IT Industry – New Growth Engine

Digital Contents Industry Promotion Policy

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Ministry of Information & Communication
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I. Promotion of Broadband IT Korea
## Broadband IT Korea Promotion Strategy

<table>
<thead>
<tr>
<th>Year</th>
<th>TDX</th>
<th>DRAM</th>
<th>CDMA</th>
<th>Broadband IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>$1,598 150 Bil. Won</td>
<td>$5,886 400 Bil. Won</td>
<td>$10,013 100 Bil. Won</td>
<td>$20,000 2.5 tril. won</td>
</tr>
<tr>
<td>('89~'02)</td>
<td>7 tril. won</td>
<td>108 tril. won ('91~'02)</td>
<td>54 tril. won ('96~'02)</td>
<td>600 tril. won ('03~'07)</td>
</tr>
</tbody>
</table>

**Modem (2.4Kbps)**  
**High speed Internet (1.5~2Mbps)**  
**Broadband Convergence (50~100Mbps)**

**IT Infrastructure**  
**Self-sufficient**  
**Leading IT Nation**
8-3-9 Strategy for IT Industry

**8 Services**
- WiBro Service
- DMB Service
- Home NW Service
- Telematics Service
- RFID-based Service
- W-CDMA Service
- Terrestrial DTV
- Internet Telephony

**3 Infrastructures**
- Broadband Convergence Network
- U-Sensor Network
- Internet Protocol v6

**9 Growth Engines**
- Next-Generation Mobile Communications
- Digital TV
- Home Network
- IT SoC
- Next-Generation PC
- Embedded SW
- Digital Contents
- Telematics
- Intelligent Service Robot
<table>
<thead>
<tr>
<th>Service</th>
<th>Plans for 2004</th>
<th>Mid- &amp; Long-term Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless Portable Internet</td>
<td>Decide directions for standardization &amp; licensing</td>
<td>('06) Commercial service</td>
</tr>
<tr>
<td>DMB (Satellite/Terrestrial)</td>
<td>License broadcasters &amp; commence service</td>
<td>('06) Two-way service</td>
</tr>
<tr>
<td>Home N/W Service</td>
<td>Expand it to 500,000 households (VoD/home appliances)</td>
<td>('07) 10M households</td>
</tr>
<tr>
<td>Telematics</td>
<td>Create Information Centers &amp; implement pilot projects</td>
<td>('07) 10M users</td>
</tr>
<tr>
<td>RFID</td>
<td>Allocate spectrum &amp; develop core technologies</td>
<td>('07) 5% of global market share</td>
</tr>
<tr>
<td>W-CDMA Service</td>
<td>Allow subsidies &amp; support tech. development</td>
<td>('06) Build N/W in cities nationwide</td>
</tr>
<tr>
<td>Terrestrial DTV</td>
<td>End the standard controversy &amp; expand reception coverage areas</td>
<td>('05) Build nationwide N/W</td>
</tr>
<tr>
<td>Internet Telephony (VoIP)</td>
<td>Establish systems incl. price &amp; give identification number</td>
<td>('07) 4M users</td>
</tr>
</tbody>
</table>
Three Infrastructures I

- **Telecom NW**
  - Wired/Wireless Telephone

- **Broadcasting NW**
  - Terrestrial/Satellite/CATV

- **Internet NW**
  - xDSL/FTTH/HFC

**BcN**
Realize the speed of 50~100Mbps by 2010
(QoS/Stronger Security & IPv6 Support)

**Digital Home**
- e-learning
- VOD
- Home appliances control
- Prevention of crimes & disasters

**E-government**
- Public services (G4C)
- Corporate support (G4B)
- Government innovation (G2G)
- Public participation (C2G)

**e-Business**
- Electronic transaction
- e-payment
- e-CRM
- e-SCM
Three Infrastructures II

Animal management

Home Network

Patients Management

Environment:
- Air pollution monitoring
- (Natural) disasters control

Distribution/Logistics:
- SCM, Inventory control

Shopping mall:
- Automatic counter

Transportation:
- Telematics
- ITS system
- Transport fares
Nine New Growth Engines

Post PC

Digital Content

Mobile Comm.

Digital TV

Telematics

Embedded Software

Home Network

IT SoC

Intelligent Robot
Opening the Era of USD110B Exports in 2007

**IT Production**
- W209T
- W380T

**IT Employment**
- 2003: 1.23M
- 2007(e): 1.5M

**Export**
- USD110B: 341
- USD70B: 476
- USD58B: 341

**CAGR**: 16.3%

**Expectation from IT 839 Strategy**

Opening the Era of USD110B Exports in 2007

Memory
- SOC

Telecom
- DTV, PC
- & Peripheral

SW, Contents
- Others

USD58B
- 2003: 205
- 2004(e): 188
- 2007(e): 240

USD70B
- 2003: 252
- 2004(e): 240
- 2007(e): 196

USD110B
- 2003: 251
- 2004(e): 32
- 2007(e): 251
II. Policies for Promotion of Digital Contents Industry
Global DC Industry Status & Prospect

Source: Reconstructed by the data from IDC, Jupiter Media Matrix (2001) etc

<table>
<thead>
<tr>
<th>Sector</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game</td>
<td>20 %</td>
</tr>
<tr>
<td>Animation</td>
<td>12 %</td>
</tr>
<tr>
<td>Mobile Contents</td>
<td>47 %</td>
</tr>
<tr>
<td>e-Learning</td>
<td>26 %</td>
</tr>
<tr>
<td>Publishing, Music, etc</td>
<td>43 %</td>
</tr>
<tr>
<td>Total</td>
<td>23.7%</td>
</tr>
</tbody>
</table>
The Status & Prospect of Korean Digital Content Industry

<table>
<thead>
<tr>
<th>Sector</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game</td>
<td>32.5%</td>
</tr>
<tr>
<td>Animation</td>
<td>59.8%</td>
</tr>
<tr>
<td>Mobile Contents</td>
<td>62.0%</td>
</tr>
<tr>
<td>e-Learning</td>
<td>60.3%</td>
</tr>
<tr>
<td>D-TV Contents</td>
<td>49.0%</td>
</tr>
<tr>
<td>Publishing Music etc</td>
<td>34.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39.9%</strong></td>
</tr>
</tbody>
</table>

Unit: Tril. won

Source: Reconstructed by the data form Korea IT industry Promotion Agency (2003)
Overview of Korean Digital Content Industry II

<Export Growth>

- 2001: 56,292
- 2002: 129,364

Growth: 129.8%

(Unit: U$ 1,000)

<Item Ratio (2002)>

- Games: 34.6%
- Solution: 34.0%
- Animation: 11.5%
- Internet Contents: 10.1%
- Mobile Contents: 9.7%
Competitiveness Analysis

<table>
<thead>
<tr>
<th>Technology</th>
<th>Strength</th>
<th>Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>World class 3D graphic production capabilities</td>
<td>Multi-platform games</td>
<td></td>
</tr>
<tr>
<td>Leader in mobile market of Contents</td>
<td>DC production paradigm shift (2D→3D)</td>
<td></td>
</tr>
<tr>
<td>Wire/mobile high speed network infrastructure</td>
<td>Ubiquitous environment introduced</td>
<td></td>
</tr>
<tr>
<td>Competitive human resources</td>
<td>Expansion of mobile Contents market</td>
<td></td>
</tr>
<tr>
<td>Leading online game service</td>
<td>Development of online console and arcade Games</td>
<td></td>
</tr>
<tr>
<td>Leading exporter of handsets</td>
<td>e-Learning grows for home study</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Current Parity</th>
<th>2007 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC online game</td>
<td>Leads technology</td>
<td>Leads world technology</td>
</tr>
<tr>
<td>Console game</td>
<td>2 Yrs</td>
<td>Comparable</td>
</tr>
<tr>
<td>CG Image</td>
<td>2.5 Yrs</td>
<td>Comparable</td>
</tr>
<tr>
<td>3D animation</td>
<td>2.5 Yrs</td>
<td>Comparable</td>
</tr>
<tr>
<td>Mobile Contents</td>
<td>Comparable</td>
<td>Leads world technology</td>
</tr>
<tr>
<td>Protection/Distribution</td>
<td>1 Yr.</td>
<td>Comparable</td>
</tr>
</tbody>
</table>
Vision of Korean Digital Content Industry

Industrial System

Global Hub of Distribution (DC Global Hub)

Production Center (DC Multiplex)

Technology Center (CG Mecca)

Center of Human Resources (DC Human Resources)

Goal

Enrich U-Korea

Top Five Digital Contents Country
**Promotion Strategy**

**Online Game**
- Developing Multi-Platform Games
- Become the leader of world gaming market

**CG Digital Animation**
- Support and developing technology to produce the Blockbuster type of 3D animation

**Mobile Contents**
- Developing 3D Mobile Contents Technology and preoccupy World Standardization

**DTV Contents**
- Link between Interactive TV Contents and T-Commerce
- Reform the policy to promote Convergence of TV Broadcast and Telecommunication

**e-Learning**
- Develop cooperation model between the Gov't Departments (Create e-Learning branch committee etc)
- Build an e-Learning Contents Library and set standardization
Policies for Digital Contents Industry Promotion

Strengthen Industrial Foundation

• **Creation of Foundation for Diverse Digital Contents**
  - Steady Promotion of National Archive of Digital Knowledge Resources, including Cultural, Science and Technology etc.

• **Enhancement of Business Profitability Base**
  - Promotion of Standard Contract Format for Fair Competition

• **Protection of Investors & Consumers**
  - Technical Protection Like DRM and Watermarking against Illegal Copying
  - Reorganization of Legal Systems for Consumer Protection
Support Ventures and their Growth

• **Formation of Regional DC Industry Base**
  - Share Image Processing Equipment at Regional Multimedia Support Centers
  - 5 Regional Centers in Chuncheon, Busan, Gwangju, Jeonju and Jeju

• **Environment for Investment for Growth Promotion**
  - Organization of Investment Cooperatives (50 billion won)

• **Systematic Information Provision**
  - Market Survey, White Paper and Demand Forecast
  - Integrated DC Information Center
• Construction of DC Technology Development Agency
  - Virtual Reality Development Lab
  - Expansion of University ITRCS (5 University ITRCs)

• Development of Core DC Technologies
  - Platform Independent Game Software Technology
    - Development of Safe Distribution Technology Like DRM
    - Development of Core Intelligent e-Learning Technology

• Promotion of Digital Contents Standards
  - Establish standards for games, e-learning and DRM
    - Enhanced cooperation with International Standards Organizations
Human Resources Development

- Foster Highly Skilled Workforce at Schools
  - Help Reorganize DC Curricula
  - Support Development of Cyber Education Courses

- Scholarships for Global Market Workforce
  - Scholarship for Master Degree and PhD Courses Abroad
    - Invite renowned Professors

- Female Professionals and Youth Training
  - Female workforce
    - DC Production Contest among students
Policies for Digital Contents Industry Promotion

Promotion of Overseas Marketing

• Localization of Export Promising Contents
  - Platform Conversion, Device Optimization for Export
    - Legal Service
    - Test-bed at iPark for Online Game Export

• Base Points for Overseas Marketing
  - Scholarship Local Market Channel (GPP) for Export of Digital Contents
    - Marketing Meetings through GPP (Global Publishing Post)

• World Class Digital Contents Trade Shows
Thank you