

公務出國人員報告書  
(出國類別：會議)

## 參加 International Telecommunication Society 歐洲年會報告

服務機關：國家通訊傳播委員會

姓名職稱：劉幼琍 委員

出國地區：土耳其伊士坦堡

出國期間：96年8月31日至9月6日

報告日期：96年11月20日

## 摘要

本人受邀至該會以”The Converged Regulator in the Digital Age: The National Communications Commission in Taiwan”為題，講述我國成立獨立匯流主管機關的經驗。此外，本人亦代表國家通訊傳播委員會參與 Regulators Roundtable 與大會出席的產官學者互動交流。本人在該場次先以”Coping with Convergence: the Mission of the NCC”為題，分析台灣的匯流服務政策法規與通訊傳播管理法草案的內涵，然後回答現場來賓的提問。由於本會在草擬通訊傳播管理法草案時，參考很多歐盟相關指令及英國 2003 年的傳播法，也藉此機會與出席者相互印證。

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## 一、目的

此行有四項主要目的：一是代表國家通訊傳播委員會報告本會成立經過；二是參與監理者政策論壇會議；三是增加與會產官學者對我國及本會的認識；四是蒐集與本會相關的法規發展趨勢報告。

本人受邀至該會以”The Converged Regulator in the Digital Age: The National Communications Commission in Taiwan”為題，講述我國成立獨立匯流主管機關的經驗。此外，本人亦代表國家通訊傳播委員會參與 Regulators Roundtable 與大會出席的產官學者互動。本人在該場次先以”Coping with Convergence: the Mission of the NCC”為題分析台灣的匯流服務政策法規與通訊傳播管理法草案的內涵，然後回答現場來賓的提問。由於本會在草擬通訊傳播管理法草案時，參考很多歐盟相關指令及英國 2003 年的傳播法，也可藉此機會相互印證。

本人在 9 月 4 日上午講述 “The Converged Regulator in the Digital Age: The National Communications Commission in Taiwan, ROC” 的內容如下：

# **The Converged Regulator in the Digital Age: The National Communications Commission in Taiwan, ROC**

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**Dr. Yu-li Liu  
Commissioner, NCC  
Taiwan, ROC  
2007.9.4**

## **Before the NCC was established**

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- Government Information Office: content**
  - Directorate General of Telecommunications (DGT) of Ministry of Transportation and Communication (MOTC): technical perspective (frequency, standard)**
-

## **The Reasons for establishing a Converged Regulator--NCC**

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- ❑ **Coping with Convergence**
  - ❑ **Conflict Role of the Government Information Office (spokesman of the Executive Yuan)**
  - ❑ **Abide by multilateral agreements of the WTO**
  - ❑ **Integrate government organizations to eliminate unnecessary administrative costs and to promote national competitiveness.**
  - ❑ **Keeping Consistency in the same agency.**
  - ❑ **The media and academics have expressed concerns for more than one decade.**
- 

## **How was the NCC established? (1)**

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- ❑ In 1998, the Executive Yuan instructed MOTC and GIO to work on the plan to integrate the two governing bodies.
  - ❑ In January, 2002 MOTC and GIO finished the plan and suggested to establish the NCC.
  - ❑ They reported to the Executive Yuan in 2003.
  - ❑ In February 2003, the Executive Yuan decided to establish an integration agency regulating telecommunications and media.
  - ❑ It established a "National Communications Commission (NCC) Preparatory Committee to prepare for the legal groundwork.
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## How was the NCC established? (2)

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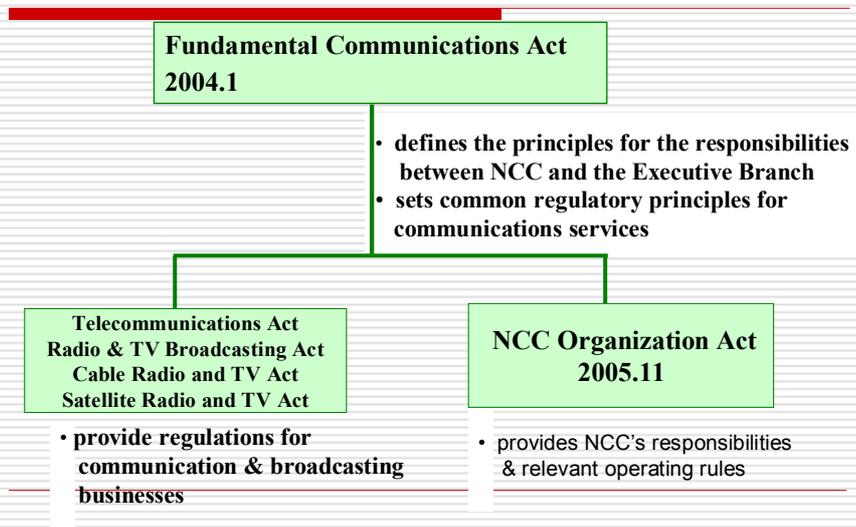
- In September 2003, the Executive Yuan sent the drafts of the Fundamental Communications Act and the NCC Organization Act prepared by the Preparatory Committee to the Legislative Yuan for approval.
  - The Fundamental Communications Act and the NCC Organization Act were promulgated by the President in January 2004 and November 2005 respectively. The long-anticipated NCC was established to be an independent entity and the sole supervisory body of the telecommunications and media industries.
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## The NCC Organization Act was passed (October 25, 2005)

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- **Debates, negotiations and conflicts**
  - **President promulgated on November 9, 2005**
-

## Legal Framework



## Objectives of the NCC

- Promote telecom development
- Protect media autonomy
- Enforce the practices effectively
- Ensure fair market competition
- Protect consumer and minority interests
- Promote a diverse culture
- Promote national competitiveness

## **Functions of the NCC (1)**

**(Article 3 of the NCC Organization Act)**

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- 1. Formulate and revise regulatory policies and laws**
  - 2. Issue certificates and licenses**
  - 3. Inspect Systems and equipment**
  - 4. Formulate technical engineering standards**
  - 5. Set standards for the content rating system**
  - 6. Manage communications resources**
  - 7. Maintain orderly competition**
- 

## **Functions of the NCC (2)**

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- 8. Set Technical standards for communications security**
  - 9. Handle major industry disputes and consumer protection**
  - 10. Handle foreign affairs and international cooperation**
  - 11. Manage monetary funds related to communications businesses**
-

## **NCC Operation (1)**

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- NCC is separated from the Executive Branch with a total number of 13 full-time Commissioners serving a 3-year term.**
  - Its Chairperson and 2 Vice-Chairs shall be elected by the Commissioners themselves.**
  - The Commissioners supervise all NCC activities, delegating responsibilities to supporting offices and operating departments.**
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## **NCC Operation (2)**

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- Commission's Decisions:**
    - Collegiate system**
    - Resolutions on the matters discussed shall be passed by agreement of a majority of the Commissioners.**
    - If any Commissioner has a concurring opinion or dissenting opinion concerning the resolutions of a Commission Meeting, he/she may request to attach such opinion in the meeting record, to be published as reference.**
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## NCC Commissioner Selection process



## Appointing Procedure of Commissioners (1) (The NCC Organization Act)

- **The Premier and Political parties suggest 18 candidates.**
  - **The Premier suggests 3 candidates.**
  - **Political parties suggest a total of 15 candidates based on their proportion of seats in the Legislative Yuan.**

## **Appointing Procedure of Commissioners (2)**

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- **Review Panel selects 13 qualified candidates by individual voting and submits them to the Premier.**
  - **Review Panel composes 11 members nominated by political parties based on their proportion of seats in the Legislative Yuan.**
    - **All 18 candidates must undergo a review process conducted in form of public hearing.**
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## **Appointing Procedure of Commissioners (3)**

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- **The Premier nominates all 13 qualified candidates to the Legislative Yuan for approval.**
  - **Legislators vote on nominees individually.**
  - **The Premier is to appoint those who passed the scrutiny of the Legislative Yuan.**
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## Nomination

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- Kuomintang (KMT ) nominated 6 (Pan-Blue)
  - People First Party (PFP) nominated 2
  
  - Democratic Progressive Party (DPP) nominated 6 (Pan-Green)
  - Executive Yuan (DPP)nominated 3
  - Taiwan Solidarity Union (TSU) nominated 1
  
  - 8+10=18** nominees
- 

## Selection Process

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- Review Panel (11 members nominated by political parties, based on their proportion of seats in the Legislative Yuan.
  - KMT: 4**
  - PFP: 2**
  - DPP: 4**
  - TSU: 1**
  - First round (public hearing, Dec.9-11): 8+5=13 (5 out of 18 were out)**
  - One qualified candidate resigned after being selected by the Review Panel.**
-

- 
- ❑ The Legislative Yuan confirmed the nominees on January 12, 2006.
  - ❑ The Legislative Speaker signed and sent the confirmation to the Executive Yuan on January 16.
  - ❑ Three nominees resigned after being approved by the Legislative Yuan.
  - ❑ Premier Hsieh did not appoint the nine commissioners before he stepped down on January 23. He asked the Grand Justices of the Judicial Yuan to interpret the NCC Organization Act to see whether it is unconstitutional.
  - ❑ Premier Su appointed and declared the Commissioners.
- 

## Birth of NCC

- ❑ **On February 22 2006, the National Communications Commission (NCC) became operational.**
- ❑ **On March 1, 2006, the Chairman and Two Vice-Chairs were installed.**



Liu Kung-Chung, Lin Tung-Tai, Hsieh Chin-Nan, Liu Tsung-Te, Liu Yu-Li, Su Yeong-Chin, Wu Chung-Chi, Shih Shih-Hao, Li Tsu-Yuan

## **Birth of NCC**

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- From the day of the NCC's establishment, laws and regulations dealing with communications and the powers originally under the Ministry of Transportation and Communications(MOTC), the Government Information Office(GIO) and the Directorate General of Telecommunications(DGT), MOTC were all transferred to the NCC.**
- NCC was established as a merger of the DGT and the Department of Broadcasting Affairs of GIO**

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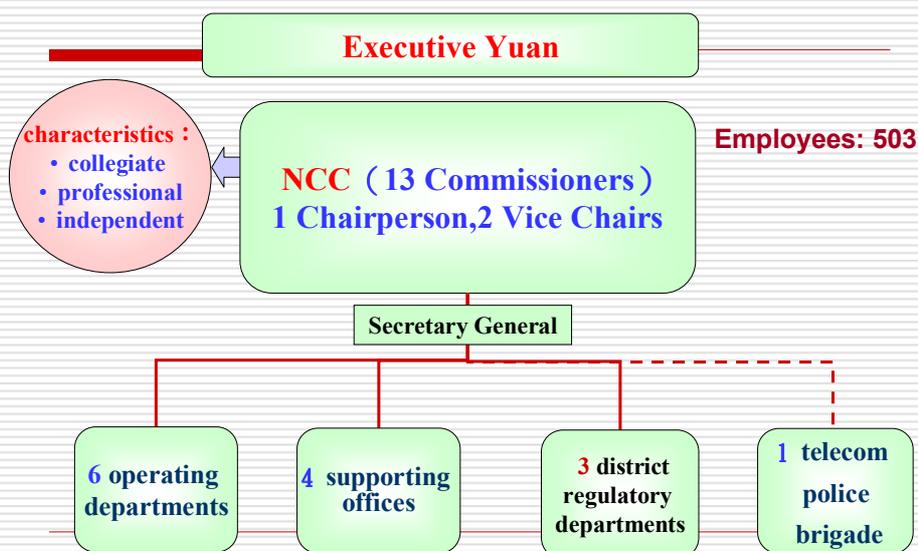
## ***NCC Operation***



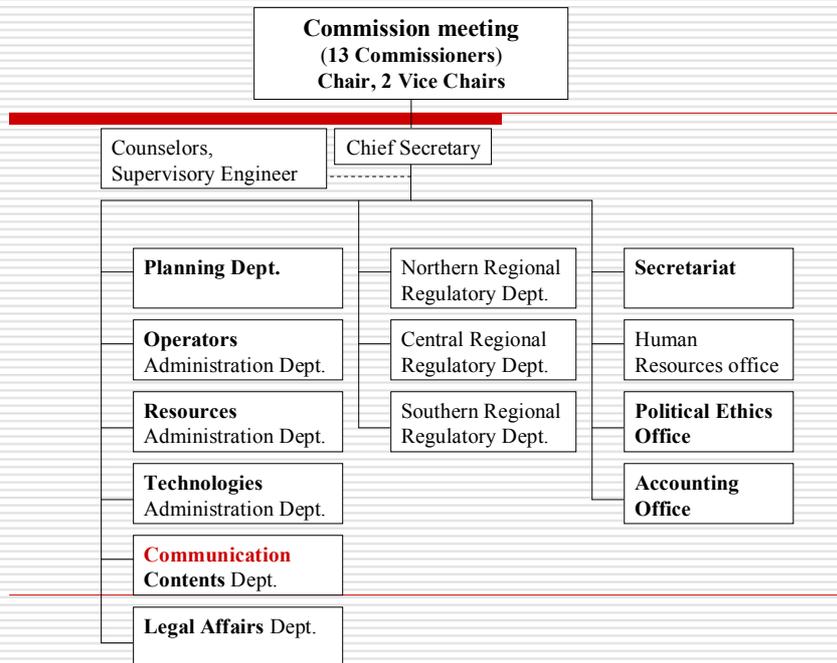
## NCC Employees and Budget

- 503 staff members (404 MOTC, 59 GIO, 40 transferred)
- Budget
  - Remuneration of employees: government appropriation
  - Regulatory activities: funded by regulatory fees at level of 5%~15% of total fees (not including auction revenues). Actual level decided by Executive Branch
- Organization of Internal Units
  - 6 departments
  - 4 supporting offices
  - 3 district regulatory departments
- A telecom police brigade from the MOI

## NCC's Framework



### The NCC's organization



## Policy making Process

- Formulate Policy (Commission meeting) (initiated by staff or Commissioners)**
- write, revise the drafts of laws and regulations**
  - public hearings**
  - Executive Yuan (other agencies may have different views)**
  - Legislative Yuan (different political parties, different public interest groups)**

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## ***Annual Plan 2006-2007***

### **Objective 1: Promoting the convergence of communications**

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- enlarging market entry
- promoting competition
- drafting and revising substantial laws and regulations
- Promoting wireless broadband access and utilization
- promoting development of digital platforms
- enhancing information and communications security
- promoting international engagement

## **Objective 2: Establishing a sound regulatory system for communications**

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- increasing the effectiveness of granting and renewing licenses
  - promoting VoIP interconnection
  - rationalizing tariff control
  - conducting effective radio regulation
  - clamping down on illegal radio stations
  - promoting effective use of frequency
  - opening up new frequency bands for communications
- 

## **Objective 3: Safeguarding citizens' rights of interests in communications**

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- implementing the withdrawal of Government, parties, and military from the media
- promoting universal services to bridge digital divide
- commissioning third parties to conduct inspection of in-building telecom equipment
- maintaining a secure network environment
- promoting Internet content rating
- enabling citizen participation in supervising broadcasting contents
- enforcing prepaid card regulation
- simplifying the certification procedure of end-users' telecom equipment
- enhancing public awareness of using communications services
- verifying billing system of communication operators

## **Objective 4: Promoting diversified cultures and protecting the disadvantaged**

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- **drafting strategic guidelines to promote diversified cultures and protect the disadvantaged**
  - **setting up a mechanism for citizen participation in the supervision of communications**
  - **helping the disadvantaged use communications resources**
  - **realizing access to public interest channels**
- 

## **Overlapping Functions of the agencies**

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- **Article 3 of the Fundamental Communications Act: The planning of the national communications resources, and the provision of guidance and incentives for industry development are performed by subordinate agencies/offices/institutions under the Executive Yuan.**
  - **The MOTC and GIO still play a role of providing guidance and incentives to the telecommunications and broadcasting industries.**
-

## Revise the Laws in two years

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- Currently regulations are not being harmonized to support the impending convergence of broadcast and telecom services (CHT's MOD, IPTV).**
- Separate laws v. Convergent laws**
- Four-in-one law: Radio and TV Law, Cable Radio and TV Law, Satellite Radio and TV Law, Telecom laws**
- US: Communications Act of 1934, Telecommunications Act of 1996**
- UK: Communications Act of 2003**

## Guidance and Incentives

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- Is NCC a completely converged agency?**
  - Overlapped with the GIO, MOTC, and Ministry of Economics**
  - Which agency shall subsidize the deployment of digital TV?**
  - How should the NCC align with a dynamic communications market?**
-

## **Ministry of Transportation and Communications (MOTC)**

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- Frequency allocation**
  - US: FCC (commercial use)**  
**NTIA (government and military use)**
  - Planning of national communications resources**
  - Guidance and incentives (Telecommunications industry)**
- 

## **Reconsider the roles of the MOTC & GIO**

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- |   |  |
|---|--|
| <input type="checkbox"/> <b>MOTC allocates Frequency ; NCC assigns frequency.</b>                     | <input type="checkbox"/> <b>GIO Provides guidance and incentives</b>               |
| <input type="checkbox"/> <b>US: FCC (commercial use)</b><br><b>NTIA (government and military use)</b> | <input type="checkbox"/> <b>Governs program providers.</b>                         |
| <input type="checkbox"/> <b>Planning of national communications resources</b>                         | <input type="checkbox"/> <b>Governs 15% of the cable TV Universal service Fund</b> |
| <input type="checkbox"/> <b>Provides guidance and incentives (Telecommunications industry)</b>        | <input type="checkbox"/> <b>Governs programs, channels, activities from China</b>  |
-

## **Re-examine the Role and Functions of the NCC**

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- Only regulate - not involved with providing guidance and incentives (broadband, digital TV) -shrunk function?**
  - What about promoting, supporting, and encouraging the development of the telecom and broadcasting industry?**
  - Do we see it shows leadership in guiding the industry?**
  - Overlapping function—frequency allocation**
- 

## **Expectations for the NCC**

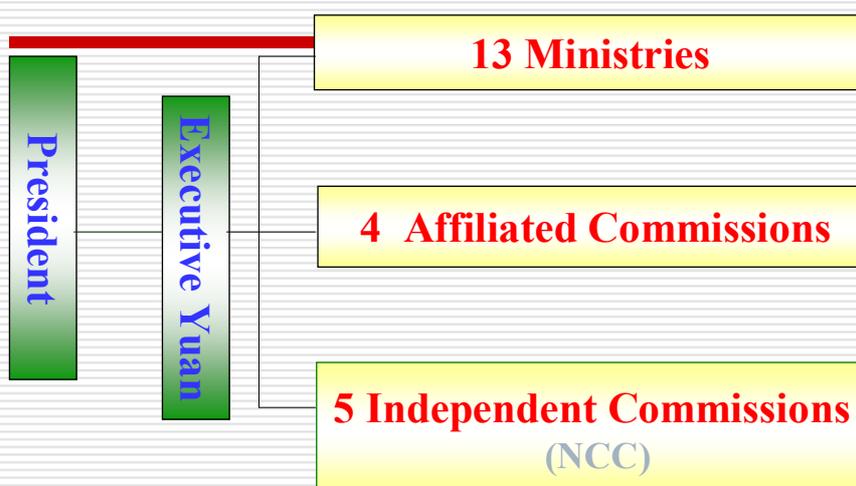
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- Independent**
  - Professional**
  - Non-partisan**
  - People's trust**
  - Efficient**
  - Innovative**
  - Responsive (to industry and consumers)**
-

## Reshuffling of ROC Executive Yuan

- Based on "Central Administrative Organization's Fundamental Act, the ROC Executive Yuan will be reshuffled from 35 ministries down to 22, including 5 independent commissions
- NCC is the first one of these five independent commissions
- The NCC is not a member of the Cabinet, and not even under the supervision of the Executive Yuan while exercising its authority.

### NCC's Position in Government Framework



## **Judicial Yuan Interpretations No.613 (1)**

- ~~rendered on July 21, 2006~~
- Article 4-II of the NCC Organization Act deprives the Executive Yuan of substantially all of its power to decide on personnel affairs, violating the principles of politics of accountability and separation of powers.
- Legislative Yuan transgresses the Executive Yuan's power to decide on personnel affairs.
- the foregoing provisions shall become void after December 31, 2008.
- ~~the Act has to be revised by that time~~

## **Judicial Yuan Interpretations No.613 (2)**

- Prior to the voidance of the aforesaid provisions due to their unconstitutionality as declared by this Court, the legality of any and all acts performed by the NCC will remain unaffected, as will the transfer of personnel and affairs.

## **Overlapping Functions**

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- Wireless Broadband Access (Wimax) licenses**
  - Digital TV licenses**
  - New radio licenses**
  - Programs imported from China (GIO)**
  - Program providers (GIO)**
  - Cable TV Universal Service Fund (GIO & NCC)**
- 

## **Conclusions**

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- 1. Independence: people, finances, clear role**
  - 2. No political interference**
  - 3. Redefine the role and functions of the converged government agency**
  - 4. Revise the selection model for NCC Commissioners**
-

本人在 9 月 4 日下午參加監理者圓桌論壇發表的內容如下：



***Coping with Convergence:  
the Mission of the NCC***

***Dr. Yu-li Liu***

***Commissioner***

*National Communications Commission*

*Taiwan, ROC*

*2007.9.4*



**National Communications Commission**



***New Converged Communications  
Services***

***Mobile TV, IPTV, Wimax***



**National Communications Commission**

## Mobile TV-- Handheld Television

### **The Goals :**

- ◆ *Create a converged environment with multimedia standards for receiving terminal equipment*
- ◆ *Provide more choice of diversified content and interactive services*
- ◆ *Promote the development of new broadcast technology*
- ◆ *Accelerate the development of domestic interactive services, the wireless industry and mobile phone related industries*
- ◆ *Expand the scope of the digital video market*

## Handheld TV Trial Project

- ◆ *The NCC took other countries' method of conducting a broadcasting trial project.*

- ⇒ *Assigning frequency bands*

### **The purposes:**

- ⇒ *Evaluating related engineering technologies*
- ⇒ *Finding business models*
- ⇒ *Promoting the development of domestic mobile TV services and related industries*

## Spectrum Arrangements for Trial Project

- ◆ **Based on the “Table of Frequency Allocations of the Republic of China”, the test-trial frequencies are located on :**
  - ⇒ Ch35 (freq.596-602 MHz)
  - ⇒ Ch36 (freq.602-608 MHz)
  - ⇒ Ch53 (freq.704-710 MHz)
- ◆ **There are two regions for this project covering the western half of Taiwan:**
  - ⇒ Northern region (from Keelung to Miaoli )
  - ⇒ Southern region (from Taichung to Pingdong)
- ◆ **The technical-neutral principle is adopted for the project.**
  - ⇒ Only two standards, DVB-H and MediaFLO, are adopted by project teams at this time.
- ◆ **The test-trial bandwidth :**
  - ⇒ 6 MHz

## The Members of The Trial Project Teams (1/2)

- ◆ **The teams are composed of**
  - ⇒ Local telecommunications operators (including Type 1 and Type 2 telecommunications businesses)
  - ⇒ Broadcasting operators (including cable broadcasters, satellite broadcasters and terrestrial broadcasters)
  - ⇒ Equipment providers
  - ⇒ Value-added service providers
  - ⇒ Content providers

*which are capable of completing this project.*

## The Progress for The Trial Project

- ◆ *Trial project teams' final reports will be issued in December, 2007.*
- ◆ *The scheme for issuing handheld TV licenses will be completed around the end of December, 2007.*

## IPTV--CHT's MOD Service

- ◆ **Was IPTV a telecommunications service subject to the Telecommunications Law?**
- ◆ **Was IPTV a cable TV service subject to the Cable Radio and Television Act?**
- ◆ **Should IPTV be regulated by a new converged law?**

## The Dilemma of CHT's IPTV Service (1)

- ◆ In December 2003, the Legislative Yuan passed a resolution to ask the government and all the political parties to withdraw their shares from the electronic media and the cable TV companies by December 2005.
- ◆ Since 35% of CHT's shares are still owned by the government, CHT faces a dilemma: it either has to withdraw its government share by December 2005 or receive penalties whether in the form of fines or the revocation of its license from the regulator.

## The Dilemma of CHT's IPTV Service (2)

- ◆ MOD only occupies a small part of CHT's business. Even though CHT wants to withdraw its government shares, it will not divest of all the government shares.
- ◆ It is also under the supervision of the Legislative Yuan, which will ensure that CHT does not sell its shares at a cheaper price to some specific financial groups.

## What Actions Did NCC Take?

- ◆ Ask CHT to withdraw its government shares or fine CHT or revoke its IPTV (cross media ownership) license
- ◆ Apply Article 7: regulatory parity
- ◆ Apply Article 6: encourage new service
- ◆ Revise the law (too late)
- ◆ Regard IPTV as a telecom value-added service (**impose open platform obligation**)

## NCC's Initial Decision

- ◆ 1. It has to avoid the characteristics of cable TV such as the closed system from the headend to the consumers.
- ◆ 2. The open platform measures
  - (1) Allow all interested channels, VOD and application service providers to use CHT's MOD platform.
  - (2) Let the customers of other ISPs be connected with CHT's MOD platform.
  - (3) Allow other aggregators to use CHT's MOD platform.
  - (4) Let the customers of other fixed networks be connected with CHT's MOD platform.

- ◆ **3. CHT has to change its business models. It cannot originate channels or manage channels directly or indirectly.**
- ◆ **4. CHT has to correct its business models and open up its MOD platform within a certain period of time.**

## ***WBA Regulatory Policy and Mechanism***



## Wireless Broadband Access (WBA)

➤ **Major goals:**

- Promoting the development of wireless businesses
- Building a sound environment for the development of novel communications technologies
- Ensuring fair competition and the future development of this service
- Reserving opportunities for prospective operators

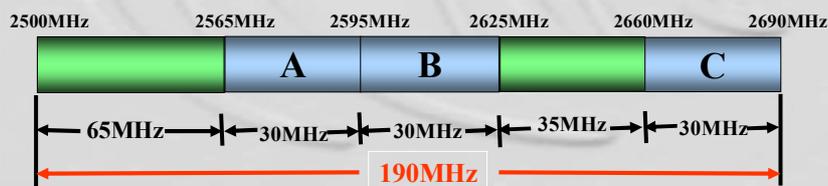
➤ **Licensing approach: hybrid of beauty contest & auction**

➤ **Licensing principles :**

- Lower threshold
- More operators
- Shorter terms

## Spectrum Allocation

- ◆ 2.5GHz to 2.69GHz release for mobile WBA
- ◆ Two-phase license issuance
- ◆ Phase one release 90MHz
- ◆ Phase two release 100MHz
- ◆ 2.5GHz to 2.69GHz was assigned for WBA services on Feb 14, 2007
- ◆ 3.4GHz to 3.487GHz
- ⇒ Release for fixed network operators



## Two-phase License Issuance

### ◆ Phase One : Regional Licenses

- ⇒ Around July of 2007
- ⇒ License terms: six years, can be renewed once
- ⇒ licenses may be merged and converted to a nationwide license
- ⇒ Each licensee will be assigned **30-MHz** with no guard bands for TDD use
- ⇒ Issuing 3 licenses per region (**North & South region** of Taiwan )
- ⇒ A total of **6** licenses were issued
- ⇒ Selected License **X1** and **X2** reserved for green fielder & limited to IEEE 802.16e standard
- ⇒ NCC established review panel to determine the qualified applicants:

## *Converged Legislative Laws*



# Legal Framework

## Fundamental Communications Act 2004.1

- defines the principles for the responsibilities between NCC and the Executive Branch
- sets common regulatory principles for communications services

## Telecommunications Act Radio & TV Broadcasting Act Cable Radio and TV Act Satellite Radio and TV Act

- provide regulations for communication & broadcasting businesses

## NCC Organization Act 2005.11

- provides NCC's responsibilities & relevant operating rules

## Converged Legislative Laws (1)

### ◆ *Legislative Plan for Converged Communications Laws*

⇒ *Goal: amendment of relevant laws and regulations*

- *Facilitating the convergence of technologies*
- *Ensuring fair and effective competition*
- *Strengthening the sound development of communications system*

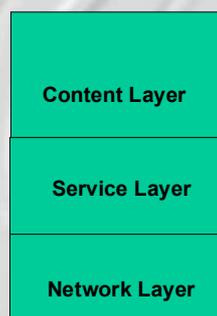
~ *Article 16 of the Fundamental Communications Act*

## Converged Legislative Laws (2)

- ◆ ***Draft and amend laws and regulations - 3 stages for Convergence***
  - 1. Abolish or amend unnecessary regulatory legislation***
  - 2. Respond to urgent industry needs, complete revision of laws on a small scale***
  - 3. Respond to the needs of digital convergence, create the “3-in-1” Converged Telecommunications & Media Law.***

## Introduction of 3-layer Regulation Framework (3/6)

3-layer  
Framework



The Horizontal-regulation Framework

- 3-layer : offers consistent regulatory criterion for operators running same business, encourages flexible and creative business models; from vertical regulation to horizontal regulation

## Conclusion

**NCC's 3C: Competition, Convergence and Consumer Protection**

- ◆ **The decisions of the Commission are publicly accessible on the website ([www.ncc.gov.tw](http://www.ncc.gov.tw)).**

**Thank you for your attention**

## 二、行程

開會時間：96年8月31日至9月6日

開會地點：土耳其伊士坦堡

由台北飛往土耳其，在泰國曼谷轉機。

## 三、心得

1. 參與國際重要電信會議可提升我國及本會的能見度：ITS全球有400多名會員，來自世界電信發達國家。參與該會可提升我國及本會的能見度。
2. 參與國際電信重要會議的決策：本人因為兩場的發表及在其他場

次的發言，為大會的理事代表提名為大會的理事，並於 10 月底獲選為正式理事，將能代表我國產官學界參與該會重要決策。

3. 推動或進行跨國電信合作計畫：由於該會每年會議都會探討電信科技發展及法規趨勢，本會未來無論是舉辦國際會議或是專業訓練，該會都可提供跨國合作的支援。
4. 尋找國際適合的產官學者拜訪本會，並建立專業網絡。
5. 與各國著名產官學者互動，交換各國監理趨勢與修法心得。

#### 四、建議事項

1. 宜鼓勵本會繼續派員參加每兩年舉辦的大會。如果每年歐洲或亞洲地區的主題精彩，亦可考慮派員輪流參加。明年大會是在加拿大舉行。
2. 我國過去接收美國資訊較多，對於歐洲國家接觸的較少，該會議出席的各國人士很平均，尤其日本與南韓更為積極。中國甚至於 2006 年爭取到舉辦大會年會的機會。
3. 泰國通訊傳播委員會的委員不但率團參加，團員有七人左右，因為他們也面臨修法之際，所以每一場都派同仁去聽，並做筆記。該委員表示，他們的預算非常充裕，因為他們所收到的規費全由他們單位使用。比起本會第一年只有規費的 7%，真是望塵莫及。本會只有本人一人參加。泰國不只派員參加，也在現場邀請經驗豐富的產官學者至該會演講，以加強該會人員的在職訓練。
4. ITS 已經與太平洋電信協會(Pacific Telecommunications Council)簽約，互相支持彼此的會議與活動。我國產官學界對 ITS 也應該給予相當的關注。

## 五、附錄 (ITS 會議議程)



18th European Regional ITS Conference in Istanbul, Turkey, 2-5 September 2007

### Draft Programme

Sunday, 2 September 2007		Monday, 3 September 2007		Tuesday, 4 September 2007		Wednesday, 5 September 2007	
		<b>10:00-11:00</b>	Opening Session	<b>09:15-10:45</b>	Parallel sessions III	<b>09:15 -10:45</b>	Parallel sessions VII
		<b>11:00-12:30</b>	Plenary Session I: Telecommunication Markets and	<b>10:45-11:15</b>	Coffee Break	<b>10:45-11:15</b>	Coffee Break
		<b>12:30-14:00</b>	Lunch	<b>11:15-12:45</b>	Parallel sessions IV	<b>11:15-12:45</b>	Parallel sessions VIII
				<b>12:45-14:15</b>	Lunch	<b>12:45-14:15</b>	Lunch
<b>15:00-18:00</b>	Registration	<b>14:15-15:45</b>	Parallel sessions I	<b>14:15-15:45</b>	Parallel sessions V	<b>14:15-15:45</b>	Plenary Session II: Vertical Separation
		<b>15:45-16:15</b>	Coffee Break	<b>15:45-16:15</b>	Coffee Break	<b>15:45-16:15</b>	Closing Session
		<b>16:15-17:45</b>	Parallel sessions II	<b>16:15-17:45</b>	Parallel sessions VI		
<b>18:00-20:00</b>	Welcome Reception	<b>20:30</b>	Dinner	<b>20:30</b>	Dinner		

## Parallel Sessions

<b>Monday</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>
<b>14:15-15:45</b>	1.1 The EU Regulatory Framework	2.1 Infrastructure Investment and Competition	3.1 Broadband Demand	4.1 Internet : Handling Content	2.3 Vertical Separation	
<b>16:15-17:45</b>	5.3 Mobile Broadband I	5.6 Roaming and Roaming Regulation	8.1 Service Innovation	9.1 Media and Regulation	4.2 Net neutrality I	
<b>Tuesday</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>
<b>09:15 - 10:45</b>	7.1 Special Session: Telecom Regulation in Turkey	1.2 Competition Law vs. Regulation	2.2 Next Generation Networks I	3.2 Broadband Markets	8.3 Company Strategies	
<b>11:15 - 12:45</b>	5.2 Mobile Market Trends II	1.3 Regulatory Reforms I	4.3 Internet and Content: Legal Issues	4.5 Technical and Security Issues	4.4 Internet: Policy Challenges	3.5 Broadband usage: E-business
<b>14:15 - 15:45</b>	5.4 Mobile Broadband II	1.4 Regulatory Reforms II	5.1 Mobile Market Trends I	3.3 Broadband Investment Strategies	5.7 Trends in Mobile Regulation	
<b>16:15 - 17:45</b>	2.4 Next Generation Networks II	6.2 Internationalisation of Markets + Company Strategies	6.3 Determinants of Market Development	4.6 Net neutrality II	9.2 IPTV	7.2 Regulators' Roundtable
<b>Wednesday</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>	<b>Session</b>
<b>09:15 – 10:45</b>	3.4 Drivers of Broadband Demand	5.5 Regulating Mobile Markets	8.4 Bundling of Services	9.3 Media Markets		
<b>11:15 – 12:45</b>	1.5 Regulatory Practice	8.2 Universal Service	1.6 Regulation and Economic Dynamics	6.1 Country Studies		

**Monday, 3. September 2007**

**Opening Session**

<u>Room</u>	<b>Monday, 3 September 2007</b> <i>Chair:</i>
<b>10:00-11:00</b>	<p><b>Tayfun Acarer, President, Telecommunications Authority of Turkey</b></p> <p><b>Welcome Address</b></p> <p><b>Ahmet Alkan,</b> <b>Dean, Faculty of Arts and Social Sciences, Sabanci University</b></p> <p><b>Welcome Address</b></p> <p><b>Professor Erik Bohlin, Chair of ITS</b></p> <p><b>Introduction</b></p>
<b>11:00-12:30</b>	<p><b>Plenary Session I: Telecommunication Markets and European Regulation</b></p> <p><i>Chair: James Alleman</i></p> <p><b>Patrick Rey, University of Toulouse</b></p> <p>Network Interconnection and Competition</p> <p><b>Margit Brandl, Nokia Siemens Brussels</b></p> <p>Regulatory Implications for Innovative Technologies</p>

## Parallel Sessions

Monday, 3. September 2007

<b>Monday, 3 September 2007, 14.15 - 15.45 Parallel Sessions I</b>								
<b>1.1 The EU Regulatory Framework Chair: Szabo Koppányi</b>								
<i>Haucap Justus</i>	The regulation framework for Euro-pean telecommuni-cations markets be-tween subsidiarity and centralisation	<i>Haar, Ilse van der</i>	The regulatory principle of technological neutrality; what does it entail?	<i>Never, Henning / Preissl, Brigitte</i>	The three-criteria-test	<i>Szabolcs Koppányi</i>	The scope, chances and limits of the effective appeal mechanism in electronic communications, with specific regard to SMP regulation	
<b>2.1 Infrastructure Investment and Competition Chair: Ernst-Olav Rühle</b>								
<i>Ilić, Dragan/ Kulenkampff, Gabriele</i>	VDSL roll out in Germany – an assessment of its economic feasibility	<i>Waverman, Len/ Dasgupta, Kalyan</i>	The impact of access regulation on infra-structure investment: evidence from Europe	<i>Hoernig, Steffen / Vareda, João</i>	The race for telecoms infras-tructure invest-ment with bypass: Can access regulation achieve the first-best?			
<b>3.1 Broadband Demand Chair: Christoph Lattemann</b>								
<i>Tsuji, Masatsugu/ Akematsu, Yuji</i>	Deregulation or market compete-tion, which has a larger effect on Ja-panese	<i>Colombo, Massimo / Grilli, Luca</i>	Broadband access and broadband-based applica-tions: The	<i>Vermaas, Karianne</i>	Broadband and its users	<i>Ota, Koshiro</i>	The telecoms po-licy for the spread of broadband services: A case study in Japan	

		ADSL development: a panel data analysis		determinants of adoption by Italian SMEs				
<b>4.1 Internet: Handling Content</b>								
	<i>Eijk, Niko van</i>	Search engines, the new bottleneck for content access	<i>Latzer, Michael</i>	Governing digital media content in Europe: The changing interplay between states, industries and users	<i>Vialle, Pierre / Daidj, Nabyla</i>	Entry strategies in the Video on Demand market. A French market perspective	<i>Poel, Martijn/ Tee, Richard/ Leurdijk, Andra</i>	Digital TV business models of public organisations: Business models, bottlenecks and public policy
<b>2.3 Vertical Separation</b>								
	<i>Castelli, F./ Amendola, G. B. / Serdengecti, Pi.</i>	Is functional sep-ARATION really the next milestone in telecommunications (de-)regulation?	<i>Curwen, Peter / Whalley, Jason</i>	How open is Openreach?	<i>Lara, Almudena/ Bellis, James / Houpis, George</i>	Network separation in the ICT sector		

<b>Monday, 3 September 2007, 16.15 - 17.45 Parallel Sessions II</b>								
<b>5.3 Mobile Broadband I Chair: Pierre Vialle</b>								
	<i>Basios, Chris/ Androulidakis, Iosif/ Androulidakis, Nikos</i>	Survey Findings towards Mobile Services Usage and M-Commerce Adoption	<i>Bouwman, Harry / de Reuver, Mark / Hernández, Guadalupe Flores</i>	Exploring technology design issues in business models for mobile web services	<i>Lee, Sang Man/ Park, Myeong Cheol / Hwang, Jae Hyun</i>	Will WIBRO and HSDPA, co-exist in the Korean mobile internet market?		

<b>5.6 Roaming and Roaming Regulation Chair: Justus Haucap</b>								
<i>Berger-Kögler, Ulrike E.</i>	International Roaming Regulation	<i>Falch, Morten / Henten, Anders / Tadayoni, Reza</i>	Regulation of international roaming charges the way to cost based prices?	<i>Sandbach, Jonathan</i>	National Roaming Pricing in Mobile Networks	<i>Markendahl, Jan / Strandberg, Ove / Pöyhönen, Petteri</i>	Business analysis of flexible roaming and operator cooperation in multi-provider markets - Impact on traffic load distribution and user experience	
<b>8.1 Service Innovation Chair: Christos Agiakloglou</b>								
<i>Heng, Stefan</i>	The exception proves the rule; Innovative payment systems have limited potential	<i>Xu Yan</i>	Regulatory environment for mobile multimedia services: The case of Hongkong and China	<i>Moon, Joonseo / Park, Myeongchul / Yoon, Sooyoung / Jang, Wongyu / Cho, Youngpil</i>	A Study of Strategy of Next-Generation Mobile Communication Services considering Customer Innovativeness	<i>Nyström, Anna-Greta</i>	What is convergence? Perceptions from the Finnish telecommunications sector	
<b>9.1 Media and Regulation Chair: Pat Longstaff</b>								
<i>Eijk, Niko van</i>	The modernisation of the European Tele-vision without Frontiers Directive: un-necessary regulation and the introduction of internet governance	<i>Lefever, Katrien</i>	Media pluralism in a fragmented world of platforms-Reinterpretation of must-carry obligation	<i>Hong, Ahreum</i>	Price discrimination under convergence telecommunication market in Korean broadcasting and telecommunication industry			
<b>4.2 Net Neutrality I Chair: Karl-Heinz Neumann</b>								

	<i>Kruse, Jörn</i>	Crowding-Out in the Internet	<i>Zarnekow, Rüdiger/ Brenner, Walter/ Dous, Malte</i>	Quality of service business models for the broadband internet	<i>Frieden, Rob</i>	Internet 3.0: Identifying problems and solutions to the network neutrality debate		
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**Tuesday, 4. September 2007**

<b>Tuesday, 4 September 2007, 09:15 - 10:45 Parallel Sessions III</b>								
<b>7.1 Special Session: Telecom Regulation in Turkey Chair: Ulrich Stumpf</b>								
	<i>Cetinkaya, Murat Bagdadioglu, Necmaddin</i>	Sequencing in telecommunications reform: a review of EU and Turkish experience	<i>Yalcin, Tolga</i>	Categorial charging for access to fixed telecommunications network: the Turkish Case	<i>Kulali, Ihsan/ Göktaylar, Yavuz</i>	Price developments in fixed telephony services in Turkey: A close look on the tariff rebalancing process		
<b>1.2 Competition Law vs. Regulation Chair: Nico van Eijk</b>								
	<i>De Visser, M.C.B.F.</i>	Revolution or evolution: what institutional future for EC comm.-unications law?	<i>Just, Natascha</i>	Electronic communications between regulation and competition law	<i>Liu, Yu-li</i>	The converged re-regulator in the digital age: The National Communications Commission in Taiwan	<i>Leung, Grace Wu, Richard</i>	A unified regulator and a unified law - the right regulatory framework for Hong Kong tele-communication market
<b>2.2 Next Generation Networks I Chair: Jean-Paul Simon</b>								

	<i>Ruhle, Ernst-Olav/ Reichl, Wolfgang</i>	NGN, IP interconnection and the effects on existing business models and competition in the telecom sector	<i>Pupillo, Lorenzo Maria Amendola, Giovanni Battista</i>	The economics of next generation access networks and regulatory governance in Europe: one size does not fit all	<i>Alleman, James Rappoport, Paul</i>	Communications in Next Generation Networks	<i>Gallo, Elena</i>	Regulatory perspective among old structural problems and NGN advent
<b>3.2 Broadband Markets Chair: Demetrius Yannelis</b>								
	<i>Jakopin, Nejc M.</i>	Determinants of broadband internet access take-up – empirical analyses of constraints and drivers	<i>Kondo, Masanori/ Nakamura, Akihiro / Mitomo, Hitoshi</i>	Quantifying the benefit of internet users derived from online applications	<i>Lattemann, Christoph/ Kupke, Sören /Schneider, Anna-Maria</i>	Review of EU-wide broadband pro-jects– Evaluation and classification of 22 EU funded initiatives	<i>Curwen, Peter/ Whalley, Jason</i>	Is mobile television a killer application?
<b>8.3 Company Strategies</b>								
	<i>Grajek, Michal/Kretschmer, Tobias</i>	Critical mass – a simple operationalisation	<i>Longstaff, Pat</i>	Managing communications firms in the new unpredictable environments	<i>Klingebiel, Ronald/ Lange, Dieter/ Zimmermann, Carsten</i>	Which capabilities are crucial? Redefining the Telco value chains		

<b>Tuesday, 4 September 2007, 11:15 - 12:45 Parallel Sessions IV</b>								
<b>5.2 Mobile Market Trends II</b>								
<i>Nakamura, Akihiro / Jitsuzumi, Toshiya</i>	Impact of fixed-mobile convergence in Japan -estimation of market size using empirical welfare analysis	<i>Curwen, Peter / Whalley, Jason</i>	Internationalisation within Asia-Pacific mobile telecommunication markets: 'local' versus 'foreign' investment	<i>Ballon, Pieter / Audenhove, Leo / Van Staelens, Tomas / Martijn Poel</i>	Business Models for Wireless City Networks in the EU and the US: Public Inputs and Returns	Ramos, Sergio/ Pérez, Jorge/ Espias, Manuel	Analysis of the techno-economic viability of Euro-pean Mobile Net-work Operators' Strategies	
<b>1.3 Regulatory Reforms I</b>								
<i>Atiyas, Izak/ Doganoglu, Toker/ Reichhuber, Martin</i>	General Access Payment Mechanisms	<i>De Streel, Alexandre</i>	The Review of the European Elect-ronic Communi-cations Regulatory Framework: state of play and critical assessment	<i>Beckert, Bernd/ Blind, Knut/ Nowack, Bent</i>	The identification of new and emerging markets: A first multicriteria propo-sal for regulatory bodies applied to the VDSL case			
<b>4.3 Internet and Content: Legal Issues</b>								
Harison, Elad	Who owns enterprise information? Data ownership rights in Europe and the U.S.	<i>Park, So Young / Kang, Shin Gak</i>	Lawful interception - regulatory framework for IP applications	<i>Rotenberg, Boris /Companó, Ramón</i>	Search engines for audio-visual Content: Copyright Law & Its Policy Relevance			
<b>4.5 Technical and Security Issues</b>								
<i>Gheraouti-Hélie,</i>	How QKD can	<i>Sakurai, Naoko /</i>	Monetary Value of Japan	<i>Kim, Jeong-Tae</i>	Indoor Wireless			

	<i>Solange / Sfaxi, Mohamed Ali / Tashi, Igli</i>	improve the security level of future e-commerce transactions	<i>Otsuka, Tokio / Nagano, Hiroshi/ Mitomo, Hitoshi</i>	Security Damage: An Estimation Based on the Subjective Evaluation by Internet Users in	<i>/ Lee, Kwanghee</i>	Communications Network Optimization using Mountain Clustering Method		
<b>4.4 Internet: Policy Challenges</b>								
	<i>Hwang, Junseok/ Oh, Jongeun</i>	Two-sided market studies: The case of Korean Internet portals	<i>Vanberg, Margit</i>	Competitive effects of network externalities on interconnection - incentives of ISPs	<i>Ramos, Sergio/ Olmos, Ana/ Perez, Jorge</i>	Internet governance policies evolution: relevant issues in a multi-stakeholder approach	<i>Markendahl, Jan/ Mäkitalo, Östen</i>	Key capabilities and business role inter-action for provision-ing of public Internet access in local environments
<b>3.5 Broadband usage: e-business</b>								
	<i>Cerno, Leonel/ Pérez Amaral, Teodosio</i>	E-commerce use in Spain	<i>Nepelski, Daniel</i>	Disruptive technologies and firm age. Technological progress in the ICT industry.	<i>Uesugi, Shiro/ Okada, Hitoshi</i>	A Case Study from ICT Experimental Project in Rural Japan		

<b>Tuesday, 4 September 2007, 14:15 - 15:45 Parallel Sessions V</b>								
<b>5.4 Mobile Broadband II Chair: Anders Henten</b>								
	<i>Erber, Georg</i>	WiMax: An alternative emerging communication	<i>Rovalo, Arturo Robles Feijóo, Claudio</i>	Broadband access feasibility in emerg-ing	<i>Rendon Juan/ Kuhlmann, Federico/</i>	A business model for a 4G wireless network in Europe		

		infrastructure	<i>Gómez-Barroso, José-Luís</i>	economies: assessing the wireless opportunity	<i>Aranis, Juan P.</i>			
<b>1.4 Regulatory Reforms II: empirical results and policy conclusions Chair: Massimo Gastaldi</b>								
	<i>Urbiztondo, Santiago / Bonardi, Jean-Philippe / Quélin, Bertrand</i>	Should we expect international convergence towards best practices in the regulation of public utilities?	<i>Vareda, João</i>	Unbundling and incumbent investment in quality upgrades and cost reduction	<i>Fredebeul-Krein, Markus</i>	10 years of liberalised telecom markets in Germany: Assessing the degree of competition on the markets for voice telephony		
<b>5.1 Mobile Market Trends I</b>								
	<i>Curwen, Peter/ Whalley, Jason</i>	Effecting entry into the European mobile telecommunications industry in the wake of accession	<i>Rappoport, Paul/ Alleman, James/ Taylor, Lester</i>	The estimation of Wireless Households: A Local Perspective	<i>Svigelj, Matej Hrovatin, Nevenka</i>	The choice of mobile operators in Slovenia		
<b>3.3 Broadband Investment Strategies</b>								
	<i>Bouwman, Harry/ Fijnvandraat, Marieke L.</i>	Analyzing the complexity of decision making in broadband network upgrading & roll out	<i>Bouwman, Harry/ Fijnvandraat, Marieke L.</i>	Exploring the rationale behind broadband roll out – A quantitative analysis	<i>Ahn, Jae-Hyeon Han, Sang-Pil Lee, Dong-Joo Skudlark, Ann</i>	Impact of customer acquisition channel on high tech services – using VoIP as an example	<i>Moral Caballero, A./ Vergara Pardillo, A./ Riera Salis, J.M./ Ramos Villaverde, S./ Pérez Martínez, S.</i>	Technical and economic viability of WiMAX-PLC; network roll out to supply broadband access in rural and

								exurban areas
<b>5.7 Trends in Mobile Regulation</b>								
<i>Kruse, Jörn</i>	Mobile termination carrier selection instead of regulation	<i>Waldburger, Martin, Stiller, Burkhard</i>	Regulatory issues for mobile grid computing in Europe	<i>Rohlf, Jeff</i>	Countervailing buyer Power and mobile termination			
<b>9.2 IPTV and mobile TV</b>								
<i>Bouwman, Harry/ Zhengii, Meng / van der Duin, Patrick</i>	Business model for IPTV service: a dynamic framework	<i>Koh, Soon Ju / Park, Young Joon</i>	The delayed regulatory response to digital convergence: the case of Korean IPTV	<i>Tadayoni, Reza</i>	IPTV regulation – Challenges of the new era	<i>Bauer, Johannes M./ Ha, Im Sook/ Saugstrup, Dan</i>	Mobile Television Challenges of Advanced Service Design	

<b>Tuesday, 4 September 2007, 16:15 - 17:45 Parallel Sessions VI</b>								
<b>2.4 Next Generation Networks II Chair: Marieke Fijnvandraat</b>								
<i>Choi, Sun-me</i>	How the regulatory framework will be changed for the all-IP network	<i>Hirschhausen, Christian Kirsch, Fabian</i>	Regulation of next generation networks: structural separation, access regulation or no regulation at all?	<i>Cadman, Richard</i>	NGN Interconnection: Charging Principles and Economic Efficiency			
<b>6.2 Internationalisation of Markets and Company Strategies</b>								
<i>Curwen, Peter/Jason Whalley</i>	Consequences for mobile operator strategy of the expansion of the	<i>Rieck, Olaf / Doan, Thang</i>	Shareholder wealth effects of M&As in the telecommunications	<i>Riccardi, Delphine Ciriani, Stéphane Quélin, Bertrand</i>	The economic and regulatory determinants of market entry:			

		European Union		industry		MVNOs-based services		
<b>6.3 Determinants of Market Development</b>								
	<i>Teruyui Bunno/Hiroki Idota</i> <i>Masatsugu Tsuji</i> <i>Hiroaki Miyoshi</i> <i>Masaru Ogawa and Machiko Nakanishi</i>	The Diffusion of Information and Communication Technology among Japanese SMEs	<i>Giovannetti, Emanuele/ Alessio D'Ignazio</i>	High Tech Internet districts in Italy: is Proximity a Replacement for Weak Competition?	<i>DaeKyeong, Nam Kim, Juseong</i>	The Global Competitiveness Index of Korean Home Network Device Industry		
<b>4.6 Net Neutrality II Chair: Toker Doganoglu</b>								
	<i>Knieps, Günther/ Zenhäusern, Patrick</i>	The fallacies of 'network neutrality'-regulation	<i>Kocsis, Viktória / de Bijl, Paul W.J.</i>	Network neutrality and the nature of competition between network operators	<i>Cave, Jonathan / Marsden, Chris</i>	Price and quality discrimination in NG internet access: Beyond the 'net neutrality' debate	<i>Chirico, Filomena, van der Haar, Ilse/ Larouche, Pierre</i>	Network Neutrality in the EU
<b>7.2 Regulators' Roundtable Chair: Izak Atiyas</b>								
<p>Participants: <b>Yu-li Liu</b>, National Communications Commission in Taiwan</p> <p><b>Sudharma Yoonaidharma</b>, National Telecommunications Commission Thailand</p> <p><b>Ayhan Tozer</b> Turkish Telecoms Authority</p> <p><b>Johannes Bauer</b>, Michigan State University</p>								

### Wednesday, 5. September 2007

<b>Wednesday, 5 September 2007, 9:15 - 10:45 Parallel Sessions VII</b>								
<b>3.4 Drivers of Broadband Demand</b>								
	<i>Cardona, Mélisande/ Schwarz, Anton/</i>	Demand for Internet services in Austria	<i>Christopoulos, Apostolos / Kosteletou, Lina/</i>	Globalisation and broadband: The case of the Greek	<i>Kim, Min Kyoung/ Park, Myeong-Cheol</i>	A study on the user generated content business strategy in		

	<i>Yurtoglu, B. Burcin</i>		<i>Vergos, Konstantinos P.</i>	telecommunications market		Korea		
<b>5.5 Regulating Mobile Markets Chair: Jason Whalley</b>								
	<i>Kwon, Youngsoun / Choi, Kwangjin</i>	Changing focuses in spectrum management regime debates and owning versus renting	<i>Jun-Seok, Hwang / Hyun-Young, Yoon</i>	Future dynamic spectrum management framework considering technology innovation: Korea spectrum policy case	<i>Takasaki, Haruo Fujiwara, Masahiro</i>	An analysis of the MNO strategy through the introduction of mobile number portability system		
<b>8.4 Bundling of Services Chair: Hasan Alkas</b>								
	<i>Lara, Almudena / Bellis, James / Houpis, George</i>	The trend for bundling products in ICT	<i>Haaker, Timber / Hettinga, Marike / de Vos, Henny</i>	Customer preferences for bundles of content services	<i>Mitomo, Hitoshi / Otsuka, Tokio Nakaba, Kiminori</i>	A behavioral economic interpretation of the preference for flat rates: a case of post-paid mobile phone services		
<b>9.3 Media Markets</b>								
	<i>Kasuga, Norihiro / Shishikura, Manabu</i>	Analysis on market structure of broadcast service. On the optimal level of channel variety	<i>Gambaro, Marco</i>	Value of the content and value of the channel: movie rerun on television	<i>Tsuji, Masatsugu / Ichikawa, Yoshiharu / Miyahara Shoichi</i>	Value of Japanese public broadcasting in the convergence of broadcasting and telecommunications		

<b>Wednesday, 5 September 2007, 11:15 - 12:45 Parallel Sessions VIII</b>								
<b>1.5 Regulatory Practice</b>								
<i>Savage, Scott J./ Chen, Yongmin</i>	The effect of competition on cable Internet access prices	<i>Kang, Sun A</i>	A case study of issues and methods of ROR (Rate of Return) Estimation	<i>Bauer, Johannes M. / Bohlin, Erik</i>	From static to dynamic regulation: recent developments in U.S. telecommunications policy			
<b>8.2 Universal Service</b>								
<i>Baek, Hyunmi/ Byun, Jaho</i>	A Competitive Scheme for Selection of Universal Service Providers	<i>Park, Dae-su /Sun Hee Lee</i>	Reconsidering USO for Broadband: Analysis of Broad-band USO Issues and Policy Recommendations	<i>Rappoport, Paul Alleman, James</i>	The digital divide and economic reality: A cross-country assessment			
<b>1.6 Regulation and Economic Dynamics</b>								
<i>Gille, Laurent/ Benghozi, Pierre-Jean/ Vallée, Alain</i>	Innovation and regulation in the digital age: a call for new perspectives	<i>Veith, Tobias</i>	On the interrelation between regulation and innovation in telecommunication markets	<i>Sung, Nakil Kwon, Taegoo</i>	Competition, regulatory policies and productivity growth in the U.S. local telecommunications	<i>Koksal, Emin</i>	Access Pricing for Developing Countries	
<b>6.1 Country Studies Chair: Peter Curwen</b>								
<i>Mathur, Somesh. K.</i>	Indian IT and ICT industry: A	<i>Klevecka, Irina/ Lelis, Janis</i>	Perspective evaluation of the	<i>Komandur, Swarirajan</i>	Significant recent developments in the	<i>Bacchiocchi, Emanuele /</i>	Privatization and policy reforms in the	

		performance analysis using DEA and Malmquist Index		electronic communications market in Latvia		Indian Telec-om Sector. Attractions for investors and business.	<i>Florio, Massimo/ Gambaro, Marco</i>	telecommunication sector: empirical evidence for 15 EU countries
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## Plenary

Room

**Wednesday, 5 September 2007**

14:15-15:45

**Plenary Session II**

**Panel discussion on Vertical Separation**

*Chair: Scott Marcus, WIK*

15:45 – 16:15

**Closing Session**

**Brigitte Preissl, Vice Chair of ITS**

**Concluding remarks**