Broadband Service Deployment
Experiences in Japan

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## Present Situation in NTT

**March 2006**

<table>
<thead>
<tr>
<th>Service</th>
<th>March 2006</th>
<th>April 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTTH</td>
<td>265 k</td>
<td>3.4 M</td>
</tr>
<tr>
<td>ADSL</td>
<td>-22 k</td>
<td>5.7 M</td>
</tr>
<tr>
<td>3G</td>
<td>1,448 k</td>
<td>22.0 M</td>
</tr>
<tr>
<td>2G</td>
<td>-963 k</td>
<td>28.6 M</td>
</tr>
</tbody>
</table>
Rapid Shift to VoIP

A-Tel + ISDN

VoIP over FTTH

- A-Tel + ISDN
- VoIP over FTTH

05/03 06 09 12 06/03

0 0.4 0.8 1.2 1.6

0 44 48 52 56 60

ITU-T Workshop "NGN and its Networks" Kobe, 20-21 April 2006

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## Why FTTH & VoIP – Price –

<table>
<thead>
<tr>
<th></th>
<th>Max. Speed Down/Up (Mbps)</th>
<th>Monthly Charge (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSL</td>
<td>47 / 5</td>
<td>22.3</td>
</tr>
<tr>
<td>FTTH</td>
<td>100 / 100</td>
<td>22.1</td>
</tr>
</tbody>
</table>

- **ADSL**:
  - Monthly Charge: 0.5 $/Mbps
  - Max. Speed: 47 / 5 Mbps

- **FTTH (GE-PON)**:
  - Monthly Charge: 0.2 $/Mbps
  - Max. Speed: 1 / 2.5 Mbps
Why FTTH & VoIP – ARPU -

FTTH

x 2.6

23 $ /mo.

Metallic

60 $ /mo.
(approx.)

FTTH

196 $ /mo.

(approx.)
Why NGN for NTT/Japan

1. Social Demand
   i) Shift to Broadband & Service Convergence
   ii) New infrastructure toward “Aged Society”

2. Internal Demand
   i) Life time of existing digital switch
   ii) More competitive in ever-changing business environment

Solutions ONLY by NGN
NTT’s NGN Strategy

1. Contribute to National Target as

   *e-Japan* and *u-Japan*

- various services
- fixed-mobile/wireless convergence
- human-machine-environment-information-communication-time
- sustainable, safe, secure, convenient
2. Build a next-generation network that is **open**, **flexible**, **easy-to-use**, **inter-operable**, **and** **safe & secure**

=> 30 million FTTH users by 2010

- **field trials** in 2006
- **commercial core network** from 2006
- **Commercial service edges** from 2007
3. Seamlessly migrate from existing public switched telephony to IP telephony, and from copper wire to optical fiber

4. Strengthen our competitiveness and financial base (Targets up to 2010)
   - Annual additional sales: 5 billion US$
   - Total capital expenditure: 50 billion US$
   - Annual cost reduction: 8 billion US$
NTT’s NGN Architecture

- **Applications**
  - Session Control Server
  - IP Broadcasting
  - FMC

- **Core Network**
  - Transport Router
  - Edge Router
  - Service Edge

- **Access Network**
  - OLT
  - ONU
  - HGW

- **Mobile Network / ISPs**
  - Business user
  - Mass user

- **Other Carriers / ISPs**

- **Service Control**

- **Mobile Network**

- **Other Carriers / ISPs**
Why NGN for Global

Digital Divide  Interconnectivity  Security

Telephony

Internet

Broadband

Mobile

Wireless

Global Center

Diversified

Cooperated

NGNs
I am a candidate for the Director of ITU-T
Challenge in a Changing Era, NGN

Thank you very much

Yuji Inoue