



# *Global Symposium for Regulators*

*Geneva*

*3-5 December 2001*

## 3G Licensing

## Workshop



### **Panelists:**

*Anthony SK Wong, Director General, OFTA, Hong Kong, China*

*José Leite Pereira, Member of the Board, ANATEL, Brazil*

*Urs von Arx, UMTS Project Manager, OFCOM, Switzerland*

### **Moderator:**

*Fabio Leite, IMT-2000 Project Manager, ITU*

# 3G Licensing Workshop

- **Status**
- **Spectrum & Standards**
- **Strategies & Methods**
- **Panel discussions**



# 3G Licenses

[Argentina]	Austria	Monaco	(Israel)	Australia
(Brazil)	Belgium	Norway	(Lebanon)	Hong Kong
(Chile)	(Croatia)	Poland	(S. Africa)	Japan
(Peru)	(Czech R.)	Portugal		(Malaysia)
(Uruguay)	Denmark	(Russia)		New Zeal.
(Venezuela)	Finland	(Slovenia)		Rep. Korea
[USA]	France	(Slovakia)		Singapore
	Germany	Spain		Thailand
	Greece	Sweden		
	(Ireland)	Switzerland		
	Isle of Man	The Netherlands		
	Italy	United Kingdom		
	Liechtenstein			
	Luxemburg			

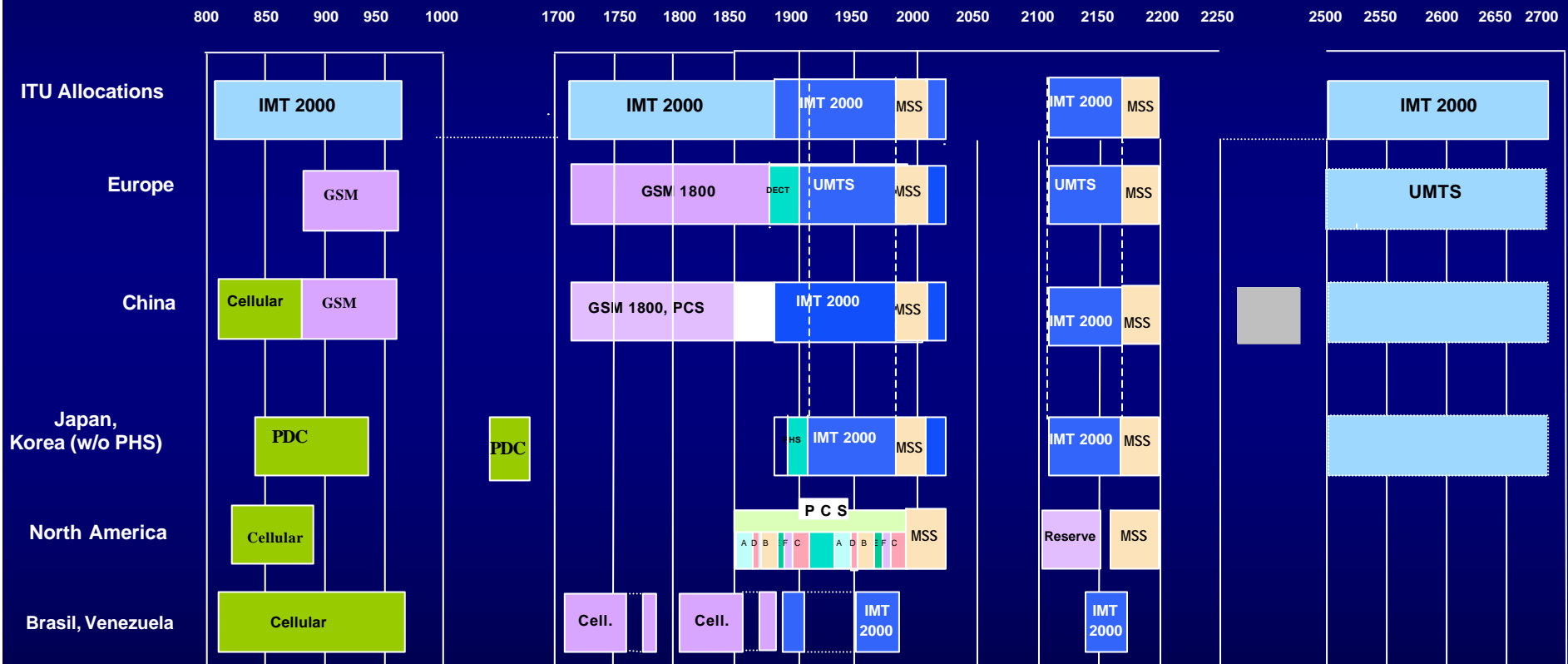


**\$129 billion**





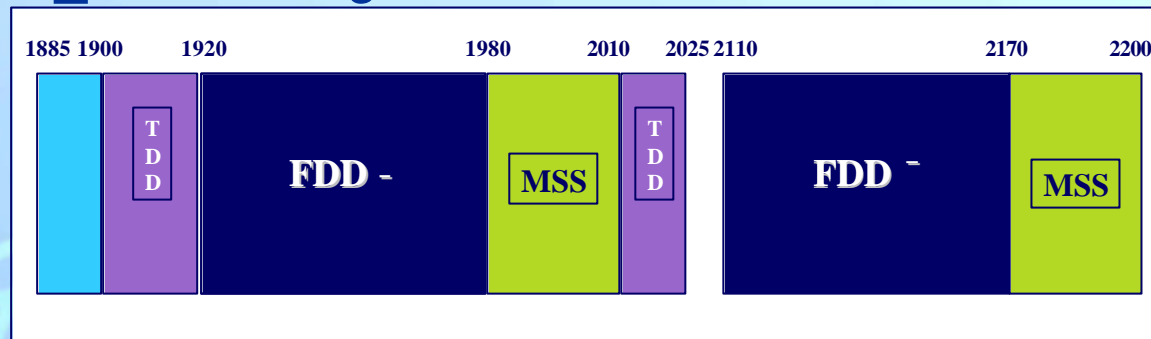
# IMT-2000 Frequency Spectrum after WRC-2000



ITU Radio Regulations: 750 MHz of spectrum identified for IMT-2000

# Spectrum Requirements

- **Frequency bands:**



- **Allocation per operator:**

**2X15 MHz (FDD) + 5 MHz (TDD)**

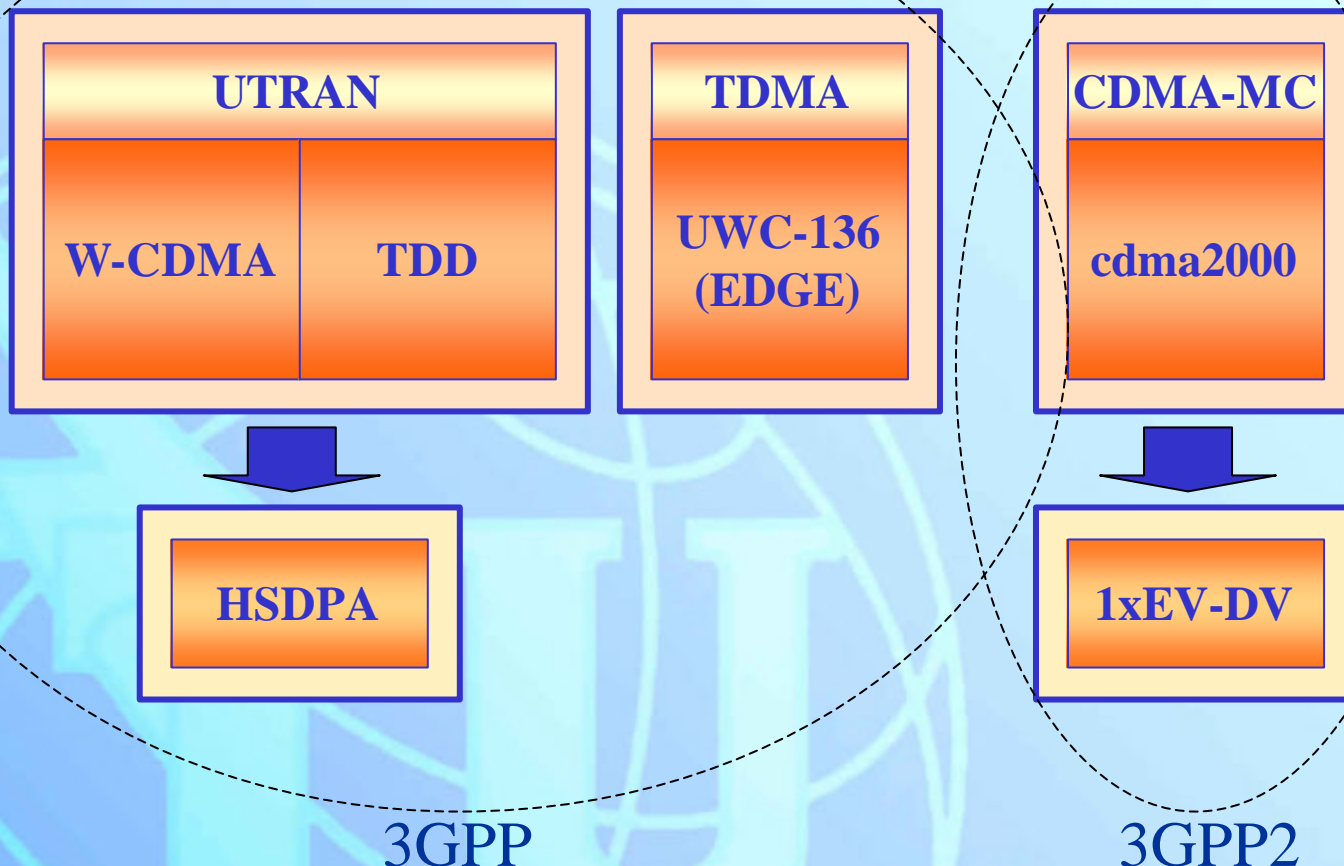
- **Guard bands**

- **Harmonization schemes**



# 3G Standards

## IMT-2000 Radio Interfaces



# Strategies & Methods

- **Number of licenses**  
Service requirements, spectrum, competition, etc.
- **Selection process**  
Auction, beauty contest, hybrid method.
- **Pricing of licenses**  
Value definition, up-front vs. deferred payments, etc.
- **Licensing obligations & conditions**  
Roll-out & coverage, roaming, ownership (MVNOs), network sharing, etc.
- **Evolution strategies**



# 3G Licensing in Hong Kong

- **“Hybrid” Licensing Process**
  - Pre-qualification exercise + Spectrum auction on Royalty Percentage
  - 4 licenses were granted.
- **Spectrum Auctioning Approach**
  - Annual Spectrum Utilization Fee over the 15-year license period.
  - Annual fee = The higher of “royalty amount” or “minimum annual fee”
- **Open Network Access**
  - 3G licensees must open at least 30% of their network capacity for use by non-affiliated service providers (e.g. MVNO, content or service providers).
- **Technology Neutral Licenses**
  - 2G spectrum are allowed to be re-farmed for 3G services
  - 3G licenses are allowed to be upgraded to 4G, etc. in future





# Swiss 3G Licencing Process

## Objectives:

- Making available varied, efficient, high-quality, nationally and internationally competitive telecommunications services to private individuals and the business community (Telecom. Law Art.1).
- Allocating and assigning scarce national resources (such as spectrum) to achieve economic efficiency.
- Assigning spectrum licences in accordance with the principles of objectivity, non discrimination and transparency (Telecom. Law Art.24).

## Procedure:

**Step 1: Control of the compliance with legal requirements and preselection criteria for the award of a licence** ➤ **Participation conditions to the auction.**

**Step 2: Auction.**

## Results:

4 IMT-2000 / UMTS-licences with a frequency assignment of 2 x 15 MHz FDD plus 5 MHz TDD have been awarded to the 3 existing 2G operators and to one new entrant.





# PRESENT SITUATION IN LATIN AMERICA

LATIN AMERICA  
MOBILE  
ACCESSES:  
77.4 MILLIONS



IMT-2000  
"CORE  
BAND"  
NOT  
AVAILABLE

IMT-2000  
"CORE  
BAND"  
AVAILABLE

*BRAZIL: EVOLUTION TO IMT-2000*

