

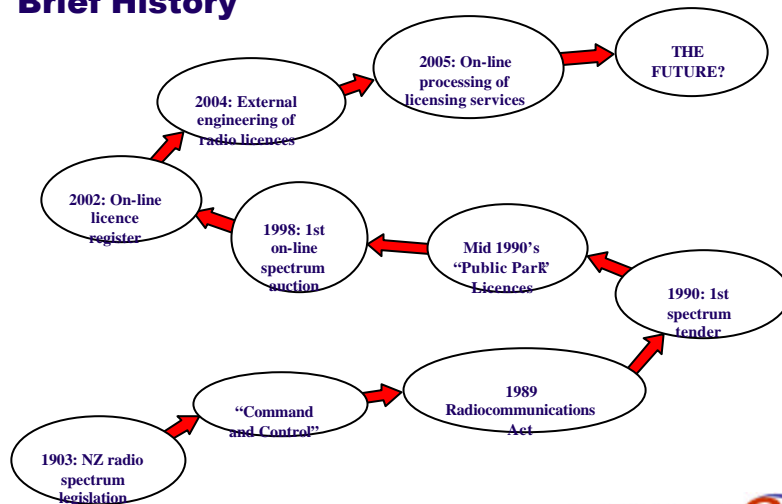
Radio Spectrum Management Reform in New Zealand

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Brief History



Pre 1989 - Command and Control

- Administrative Licensing.
- 1st Come – 1st Served.
- Does not address competition issues where demand exceeds supply.
- “Beauty Contests” are costly, subjective and subject to legal challenge.
- No guarantee of tenure.
- Little flexibility for new technologies or services.

Radiocommunications Act 1989

- “Maximise the value of spectrum to society through a management regime that provides flexibility and choice”
 - Administrative Licensing - radio licences.
 - “Public Park” (General User) licences.
 - Private property rights
 - Management Rights
 - Tradable spectrum licences.
 - Radio Frequency Register.
 - Tenure of rights up to 20 years.
 - Government or private band managers.
 - Private engineering and certification of licences.

Commercial Allocations

- Approx 17% of spectrum below 30 GHz converted to Management Rights
 - AM/FM radio broadcasting
 - VHF and UHF television broadcasting
 - 1G, 2G and 3G cellular bands
 - 2.3 GHz multipoint distribution service spectrum
 - 3.5 GHz broadband spectrum
 - 24-28 GHz local multipoint distribution service spectrum
- Allocation methods:
 - Tenders
 - On-line simultaneous ascending round auctions
 - Outcry auctions



Management Right Experience

- Management rights are a useful tool for the allocation and management of commercial spectrum.
- Competition issues
 - Thin markets in NZ
 - Some spectrum is not used
 - Limited secondary market trading
 - Market concentration
- Trade-off between technology neutrality and efficient use of spectrum.
- Coordination between management right holders.
- Policy on renewal of rights is a critical issue.



“Public Park” Experience

- Rapid growth of new technologies and services in public park spectrum:
 - Wireless LANs
 - Broadband access
 - Backhaul point-to-point links for broadband (5.8 GHz)
 - RFID devices
 - Low power FM broadcasting
- Low compliance costs.
- Quality of service can be limited due to interference between devices.
- Congestion can lead to excessive interference and “tragedy of the commons”.



The “Managed Spectrum Park”

- A new idea that has potential to allocate spectrum more efficiently, reduce access costs, and promote innovative services and technologies.
- It integrates the desirable features of the management right, public park and administrative licensing regimes.
- Provides shared access to a band of spectrum.
- Relies on coordination between the users and the deployment of smart technologies to manage interference.
- Access is subject to users agreeing to conditions such as behaviour and implementation requirements.
- Minimal technical constraints.
- Access fee covers administration costs.



Making it Easier & Cheaper to do Business ...

- Self management initiatives:
 - Public park licences for
 - Aeronautical services
 - Maritime services
 - Amateur service
 - Provision for external (private) engineers to design and certify licences
 - Self declaration of compliance with regulatory requirements
- On-line access to radio frequency licence register.
- On-line processing and automation of licensing services.



Thank You

For more information please see: www.med.govt.nz/rsm

