Challenges, Approach and Achievements

A decade’s Retrospection of Telecommunications in the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu

Mr. Po-Chou Liang
Senior Engineer, NCC

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Outline

◆ First Reform – From Monopoly to Competition
  ✓ Objectives
  ✓ Challenges
  ✓ Approach
  ✓ Achievements

◆ Second Reform – Creating a Competent Regulator
  ✓ Objectives
  ✓ Challenges
  ✓ Approach
  ✓ Achievements

◆ Conclusion
First Reform
1996 - 2001

The Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu
First Reform (1/4)

Why?
- To Create a Liberalized and Competitive Telecom Market
- To Plan for Access to WTO

Objectives:
- WTO Accession
First Reform (2/4)

Challenges:

- Proceeding from Monopoly to Competition
- Establishing an Independent Regulator
- Implementing Pro-competitive Regulatory Measures

Guiding principles: Fundamental spirit and rules of WTO
Liberalization to strengthen competitiveness
First Reform  (3/4)

Approach:
- Learned from peer regulators worldwide
- Adopted phased approach for liberalization

Achievements:
- Overhaul of the Telecommunications Act – Feb 1996
  - Several Amendments were made subsequently
- Establishment of the independent regulator, DGT – Jul 1996
- Enactment of regulations for network interconnection – Oct 1997
- Enactment of regulations for governing tariffs – Sep 2000
- Enactment of regulations on universal services – Jun 2001

DGT : Directorate General of Telecommunications
First Reform Milestones 1996 - 2001

- **Telecom Act 1st Amendment**
  - **Jan-May 1997**

- **DGT reformed**
  - **Feb 1997**

- **CHT formed**
  - **Mar 1997**

- **Telecom Act 2nd Amendment**
  - **Dec 1997**

- **WTO Telecom Agreement (observer status)**
  - **Jan 1998**

- **Mobile Opened**
  - **Jan-Mar 1998**

- **Satellite Opened**
  - **Feb 1998**

- **Leased line Opened**
  - **Mar 1998**

- **Fixed-line Opened**
  - **Dec 1998**

- **Submarine Cable Opened**
  - **Feb 1999**

- **ISR Opened**
  - **Mar 2000**

- **WTO Accession**
  - **Sep 2001**

- **CHT Domestic IPO**
  - **Jan 2002**
### Checklist – Key WTO commitments

<table>
<thead>
<tr>
<th>Sector</th>
<th>Limitations on market access</th>
<th>Limitations on national treatments</th>
<th>Compliance</th>
</tr>
</thead>
</table>
| BASIC TELECOMMUNICATION SERVICES | Mode 3: None except:  
- A service supplier shall be a Company Limited by Shares incorporated in Chinese Taipei.  
- Investment by non-Chinese Taipei persons in a service supplier max: Direct 20 %, Indirect 60 %  
- The aggregate percentage of shares held by non-Chinese Taipei persons in Chunghwa Telecom, including direct and indirect investment: max. 20 %.  
Mode 4: Unbound except as indicated in the horizontal section. | Mode 3: The chairman and a majority of the board of directors shall be Chinese Taipei nationals.  
Mode 4: Unbound except as indicated in the horizontal section. | |
| VALUE-ADDED TELECOMMUNICATION SERVICES | Mode 4: Unbound except as indicated in the horizontal section. | Mode 4: Unbound except as indicated in the horizontal section. | |
First Reform  (4/4)

Achievement - full compliance with 
WTO Telecommunications Reference 
Paper !
Second Reform
2002 - present
Second Reform (1/19)

Why?

- To establish a more effective and restructured *independent* regulator to ensure impartiality and accommodate the trend of *convergence* between telecommunications and broadcasting.
Second Reform  (2/19)

Objective: to establish a Competent Regulator

Six Main Missions

- Sound Development of Industry
- Convergence of Technology
- Rights of citizens
- Cultural Diversity
- Rights & Interests of the Disadvantaged
- Interests of Consumers

Vision of the Communications Sector
Challenges:

- **Converging laws and regulations**

  - The outmoded regulatory framework:
  - The authorities for telecommunications and broadcasting affairs originally belonged to different departments and were governed by different laws
  - This led to a lack of consistency and efficiency in management for regulators
Second Reform  (4/19)

Approach:

- NCC was established in order to
  - effectively carry out regulatory affairs concerning communications
  - independently exercise its duties and powers in accordance with the laws
Achievement:

- **The NCC became operational on February 22, 2006**
  - Laws and regulations dealing with communications came under the official responsibility of the NCC
  - The corresponding powers originally under the MOTC, GIO, and DGT were transferred to the NCC
  - This was also the case for other laws and regulations that have come under the official responsibility of the NCC.

~ Article 2 of the NCC Organization Act

*MOTC: Ministry of Transportation and Communication*
*GIO: Government Information Office*
*DGT: Directorate General of Telecommunications*
Second Reform  (6/19)

NCC Legal Framework

**Fundamental Communications Act**
- Defines the principles for the division of responsibilities between NCC and the Executive Branch
- Sets common regulatory principles for communications services

**Telecommunications Act**
- Substantive Laws: Explicitly provide regulation over telecommunication & broadcasting businesses

**Radio & TV Broadcasting Act**

**NCC Organization Act**
- Organization Act: NCC’s Authorities & relevant operating rules
Second Reform (7/19)

The NCC’s Challenge 1:

- Ensuring its operations can better address the six areas covered by the WTO Telecom Reference Paper:
  - Competitive Safeguards
  - Interconnection
  - Universal Service
  - Public Availability of Licensing Criteria
  - Independent Regulators
  - Transparent and Objective Allocation and Use of Scarce Resources
The NCC’s Challenge 2:

- **Amending relevant laws and regulations in a transparent and consistent manner**
  - Policies & regulations need amending
  - Approximately 10 Acts and hundreds of regulations and directions need amending
  - The alteration of regulation framework may affect the rights and interests of operators
  - A change of traditional perspective is required
Second Reform (9/19)

The NCC’s Approach:

- **Act according to decisions made by a collegial system**
- **Make best use of multi-level regulation**
  - Self-regulation, Co-regulation, Regulation
- **Set 3 stages for Convergence**
  1. Abolish or revise unnecessary regulatory legislation
  2. Respond to urgent industry needs, complete revision of laws on small scale
  3. Respond to the needs of digital convergence, complete a comprehensive revision of the Telecommunications Act and the three radio and television laws
Second Reform  (10/19)

- *The NCC’s Approach: the Transparent Policy Planning System*

<table>
<thead>
<tr>
<th>Input</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Hold Discussions among Sub-Groups within the Commission.</td>
</tr>
<tr>
<td>External</td>
<td>Conduct Public Consultation, Public Opinion Survey.</td>
</tr>
<tr>
<td>International</td>
<td>Refer to International Benchmarks</td>
</tr>
</tbody>
</table>
Second Reform (11/19)

The NCC’s Achievements:

- **Communications Management Bill was drafted for future 3-layer Regulation Framework**

**OSI Framework**

- Application Layer
- Presentation Layer
- Session Layer
- Transport Layer
- Network Layer
- Data Link Layer
- Physical Layer

**3-layer Framework**

- **Layer 3**
  - Content-Application

- **Layer 2**
  - Operation-Management

- **Bottom Layer**
  - Networking-infrastructure

Providing Services based on the Operation-management Layer

Providing communications services based on the facility of the Networking-infrastructure layer

Any wired, wireless, optical and electromagnetic facilities for transmitting communications signals
The NCC’s Challenge 3:

- Managing emerging telecom technologies and services sensibly
  - Continually evolving services require updating knowledge and awareness
  - Much effort and increased budget and authorization are required
  - Greater understanding of projected scope of new services is necessary
Second Reform  (13/19)

The NCC’s Challenge 4:

- **Easing restrictions on telecom equipment imports and cross-certification agreements**
  - Requires greater international cooperation
  - Needs active participation in international meetings
  - Calls for a multilateral or plural agreement on both conformity assessment procedures and common criteria recognition arrangement for electronics and IT products
The NCC’s Challenge 5:
- Vacating Analog Television Frequencies
  - Fully vacated by 2010

Approach:
- Promote set-top box ~ Digital TV
- Coordinate closely with local governments
- Facilitate the construction of gap fillers for digital TV
The NCC’s Challenge 6:

- Accelerating Digital TV development
  - Create incentives
  - Enhance diversity of channels and consumers’ choices

Approach:

- Become a strong advocate of Digital TV
- Establish correct objectives – draft proposals, etc.
The NCC’s Challenge 7:

- Becoming a formal member of international organizations
  - Acquiring a fair channel of distribution for telecommunication resources
  - Sustaining resources for acquiring and drawing up technical standards
  - Achieving Complete and thorough global cooperation
The NCC’s Approach:

- **Promote advanced telecommunication networks**
  
  - *Increase significance and role in the region by becoming regional telecom hub*

- **Participate in international events under the multilateral mechanism**
  
  - *Ensure interconnecting the global network of networks and interoperability through joint efforts*
Second Reform (18/19)

The NCC’s Challenge 8:

- **Providing Access to Universal Services**

Achievements:

- **The first economy to achieve the goal of “Every rural community has broadband internet service”**
  - 45 rural areas affected
  - Great deal of effort and manpower required to install network
Second Reform (19/19)

The NCC’s Challenge 9:

- Implementing Asymmetric Regulations- Wholesale prices for telecom services

Achievements:

- Dominant Type I telecom enterprises shall formulate wholesale prices and refrain from unfair competitive practices
Second Reform Milestones 2002 - present

- WTO Initial Offer
- Fundamental Communications Act promulgated
- National Communications Organization Act promulgated
- WIMAX License issued
- Broadband Access to all remote areas
- 3G Opened
- WTO Revised Offer
- WTO Accession
- NCC Established
- Assessment of Trade in Telecom Services (TN/S/W/18)
- communications management bill drafted
# The Effects of Liberalization

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>1997</th>
<th>Sep 2003</th>
<th>Nov 2007</th>
</tr>
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<tbody>
<tr>
<td>Operators</td>
<td>Type I (facilities-based)</td>
<td>1</td>
<td>95</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>Type II</td>
<td>80</td>
<td>436</td>
<td>557</td>
</tr>
<tr>
<td>Subscribers (Millions)</td>
<td>Local Phone</td>
<td>10.86</td>
<td>13.29</td>
<td>13.31</td>
</tr>
<tr>
<td></td>
<td>Mobile Phone</td>
<td>1.49</td>
<td>25.28</td>
<td>24.15</td>
</tr>
<tr>
<td></td>
<td>Internet (users)</td>
<td>1.66</td>
<td>8.77</td>
<td>14.76*</td>
</tr>
<tr>
<td></td>
<td>Broadband Internet</td>
<td>...</td>
<td>2.72</td>
<td>4.62</td>
</tr>
<tr>
<td>Penetration</td>
<td>Local Phone</td>
<td>49.96%</td>
<td>58.86%</td>
<td>58.02%</td>
</tr>
<tr>
<td></td>
<td>Mobile Phone</td>
<td>6.86%</td>
<td>111.97%</td>
<td>105.26%</td>
</tr>
<tr>
<td></td>
<td>Internet (pop)</td>
<td>8.00%</td>
<td>39.00%</td>
<td>64.4%*</td>
</tr>
<tr>
<td></td>
<td>Broadband/Internet</td>
<td>...</td>
<td>30.96%</td>
<td>70.19%</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>NT$ Billions</td>
<td>176.2</td>
<td>333.7 (2002)</td>
<td>371.6 (2006)</td>
</tr>
<tr>
<td></td>
<td>Fixed Network Telephony</td>
<td>74%</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Mobile Phone</td>
<td>22%</td>
<td>56%</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Data</td>
<td>4%</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>Average Price of IDD per minute (NT$)</td>
<td>29.94</td>
<td>6.22 (Nov 2003)</td>
<td>5.28 (Sep 2007)</td>
<td></td>
</tr>
</tbody>
</table>

* Source: www.find.org.tw

Main source: NCC
Conclusion
Conclusion

- Liberalization involves short-term pain, but long-term benefit.

- The NCC’s 3C: Convergence, Competition, Consumer protection have been instrumental
  - Regulations should be constantly reviewed to adapt to the development of market, needs of consumers and innovation of technologies
  - A mechanism under long-term strategy for safeguarding competition is essential
  - The regulator should consider public opinions and international benchmarks, and hold periodic talks with stakeholders

- The Removal of Technical Barriers to Trade (TBT) on the issues of conformity assessment procedures and common criteria recognition for ICT products under the multilateral negotiations is necessary
Thank you for Your Attention