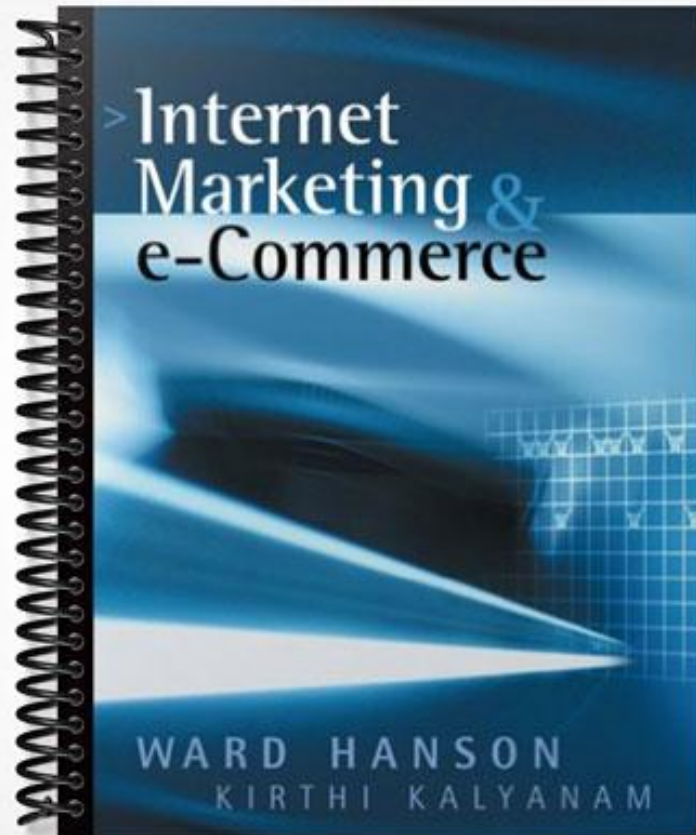# SOLUTIONS MANUAL

Internet Marketing & e-Commerce

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Internet Marketing, **Instructor's Resource Manual**
Part I, Chapter Two: A Digital World

Chapter Overview

In this second foundational chapter, students are introduced to the basic framework of how digital material is formed and how it can be used effectively in marketing strategies. The chapter defines and explores the principles of Moore's Law. Building on that key concept, the chapter provides an overview of how digital material and digital environments are created and used in real world applications such as film production for *The Fellowship of the Rings* and the launch of the Treo Smartphone.

Chapter Two also introduces the concept of digital convergence between related industries and technologies and highlights the advantages of moving to digital production and storage to enhance a range of business functions.

Learning Objectives

At the end of the second chapter, students should:

- Understand the importance and potential of digital technology in marketing.

- Master the economic concept of Moore's Law and understand its relevance in business planning and strategy.

- Be conversant in how digital material is created and the key components of effective digital environments.

- Learn the fundamental principles of digital convergence and realize how industries can benefit from the merger of technologies and techniques.

- Recognize the benefits and growth potential of interactive media and digital material in creating successful marketing strategies and improving basic business processes.

Chapter Outline

I Being Digital (*Pages 37 to 48*)
- Decreasing costs and rapid technological advances have created vast possibilities for marketers in an increasingly digital world
  - ♦ History and principles of Moore's Law
  - ♦ The impact of Moore's Law on the modern economy
    - Swift advances in product development
    - Lower prices and faster consumer adoptions
- Input Substitution: Putting Moore's Law to work for marketers
  - ♦ Opportunity for broad cost savings
    - Sun Microsystems and the advantages of online customer support
  - ♦ Potential for improved customer service
    - Pharmaceutical representatives better equipped in the field
  - ♦ Improved products and capabilities
    - Online language translations and global commerce
- Future considerations for a digital world
  - ♦ The question of whether Moore's Law will continue
  - ♦ Implications of consumer choice and competition for consumer dollars

II Digital Environments: (*Pages 49 to 56*)
- Digital environments are highly **procedural** – the computer only knows what it is trained to know
  - ♦ Necessary software can be complex and expensive to create
  - ♦ Business policies and rules must be explicit to be translated to digital environment
- Effective digital environments are highly **participatory**
  - ♦ Ease of consumer use
  - ♦ Authenticity of human interaction in a computer-made environment
- The importance of **spatial** elements in online environments
  - ♦ Rich fantasy: Popular culture takes the lead
    - Multi-million budgets and life-like Grand Theft Auto
    - Marketing opportunities, too: McDonalds and Sims
  - ♦ In real life, restrictions and successes
    - Budget constraints for companies
    - Consumers and the problem of slow Internet connections
    - Gains with "augmented reality:" football's virtual first down
- Digital environments have the advantage of being **encyclopedic** in scope
  - ♦ Low cost allows almost endless storage capacity
  - ♦ Vast amounts of stored material give marketers more opportunity

III Digital Convergence and Marketing Opportunities: (*Pages 57 to 65*)
- Understanding the concept of digital convergence and its potential
  - ♦ Cheap and powerful technologies make the merger of key related industries increasingly attractive
  - ♦ For marketers, there is vast potential in convergence – but also potential pitfalls: the failed merger of AOL-Time Warner
- Understanding how the digitizing process works
  - ♦ Two dimensional digitization as the widely-used standard
  - ♦ The potential for marketers in three-dimensional digitization: virtual home tours and automobile test drives
- Digitizing the marketing process
  - ♦ Moving materials to digital form
  - ♦ Identifying and understanding the "business process point of view"
  - ♦ Substituting digital materials within business processes
    - Levi Strauss and the online focus group
  - ♦ Redesigning business functions to incorporate digital capabilities
    - Airlines and the changeover to electronic ticketing

Teaching Suggestions and Recommended Exercises

Stretching a dollar; understanding Moore's Law

Because most students have grown up in the digital world and may take for granted the relatively low cost of something such as hard drive storage, the important premise of Moore's Law might be difficult to initially comprehend. The example at page 40 of the fictitious student Joan, whose parents paid an extra $1,000 in 1984 for expanded memory chips for their personal home computer, can be a useful starting point for the instructor to explore this key principle in understanding the power of internet marketing.

When Joan leaves for college at age 18, a quarter can purchase the same amount of expanded memory that her parents bought for $1,000 when she was born. (See page 41.) To explore how and why digital technology has become so broadly affordable, discuss with students the technological products they favor or covet and why the cost of many of those items has steadily declined. The flat screen television or computer monitor that a student wanted for their dorm room as a freshman? That cell phone with email capabilities? Are there items they want that Moore's Law might make more attainable in the near future? Apple's IPod might be one example.

Now turn the students from consumers to marketers. Just as the rapid decrease in digital cost helps couch potatoes afford bigger, better televisions, it also provides marketers with better information and means to make complex business decisions. And it allows businesses to provide far more sophisticated and responsive customer service and

customer support. Ask students to identify different kinds of information that marketing departments can develop from interactive media and how it could assist in business strategy development. One starting point for this discussion is the online book seller Amazon.com. How do sites such as Amazon and other virtual bookstores utilize information about past purchases of books, music and DVDs to influence future purchases? Could they be doing even more?

Recommended Exercises:
- It is important that students understand that the Moore's Law pattern of decreasing digital costs is not guaranteed to continue indefinitely. Calling randomly on two students at a time, create a series of mini-debates by asking the two students to articulate one or two of the arguments for – and against – the premise that Moore's Law will continue for at least the next decade.

- If Moore's Law does not continue, and digital costs become flat or increase, businesses will face daunting challenges. Assign the students to identify five problems that could beset marketers and ask them to be prepared to discuss possible solutions that would tap existing technologies and digital platforms.

Are we there yet? Exploring Digital Environments
To take full advantage of the Internet's speed and the cost savings it can offer to businesses, marketers must find creative ways to use the technology to reach more customers, to better serve existing clients and to grow profit and revenue. One of the most creative and still widely under-utilized tools to attract and retain business is to create engaging and effective digital environments for customers.

Students should be well familiar with the concept of a digital environment from the popular culture. The textbook at page 37 offers the example of the complex technological feat that brought J.R. Tolkien's Lord of the Rings trilogy to the cinema. Many students probably regularly visit other digital environments in the form of sophisticated video games. Ask students about the surroundings, look and feel of their favorite video games. What characters do they encounter? What does the background look like? Can they think of any advertisements or promotions that are noticeable to the average gamer?

Encourage students to consider the digital environments they visit outside of commercial entertainment. How many students have a blog or a page on MySpace? How does that popular social networking site function as a digital environment, and how can marketers tap into it for potential customers? Are there privacy concerns to consider?

Recommended Exercise:
- There are challenges in the use of digital environments in marketing, including the cost of creating customized software and the difficulty of training a computer to create an interactive social environment that appeals to human customers. Divide students into teams, then assign each to launch a

new product for Widgets Inc. Each groups must identify how they would use involve digital environment marketing in the launch and detail the expected benefits and potential pitfalls of the approach.

Putting it all together: Digital Convergence and Marketing Opportunities

As digital technology becomes cheaper and more powerful, it can lead to a broad reshaping of large segments of the economy. The textbook at pages 57 and 58 examines the technology-driven convergence of three massive industries: computing, communications and mass media. Convergence should give marketers, especially, greater flexibility as barriers between industries are broken and reshaped.

But that has not always been the case. Because distinct industries have their own jargon, best practices and institutional histories, opportunities for digital convergence that would appear to be logical and successful sometimes are not. The textbook at page 58 points to the troubled AOL-Time Warner merger. What industries do the students see as ripe for a potential digital convergence? What potential problems could accompany those mergers?

The final key concept in this chapter is for students to understand the basic steps in digitizing the marketing process. Because marketing strategy and consulting often is focused on improving the functioning of a business, students should have a solid understanding of how to evaluate the "business process point of view" in order to identify potential opportunities for digital substitution. The instructor can illustrate the potential in this approach by selecting one business process detailed in Figure 2.4 on page 63 – for instance, identifying customers' delivery needs – and walk students through each step of that process, looking for opportunities through digital substitution. Say the business is a movie rental operation. Do customers still want to go to the local movie rental shop and peruse the shelves? Are they satisfied ordering online through vendors such as Netflix, or could the business make a broader digital substitution and deliver the movies directly over the Internet?

Recommended Exercises:
- Announce to the students that they each have been selected to conduct a marketing review of how Office Widgets Inc., a major retail chain specializing in office supplies, manages customer information. The students should submit eight to 10 slides, explaining how Office Widgets Inc. can better utilize interactive media and digitization to build customer profiles, establish service information and measure customer satisfaction. For guidance, refer students to Figure 2.4 at page 63.

- Take the assignment one step further. Assign students to identify five potential markets that Office Widgets Inc. should look to for potential digital convergence benefits. Students should submit four or five slides identifying the potential merger markets and listing specific areas that would compliment the office supply industry.

1) Something is digital when its properties are stored as which of the following?
    a) a combination of dots and dashes
    b) a string of zeroes and ones
    c) a continuum along the color spectrum
    d) a mix of negative and positive signs
        Answer: b; Page 38

2) From 1945 until 2002, computer speed has increased how many times?
    a) 45 billion
    b) 65 million
    c) 75 billion
    d) 250 billion
        Answer: c; Page 40

3) Each of these is an example of a digital consumer financial transaction EXCEPT
    a) automatic payroll deposit
    b) direct deposit of Social Security pensions
    c) automated payments of state lottery tickets
    d) mortgage payment receipt books
        Answer: d; Pages 60, 61

4) Moore's Law describes which of these powerful forces in modern society?
    a) demand for new technology
    b) falling cost of digital technology
    c) emergence of technology in popular culture
    d) use of new technologies in marketing strategies
        Answer: b; Page 39

5) Which of the following is thought to present the most serious limit to Moore's Law?
    a) physics
    b) personal income
    c) engineering limitations
    d) consumer choice
        Answer: d; Page 48

6) To launch its Treo Smartphone, Handspring employed which of these concepts?
    a) digital convergence
    b) Moore's Law
    c) digital environments
    d) all of the above
    e) none of the above
        Answer: d; Page 44

7) Which of these factors has restricted the promise of multimedia digital convergence?
    a) rising digital costs
    b) software limitations
    c) industry jargon
    d) audience declines
        Answer: c; Page 58

8) As early as 1995, Sun Microsystems saw large savings by using digital substitution in which area?
    a) internet software distribution
    b) customer support by email
    c) web-based customer support
    d) a and b only
    e) a, b and c
        Answer: e; Page 43

9) Second-level business practices involve which of these activities?
    a) marketing and selling products
    b) managing customer information
    c) customer service
    d) all of the above
        Answer: d; Page 63

10) Which of these does not describe the basic framework of an effective digital environment?
    a) static
    b) encyclopedic
    c) procedural
    d) participatory
        Answer: a; Page 50

11) Of the following marketing costs, which has fallen dramatically in recent years?
    a) energy
    b) sales calls
    c) newsprint
    d) digital bits
        Answer: d; Page 43

12) Which of these is an example of "augmented reality" using a spatial digital environment?
    a) the video game *Grand Theft Auto*
    b) a reality television show documenting plastic surgeries
    c) the yellow first down line visible during televised football games
    d) a corporate home page that looks like a corporate office
Answer: c; Page 54

True/False Questions

1) Moore's Law is considered to be a key factor in the economy's ability to grow without inflation?
Answer: True; Page 39

2) Moore's Law states that each generation of chip technology contains about twice as much power as the previous generation.
Answer: True; Page 40

3) Digital systems operate much like people and inherently understand how to satisfy the human-centered views of a customer.
Answer: False; Page 51

4) Everything on the Internet is digital.
Answer: True; Page 38

5) Equipping a team of pharmaceutical sales representatives with wireless laptops is an example of digital substitution.
Answer: True, Page 44

6) When using digital substitution for parallel language translation sites, the sites should be identical to be most effective.
Answer: False; Page 44

7) The demise of Communism in Eastern Europe has been linked to decreases in digital costs.
Answer: True; Page 39

8) Thomas Watson Sr., the founder of IBM, once estimated the world market for computers to be "about five."
Answer: True, Page 49

9) An effective digital environment is unaffected by a slow Internet connection.
Answer: False; Page 54

10) Computers with "teraflop" processing powers rival the estimated computing power of a mammal brain.
Answer: True; Page 42

11) Moore's law applies equally to technology advancements and software development.
Answer: False; Page 60

12) One limitation of digital environments for marketers is that they do not allow for the storage of large amounts of information.
Answer: False; Page 55

13) Redesigning marketing processes to utilize digital capabilities is attractive to business managers because it does not require reorganizing existing employees.
Answer: False; Page 65

14) The art collections of the Louvre in Paris and the Vatican in Rome exist in digital form.
Answer: True; Page 61

15) Creating the life-like surroundings in the movie *The Fellowship of the Rings* required using more than 6,000 computers running continuously for months.
Answer: False; Page 36

Essay Questions

1) Digital convergence is full of promise for marketers, but its potential has yet to be fully realized. Discuss some of the problems that companies have faced in executing effective mergers of technologies and techniques and evaluate how changes in the marketing strategy could help make such mergers more successful.

2) In addition to cost savings for businesses, digital substitution also leads to new capabilities. The textbook gives the example of online language translations as a way to reach customers worldwide. Identify another business need or operation that could be enhanced by digital substitution and discuss how the potential benefits. Explain how Moore's Law and digital environments could play a role.