EMGT 555
TECHNOLOGY MARKETING

FALL 2008

VERSION: 1.0 – September 2008

INSTRUCTOR: Jean-Claude Balland, Dr. Sc.
EMAIL: jcballand@jcbassociates.com Email is my preferred mode of interaction. I am available any time, workdays and weekends.
CELL: 503/ 780 6742
COURSE WEB SITE: http://groups.yahoo.com/group/MST503 (by invitation only)
ADVISING HOURS: After class and on request.

Warning:
• This course represents a significant workload. If you have a full time job, we recommend you do not take another 3-4 credit class.
• You have small assignments to complete for the first session
• A session has been added Dec 11 evening for the project presentations

COURSE DESCRIPTION

High Technology Marketing is designed to provide an advanced understanding of the marketing process for technology-based products and organizations from opportunity identification to product introduction and market development. The course is articulated around three core issues: 1) how to create value for the customers, 2) how customers and value change along the technology adoption lifecycle, and 3) how to develop and protect competitive advantage.

Particular emphasis is placed on the front end of the marketing process: the one that deals with understanding what customers value and developing strategies and offerings that capitalize on that knowledge. It covers a wide range of topics like how to identify value opportunities, how discontinuous innovations get accepted by the marketplace, how value change along with time, how to segment and select markets, how to understand and outmaneuver competitors, how to develop marketing strategies that create strong competitive advantage, and last but not least how to price products and go to market.
As a result of this course, students will understand how to define winning innovative products and how to market them to gain a leadership position in the marketplace. Students will put this knowledge into practice by developing a New Product plan in a team project.

LEARNING OBJECTIVES

The prime objective of the class is to provide the students with a good practical understanding of how to understand customers, how their needs change along the technology adoption lifecycle, and how this should influence the marketing strategy of the technology company.

At the end of the term, students should be able to apply three key concepts:

- How to create value for the customers
- How to capitalize on the dynamics of technology diffusion in the market place
- How to develop sustainable competitive advantage

To

- Understand student’s own division/ company strategy
- Understand real company strategic options (case studies)
- Develop a strategic marketing plan for a new product (team project)

OPM AND ACADEMIC HONESTY

OPM means “Other People’s Materials.” The web is full of information of interest for your research. Sometimes complete sections of a document may even fit perfectly in your report. You are obviously encouraged to make good use of this resource. But remember that these ideas (a creative work) do not belong to you but to the authors. You must not use this material without putting the text in between quotes or in a style that clearly differentiates it from your own creation and without giving credit with full references to the author.

Failure to do so is a breach of the integrity that we expect from students and may expose them to severe sanctions. Please refer to the Academic Honesty policy for further details.
COURSE MATERIALS

Required Textbooks:

NOTE: These are the classics of technology marketing from Geoffrey Moore.


NOTE: This is also a classic from an Intel executive who lived the whole thing. Still current after 20 years.


Recommended Textbook:


NOTE: This is the field book to Geoffrey Moore's books. It adds to Moore's books good practical tools but the explanations will be redundant.

Additional Required Readings:

2 **Articles from Harvard Business Review (HBR)**. You need to download them from the HBR web site. (http://harvardbusinessonline.hbsp.harvard.edu/) or order them through PSU bookstore


3 **Case studies from Harvard Business Review (HBR)**. You need to download them from the HBR web site. (http://harvardbusinessonline.hbsp.harvard.edu/)

- Joseph B. Lassiter III, and Diana S. Gardner, MarketSoft Harvard Business Case Study 9-800-069
TEACHING METHODOLOGY

The class involves a mixture of lectures, class discussions, group exercises, and short case analysis. You are expected to have completed all assignments and be prepared to discuss them in class (see reading briefs later). Participation in class discussions is important and enters into total evaluation.

Preparation includes reading, online search, and personal observations.

GUEST SPEAKERS

We will invite industry guest speakers to illustrate key points of the course. Names will be communicated ahead of class time.

EMAIL COMMUNICATION

All communications in-between sessions and assignment submissions will be made by email. Please have an email address with at least 2 Mb memory to allow for exchange of large documents. Please keep your mailbox clean so messages do not bounce. When submitting an assignment, use the following format to name your file and the email subject line (that will avoid error on my side).

All documents should be in Office 2003 or prior versions

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GRADING PROCEDURES

A grade will be assigned to each of the activities outlined below. Each activity has a weight. The final grade is a weighted sum of the activity grades. The weights are indicated below:

- Group Project 40%
- Reading Briefs (case studies count for 2) 45%
- Class and team participation 15%

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**PREPARATION FOR CLASS**

Discussions are critical to your learning. You are expected to actively participate in class discussions, and make thoughtful contributions that will benefit you and your classmates. Therefore, class attendance and preparation are critical.

Each reading is the subject of a Reading Brief with questions in the detailed syllabus. We recommend you develop your RB along the following points, and provide enough depth for demonstrating that you understand and can apply the concepts. Readings will be the subject of discussions during class.

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**Recommend Format for Reading Briefs below:**

- Your name, title of the reading
- Key learning. Not a summary, but your synthesis of what you need to remember from the reading or what you would tell others the important points are
- Your critical comments on the thesis developed by the author
- How the concepts learned can apply or can apply to your job, your company, your career, or other areas of interest to you.
- Points that you have difficulty with (whether you do not understand or do not agree)
- Answers to the questions stated in the week assignment (restate the question before answering, please)

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Reading briefs are to be submitted as a Word document (**format Office 2003 or earlier versions**) sent by email by class time. Penalty will apply if submitted late. You can submit an improved version after class to improve your grade.

Please name the document with the format below or close. Follow the same rule for the subject line of your email.

This might seem overly constraining but that will minimize errors on my side. Thank you for your understanding.

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**CASE STUDIES**

Case Studies are to be submitted as a Word document (**format Office 2003 or earlier versions**) sent by email by class time. Penalty will apply if submitted late. You can submit an improved version after class to improve your grade.

Please name the document with the format below or close. Follow the same rule for the subject line of your email.
Recommends Format for Case Studies below:

- Your name, title of the case study
- Key points (summary of the case and the issues)
- Answers to the questions stated in the week assignment (restate the question before answering, please)
- Key learning and application to your job/ company/ personal interest

Please name the document with the format below or close and use it also for the subject line of your email. This might seem overly constraining but that will minimize errors on my side. Thank you for your understanding.

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**KEY ASSIGNMENTS**

**All assignments are to be submitted electronically.** There is no specific requirement for font type and size but you need to submit them in **format Office 2003 or earlier.** Do as you would do at your workplace when submitting reports and making presentation to top management: communicate simply and clearly and help the reader (the instructor) get the main points.

**Team Project:** This is designed to apply the concepts presented in class and/ or learned experientially. Your goal should be that your ideas and plan be “accepted”. Acceptation comes from building a good case supported by convincing and credible data, most importantly customer information. Therefore, all the criteria that you use when writing and presenting a report to your management holds true here, with the additional demonstration of your ability to use marketing concepts in a thoughtful way.

The Team Project goal is to develop a product proposal for a new product that you will sell to management for approval and additional funding. The process to form teams and select ideas will be presented at the first session. The project must allow for the gathering of primary and secondary customer and market requirements and reflect a strong market and customer focus. Financials analysis and technology consideration are secondary to the primary objective of first proposing something that is clearly targeted to customer needs. More information will be provided in first day of class.

Please refer to examples of previous A projects available on the Marketing Yahoo group [http://groups.yahoo.com/group/MST503](http://groups.yahoo.com/group/MST503).

**Team presentations:** You team will present its findings to the class in a short presentation.
DRAFT SUBMISSIONS:
Students are encouraged to submit a draft for the project. Drafts are not graded. Drafts with comments will be returned to students within 24 hours of their original submissions using the Comment feature of MS Word. The earlier you submit a draft, the more you can benefit from the feedback and improve your paper. Grading will be made on your final submission. To be useful to you, your draft must reflect what your final project will look like but still be open to modifications. Obviously, you are welcome to ask questions to clarify any aspect of the assignment or any points that preempt you to produce your best work.

“TIME TO MARKET” BONUS AND PENALTY
In business, it is critically important to hit the market window at the right time. Enter early with an OK product and you might have an advantage. Enter late and you need to compensate your lateness by a superior product. Grading will follow the same principle. For the team project there will be 1.5 points bonus per day early up to 7.5 points, and 1.5 point penalty per day late without limit.

COURSE SLIDES
pdf versions of the slides will be sent prior to each session.

CLASS WEB SITE
The course web site URL is http://groups.yahoo.com/group/MST503. The web site contains many examples of excellent team projects and supportive documents to help you throughout the term. It also can be used to access the group by email. The web site will be available for your perusal two weeks before the first session. Ask for invitation to the instructor.

MASTERING THE WORKLOAD
This class represents a significant workload. Plan your work and you will be O K. Do not wait for the week of class to start your reading and your reading briefs. The web site contains an example of a student planning worksheet that may be helpful to plan your own workload. You can access it from the web site (GENERAL INFO folder). She ended up with an A +! You can do it too.
October 2: Overview

Pre-Class Assignment

Introduction Assignment:

Due Date: Thursday, October 2, noon

1. Send me an email (see address on first page) with "<Class#> Hi! my name is <your name>" in the subject line (that helps me identify your message rapidly and be sure it is not a virus!). For example “EMGT 555 Hi. My name is John Doe”

Provide following information:

1) Your full name, position, company name, division and address, phone number and preferred email address(es)
2) A short bio
3) The MST courses you have taken or/ and are taking.
4) Your level of knowledge on marketing?
5) The products, markets, activities (professional and/ or personal) that you have a strong interest in and that you would like to investigate further in a team project.
6) The role that makes you perform best in a team and why (project manager, research analyst, contributor, subject expert, report writer, meeting facilitator, etc.)
7) Any other information that you think I should know about you and your ability to perform and get benefits from the course.

TO DO before the session:

1. Get yourself familiarized with the syllabus, assignments, and resources.
2. Get yourself familiarized with the materials available on the course web site. You should request an invitation to join this group to get access to the site. If you want to access the site from more than one address send me an email with all these addresses. You will need to register as a Yahoo Group (http://groups.yahoo.com/) member for all addresses.

This first session, I want to:

- Answer your questions o the syllabus and the various assignments.
- Form the project teams
- Provide an overview of technology marketing, and ythe guiding principles of this course

TO DO after the session:

Meet with your team and select a project idea. Submit short description of your idea.

October 9: Guiding Principle I: Discontinuous Innovation

This session will the guiding principles for this course:

1. The concept of discontinuous innovation, how this kind of innovation gets adopted in the market place, and how it shapes the company strategy
2. The concept of **Customer value** and how we can operationalize it so it can become a powerful force behind defining winning products.

**Reading and Reading Briefs**

**Reminder:** RBs are to be submitted by class time. *(see format page 5).* All documents should be submitted in Office 2003 or prior format (*.doc* and not *.docx* for Word documents).

1. **Download a short introduction of The 4 P’s of Marketing:**
   [http://en.wikipedia.org/wiki/Marketing#Four_Ps__28marketing_mix__29](http://en.wikipedia.org/wiki/Marketing#Four_Ps__28marketing_mix__29)

2. **Chasm: Chap 1: High Tech Marketing Illusion**
   **Questions**
   - Provide at least two examples of products/companies for each of the two kinds of innovations: 1) continuous innovations, or 2) discontinuous innovations (other than products from Apple, Intel, Sony, and 3M). Provide justifications in term of what discontinuities they introduce.
   - Can you think of a company that is good at both continuous innovations and discontinuous innovations (same restrictions)? Provide justifications in term of products/product-lines? What challenges do you see for product lines/companies that want to excel at both? Provide examples of such companies.

3. **Davidow: Chap. 1. Crush the Competition**
   **Questions**:
   - In your opinion, what made Intel win over Motorola? Be specific. Explain your reasons?
   - Provide other examples of companies that gained great competitive advantage without having the best product? What other approach(es) did they use? What does it tell you regarding the importance of products in the success of a company/

4. **Davidow Chap 2**
   **Questions**:
   - Page 15, the author says “The goal should never be only to capture a very small percentage of a huge market. Rather, concepts must be developed and resources identified to gain significantly greater than a 15 percent market share in a well-protected market segment. Anything else is to plan for failure.” What’s wrong with wanting to have 1% of a $10B market? Why does it most often than not fail? Give examples where it did and examples where it didn’t, and comment on your findings.
   - Based on the “cost of entering a market” that Davidow introduces in this chapter, it seems that entering a market where there is an established competitor is nearly impossible. Find examples where new entrants actually successfully entered a market and gained share over the leader. Why did they succeed? Draw some conclusions and learning from this analysis.

**October 16: Guiding Principle II: Customer Value**

**Customer Value**

We will continue our discovery of what marketing is all about and we will introduce the second guiding principles of this course: **value**. Value is a word we widely used, but we will start to reflect on exactly what value is and how to operationalize it so it can become a powerful force behind our actions in marketing. After completing this week, you will be able to:

- Understand what is value
- Understand the concept of the Whole Product and how it applies
Readings

2. Teaching note: Understanding what Customers Value. Download from course web site

Question:

- Revisit Davidow Chap. 1. Build a table to compare Motorola and Intel complete products along the five dimensions of benefits and the five dimensions of costs outlined in the Teaching Note. Justify your comparison with some explanations.

October 23: Segmentation and the Technology Adoption Lifecycle

Segmentation

We will look at a key marketing activity: Segmentation. Segmentation is at the core of the strategy of a firm. Segmenting a market to identify opportunities for innovative products is what we will focus on, and you will learn how to do it.

We will also introduce a market-driven process of developing new products and in particular how to gather customer needs. At this point, you should already be able to conduct an intelligent conversation with your Marketing VP.

At the end of this week, you should:

- Understand the challenges of segmentation and the various ways companies are segmenting markets.
- Understand the market-driven approach.

Technology Adoption Life Cycle (TALC)

We will examine the Technology Adoption Life Cycle or TALC introduced in the first session in more details. We will discover the “chasm” and the role that innovators play in the adoption of nearly all disruptive innovations.

At the end of this session, you should:

- Understand the process of adopting an innovation in its early days and the way companies can exploit it to develop their strategies

Readings


Questions:

1. Why is segmentation a critical task for any company? What are the risks for a company of not segmenting its market?

2. What are the fundamental differences in the author’s approach compared to more conventional segmentation approaches? What would you say are the strengths and weaknesses of this approach? Could Motorola have used other approaches to arrive at similar conclusions? Explain.
3. List possible outcomes you believe your target customers (team project) want to achieve. Please note that you will have to investigate these during the interviews.

2. Chasm, Chap. 2: High Tech Marketing Enlightenment

Questions:

1. Is the Technology Adoption Lifecycle the same for continuous innovations and discontinuous innovations? What is(are) the key difference(s)? Why are there differences?

2. Why does the Chasm exist? Provide at least one example (other than the ones in the books) of a product category that is today caught in the chasm. Must there always be a Chasm? Any example where there was no chasm?

3. The iPod seems to have been an instant success. In this regard it does not seem to fit the TALC model (no chasm or early adopters). How do you explain that?

4. Innovators, visionaries, and early adopters are generic names, but for marketing purpose you need to be able to address them. It means that you need to identify and locate them. Any idea about how to do this for each of these groups?

October 30: Customer-Centric Product Definition

In this section, we will continue our discovery of markets and customers and see how the pros are finding what they need to know so that they can create winning products. You will develop an interview guide for your own project and be ready to go interview your target customers

Reading

1. Case Study:

To submit in writing. See also format of case study submission page 5
Joseph B. Lassiter III, and Diana S. Gardner, MarketSoft Harvard Business Case Study 9-800-069

Questions

• What were the MarketSoft people trying to avoid by conducting these interviews? Why? Could the same information be obtained in any other ways?

• What are the reasons for having several people do the interviews?

• What is MarketSoft process for understanding the customer requirements?

• Is all this process worth it? What are the strengths and weaknesses of the MarketSoft product development process? What impact does it have on time to market? In what cases would you definitely use this process, and in what case would you not use it?


• What do you see as the strengths and weaknesses of this methodology?

• Who should interview customers? Why?

• What are the differences between a survey, and an interview?
November 6. From Voices to Customer Requirements

For this session, you should have started to gather customer voices for your project, so this week we will present a process of extracting requirements from the information you gather from the customer. In parallel, you should also learn how to get competitive intelligence. So at the end of this week, you should:

- Know how to transform customer voices into product requirements and features
- Understand how to conduct a competitive analysis

TO DO before and after this session

You should have interviewed most of your targeted customers and transcribed their inputs.

Reading Briefs (see format page 5)

1. Download and read the following resources from the course web site...

   Teaching Note - From Customer Voices to Specifications.doc

Questions

Transform one of the “customer voices” below from a frequent business traveler (economy class) into a set of requirements (you are a laptop manufacturer that also offers accessories):

- “I need to work on my laptop during entire coast to coast flights.”
- “When I travel back East for a day or two, I carry professional documents and personal belongings besides my laptop. I am losing a lot of time checking my suitcase and waiting for it at destination. I wish I have a single bag that I can carry on board and that airlines help frequent travelers like me save time.”

2. Crossing the Chasm Chap. 3

   Inside the Tornado Chap 3 (page 27-43), 4 (page 63-83), 5 (page 101-121)

Questions

- In what cases could a company target directly the pragmatists without going through the early adopters first? In what cases should it not do it?
- In the Tornado phase, Geoffrey Moore says “Ignore the Customer?” What does he mean by that? Try to reconcile this statement with the fact that you should always be focused on the customer
- What is +1 marketing. Gives example of +1 products other than Apple and the ones in the book.

Case Study (see format page 5)


Questions

- What is the product category that CTS competes in? Where in the Technology Adoption Life Cycle is it at the time the case study was written?
- What do you think of the innovation? Capture the attributes of the innovation under two headings: “Great Ideas” and “Questionable Ideas” and list at least five under each heading.
- Describe the steps a typical “pragmatic” surgeon would go thorough over time to adopt a new procedure like CTS (One of the first steps if not the first is that he must become aware of the new procedure). What will she/he need at each step to move to the next one?
November 13. Market Development Strategy

Reading

1. Crossing the Chasm Chap. 4, 5, and 6 (to page 148, “positioning”); refresh your memory on Chap 3.

Inside the Tornado Chap 3 (from page 43), and refresh your memory on last week reading

Questions

- Moore strongly advocates that crossing the chasm requires to take a niche market approach. Why? Find at least one example of a company (other than the ones in the book) that has successfully taken a broad approach. Draw some conclusions about the applicability of the niche strategy.

- What are the three conditions required to have correctly identified a Compelling Reason To Act (Buy)? What is the CRTA for your team project customers?

- Why is the saying “We have no competitor” to be avoided at all cost? Why should you always find at least one competitor? What should you do to “create the competition”?

Team Project Review

The objective of this review is to make your case that there a market and an opportunity and to get feedback from your classmates to improve your plan. Suggested topics to cover:

- Who are the customers? Describe them.
- What problems do they have? What is (or are) their potential Compelling Reason to Act (Buy)
- How large the market is?
- What solutions/products do they use today? Who provide them?
- Market segmentation and segment selection (which segment will you target and why?)
- Customer value drivers in the main dimensions of value, and how you used them to define a solid offering

November 20: Differentiation, Positioning, and Branding

We will look at a very important aspect of product marketing: positioning and differentiating. Both are aimed at creating a direct link between a company and its customers that will make him/her associate your company/product with a particular need.

At the end of this section, you should

- Understand the importance of positioning in the success of products
- Understand that various way to differentiate your products and company
- Equipped with this knowledge, you can now think of putting together a value proposition. You will be exposed to a framework you can use to develop a powerful one.

Reading Briefs (see format page 5)

1. Crossing the Chasm Chap 6 (from “Positioning”)

Marketing High-Technology Chap. 3

- Moore says that positioning is what you “do” to a customer’s mind. Can a company do anything it wants to a mind? What are the limitations that are implied by this statement?

- How would you apply these concepts chapter to your project,
2. Download from the Yahoo web site (Files/GENERAL INFO folder): Teaching Note – Developing a Compelling Value Proposition.

- Express the required elements of the value proposition of your team project; don’t put it in a sentence, but come prepared to discuss this with your team and instructor in class.


- Ward defines brand as a promise of value. What are the implications of this definition if a company wants to develop and maintain a strong brand?

- Should brand change along the TALC? What are the implications, knowing that it takes significant time to build a new brand?

December 4: Going to Market

In this session, we will review pricing approaches and in particular value-based pricing. Then, we will

At the end of this section, you should

- Understand the importance of positioning in the success of products
- Understand that various way to differentiate your products and company
- Equipped with this knowledge, you can now think of putting together a value proposition. You will be exposed to a framework you can use to develop a powerful one.

Reading Briefs (see format page 5)


- Robert Dolan suggests looking for variations in the way customers value the product for the company to capture more of the value you create. Find several examples across industries besides the ones mentioned in the article or in class. Ideally, you could think of making each customer pay the price he/she is willing to pay for the value received. Could you think of examples where this is actually the case.

- Is price elasticity a given? Is it a good thing or a bad thing? Give examples of products that are very inelastic and others that are very elastic. What can a company do to reduce price elasticity for a product?

Case Study (see format page 5)

2. L.W. Stern and F.D. Sturdivant Customer-Driven Distribution Systems

Joseph B. Lassiter III, Z Corporation Harvard Business Case Study 9-801-210

- Using Stern & Sturdivant’s article, build a table of requirements for the sales channel from the company’s perspective and from the customer’s perspective. Evaluate each of the three alternatives along these requirements. Based on this table, what choice would you make if you were Tom Clay and why?

December 11: Project Presentation

Each team will present its project for 20 minutes.