



International Telecommunication Union

Global Symposium for Regulators

Geneva, Switzerland
8-10 December 2004

Towards a New Era in Spectrum management



Dr. Chris Doyle
Senior Research Fellow

Traditional Approach: Multidimensional Licensing

- Service
 - Public voice telephony, VANS, broadcasting
- Technology
 - Cellular, fixed, wireless, satellite
- Geography
 - Local, regional, national
- Temporal
 - Duration
- Spatial
 - Land, maritime, aeronautical

Neutrality in Spectrum Management

■ ■ ■ The ideal

- ■ ■ Any technology, providing any service in any frequency band

■ ■ ■ The reality – constraints

- ■ ■ Interference
- ■ ■ Economics
- ■ ■ Institutions

Spectrum Neutral Technologies

■ ■ ■ Software Defined Radios

■ ■ ■ Wi-Max

■ ■ ■ Ultra-Wide Band Technology

Transitioning Towards Neutrality

- ▣▣▣▣ Licence exempt bands e.g. 2.4GHz band WiFi in some countries
- ▣▣▣▣ Reforms promoting greater use of market incentives such as spectrum pricing and spectrum trading
 - ▣▣▣▣ Australia
 - ▣▣▣▣ Guatemala
 - ▣▣▣▣ New Zealand
 - ▣▣▣▣ United Kingdom

Spectrum Flexibility, 3G and Wireless Broadband

- ▣▣▣▣ What is spectrum flexibility?
- ▣▣▣▣ Why 3G?
- ▣▣▣▣ Should flexibility apply to TDD and FDD spectrum allocations?
- ▣▣▣▣ Flexibility in Singapore and the United States

Spectrum Neutrality and Developing Countries

- ■ ■ Spectrum scarcity is often less of an issue
- ■ ■ To accommodate growth in new services and help promote access to broadband services, greater flexibility in spectrum management is likely to be help

Spectrum Neutrality: The Future

- ■ ■ Increase use of spectrum and liberalisation requires greater flexibility
- ■ ■ Flexibility can accommodate convergence and allow for more innovation
- ■ ■ Flexibility can co-exist with market incentives to promote more efficient use of spectrum
- ■ ■ Developing countries are especially likely to benefit by allowing greater flexibility in spectrum use