International Telecommunication Union

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7. ICT Infrastructure and Access
- II: RF 1 – competition & licensing -

UNESCAP/ITU Regional Training Workshop on

Enabling Policies and Regulatory Frameworks for Information and Communication Technology (ICT) Development in the Asia-Pacific Region

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Dr. Eun-Ju Kim

ITU

eun-ju.kim@itu.int

Agenda = Major Regulatory Frameworks

1030H – 12:00H, Regulatory Frameworks I:
- Independence of Regulator
- Competition Safeguard
- Licensing & its Criteria

1300H – 1430H, Regulatory Frameworks II:
- Scarce Resources (e.g., Spectrum)
- Interconnection
- Universal Service and Its Funds
- Costing & Pricing
- Others through converged ICT

Independence of Regulator

Major Check-list for role of regulators

- ✓ Separated regulator
- ✓ *Objectives* of regulator
- ✓ *Role* of regulator
- ✓ *Organizational structure of* regulator
- ✓ Ways of maintaining *independence*
- ✓ Ways of f*inancing regulator*
- ✓ Ways of *appointing/selecting* chairman & staff
- ✓ Legislation of its *functions*

✓ Separate regulator from PM & incumbent

Country	Policy Maker	Regulator	Incumbent
Bangladesh	MPT	BTRC	BBTB
China	MII	MII	CT
India	MCIT	TRAI	BSNL
Korea (Rep.)	MIC	KCC/MIC	KT
Malaysia	MECM>MEWC	MCMC	TM
Nepal	MOICT	NTA	NTC
Philippines	DOTC	NTC	several
Sri Lanka	MPT	TRC	ST
Thailand	MOICT	-	TOT,CAT

{Source: ITU (2002), Internet for a Mobile Generation; Trends in Telecommunication Reform; & Global Directory}

✓ Emergence of Regulators

- **Increasing separate regulators in Asia**
  - Hong Kong: Office of Telecom Authority (OFTA);
  - India: Telecom Regulatory Authority of India;
  - Australia: Australian Communications Authority
  - Korea: Korea Communications Commission
  - Bangladesh: Bangladesh Telecom Regulatory Commission
  - Nepal: Nepal Telecom Authority
  - Maldives: Telecom Authority of Maldives
- **Emerging converged regulators in Asia**
  - Malaysia: Malaysian Communications & Multimedia Commission;
  - Singapore: Infocomm Development Authority;
  - Bhutan: Bhutan Communications Authority;

✓ Objectives of Regulators

- Protecting user interests and considering user complaints;
- Providing the industry with a level playing field for fair competition, if liberalized;
- Supervising the dominant operator to prevent them from anti-competitive behavior;
- Stimulating innovation for technologies;
- Stimulating investment in the public network particularly in some developing countries.

A Case Study on OFTEL, the UK

- **To promote fair, efficient and sustainable network competition;**
- **To promote fair, efficient and sustainable service competition;**
- **To secure license enforcement and fair trading;**
- **To secure fair distribution of the benefits of competition for different groups of customers; and**
- **To protect consumer interests.**

A Case Study on OFTA, Hong Kong

- **To provide consumers with good quality of service at reasonable prices with a variety of choices;**
- **To ensure telecommunications networks and services to be interconnected among liberalized & privatized companies in competitive IT markets;**
- **To ensure healthy competition in the market through creating a level-playing field; and**
- **To ensure efficient and effective management of scarce resources such as spectrum and numbering.**

✓ Major roles of regulators

A Case of the USA: The FCC

- Developing and implementing regulatory programs;
- Processing applications for licenses or other filings;
- Analyzing complaints;
- Conducting investigations; and
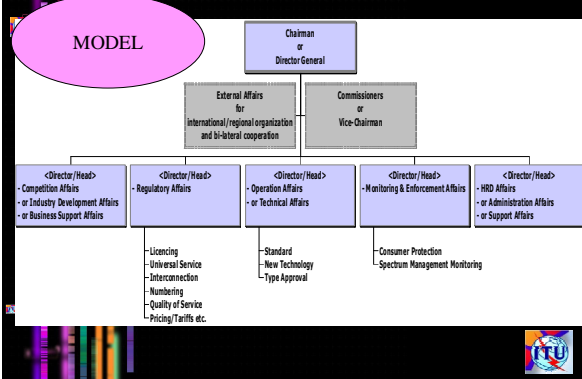- Taking part in FCC hearings.

A Case of the UK: OFTEL

- Ensuring that licensees comply with their license conditions;
- Initiating the modification of license;
- Advising the Secretary of State for Trade and Industry (DTI);
- Obtaining information and arranging for publication;
- Considering complaints and inquiry made about telecommunications services or apparatus.

A Case of Hong Kong: OFTA

- Implement technical & economic regulatory frameworks (e.g., interconnection, numbering, spectrum management and coordination etc.)
- Promote economic efficiency & competition in the provision of telecommunications networks, systems, installations, customer equipment and services;
- Protect consumers' interests through ensuring competition and safety/quality of telecom services;
- Grant and administer licenses
- Investigate, and take appropriate action for, breaches of terms and conditions of ...

✓ Organizational structure of regulator

MODEL

Chairman or Director General

External Affairs for international/regional organization and bi-lateral cooperation

Commissioners or Vice-Chairman

- <Director/Head> Competition Affairs or Industry Development Affairs or Business Support Affairs
- <Director/Head> Regulatory Affairs
  - Licencing
  - Universal Service
  - Interconnection
  - Numbering
  - Quality of Service
  - Pricing/Tariffs etc.
- <Director/Head> Operation Affairs or Technical Affairs
  - Standard
  - New Technology
  - Type Approval
- <Director/Head> Monitoring & Enforcement Affairs
  - Consumer Protection
  - Spectrum Management Monitoring
- <Director/Head> HRD Affairs or Administration Affairs or Support Affairs

✓ Degree of independence

Independent regulators should be to some degree of independent or autonomous in such areas as:

- Day-to-day operation of telecommunications/ICT facilities and services;
- Day-do-day implementation of policies decided by the relevant ministry; &
- Decisions independent from interest parties or groups.

✓ Ways of financing regulator

- Finance its establishment and operational costs by the government as a start-up.
- Adopt a separate budget for operation (e.g., the Trading Fund Agreement between the government and OFTA to cover staffing and other administration costs of regulator)
- Utilize the license fees covering administrative costs

✓ Ways of appointing Chairman & staff

- Chairman supported by commissioners ?
- Head (e.g., DG) appointed or selected by the government (e.g., Minister or President) ?
- Commissioners selected by the senate ?
- Political appointee or civil servant ?
- Full-time basis or part-time basis ?
- Fixed or flexible term ?
- Civil servant or quasi-public officers ?
- Staff from civil servant examination or recruitment based on competence/ expertise ?

✓ Legislation for regulators

USA: The Communications Act of 1934 with amendments

UK: The Telecommunications Act of 1984

Hong Kong/China: The Telecommunication Ordinance of 1963, supplemented by the Telecommunication Regulations and the Telecommunication Ordinance 2000

India: The TRAI Act, 1997

Malaysia: The MCMC Act, 1998

SUMMARY

- Liberalization policy with convergence of ICT led to created a new or converged regulators for telecom and/or ICT worldwide, and Asia & Pacific in particular.
- Regulators face double challenges:
  - one for its internal issues from setting-up to managing its own organization with expertise and resources in various, complicated and even new regulatory areas;
  - the other is to ensure development and healthy growth of ICT sectors through placing appropriate regulatory frameworks timely, efficiently and transparently based on delicate balancing 'hard' and 'soft' regulations in the converged ICT environment.

Competition Safeguard

Dynamic telecom & converged ICT environment
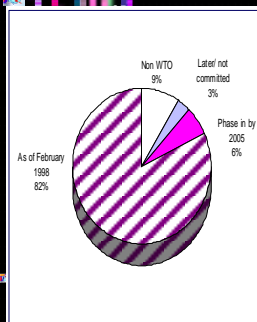
- **The national monopolies are now facing competition due to liberalization or privatization.**
- **Some 90 per cent of world revenue committed to ensure competition gradually before 2005 as a consequence of WTO/GATS agreement .**
- **Competition** – or **competition safeguards - became more on agenda for regulators worldwide**

Major Check-list for Competition

- ✓ Definition of competition
- ✓ *Major objectives* of competition
- ✓ Key competition principles
- ✓ Ways of analyzing & ensuring competition
- ✓ Various trends of competitions
- ✓ Needs for competition laws & authority
- ✓ Barriers of effective competition

✓ Definition of competition ?

- **Competition is defined as "*the process by which economic agents acting independently in a market limit each other's ability to control the conditions prevailing in that market*".**
- **Its essence is "*rivalry & freedom to enter a market*".**

  {Source: M.E.Beesley & S.c. Littlechild, 1997}

✓ Major objective of competition

- **To enhance economic efficiency as well as economic welfare through:**
  - **maximizing** *consumer benefits* **with potential provisions for more choices and better quality of services on not always cheaper but reasonable prices; and**
  - **limiting** *monopoly power* **especially in traditional telecommunications markets or industries ...**

✓ Key competition principles

- Comprehensiveness of coverage;
- Transparency;
- Accountability;
- Non-discrimination; and
- Competitive neutrality

✓ Ways of analyzing competition

- **Defining the relevant market, first: i.e., The followings are not direct/real competition:**
  – Between fixed and mobile
  – Fixed or mobile in different zones/provinces
- **Assessing effects on competition: e.g.,**
  - Market shares over time;
  - Position and number of competitors;
  - Entry barriers;
  - Pricing and profitability;
  - Excess capacity and so forth.

✓ Ways of ensuring competition

Practice Under the GATS/WTO

- Competitive safeguard;
- Prevention of anti-competitive practices : e.g.,
  - cross-subsidization;
  - Not making available to other services suppliers on a timely basis technical information about essential facilities and commercially relevant information etc.

Practice Within APEC Economies

- **Prevention of** abuse of dominant position;
- **Prohibition of** restrictive agreements;
- **Prohibition of** concentration through mergers and acquisitions; and
- **Prohibition of** unfair competition **etc.**

✓ Trends of competition: ICT sectors
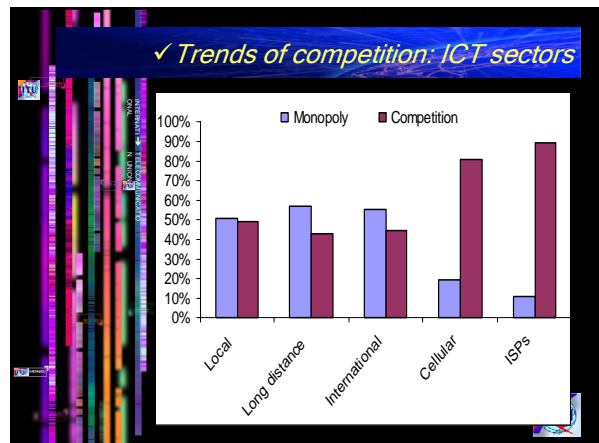
✓ Trends of competition: In Internet

Countries	ISP C= competition M = monopoly (number of ISP)	Users (Per 100 habitants)	Tariffs (Off-peak: 30 hrs/month)
South Korea	C (270)	51.07	10.15
Sri Lanka	C (12)	0.79	11.97
Singapore	C (47)	60.52	12.17
China	C (59)	2.60	18.24
Australia	C (235)	37.23	23.32
Japan	C (234)	45.47	58.36
Cambodia	C (2)	0.07	129.56
Marshall I.	C (2)	1.29	159.00
Maldives	M (1)	3.70	168.22
PNG	M (1)	2.81	185.97
Tuvalu	M (1)	1.02	212.73
Kiribati	-	2.50	222.09

{Source: ITU's various publications}

✓ Trends of competition: Growth
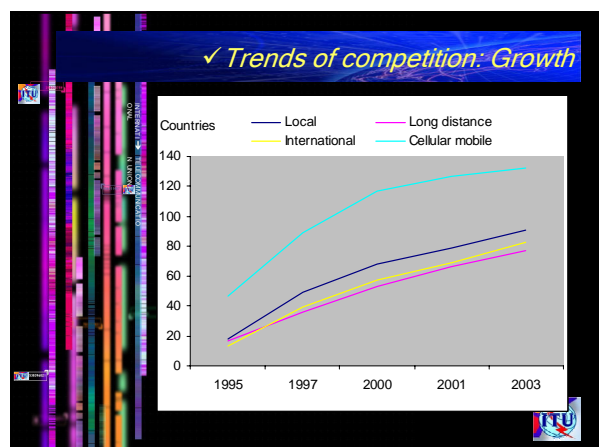
✓ Need for competition law

Competition Law, if any,
- aims at maintaining and enhancing the competition;
- is an essential part of the economic constitution of a free market economy; and
- should, as much as possible, apply to all market transactions and to all entities engaged in commercial transactions irrespective of ownership or legal form.

✓ General law vs. Sector-specific law

No a single rule or practice whether to combine or separate between general competition laws covering the overall markets & specific competition laws focusing on the ICT sectors: e.g.,
- UK & Germany: general competition law (e.g., the Fair Trading Act and the Competition Act), under which telecommunications regulators have a range of powers. Some argue that these powers are not sufficient to tackle an industry such as telecommunications.
- Hong Kong: sector specific competition rules and conditions were adopted in the Telecommunications Ordinance (2000).
- India: Competition Act (2002)

✓ Need for sector-specific competition authority

- **To protect public interest on a full-time basis, where there is a market of the size and significance, supplied by a vertically integrated, highly dominant company, with large economies of scope and scale and huge sunk costs;**
- **To provide protection against the abuse of a dominant position and to promote effective competition;**
- **To help its domestic industry to overcome barriers to entry in others' markets which are very competitive globally;**
- **Specific knowledge and expertise are also required particularly for such areas as licensing & interconnection among various competitors and limited resources (e.g., spectrum) for management & coordination**

✓ Role of regulator for competition

- **UK:** OFTEL has sharper prior controls to prevent dominant operators from indulging an '*anti-competitive*' behavior as well as promote and police competition.
- **Hong Kong:** Telecom Authority (OFTA) and Broadcasting Authority (BA) are empowered to prevent '*anti competitive*' behaviors in their respective areas.

'Anti-Competitive Practice' ?

- ➢ "**A** *licensee who engages in conduct which has the purpose or effect of preventing or substantially restricting competition in a telecommunications market*" [Hong Kong, *Telecom Ordinance, 2000*]: i.e., such behaviors as
  - **agreements to fix the price in a telecommunications market;**
  - **an action preventing or restricting the supply of goods or services to competitors;**
  - **agreements between licensees to share any telecommunications market between them on agreed geographic or customer lines; and so on.**

✓ Barriers for effective competition

- **Three major types of barriers among others by incumbent operator(s) recognized in the telecoms markets: e.g.,**
  - Dominance advantages
  - Control advantages
  - Structural advantages

SUMMARY

- Competition is regarded as
  - one of the key reasons to promote and implement liberalization – or 'progressive liberalization' – for telecom sector, whilst IT sector has been competitive from the beginning; and
  - one of the key variables for the growth of sectors proven by IT sector and mobile sector to some extent.
- 'Full and real' competition is yet a long way to go in many developing countries across ICT sectors.
- Monitoring, policing and enforcing penalties against 'anti-competitive' behavior of dominant players are more challenging and critical than just placing policy or law per se.

Licensing and Its Issues

Major Check-list of Licensing

- ✓ Major objective of licensing
- ✓ Roles of PM & regulator for licensing
- ✓ Licensing policy: e.g., technology-neutral
- ✓ Categories or types of licenses & licensing
- ✓ Licensing criteria
- ✓ Licensing mechanisms
- ✓ Licensing guidelines & conditions
- ✓ License application forms
- ✓ Licensing procedures
- ✓ License fees
- ✓ Period of licensing validity
- ✓ Number of licensees
- ✓ Legal enforcement when violating

✓ Major objectives of licensing

- Allow carriers and/or service providers to provide customers with various choices and quality of services on reasonable prices in liberalized or privatized markets,
- Protect customers from harmful interference and anti-competitive practices from the markets;
- But, avoid any unnecessary burdens for operators and regulators through minimum regulations - i.e., streamlined licensing.

✓ Roles of policy-maker & regulator in licensing

Policy-Maker

- **Set a policy**:
  -Decide whether to regulate or liberalize the markets;
  -Decide whether to fix the number of licensees or let markets decide etc.

Regulator

- Implement the policy:
  - Recommend or Issue the license(s)
  - Develop guidelines for various issues
  - Monitor licensees on a day-to-day base etc.

✓ Licensing policy

Scope of licensing policy: e.g.,

- What kind of licenses to be issued: e.g., unified, individual, class etc.
- Whether to issue licenses for each service (e.g., basic, value-added services etc.)
- Whether to issue licenses based on technology neutral
- Whether to limit number of licensees, if necessary
- How to allocate spectrum, if required;
- …And so on, depending on country's circumstances

✓ Licensing categories or types (1)

Hong Kong
- **Exclusive license**
- **Carrier license**
  - fixed
  - mobile
  - space station
- **Class license:e.g.,**
  - In-building telecom system
  - Provision of public wireless local area network services
  - Terminal equipment

India
- **Basic service license**
- **Cellular mobile license**
- **Radio paging license**
- **Internet**
- **Value-added service license**
- **GMPCS**
- **Unified license.**

✓ Licensing categories or types (2)

Malaysia: Licensing Migration

The old licenses that were issued based on specific technologies, and specific services

- Broadcasting license
- Telecommunication license
- ISP license
- VAN license

New technology-neutral and service-neutral licenses

- Content Services
- Applications Services
- Network Services
- Network Facilities

✓ Licensing categories or types (3)

Definition Of **'Class License'**: "A licence for any or all persons to conduct a specified activity and may include conditions to which the conduct of that activity shall be subject". In Malaysia

Malaysia
- **Individual Licenses**
  - Content applications service provider
  - Applications service provider
  - Network service provider
  - Network facilities provider
- **Class Licenses (Current)**
  - Applications service provider

One SP can have multiple licenses

R.O.Korea
- **Facility-based (34):** e.g.,
  - Local (2)
  - Long-Distance (3)
  - International (3)
  - Leased line (14)
  - Cellular, PCS, GMPCS
  - TRS, Paging, Wireless Data,
  - B-WLL, IMT-2000
- **Non-facility-based (3191)**
  - Special (314)
  - Value-added (2,877)

(numbers): as of 2002

✓ Licensing categories or types (4)

Nepal*
- **Basic telecom service**
- **Mobile telecom service**
- **Value-added service (including Internet)**

Nepal's *Schedule of Specific Commitments in Services*
WT/ACC/NPL/16/Add.2
28 August 2003, WTO

✓ Licensing criteria

Hong Kong
- **Scale of investment & capacity**
- **Financial capability**
- **Performance bond**
- **Technical soundness & quality of service**
- **Proven managerial & technical expertise**
- **Implementation schedule**

India
- Licensee should be Indian co.
- Foreign equity should not exceed 49%.
- Execution of performance bank guarantee
- Stipulated network & experience
- Comply with technical specification, commercial & financial conditions etc.

✓ Licensing mechanism

- **Case-by-case ad-hoc decision-making on a first-come first-served principle;**
- **Comparative & qualitative evaluation of bid (i.e., a 'beauty content') among short-listed bidder;**
- **Comparative hearings;**
- **Lottery;**
- **Auction;**
- **Combination of the above (e.g., an auction among bidders who succeed in the initial beauty contest);**
- **Simple register etc.....**

Slide 1: ✓ Licensing guidelines & condition (1)

The guidelines & conditions differ in each license.

Hong Kong for FTNS

➢ **External Fixed Telecom Network Service:**
- Introduction of the scope
- Regulatory framework
- Terms of licensing arrangement
- Relevant information for applicants re their proposals or applications etc.

Slide 2: ✓ Licensing guidelines & condition (2)

Malaysia for Individual License

➢ **Corporate**
- Incorporation
- Share holding, JV
- Sole license for activity
- Compliance with CMA

➢ **Indemnity**

➢ **Change in license condition**

➢ **Operations**
- Numbering plan, electronic addressing, spectrum plan
- Consumer code
- Rates
- Safety measures
- Charge mechanism
- License fees

Slide 3: ✓ Licensing guidelines & condition (3)

Malaysia for Class License

➢ **Permitted activities**
➢ **Sole license**
➢ **Compliance with the law**
➢ **Compliance with the numbering plan, the electronic addressing plan, and Consumer Codes**

➢ **Safety measures**
➢ **Charging mechanism**
➢ **Indemnity**
➢ **Fees**
➢ **Change of particulars of the registration notice**

Slide 4: ✓ Special licensing condition (1)

Malaysia

1. Obligation to provide **Universal Service** And/Or To Contribute To **USF**
- The licensee shall comply with any determination made on USO.

CONTRIBUTION TO USO FUND:
- All licensees except Content Application Service Provider (CASP)
- Licensees whose annual total revenue exceeds (RM500,000)
- Contribution is determined at 6% of the total weighted net revenue from

2. For all individual licensees [Reg. 18]
- Notify the Minister of any restructuring or rationalization of the individual's corporate structure

3. Additional for CASP(I) [Reg. 22(2)]
- Provide local content programmes and those that promote national culture and identity etc.

Slide 5: ✓ Special licensing condition (2)

R.O.Korea

➢ Contribute to *research and development (R&D)* determined at certain percentage of the total revenue from licensees; and/or

➢ Contribute to the *development of national informatization funds* determined at certain percentage of the total revenue from licensees etc.

Slide 6: ✓ License application forms

Hong Kong
- Company structure & financial capability
- Description of service
- Technical details of the system
- Technical support
- Experience of applicant
- Compliance with the ITU standards etc.

India
- Company registration certificate
- Net worth & experience
- Annual reports for the last 5 financial years
- A comprehensive detailed documents

✓ Licensing procedures

1. Create a team with various expertise by regulator and/or government,
2. Draft licensing criteria and conditions by the regulator or government (or with help of the team)
3. Consultations among various interested parties and experts
4. Prepare for the Guidance Note
5. Invite interested applicants for their proposal or applicant
6. Evaluate the proposals or applicants
7. Grant the relevant license(s):e.g.
   - Individual/basic license: detailed conditions – e.g.,in 90 days
   - Class/value-added license: simple registration – e.g., 24 days (internal)
8. Monitor/visit licensees on a regular base

All these should be timely, efficient &

✓ License fees

- There can be three scopes of licensing fees:
  - cost-recovery
  - costs of scare resources consumed by operators
  - sharing values of businesses.
- License fees are recommended to cover the administrative costs, except for the optimal use of scarce resources.
- License and its fees should not be burden but, in both principle & practice, to the introduction and development of innovative services and competition
- Special conditions may apply: e.g., Malaysia & Korea

✓ License fees: Example

Application fee	RM10,000
Processing fee	RM50,000
Annual license fee	0.50% or 0.15% of Gross Annual Turnover (minimum RM50,000)
Renewal fee	RM25,000
Tenure	5 or 10 years

Registration fee	RM2,500
Annual registration	RM2,500

CLASS LICENSEES

Malaysia

INDIVIDUAL LICENSEE

✓ 3G Licensing/spectrum fees: Example

Country	Company	Price $	License Date	License Conditions/Service Status
France	Orange SFR	551 million 551 million	May 20, 2001	Must offer services to 80% of the population by 2009, 20-year license plus 1% of revenues
Germany	E-Plus Mobilfunk O2 Germany Quam (Group 3G) T-Mobile Deutschland Vodafone D2	7.62 billion 7.67 billion 7.63 billion 7.70 billion 7.63 billion	July 31, 2000	Services were to start from January 2002 and cover 25% of the population by the end 2003, and 50% by the end of 2005; 20-year license
Italy	H3G IPSE 2000 TIM Vodafone Omnitel Wind	2.01 billion 2.02 billion 2.00 billion 2.03 billion 2.01 billion	October 19, 2000	Coverage must extend et regional capitals within 30 months and provincial cities within 60 months; 20-year license
Japan	Vodafone K.K. KDDI NTT DoCoMo	Free	June 12, 2000	Amidst competing technological standards, Japanese mobile operators already have millions of subscribers and near total national coverage
South Korea	KT Freetel LG Telecom SK Telecom	994 million 898 million 994 million	Dec. 15, 2000 Aug. 25, 2001 Dec. 15, 2000	South Korea's major mobile operators already have close to 20.7 million subscribers to high speed services
United Kingdom	Huchison 3G UK mm02 Orange T-Mobile UK Vodafone	6.90 billion 6.35 billion 6.44 billion 6.30 billion 9.40 billion	April 26, 2000	Services must cover 80% of the population by 2008; 20-year license. Hutchison 3G predicts it will have one million subscribers by the end of April

Malaysia: RM 50 million + additional fees

{Sources: 3G Newsroom, UMTS-Forum, ITU, OFCOM}

✓ Period of licensing validity

Hong Kong
- Carrier licenses are valid for 15 years with a renewal of further period not exceeding 15 years,
- Taking into account the life span of technologies, services or systems etc.

India
- Most licenses are valid for 20 years extendible by 10 years at one time,
- Taking into account the investment required and a reasonable return for the investment.

✓ Number of licensees

Hong Kong
- The number of licensees are in principle determined by markets
- unless there are physical constraints like spectrum

India
- Licences are granted to all applicants when satisfying the entry qualification
- except wireless communications due to spectrum constraints.

✓ Legal enforcement when violating license conditions

Hong Kong: OFTA imposes either penalties when having found breach after the investigation procedure. Or, they can either suspend or revoke license as appropriate;

USA: It is the duty of the attorneys under the direction of the Attorney General to institute proceedings to prevent and restrain violations in accordance with the Sherman Act;

UK: OFTEL empowered to enforce license conditions in the telecoms industry and may fix penalty, as appropriate;

EU, it is the EC who may impose the relevant range of fines in the breach the anti-competition rules of the Treaty

✓ Other licensing related issues

- Before license is issued, regulators should
  - Provide clear 'guidelines' to potential licensees for the specific license: e.g., right of way and construction of facilities/infrastructure etc.
  - Ensure all the guidelines to be implemented by the authorities involved (e.g., municipal authority to allow to build the facilities etc., customs office, ministry etc.) to avoid any delays or disputes.
- All the procedures and any other regulatory approvals for providing the licensed services should be simplified: e.g., importing equipments/handsets etc. in a reasonable period of time.

SUMMARY

Licensing can be a critical 'means' of not only <u>market entries in liberalized markets</u> but also <u>developing ICT infrastructure & applications</u>

- When it is implemented in a non-discriminatory, proportionate, efficient, and transparent manner with streamlined procedures and clear guidelines, and
- When it is mobilized not as a burden for entrants but as a carrot for their innovation and competition.

The End

Thank you

Dr. Eun-Ju Kim
ITU Regional Office
89/2 Chaengwattana Road
Laksi, Bangkok 10210
Thailand
Tel: +66 2574 8565
Fax: +66 2 574 9328
E-mail: eun-ju.kim@itu.int