports and oral presentations should contain the following two components:

A. "Case Study" of the Business and Technological Environment and Strategy Challenges Facing the Firm.

Provide a comprehensive discussion of:

- The industry environment and specific challenge(s) facing the company
- The technology options considered and basis for selection
- The strategic options considered and the basis for selection
- The metrics for success.

Also include:

- Background information on the firm's industry and its history
- Perspectives from the company and from organizations or persons that interact with the initiative, such as customers, suppliers, competitors, or employees as appropriate.

The type of case study used in classroom teaching is an appropriate model for this exercise, with the important provision that unlike many teaching cases, "artful ambiguity" is not a virtue for this project.

B. "Economic Analysis" of the Business Application or Initiative

The heart of the report is an attempt to understand and document the key economics of information relevant to the project studied and their implications for the company. Provide a set of recommendations for how the company should proceed, both in terms of measuring returns from the system and in terms of how to most effectively use the technology. Are there strategic or other business changes that you would advise?

If you are documenting an initiative which has already been implemented, you should describe the evolution of the initiative over time. This will involve characterizing a set of dimensions along which you will analyze and follow the project, based on course materials, contacts, interviews and/or prior experience. One dimension to characterize the initiative is how significant the role of top managers vs. middle managers were in adopting and implementing the initiative and how a hierachial structure of a firm affected the decision of implementing the initiative. Finally, you will issue an assessment of how successful the project was undertaken, point out possible weaknesses in its planning and implementation, and suggest alternatives if necessary.

In order to help you with the assessment, you are encouraged to compare your findings with those of another team in the class studying a similar technology initiative at another firm, and compare the analysis between the two firms. If you choose to look at an initiative that has not been implemented yet, your analysis should include the firm's strategic options and costs/benefits of specific actions.

Company Sponsored Project Opportunities

Successful projects will demonstrate an in-depth understanding of the company and its environment that can only be gained by first-hand access to company information and decision-makers. To assist you, we have contacted companies interested in offering project opportunities to MBA students in the course. Responding firms have agreed to provide challenging problems and in-depth access to decision-makers and resources in the companies. A list of these project descriptions is available on the class web site.

Student teams are free to choose to work with companies on or off this list, and the ultimate responsibility for finding an appropriate team project rests with the student team. You should ensure that the company your team selects will provide you sufficient access to information and individuals necessary to successfully complete your project. The faculty and teaching assistants for the course cannot sign non-disclosure agreements (NDAs) for the purpose of grading class projects and we do not encourage students to sign broad NDAs with project companies.

Student teams should provide a copy of their report to the company sponsoring the project. In the past some teams have been given the opportunity to present their recommendations directly to senior members of the sponsor company. Teams are encouraged, but not required, to pursue this option where available (please advise the project TAs of this option if it is available). MIT Sloan seeks to maintain positive links to the business community and future generations of students will appreciate your efforts to strengthen these relationships.

If the team is asked to travel, either to interview individuals in the company or to present results, the company may reimburse team members for out-of-pocket travel expenses. However, since this is a class project and not a consulting engagement, teams may not accept any compensation for their work. Sponsor companies and company project liaisons should clearly understand these projects are class projects, and as such, the primary purpose is educational and academic.

Format

The reports will be delivered in two ways: written and presentation formats.

Written Reports: The written reports should be no longer than 10 pages (2500 words maximum), including a 300 word executive abstract.

Presentations: Your presentation should be 8-10 minutes long, plus another 2-3 minutes for questions and discussion.

Grading:

Projects that are provocative, insightful, and interesting to read are always appreciated.

Grading will be based on

a. how interesting the topic area is in its relevance to the economics of information (15%),
b. the depth and accuracy of your case study description (20%),
c. the quality of your accompanying strategic and economic analysis (35%), and
d. and the quality of your presentation in its written and class presentation formats (30%).

OPTION 2: ISSUE BRIEFING

Overview:

This is an opportunity for you and your teammates to explore, in detail, a particular business issue of relevance to the economics of information. Your analysis should draw on personal contacts, library resources, course materials, and web-based information.

Detailed Description:

Groups of 4-5 students will develop up-to-date information on relevant aspects of digital business and share this information with the rest of the class and others. Such up-to-date information is particularly important given the pace of change in the field of digital business. The goal of the project is to promote a common level of understanding and familiarity with the core technologies and issues that will be discussed in the course.

Teams choosing this option will deliver their findings via an in-class presentation, a written report and a blog post. The written report should be no more than 10 pages long (2500 word maximum) and should include the following information:

1. Executive summary of briefing's findings and conclusions (300 words);
2. Explanation of the core technology or business issue;
3. Implications for competitors, markets, and the future of digital business;
4. Sources for more information, including a bibliography on the subject (with web links as appropriate).
5. A copy of the proposed blog post, including accompanying links and graphics.

A list of sample topics is found below. This list is by no means exhaustive, and groups are welcome to modify the listed topics or propose other topics of interest. If you are having trouble choosing a topic or would like to discuss a topic to see whether it is applicable, please talk to or email the Teaching Assistants.

Format:

The issue briefings will be disseminated in three ways: via written reports, a blog post, and in oral presentations.

Written Reports: The written reports should be no longer than 10 pages (2500 words maximum) including a 300 word executive abstract.

Blog Post: The blog entry should be no longer than 250 words, but include appropriate links to other relevant sources and examples, as well as any suitable graphic(s). The blog post will be included on the Economics of Information Blog unless you request that we do not make it public. Some teams may choose to put a version of their post in other locations, such as Wikipedia.

Presentations: The presentations will be in class and will run 8-10 minutes with an additional 2-3 minutes for questions and discussion.

Grading:

Effective projects will show knowledge of both the underlying technology and the relevant business issues.

Grading will be based on

a. how interesting the topic area is in its application to the economics of information (15%),
b. the depth of your analysis (30%),
c. the quality of your supporting data (25%),
d. and the quality of your presentation in its written, blog and class presentation (30%) formats.

Sample Topics:

Below are suggestions that may make interesting topics for an project related to the Economics of Information. It is recommended that students choose a narrowly focused subtopic for their issue briefing instead of writing a general report on a broad topic. The list below is by no means exhaustive and teams are welcome to suggest others.

- combining online and offline revenue models for a publication like the *MIT Sloan Management Review*
- pricing of movie downloads over the internet
- revenue models for music
- bundling and unbundling of newspaper content
- prospect for a new business model by a start-up (e.g. Groupon) and its relationship to information economics concepts
- ownership of consumer purchase data and its use for recommending new purchases
- convergence of digital products and services in the home and the resulting standards battle
- prospects for Kindle and other e-books
- estimating the total amount of digital data created and consumed each year and future trends
- IT and the "superstar" effect: Does IT leverage the best of the best?
- IT and the Long Tail: Does IT help niche producers?
- IT and the CEO's role: more impact or less?
- IT policy implementation and the structure of firm or the corporate governance
- information services enabled by widespread adoption of WiMax, broadband cellular and related technologies
- data collection for evaluating medical service quality
- the integration of supply chain information between a large retailer and its key supplier
- the adoption of a CRM or salesforce automation system by a software firm's salesforce
- a switch to a web-based customer support system at a high tech firm
- the adoption of new online banking services
- the roll-out of RFID tracking system at a manufacturer or retailer
- the adoption of a knowledge-management system at a large consulting firm
- the adoption of a "paperless" electronic document management system
- the effects of ultra-high quality videoconferencing on knowledge and informationflows at P&G
- the prospects for in-store product recommendation kiosks at Home Depot
- creating a community of gamers around a new gaming platform
- evaluating the "Long Tail" and "Superstar" effects for motion pictures
- identifying the next big opportunity for outsourcing of virtual work and its implications
- mobile content revenue models
- targeted advertising for internet radio
- next generation recommender systems
- estimating the environmental benefits and costs of telecommuting or videoconferencing
- Which "web 2.0" technologies are having the most impact?
- Is there a Web 3.0 and if so what is it?
- How effective have prediction markets been and what are their prospects?
- Which companies have the most effective information analytics systems?
- Will Chrome displace Windows as the application platform of choice?
- What technologies and business models will most rapidly integrate developing countries economies with the rest of the world?
- Location based services in mobile phones: what is the killer app?

Center for Digital Biz Sponsors
- not this much this year

15.567 Team Project

9/25

- doing micropayments issue briefing
- need by 9/30 a 1 pg description
  - parties to contact
  - time table
- long term project
- hopefully they have some personal contacts
  - what in lib would help
  - I want to sub focus on RFID offline payments
  - also the whole online world
    - paypal
    - iTunes songs
  - or just do online
    - narrowing
    - description implies online focus

deliverable
- written, 10 pger
- in class presentation
- blog post 250 words

- willing to do all 3, well one of :)

(2)

Ok bg research
- wikipedia
- reverse of bundling

Oh wow they wanted to put it in to HTTP!
- instead of layer on top as it is now

IBM + Compaq had devisions on it

Won more invested than I thought

This may be a why it failed paper

Virtual goods:
- don't get into it too much
- but all goods sold would be virtual: newspaper articles

In place now: FB credits
iTunes → are #1
MS points
PayPal

but nothing for newspapers or payment acceptors

Problems w/ payment acceptors → Square troubles
→ PayPal Fraud

(3) Behavioral : large or small payment

- amusement parks
- cable subscriptions

Micro donations

Planing Project

9/28

Micro payments
- payment providers Paypal
has it been carried by death
What is issue here?
Paying for media
app sales

RFID

Online?
- more of issue
lot more new
can talk

technical

Visa + MasterCard dominance

fees for merchats

rolled out terminals

History + future

Players Groups

History → Why not?
- Banks
- Visa + MC
- Vendors

How to move forward

log jam

tap us wave

Moment Club + Media Tech

- Where product dev company
- industry clubs

talk US + ~~European~~
German

- tech issues history + going forward

~~b~~ team wants bg research

~~DO~~ (7 ~~W~~ Card + tech

15.567 Group

10/1

first part What ~3 pgs

tech aspects - Me
- hardware
- description security flaws

History

Biz Model + Why - 3 pgs
Maya - future

Have 6 pgs mid month ~~10/29~~ 10/25
- first version

~~Week after 25 = slides~~ each person do draft before that weekend 10/29 slides meeting
Week thereafter - revising paper

Why it failed
- together
- History

US vs Germany

MasterCard website 10/24

just EMVCo Contactless

(rec: common brand name
- do have common symbol)

Mag Stripe card
- security Architecture
- dynamic CVC3 ← less secure

or M/Chip ← the "secure" option

or EMV

3 security levels

MC approves all 3
- no security details on the CVC3

(can I find fee structure?)
↳ interchange fees

Online vs offline issue

M/Chip = extension to EMV

(remember biz doc - don't get too technical)

need high speed connection
one < 4 sec

and combined terminal

(2)

docs say verify card visually
- but otherwhere says do not collect it

no swipe + verify

Still need sig over an amt
↳ except if qvich payment service (QPS)
- seperate service guide
- limited $ amt per industry
- no sig needed
- MC approval needed
- does not affect rates

paypass $50 no sig limit in all merchat cat
$15 on post auth transit
↑ (point out convience over security)

many industries $25
So advantage to use
not specified mag stripe or not

(I really like their interchange fee explination pg)
(would be interesting to read history / case study Visa/MC

Paypas is at high end Europe

Paypass	.18% + .03€ ← but has a chip?
EMV	.14% + .05€
Base	.18 + .5€

(3)

Paypass more on mistro

---

back to tech
- requires extended service code anyway

transaction liablity is same

must present full card data

(struggled to advance security + convinence at minimal cost)
- has lead to mistakes in consumer acceptance

beep does not mean authorized

debt or credit

10/25

Need example of companies abandoning
- skip for now Flesh out other parts
- get this done

- don't make it too long

Why is my writing so weak on this

Where talk about danger of mag stripe data

Introducing this very poorly

15.567 Grp Project

10/26

pushing forward
next
recomendations

---

more biz than techincal
- don't get bogged down on standards

Open or closed
- ? should we talk about it
- diffusion of tech
- innovate solution

entrenced players will have to stay entrenched

Slides
- due on 4th
- minor changes only

Presentation 11/9 - 12/2
later held to higher standard

Paper
- can add info

Scope - don't need whole background
def more to future, rec
not bg

Card Tech Slides

10/30

- follow format of paper
- one slide env
- 2nd fu's hack
- 3rd What can be done
- I should use Beamer
  - too much trouble
- or perhaps Fu's 1st

Ok first 2

how perhaps consumer reaction

how to present ? today video?

15,567 Team Meeting

11/5

- how to structure project
- layout
- BlingNation - Paypal contactless
  - no personal
- Revenue montly fee
  1.5% transaction
  Paypal cost
  Play around Visa + MC

Competive advantage; more than payment system
- checkin socialmedia
- lolalty program

Does not want to be in hardware biz

Verafone

Relevant: Visa + MC competition
- 30-50,000 communities - new payment format
- where 1 bank dominating

Trifect - social + loyalty Palo alto 13,000

(2)

History

More about credit cards RFID

Tech

Not very logjam y

Do more like stripes

Combo benefits + players

Not IT

- but how messed up in IT

Security

Consumer perception

Merchant Acceptance

How to break it

do 1 for 1

logjam → sol

logjan → sol

separate

Future Trends

Blingification

- just general what is coming
- not how it solves each log jam

2-sided network - mention as part of how to solve

③ Don't really know how to break it
- just ideas
- recommendations

Separate suggestions
- not solutions

Tal
To consumer contactless card no benefit
But mobile better

To merchants -) just cards over merchant
30% vs cash

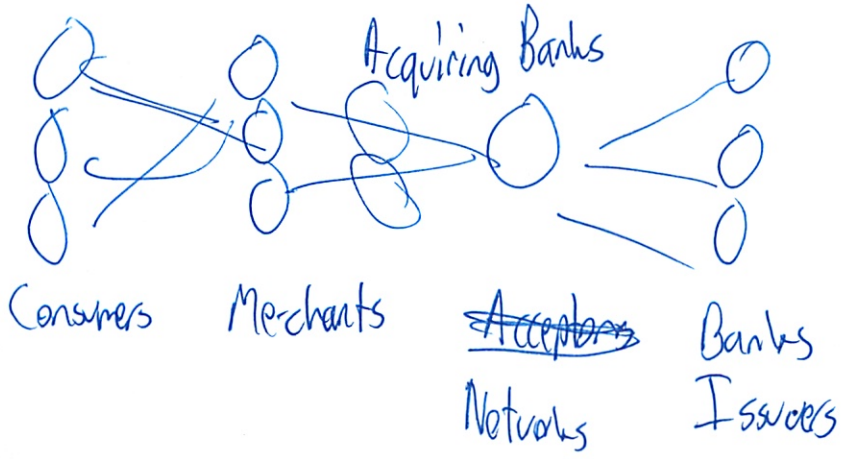
Suggestions - postpone now
- I will do some

My section
- 3 pgs
- for now Ok
- cut later

$lide Pratice

12/3

- More class concepts ?
- - just say 4 sided network
- ? just intrem ?
  - hope it will become main standards
- destructive mobile
  - where investment decision
- bait to get it at there
  - card format
- Most $ goes to infrastructure
- Network effects
  - network



Cross subsidy the terminals

Cards free

(2)

- Less content on slides
  - Just focus on what saying

Network externalities

different policies affect network

Security created a huge mess

- But is not the problem now

- Not too tech
- Not too much history
- How good ~~the~~ her;
  - identify problem as biz
- Poor run experiment
- Awareness
  - fractured
- No coordination
- How to change going foward
- Bad Rblicity

(3)

Too babish PR

Very too much technical
More biz model

1st run

T-Pass + MIT ids
- launching w/ Tpass cities

What RFID stand for

Lamen cardo - how passive cards work?
- or not

Sucess but then poor results
- square-ness
- breakdown

Research #

Shows short term
"as evidence as is working"

(4)

Network after the movie

Originally
- security
- Non adoption problem

Redo w/ #

Nexus 5

? Perception of insecurity

Need to pull together — sections due Sun afternoon EST

max 10 pg

Sun - consolidate - Maya

all proofread

exec summary - Tal 300 words

Sat afternoon - 3 slides review

Network

(5)

We at Exxon Mobile

Proof wed night

Tech section as appendix

Edgardo - you have the first question

Ask people to check their wallets

- it take too long

Shortening check out time

- people spend more

- long term value

12/6

Vs -what
avg american #
card

but there are some problems

---

15 min

Do T ~~or~~ ~~a~~

Point out simbol

---

10 min - then abandoned

---

10 min + video
- still too long

12/7

Lets take a look at the final paper

just edit paper

- ~~don't~~ not write here
- or in email

Good thing I am revising now

- need to add my section too
- but too long

Lots of factual ~~errors~~ errors / contradictions in paper

- diff POVs
- all sorts of contradictions,

It's the same mistakes + biases as ~~previous~~ working on presentation

Looking at My section again 12/8

- mess
- well last looked at more than a month ago
- need to write fresh
  - and I want to spend a few hrs fixing this for the appendix
- I am starting to realize about not ~~the~~ focusing purely on security