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TAKING **INGENUITY** TO NEW HEIGHTS

700 MHz D Block Re-Auction: Near Space Technologies are a Proven, Wide-Area Approach to Cost-Effective Build Out

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Near Space Platforms are a proven wide area coverage technology

- **Near Space Platforms have provided wide-area coverage for over 4 years on terrestrial spectrum and protocols to Texas, Oklahoma and surrounding states**
  - Requires **NO** additional mode/band built into the user device = large cost savings for users
  - Wide footprints (120+ miles) in diameter provides for dramatically reduced build out costs
  - 100% coverage of pops and landmass is available with only 370 sites for Continental US
- **Commission should adopt rules that are technologically neutral in order to permit ALL wide area technologies**
- **Near Space platform coverage should count as build out as it uses 700 MHz spectrum, platforms not using 700 MHz spectrum should not count as build out**
  - Counting non-700 MHz coverage would allow for warehousing of 700 MHz spectrum
- **If one nationwide license is maintained, no rules are needed to permit Near Space Platform operation (other than along international borders)**
- **If licensed market areas are smaller than nationwide, then OET should establish a rules to govern transmit power, antenna pattern, and stand-back distance from a geographically adjacent, co-frequency licensee**

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One Urban / One Rural License: The Middle Ground Approach

- **License 1**. ONE Urban License for ALL metro areas
  - Urbanized Areas of >50,000 pops with a 10 km extension
  - Covers approximately 75% of the Nation's pops and 10% of landmass
- **License 2**. ONE Rural License for rest of country
  - Covers approximately 25% of the Nation's pops and 90% of landmass
- Interoperability allows boundaries where they should be vs. remote county lines
- More competitors bidding for D Block at re-auction
- Maximizes opportunity of success for public/private partnership
- Greater total coverage + faster rural and urban build out
- Economically efficient – financial model shows rural licensee is economically viable

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- **Three areas must be defined in regulations for success of re-auction & implementation**
  1. Cross roaming agreements
  2. Rule flexibility to allow for the wide area, overlay technologies needed to lower rural build out costs
  3. Commercial-level hardness for sites with redundant coverage from wide-area, overlay technologies

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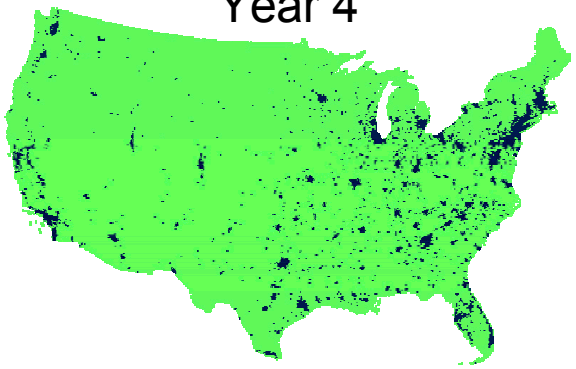
D Block Maps: Auction 73 vs. Urban / Rural Build Out

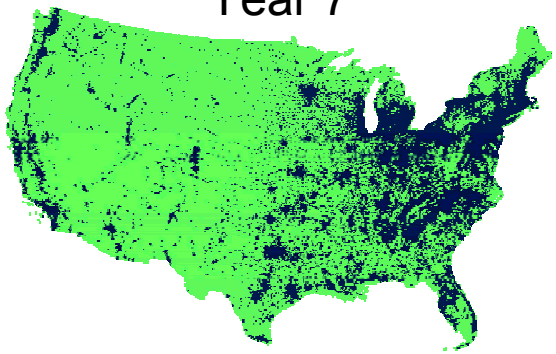
Auction 73 Build Out Maps: One Nationwide D Block License

Year 4



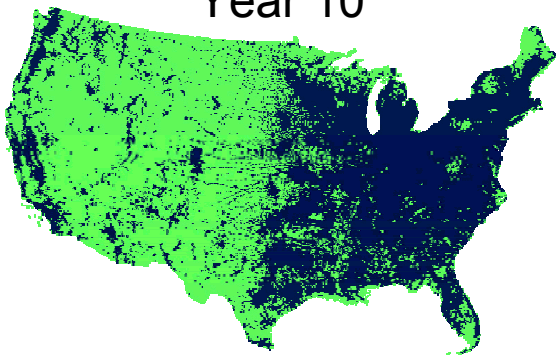
75% Pops

Year 7



95% Pops

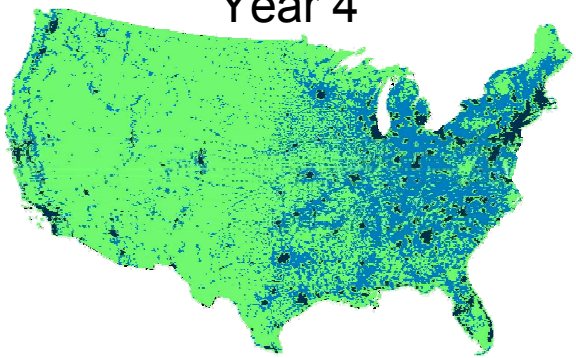
Year 10



99.3% Pops

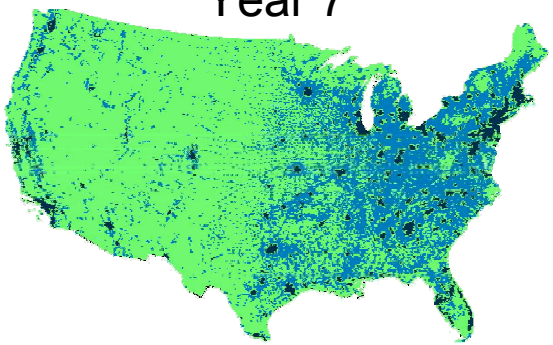
Proposed Build Out Maps: One Urban + One Rural License

Year 4



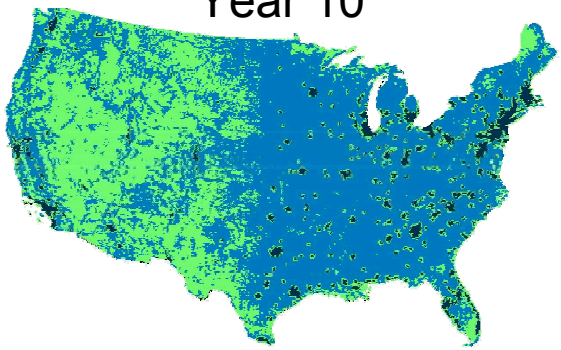
Urban: 75% Pops & Rural: 35% Land

Year 7



Urban: 95% Pops & Rural: no 7-yr. milestone

Year 10



Urban: 99.3% Pops & Rural: 70% Land

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