Spectrum and the Public Interest

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Future of TV Delivery

Who will control the wireless conduits?
Will conduit control confer content control?
   Broadcast or common carrier model of carriage?
Will conduit control confer equipment control?
   Broadcast or cellular model of network access?
Will public interest regulation attach to spectrum?
   Public trustee or property model of licensing?
TV Band Spectrum Policy

- Communications policy values
- Competition policy values
- Resource management/Fiscal values

TV Frequencies
Future of DTV Spectrum

• Fate of 108 MHz in 700 MHz Band?
  60 MHz in TV channels 52-69 auctioned for commercial use 1/08; 24 MHz for public safety

• Fate of 294 MHz below 700 MHz used for DTV broadcasting?
  White spaces – buffer spectrum betw. TV transmissions
  Black spaces – spectrum used for TV transmissions

White Space Proponents:
Look How Much Spectrum There Is!

Potential Channels Available for Unlicensed Access

- Los Angeles, CA: 22
- Washington, DC: 29
- Burlington, VT: 39
- El Paso, TX: 34
- Juneau, AK: 44
- Helena, MT: 43
Broadcasters: Look How Little Spectrum There Is!

1. Efficiency
2. Value Recovery
3. Innovation
4. Competition
5. Incumbent Interests
6. Service Preservation
7. Public Goods
DTV Public Interest Goals

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic efficiency</td>
<td>Not considered</td>
</tr>
<tr>
<td>Innovation</td>
<td>Only within broadcasting</td>
</tr>
<tr>
<td>Recovering value</td>
<td>Around edges of existing TV architecture</td>
</tr>
<tr>
<td>Competition</td>
<td>Within existing TV landscape for existing players</td>
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<tr>
<td>Incumbent protections</td>
<td>Broadcasters get 6MHz channel</td>
</tr>
<tr>
<td>Service preservation</td>
<td>Digital free TV/ HDTV</td>
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<tr>
<td>Public goods</td>
<td>Public interest reqs.; universal service</td>
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</tbody>
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Unpacking and Trading Public Interest Goals

- Service preservation
  - Universal access to TV
  - Local architecture → Local video
  - Public trustee obligations
    VS.
- Spectrum value recovery
  VS.
- Efficiency
C Block – 22 MHz

- **Competition and innovation goals** → open platform conditions
  - Network operators cannot discriminate against applications (no block) or prohibit devices (no lock)
  - Partial win for Google/start-ups; Partial loss for Verizon/ATT
- **Recover spectrum value** – reserve price of $4.6 billion for C Block
- If reserve price is not met, licenses automatically reauctioned and open platform conditions dropped
Spectrum Policy Innovation

• Move towards disaggregating public interest goals
• Move towards quantifying tradeoffs
  – Simultaneous auctions with varying conditions to isolate the market costs of policy choices?
• BUT, market mechanism cannot measure non-economic or diffuse costs and benefits