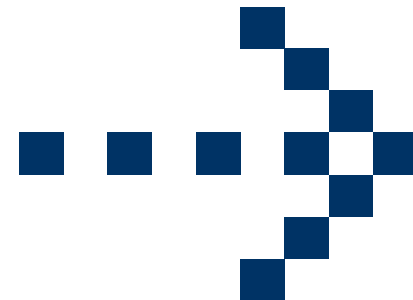


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'UK Case Study'



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Recent chronology of spectrum reform

1998 Wireless Telegraphy Act

- ▣ permits licence auctions
- ▣ introduces administrative prices for spectrum

2002 Independent review of spectrum management and Government response

2003 Communications Act

- ▣ entrusts frequency management to new regulatory agency
– OFCOM
- ▣ authorises spectrum trading

2004 Introduction of spectrum trading?

2004 New administrative prices?

Spectrum Management Instruments to be discussed

	Individual licensing	Initial assignment	Secondary trading	User price
Command and control	Yes	Administrative	No	None (except administrative change)
Administrative incentive pricing	Yes	Administrative	No	Yes ('opportunity cost')
Primary auctions	Yes	Auction	Not necessarily	Not normally
Secondary trading	Yes	Auction or administrative	Yes	Not necessarily

OFCOM's Duties

'to further the interests of citizens in relation to communications matters

to further the interests of consumers in relevant markets, where appropriate by promoting 'competition'

OFCOM must, by virtue of above, secure

'(a) The optimal use for wireless telegraphy of the electro-magnetic spectrum'

OFCOM's (apparent) overall strategy

❑❑❑ Twin track

- ❑❑❑ Some spectrum reserved for public service functions, and subject to administrative incentive pricing
- ❑❑❑ Remainder subject to tradable licences, involving (progressively) change of owner, reconfiguration and change of use

Administrative Incentive Pricing

Aim is to provide incentive to economise on demand by pricing at competitive/opportunity cost level.

Some spectrum has no opportunity cost, because of international agreements (NATO spectrum, ICAO)

Some spectrum, eg. in sparsely populated regions, is in excess supply – has zero opportunity cost and price

Market price of spectrum depends on a) cost reduction potential – degree to which use of frequency reduces costs of production and b) scarcity rent-profits available in downstream market.

The UK approach to administrative pricing

A. Original method – ‘Smith Nera’

- ☐ Spectrum valued on basis of two alternative technologies
 - ☐ Substitution between mobile spectrum and base stations
 - ☐ Substitution between fixed links and wire-based technologies

Subject to ‘modifiers’ and introduced progressively.

B. New proposal

- ☐ Also takes into account substitution of one frequency by another.

UK Spectrum Auctions

A. 3G - 2000

13 bidders for five licences

Completed after 150 rounds, bidding revenues of £23bn

Licences gained by four 2G incumbents plus one entrant

B. 28 GHz – 2000

42 licences for fixed wireless broadband in 14 areas

Only 16 sold; remainder unsuccessfully re-auctioned later

C. 3.4 GHz – 2003

15 licences sold after 41 rounds for £7m.

Do auctions make a difference?

- ⌘ Direct spectrum to most efficient operators
- ⌘ Do not allow change of use, secondary trading
- ⌘ May discourage risky 'all or nothing' bids

Secondary Trading: issues to be addressed and OFCOM's proposals

- ❑ Protection from interference (new method)
- ❑ Duration of licences (5-year rolling)
- ❑ Dispute resolution (special institutions)
- ❑ Competition issues ('significant lessening of competition' test on trades)
- ❑ Administrative incentive pricing as well (yes)
- ❑ Introduction (gradual over 2004-7)

Unlicensed Spectrum

- ▣▣▣ Already available on many frequencies
- ▣▣▣ Problem of choosing future
‘commons’ still under debate