Technology & Innovations for sustainable Ubiquitous Society

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"Power shift" that Albin Tofrar advocated has actually become it. The age when knowledge has value comes, and power moves from the organization to the individual.

Change of business model based on prosumer’s perspective

Change in consumer behavior with Web2.0
- Web2.0
- Blog
- SNS

The rise of mash-up service

Increasing collaborative business
- e-commerce
- Direct marketing

B2C net business led by consumers

SNS Users in Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>Normal SNS Users</th>
<th>Active SNS Users</th>
<th>Ratio for Internet Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>'05/03</td>
<td>1</td>
<td>0.5</td>
<td>5%</td>
</tr>
<tr>
<td>'06/03</td>
<td>2</td>
<td>1.5</td>
<td>7.5%</td>
</tr>
<tr>
<td>'07/03</td>
<td>3</td>
<td>2.5</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: MIC
New Value Innovation

New value innovation with sustainable development is key for the network society.

- Technology
  - IT (Computer) & Networking (Communication)
- Human Factor
  - Knowledge Friendly Safety

Ecology
Green ICT

Social Life and Economic Activities supported by Network

- Enterprises
- Commerce
- Government
- Transportation
- Home
- Education
- Healthcare

Ubiquitous Network Society

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Economic Growth vs. ICT Investment

- ICT investment develops economy (GDP).
- Recently, the contribution of the ICT investment in the growth of GDP rises. However, That of Japan and Italy are not so high in compared with others.

Comparison of ICT Investment

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP Index (Year1990=100)</th>
<th>ICT Investment Index (Year1990=100)</th>
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<tbody>
<tr>
<td>JAPAN GDP</td>
<td></td>
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<tr>
<td>USA GDP</td>
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</table>

Source: ICT White Paper MIC, JAPAN

ICT Investment ratio against GDP

Source: OECD Web Site
NEC suggested 30 years ago that the **ubiquitous society** comes true in 21 century.
Technology Frontier with Green ICT

- Electric cars: Lithium-ion batteries
- Cell phones: Power-saving chips
- PCs: Eco-polyca, Water-cooling
- Thin client system
- Eco Data center
- Lunar explorer "Kaguya"

Nano Technologies

Silicon Photonics
- One-chip R-OADM

Carbon Nanotube
- Printed CNT Transistor

Quantum Computing
- Quantum Bit
- Reading Circuit 1 μm

Courtesy of JAXA
Towards Ubiquitous Society

Innovation Ecosystem based on convergence of C&C and Knowledge would create a sustainable and abundant society.
Empowered by Innovation

NEC