

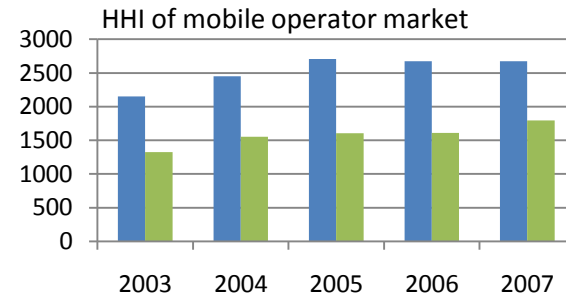
Spectrum managements to promote competition

Problems

- After eliminating a spectrum cap rule in 2003, the concentration of US mobile operator market is on the increase.
- Incumbents have incentives to pay more money for spectrum auctions than new entrants because of monopoly/oligopoly rents.
- 700MHz auction invites some new entrants, but AT&T and Verizon achieved 85% of spectrum in 700MHz, and other operators such as Sprint, T-mobile and PCS acquired only AWS or PCS spectrum which are higher frequency(more costly than lower frequency).
- MVNOs often fail to negotiate terms with incumbents and fails to compete with them.

Carrier	Market share by year (%)				
	2002	2003	2004	2005	2006
Verizon	23	23	28	25	26
Cingular	18	16	29	27	27
AT&T	19	18	29	27	27
Sprint	14	13	13	25	25
Nextel	11	11	7		
T-Mobile	6	8	10	12	12
Others	8	10	15	11	10
Total	100	100	100	100	100

(Cited from P.Cramton et al."The 700 MHz Spectrum Auction: An Opportunity to Protect Competition In a Consolidating Industry", 2007)



■ Average ■ Low (Source: FCC reports)

Possible solutions

- Control through anti-trust regulations?
- Bring back spectrum cap rules?
- Store some spectrum lots for new entrants?
- Impose open access obligation on incumbents/dominants?
- Expand commonly used spectrum?