Case Study for Information Management

資訊管理個案

Telecommunications, the Internet, and Wireless Technology: Google, Apple, and Microsoft (Chap. 7)

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週次  日期  內容（Subject/Topics）
1  102/09/18  Introduction to Case Study for Information Management
2  102/09/25  Information Systems in Global Business: UPS (Chap. 1)
3  102/10/02  Global E-Business and Collaboration: NTUC Income (Chap. 2)
4  102/10/09  Information Systems, Organization, and Strategy: iPad and Apple (Chap. 3)
5  102/10/16  IT Infrastructure and Emerging Technologies: Salesforce.com (Chap. 5)
6  102/10/23  Foundations of Business Intelligence: Lego (Chap. 6)
<table>
<thead>
<tr>
<th>週次</th>
<th>日期</th>
<th>內容（Subject/Topics）</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>102/10/30</td>
<td>Telecommunications, the Internet, and Wireless Technology: Google, Apple, and Microsoft (Chap. 7)</td>
</tr>
<tr>
<td>8</td>
<td>102/11/06</td>
<td>Securing Information System: Facebook (Chap. 8)</td>
</tr>
<tr>
<td>9</td>
<td>102/11/13</td>
<td>Midterm Report (期中報告)</td>
</tr>
<tr>
<td>10</td>
<td>102/11/20</td>
<td>期中考試週</td>
</tr>
<tr>
<td>11</td>
<td>102/11/27</td>
<td>Enterprise Application: Border States Industries Inc. (BSE) (Chap. 9)</td>
</tr>
<tr>
<td>12</td>
<td>102/12/04</td>
<td>E-commerce: Amazon vs. Walmart (Chap. 10)</td>
</tr>
<tr>
<td>週次</td>
<td>日期</td>
<td>內容（Subject/Topics）</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>13</td>
<td>102/12/11</td>
<td>Knowledge Management: Tata Consulting Services (Chap. 11)</td>
</tr>
<tr>
<td>14</td>
<td>102/12/18</td>
<td>Enhancing Decision Making: CompStat (Chap. 12)</td>
</tr>
<tr>
<td>15</td>
<td>102/12/25</td>
<td>Building Information Systems: Electronic Medical Records (Chap. 13)</td>
</tr>
<tr>
<td>16</td>
<td>103/01/01</td>
<td>開國紀念日(放假一天) (New Year’s Day)(Day off)</td>
</tr>
<tr>
<td>17</td>
<td>103/01/08</td>
<td>Final Report (期末報告)</td>
</tr>
<tr>
<td>18</td>
<td>103/01/15</td>
<td>期末考試週</td>
</tr>
</tbody>
</table>
Chap. 7
Telecommunications, the Internet, and Wireless Technology:
Google, Apple, and Microsoft
Case Study: Google, Apple, and Microsoft (Chap. 7)

Google, Apple, and Microsoft struggle for Your Internet Experience

1. Define and compare the business models and areas of strength of Apple, Google, and Microsoft.

2. Why is mobile computing so important to these three firms? Evaluate the mobile platform offerings of each firm.

3. What is the significance of applications and app stores to the success or failure of mobile computing?

4. Which company and business model do you believe will prevail in this epic struggle? Explain your answer.

5. What difference would it make to you as a manager or individual consumer if Apple, Google, or Microsoft dominated the Internet experience? Explain your answer.

Overview of Fundamental MIS Concepts

Management

Organization

Technology

Business Challenges

Information System

Business Solutions

PACKED-SWITCHED NETWORKS AND PACKET COMMUNICATIONS

THE TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL (TCP/IP) REFERENCE MODEL

FUNCTIONS OF THE MODEM

- Telephone line
- Cable system
- Wireless media
- Analog device

NETWORK TOPOLOGIES

BP’S SATELLITE TRANSMISSION SYSTEM

THE DOMAIN NAME SYSTEM

Internet Root Domain
- "
  - Top-level domains
    - edu
    - com
    - gov
    - org
    - net
  - Second-level domains
    - expedia
    - google
    - congress
  - Third-level domains
    - sales
      - sales.google.com
      - computer1.sales.google.com
    - Computer1

INTERNET NETWORK
ARCHITECTURE

CLIENT/SERVER COMPUTING ON THE INTERNET

- Web browser
- Other client software

- Web (HTTP) server
- Simple Mail Transfer Protocol (SMTP)
- Domain Name Serving (DNS) utility
- File Transfer Protocol (FTP)
- Network News Transfer Protocol (NNTP)

HOW VOICE OVER IP WORKS

A VIRTUAL PRIVATE NETWORK USING THE INTERNET

1. User enters query

2. Google's Web servers receive the request. Google uses an estimated 450,000 PCs linked together and connected to the Internet to handle incoming requests and produce the results.

3. Request is sent to Google's index servers that describe which pages contain the keywords matching the query and where those pages are stored on the document servers.

4. Using the PageRank software, the system measures the "importance" or popularity of each page by solving an equation with more than 500 million variables and two billion terms. These are likely the "best" pages for the query.

5. Small text summaries are prepared for each Web page.

6. Results delivered to user, 10 to a page.

TOP U.S. WEB SEARCH ENGINES

Google 72%

Yahoo 14%

Bing 10%

Ask 2%

Others 2%

Web 2.0

• Four defining features
  1. Interactivity
  2. Real-time user control
  3. Social participation
  4. User-generated content

• Technologies and services behind these features
  – Cloud computing
  – Blogs/RSS
  – Mashups & widgets
  – Wikis
  – Social networks

Web 3.0: The Future Web

• Web 3.0 – the Semantic Web
  – Effort of W3C to add meaning to existing Web
  – Make searching more relevant to user

• Other visions
  – More “intelligent” computing
  – 3D Web
  – Pervasive Web
  – Increase in cloud computing, SaaS
  – Ubiquitous connectivity between mobile and other access devices
  – Make Web a more seamless experience

A BLUETOOTH NETWORK (PAN)

AN 802.11 WIRELESS LAN

HOW RFID WORKS

A microchip holds data including an identification number. The rest of the tag is an antenna that transmits data to a reader.

Has an antenna that constantly transmits. When it senses a tag, it wakes it up, interrogates it, and decodes the data. Then it transmits the data to a host system over wired or wireless connections.

Processes the data from the tag that have been transmitted by the reader.

A WIRELESS SENSOR NETWORK

You’re on Facebook? Watch out!

1. What are the key security issues of the Facebook?
2. Why is social-media malware hurting small business?
3. How to manage your Facebook security and privacy?
4. What are the components of an organizational framework for security and control?
5. Security isn’t simply a technology issue, it’s a business issue. Discuss.

資訊管理個案
(Case Study for Information Management)

1. 請同學於資訊管理個案討論前
   應詳細研讀個案，並思考個案研究問題。

2. 請同學於上課前複習相關資訊管理相關理論，以作為個案分析及擬定管理對策的依據。

3. 請同學於上課前
   先繳交個案研究問題書面報告。
References


– 周宣光 譯 (2011)，資訊管理系統－管理數位化公司，第12版，東華書局