

# ASSESSING SPECTRUM VALUE

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# Previous Studies

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- Thanki (June 2012), Alden (ITU, April 2012), Hazlett, Munoz, Avanzini (Winter 2012), Europe Economics (for Ofcom) (Nov. 2006)
  
- Limitations:
  - ▣ Fixed regulatory regimes (open access, licensed)
  - ▣ Assessment typically based on total revenues from applications
  - ▣ Assumes present allocations/business models

# Primary Issues

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- How to separate the value of the application from the value of the spectrum
- Marginal versus total value
- Congestion and interference management

# Alternative Approaches

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- Evaluate added value as an opportunity cost:  
If spectrum  $X$  were not available, then what would be the cost of serving those applications?
- Evaluate marginal value of additional spectrum:  
If additional spectrum  $\delta X$  were allocated to application  $A$ , then how much additional demand could be supported?
- Evaluate congestion cost:  
How much is congestion reduced by adding spectrum or investing in interference management?

# Regulatory Considerations

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- Licensed, unlicensed, sharing constraints with incumbent
  - ▣ Distinguish from business models
- Potential for innovation
- Market inefficiencies/transaction costs
- Robustness with respect to changes in technologies and associated services.