MKTG407 International Marketing
Fall 2012

Class Location: IN134
Class Meeting Times: Monday 4:30pm – 7:10pm

Professor Contact Information
Name: Dr. Sussan
Office Location: Enterprise Hall 125
E-mail Address: fsussan@gmu.edu
Office Hours: Monday 3:15 p.m. – 4:15 p.m.
Or by appointments

Course prerequisites: ‘C’ or higher in MKTG301 and degree status


Reference:


Recommended Readings: Major business newspapers and journals (Financial Times, Wall Street Journal, The Economist etc.) are recommended but not required.
Course Objectives, SOM Learning Goals, and Measurement of Knowledge and Skills:

This course has the following learning objectives and will help you in achieving the learning goals of SOM undergraduate business programs.

Objective A: Multidisciplinary approach to international marketing from the viewpoint of business management

Concept 1: World’s economic environment and its impact on international marketing. This addresses **SOM Learning Goal 4: Our students will have an interdisciplinary perspective**

- Measurement of Knowledge: Quiz on the stages of world’s economic environment
- Measurement of Skills: Exam, interpret marketing implications of the stages of economic development

Objective B: Examination of major marketing issues affecting companies operating in global environment.

Concept 2: The operationalization of importing, exporting and sourcing in international Trade. This addresses **SOM Learning Goal 5: Our students will be knowledgeable about global business and trade**

- Measurement of Knowledge: Exam on the costs of exports
- Measurement of Skills: Final project, develop export financing strategy

Objective C: Students will achieve an understanding of the economic, political, and cultural differences among nations as they affect marketing opportunities and operations, and will develop skills to identify and evaluate international marketing opportunities

Concept 3: The impact of global socio-cultural environment on international marketing across borders. This addresses **SOM Learning Goal 9: Our Students will understand the value of diversity and the importance of managing diversity in the context of business**

- Measurement of Knowledge: Quiz on global socio-cultural environment
- Measurement of Skills: Final project, interpret marketing implications of social and cultural environment in a foreign market

Concept 4: Understanding political, legal and regulatory environment and their impact on international marketing decisions. This addresses **SOM Learning Goal 7: Our students will be knowledgeable about the legal environment of business**

- Measurement of Knowledge: Quiz on political, legal and regulatory environment
- Measurement of Skills: Exam, analyze the impact of political and legal environment on new product introduction in a foreign market
Concept 5: Strategy on Marketing Mix Decisions. This addresses *SOM Learning Goal 10: Our students will be critical thinkers*

- Measurement of Knowledge: Exam on standardization vs. localization of marketing mix
- Measurement of Skills: Final project, develop a strategic marketing plan for a new product in a foreign country

### Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Day of the Week</th>
<th>Quiz/Exam</th>
<th>Class Topic</th>
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| 8/27     | Monday          |           | Chapter 1: Introduction to Global Marketing  
Chapter 2: The Global Economic Environment |
| 9/3      | Monday          |           | No Class, Labor Day |
| 9/10     | Monday          |           | Chapter 3: Regional Market Characteristics and Preferential Trade Agreement  
Chapter 4: Social and Cultural Environments |
| 9/17     | Monday          | Exam #1   | *Exam for Chapters 1, 2, 3, and 4*  
Chapter 5: The Political, Legal and Regulatory Environments |
| 9/24     | Monday          |           | Chapter 6: Global Information Systems and Market Research  
Chapter 7: Segmentation, Targeting and Positioning Investment, and Strategic Alliances |
| 10/1     | Monday          |           | Chapter 8: Importing, Exporting and Sourcing  
Chapter 9: Global Market Entry Strategies |
| 10/8     | Monday          |           | No Class, Columbus Day |
| 10/9     | Tuesday         |           | Group Projects Work |
| 10/15    | Monday          | Exam #2   | *Exam for Chapters 5, 6, 7, 8, 9*  
Chapter 10: Brand and Product Decisions in Global Marketing |
| 10/22    | Monday          |           | Chapter 11: Pricing Decisions  
Chapter 12: Global Marketing Channels and Physical Distribution  
Chapter 13: Global Marketing Communications Decisions I  
Chapter 14: Global Marketing Communications Decisions II |
| 10/29    | Monday          | Exam #3   | *Exam for Chapters 10, 11, 12, 13,14*  
Chapter 15: Digital Revolution |
| 11/5     | Monday          |           | Chapter 16: Strategic Elements of Competitive Advantage  
Chapter 17: Leadership, Organization, and Corporate Social Responsibility |
| 11/12    | Monday          |           | Group Projects Work |
| 11/19    | Monday          |           | Group Projects Work |
| 11/26    | Monday          |           | Group Projects Work |
| 12/3     | Monday          |           | Presentation of Group Projects |
| 12/17    | Monday 4:30pm – 7:15pm | Final | *Final Exam Chapters 15, 16, 17*  
Final Group Projects Due |
Evaluation
Exams (3 exams x 150 points each exam) 450 points (45%)
Final 150 points (15%)
Final Group Project 400 points (42%)
Peer evaluation (120 points)
• 60 points within-group peer evaluation for work done
• 60 points peer evaluation for group presentation
Participation: (40 points) - for participation in evaluating presentations on 12/3
Instructor evaluation (240 points)
• 60 points for group presentation. Individual group member score is proportional to the within-group peer evaluation. For example, Student A in Group X receives 30 out of 60 points from within-group peer evaluation, even if the instructor gives Group X 60 points for their presentation, Student A will only receive 40 points, i.e., 60 points x 50% (30 out of 60 points from within-group peer evaluation).
• 180 points for group report in writing. Individual group member score is proportional to the within-group peer evaluation.

TOTAL POINTS TO BE EARNED 1000 points

Grading
Your final grade for the course will depend on the total number of points you earn:

<table>
<thead>
<tr>
<th>Points</th>
<th>Letter Grade</th>
<th>Grade Points</th>
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<tbody>
<tr>
<td>940 – 1,000 points</td>
<td>A</td>
<td>4.0</td>
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<tr>
<td>900 – 939 points</td>
<td>A-</td>
<td>3.7</td>
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<td>870 – 899 points</td>
<td>B+</td>
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<td>830 – 869 points</td>
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<td>600 – 699 points</td>
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<td>Below 600 points</td>
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**Student Responsibilities:** For a summary of relevant university policies, see:
http://www.gmu.edu/catalog/apolicies/index.html, especially
http://catalog.gmu.edu/content.php?catoid=19&navoid=4065#grading

**Exam Processes:** You will take three closed-book, closed notes exams in this course - two hour exams and a final. Any use of electronic devices during testing times can be interpreted as a violation of the University Honor Code. These devices include cell phones, electronic translators, calculators, and similar devices. Any student using such devices during an exam or any form of cheating during exams will result in a grade of zero for the test and will be referred to the Honor Council.

**Exam makeups:** Consistent with University policy, **only provable (i.e., documented)** absences due to personal illness or family emergency constitute acceptable bases for missing exams. Students missing the final exam must request a waiver from the Assistant Dean in the Office of Academic and Career Services in ENT 008. Preplanned weddings, vacations and deep discount airfares are not acceptable absences. There are no make-up tests or adjustments to satisfy the convenience of students who are enrolled in this class. No extra credit is offered to anyone. All students are graded with the same standard.

**Virtual Classroom:** Due to unpredictable weather and traffic, there may be a day when we are unable to attend class. During such a rare case, check your e-mail by noon the day of class. We are usually on campus by then, so if we are stuck in traffic you will know about by that time.

**School of Management Community Standards**

The mission of the School of Management at George Mason University is to create and deliver high quality educational programs and research. Students, faculty, staff, and alumni that participate in these educational programs contribute to the well-being of society. High quality educational programs require an environment of trust and mutual respect, free expression and inquiry, and a commitment to truth, excellence, and lifelong learning. Students, program participants, faculty, staff, and alumni accept these principles when they join the SOM community. In doing so, they agree to abide by the following

Community Standards of Behavior:

- Respect for the rights, differences, and dignity of others
- Honesty and integrity in dealing with all members of the community
- Accountability for personal behavior

Integrity is an essential ingredient of a successful learning community. Ethical standards of behavior help promote a safe and productive community environment, and ensure every member the opportunity to pursue excellence.

SOM can and should be a living model of these behavioral standards. To this end, community members have a personal responsibility to integrate these standards into every aspect of their experience at the SOM.
Through our personal commitment to these Community Standards of Behavior, we can create an environment in which all can achieve their full potential.

The following information has been provided by the Office of the Provost:

**Academic Integrity**

For complete information about the University’s policies on academic honesty, please see: http://academicintegrity.gmu.edu/honorcode/

GMU is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else’s work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

**Mason E-mail Accounts**

Students must use their MasonLIVE email account to receive important University information, including messages related to this class. See http://masonlive.gmu.edu for more information.

**Use of E-Mail:** Consistent with federal privacy laws, I do not respond to non-GMU e-mail with confidential information. I respond only to YourName@gmu.edu e-mail.

**Religion:** Students who will miss class for religious reasons should inform me of their anticipated absences during the first two weeks of the semester.

**Personal Challenges:** GMU and SOM provide students with significant resources to navigate the challenges of daily life. They include the Writing Center, Counseling and Psychological Services (CAPS), and several other student services. SOM majors should visit the Office of Academic and Career Services in room ENT 008 for more information.

**Office of Disability Services**

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS. http://ods.gmu.edu

**Other Useful Campus Resources**

WRITING CENTER: A114 Robinson Hall; (703) 993-1200; http://writingcenter.gmu.edu
UNIVERSITY LIBRARIES “Ask a Librarian” http://library.gmu.edu/mudge/IM/IMRef.html

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380; http://caps.gmu.edu

UNIVERSITY POLICIES The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at http://universitypolicy.gmu.edu/. All members of the university community are responsible for knowing and following established policies.
MKTG 407 International Marketing Term Group Project

PROJECT OBJECTIVES
The learning objectives for the term project are:

- to familiarize with the environment of a country, and the need to understand the environment as an essential step preceding the preparation of a marketing plan.
  - This addresses **SOM Learning Goal 4**: Our students will have an interdisciplinary perspective
  - This addresses **SOM Learning Goal 5**: Our students will be knowledgeable about global business and trade
  - This addresses **SOM Learning Goal 7**: Our students will be knowledgeable about the legal environment of business

- to facilitate cross-cultural understanding in preparing the project
  - This addresses **SOM Learning Goal 9**: Our Students will understand the value of diversity and the importance of managing diversity in the context of business

- to provide the opportunity to craft a marketing plan for a new product in a foreign country
  - This addresses **SOM Learning Goal 10**: Our students will be critical thinkers

- to effectively reinforce key concepts covered in this and other courses

PROJECT OVERVIEW
The project requires you to select a country and a product.

- The first part of the report is to report the political, legal and the economic environment of the country selected.

- The second part is a general survey of the country's culture. This section includes geography and history.

- The third part of the report is a market audit and competitive analysis of a country for a specific product. In this section of the report, the economy (include political, legal environment) of the country which impacts the distribution and marketing systems should be discussed.

- The fourth part of the report is to develop a marketing plan for a product under consideration for marketing in the country selected.
COUNTRY AND PRODUCT SELECTION

First, you have to select a country of your choice. Second, select a product/service for marketing consideration.

Selecting a Country

To achieve maximum interest and involvement, you are permitted as much latitude as possible in selecting a country. It is best that you select a country in which you have some specific interest. While this is a general goal, there are some necessary constraints. One constraining factor is you are required to select a country outside of your home country and outside of the U.S.

Selecting a Product (*Calibration of 4Ps are required*)

While conducting the cultural and economic analysis of the country chosen, you begin to select a consumer product or service. In order to maintain the cultural orientation of the project, consumer products or services offer more opportunities to focus on cultural adaptation than do most industrial goods. Two additional factors should be considered.

- First, the product should have obvious cultural overtones to provide a strong cultural impact to the project.
- Second, the product should be one that you know something about. Products meeting these criteria and which have been used successfully in the past include: baby food, disposable diapers, powdered milk, contraceptive pills, high-protein diet supplements, prepared foods such as dry soups, portable washing machines, soft drink mix, children's toys, instant noodles, franchise outlets and early pregnancy tests.

Finally, the reason why your product choice has to be approved by the professor is to ensure that the product is not already being marketed in the chosen country or, conversely, is obviously inappropriate for that country. Once the products have been selected, it is necessary to provide information sheets of the product. Appendix II is an example of product information presented; the data provided are generally limited to content information, product uses, preparations, and product costs. Most of this information can be found on or with the literature accompanying the product and on the internet.
PROJECT COMPONENTS

The international marketing term project is designed to provide the students with experience in analyzing a country's cultural and economic environment and experience in developing a marketing program for a specific product. The assignment consists of four parts: Part I is an economic analysis of a country; Part II is a cultural analysis of a country; Part III is a market audit and competitive analysis of a product in a country; and, Part IV is a complete marketing plan for one product in the selected country.

Guideline for Country Analysis—Part I

The objective of covering these topics in this paper is not to present a written report of all the information they have found on the subject, but, you need to demonstrate an understanding of the material and highlight those points of particular significance from a marketing planning perspective.

1. Economics, Political System, and Legal System
2. Population, Economic statistics and activity (GDP, GNI, rate of growth, GDP per capita), distribution of wealth GINI index, resources, transportation, communication systems, working conditions, major industries, foreign investment, international trade statistics, trade restrictions, labor supply, developments in science and technology, channels of distribution, media.
3. Source of information

Guideline for Cultural Analysis—Part II

Before a marketing manager can determine what adjustments of the product or service would be appropriate, it is necessary to understand the environment. This is particularly true of the culture of a country.

1. Introduction
2. Brief discussion of the country’s relevant history
3. Geographic Setting: location, climate, topography
4. Social institution: family, education, social organizations, business custom and practices
5. Religion and aesthetics
6. Living conditions
7. Language
8. Sources of information
Guideline for a Market Audit and Competitive Analysis—Part III

Information in this guideline provides an estimate of market potential and an evaluation of the strengths and weaknesses of competitive marketing effort. The data generated in this step are used to determine the extent of adaptation of the company's marketing mix necessary for successful market entry and to develop the final step, the action plan. This guideline is designed to identify the correct questions to ask in a formal market study.

In any study of the domestic market, it is essential that a thorough understanding of the situation confronting the firm be developed. The situation analysis usually is defined as consisting of the following topics: general information about the industry, competition and governmental controls along with information about the firm and the market. The information required varies in the amount of detail depending on the time and resources available for the situation analysis.

Marketing managers and researchers involved in the collection of information for situation analyses are well aware of the problems associated with identifying needed information. The availability of needed information is a substantial problem in the domestic market, and the problems intensify when trying to identify needed information for a foreign market. Since the sources of information available are primarily secondary, it is typically necessary to modify the requirements of the situation analysis for students trying to identify such information about a foreign market.

Two strategies are used to make this objective more attainable. The first is to select a product, which is basically a new product. In this way, that part of the situation analysis, which deals with the industry and competition, is simplified. If a new or relatively new product is selected, then you should conduct an analysis of its innovativeness. This includes an analysis of the product in terms of the five characteristics, which influence the rate of diffusion. This represents a trade-off with one type of analysis being substituted for another. However, given the information problems associated with identifying the needed information for the typical situation analysis, this is a reasonable departure.

The second strategy focuses on those pieces of information in the typical situation analysis, which are still required. In developing a marketing plan for a product in an international market, it is necessary to have the necessary information or make an assumption about what the information would be in order to complete the situation analysis. Thus, some of the critical elements of the situation analysis are still included.

1. Introduction
2. The product, evaluate it as an innovation as it is perceived by the intended market
3. The market, describe the market (geography regions, transportation, communication, consumer buyer habits, distribution, advertising and promotion, pricing)
4. Compare and contrast your product with other competitions’ products
5. Market size
6. Source of information
Guideline for a Marketing Plan—Part IV

You are assigned the task of determining whether the product you have selected can be marketed effectively in that particular foreign market.

1. The marketing plan
2. Objectives
3. Product adaptation or modification
4. Promotion mix
5. Logistics (documentation required, insurance, freight forwarder)
6. Channel of Distribution
7. Price, terms of payment,
8. Marketing budget, resource requirements (finance, personnel)

Some sources of information

General Information about all countries in the world
1. CIA Factbook (www.cia.gov)
2. U.S. Department of Commerce (www.stat-usa.gov)
3. World Bank (www.worldbank.org)
4. OECD (www.oecd.org)
5. EU (europa.eu)
6. International Monetary Fund (www.IMF.org)
7. Heritage Foundation (www.heritage.org)
8. The Cato Institute (www.cato.org)
Style and Format

Final Paper

- Not to exceed 30 pages, double-spaced, to include all charts and figures
- 12 font
- Supporting materials in visual format are welcome

Final Paper Format

- Executive summary (2 page maximum): Summary of your report. Make sure you highlight the keypoints of your segmentation, targeting, positioning, and marketing plan
- Introduction: provide background of why you choose the country and the product
- Part I
- Part II
- Part III
- Part IV

*Bullet points accepted for clarity purposes*

*Data presented in charts, tables and graphics are encouraged*

*Visual presentation of products or services accompanied by textual description is welcome*

Presentation: *Powerpoint slides*

- Less than 10 slides in total
- Should include country-specific data, market audit results, market competition, product information, segmentation, product positioning, and localization of 4Ps
- A combination of graphics, data and text is desirable
- 15 minute presentation to include Q&A
Final Project Evaluation Criteria

- The effort and the comprehensiveness in researching about the details of the market of your choice in order to introduce the new product in the country chosen.
  - This addresses **SOM Learning Goal 4**: Our students will have an interdisciplinary perspective
    - Measurement of Knowledge: demonstrate within the report an understanding of the Economic, cultural, and political environment of the country selected
    - Measurement of Skills: interpret the implications of these external factors in marketing a new product in the country selected
  - This addresses **SOM Learning Goal 7**: Our students will be knowledgeable about the legal environment of business
    - Measurement of Knowledge: Investigate in the report the legal environment of the country selected for the project
    - Measurement of Skills: Analyze the relevance of the legal environment of a foreign country and its relevance to the new product to be introduced

Tips: For example, if you have chosen to market a U.S. designed and manufactured mobile phone handset to China, you should
- Demonstrate an understanding of the current status of mobile phone market in China
- The current status include rules and regulations (*about Chinese legal system see textbook p. 186, 189, 195-7*) for foreign mobile phone handsets being marketed in China
- The current status of the competition of foreign and local mobile phone handsets in China
- The compatibility of the technology embedded (e.g., antenna compatibility with local bandwidth, configuration of the phone) in the handset and the mobile phone service in China
- Investigate if there is any historical and cultural reasons hindering the adoption of foreign mobile phone handsets

- Analytical skills in analyzing country-specific data (e.g., geographical, economic, political, and cultural) and their relevance to the marketing plan (segmentation, product, price, promotion, and distribution).
  - This addresses **SOM Learning Goal 5**: Our students will be knowledgeable about global business and trade
  - This addresses **SOM Learning Goal 9**: Our Students will understand the value of diversity and the importance of managing diversity in the context of business
    - Measurement of Knowledge: demonstrate within the project the socio-cultural environment of the country selected
    - Measurement of Skills: analyze within the project the relevance of socio-cultural environment of the country and its implication on marketing efforts

Tips: For example, in attempting to market a product in China
you must zero in geographically which part of China you will introduce the product, it is not advisable to introduce the product to every part of China at the same time.

○ which economic strata of consumers you target, in other words, you do not want to target the product for the entire 1.3 billion people in China because it is too expensive and ineffective.

○ after deciding your target customers, your marketing efforts must synchronize with your segmentation and target market. In other words, if you are targeting e.g., age 24-34, you do not spend marketing dollars on baby boomers. Or if you are targeting Internet users only, you are unlikely to spend your initial ad dollars on TV watchers. Think return on investment (ROI) of your marketing efforts.

○ whenever possible, real world data should be used for e.g., segmentation demographic details, advertising rates, pricing of competitive products, distribution outlets, and so on.

- Critical thinking skills in crafting the marketing plan.
  ○ This addresses SOM Learning Goal 10: Our students will be critical thinkers
    i. Measurement of Knowledge: demonstrate within the project the localization of marketing mix, budgeting, market segmentation, and product positioning.
    ii. Measurement of Skills: argue (with supporting evidence) for the segmentation decisions, target market, product positioning, and the localization of marketing mix.

○ All 4Ps must be adjusted according to the country selected.

Tips: For example, if you choose the product “chewing gum” made in the U.S. and market it to Japan, you may not use the same price, same packaging, same promotional methods, same ad and so on as used in the U.S.

i. Support the decision of localization of each Ps with relevant literature.

ii. For example, in order to market the aforementioned chewing gum in Japan, the package size of the product should be adjusted (see textbook p.376), the flavor of the product should be adjusted to local taste (see textbook p.374).

iii. Similarly, the advertising message must be localized, e.g., translation, tagline, and so on, and media choice (see textbook p. 479).

iv. Pricing to be adjusted to local economy (see textbook p.530, or using GDP per capita difference to adjust prices in the case of Warner Bros in China p. 200)

v. Distribution according to local practice (see textbook p.422 – 422)

Note: Marketing budget is the costs you estimate necessary to bring the product to market within the first year. All data presented must be accompanied by real-world evidence.

- Presentation: Clear and concise summarization of your project is expected.
Appendix I: Sample questions

Below is a list of random questions to help you get started with your project. Do not prepare your final project by cutting and pasting and answering these questions in sequence in the report.

Country Choice: A country outside of the U.S. or outside of your home country
Product Choice: A U.S. product or service relatively new for the country selected

a. What is the population, demographics of the country of your choice?
b. Compare the population, demographics of the selected country to your home country.
c. How is the population distributed across the country? Do most of them live in the countryside? If so, are you intending to sell your product to people who live in the cities only? What is your intended population size? Which segment within the intended population?
d. What is the average income of the people in the country? What about the distribution of the income? What percentage of people can afford your product?
e. What is the culture of the people? Their religion, their language, their contextual meanings and how they affect your promotion campaign?
f. How does the geography of the country impact the product you are to introduce?
g. How does the population and geographic distribution or population impact your segmentation strategy?
h. How does the income of the population (e.g., urban vs. suburban; GINI index) relate to the pricing and the distribution of the product you are to introduce? Should the price of the product be higher/lower than that of the home country?
i. How does the demographics of the population relate to your product? Is your product for a specific gender, a specific ethnic group etc.?
j. How does the political environment of the country (e.g., are there law and order to protect your business, political coup?) impact your intended business?
k. How does the cultural background of the people relate to your product? Is it likely that your product will be welcomed given the tastes of the people? How does culture impact pricing, distribution?
l. How does the infrastructure of the country affect the distribution of your chosen product? Are there roads to transport your product to the intended buyers?
m. How should your promotion strategy be crafted? Should it be based on traditional advertising, PR, or Internet based promotion?
Appendix II: Product Fact Sheet (example)

THE PRODUCT—XO COMPUTER

A nonprofit group called “One Laptop per Child”, organized by Nicholas Negroponte, co-founder and director of the MIT Media Laboratory, aided in developing a computer for distribution to schools in developing countries. The plan called for countries to buy the computers, called the XO, for a price between 100 and 150 dollars and to distribute them free to schools. While the initial goal of the project is to work with governments, the design is being licensed to third-party companies to build commercial versions. (For more information about the One Laptop per Child program, visit: www.laptop.org).

The product for this assignment will be a commercialized version of the XO to sell at retail for roughly $250. Initial research by your company indicated that not only can such computers be used effectively in schools around the world but there is also a broader market in developing countries as an attractive cheap computer. In richer countries, the study indicated a potential market for the commercialized XO as computers for the elderly, as useful systems for people working in field locations, due to their functional and robust nature and cheap price and a somewhat ‘disposable’ computer system as gifts for children.

SPECIFICATIONS

The proposed design of the machines calls for a 500MHz processor, 1GB of memory and an innovative dual-mode display that can be used in full-color mode, or in a black-and-white sunlight-readable mode. The display makes the laptop both an electronic book and a laptop.

Since many countries targeted by the plan do not have power in remote areas, alternative power systems were developed for the XO. Power can be provided through conventional electric current, a small, low-cost solar cell, batteries, a windup crank attached to the side of the notebooks, a pedal or a lawn-mower-style ripcord to generate power.

The machines will run a version of the Linux operating system and for connectivity; the systems will be Wi-Fi- and cell phone-enabled, will include four USB ports, along with built-in “mesh networking,” a peer-to-peer concept that allows machines to share a single Internet connection. Using the XO’s built-in camera and microphone, users can easily jump into video or audio chats with other users.

The machine is built of heavy duty plastic and has antennas to communicate with nearby laptops. The rubber membrane keyboard is, of course, resistant to water and dirty hands. It is also designed to be easily swapped out to account for different languages and character sets.

The XO is designed to use a minimum of power compared to conventional laptops. The display is black-and-white high resolution in sunlight and color in a room or at night and uses 1 watt of average power consumption and, when the backlight is off, it uses 100 milliwatts of power. Memory is on the timing controller of the display so the display can stay on while the motherboard is turned off. This was done because people often spend a lot of time reading and the processor isn’t doing anything. The CPU can be in or out of hibernation in a tenth of a second, so that users won’t even notice the change. In e-Book mode, the XO uses less than a half a watt. While idling, the XO uses about 1 watt of power. A typical wireless system in a laptop consumes around 10 watts however the revolutionary wireless mesh technology in the XO uses 0.8 watts of power. As a result of the low power demands, the XO is considered the greenest computer ever made considering that the newest Energy-Star requirement for a laptop is 14 watts while idling.

Currently the XO can use two different battery technologies: a classic nickel metal hydride battery or a newer style lithium iron phosphate battery. The batteries are designed to last over five years or 2,000 to 3,000 recharges. With the XO using on average 2 watts and the battery having a 20 watt-hour span, the XO can easily go for 10 hours on a single charge. Because of the battery’s low replacement cost ($10), a spare battery might be included with every system.

The bundled software applications include: a Firefox-based Web browser, a simple writing application, an RSS reader, an eBook reader, an advanced calculator that handles a number of functions, including word-based calculations, a drawing tool and, of course, lots of learning games.