Rural Government Telecom Planning
by Anna Tapp

INNOVATIVE, DECISION-MAKING TOOLS.

buildingupdreams.com
Collaborative Effort

CityScape provides impartial wireless expertise, independent expert advice and strategies to city and county governments seeking shared solutions to the placement of wireless telecommunications infrastructure.

Building Up Dreams provides site location analysis in a variety of contexts. They develop new techniques for calculating and visualizing telecommunications capacity in urban areas. Similarly, they advocate for infrastructure reuse for wireless service to rural areas.
Rural Government Telecom Planning

- Economics
- Politics
- Technology

[buildingupdreams.com]
Case Study - Garfield County, CO
What the Providers Report

INSERT FCC FORM 477 BROADBAND INTERNET PROVIDER SERVICE MAP
Case Study - Garfield County, CO
Existing Infrastructure
Case Study - Garfield County, CO
Economics of Population Density

Modeling Residential Population Clusters with Parcels

- Estimate People per parcel
  - There were just over residential 16,635 parcels in the county
  - Population estimates said the county had 20,622 households
  - Each single family parcel is assumed to have one household
  - The remaining households are evenly spread across all the multi-family housing parcels
  - Convert parcels to point centroids

- Simulate Population Clusters
  - Generate a heat map that lights up red a certain population density (50 households per square mile was used in the case study)
Case Study - Garfield County, CO
Economics of Population Density
Case Study - Garfield County, CO
Economics of Population Density

Modeling Residential Population Clusters with Parcels

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- **Simulate Population Clusters**
  - Generate a heat map that lights up red a certain population density (50 households per square mile was used in the case study)
  - Create a 3x3 mile fishnet grid across the county
  - Calculate the number of households per grid cell
  - For each of the red areas, group 9-10 cells together and report a number
Case Study - Garfield County, CO
Economics of Population Density
Case Study - Garfield County, CO
Politics and Economics of Community Anchor Institutions

SB-152 had limited rural counties from investing in bringing Broadband to their communities

◦ SB-152 prohibited local governments from involvement in any partnership, funding, provision, or other activities related to local broadband, telecom service, or infrastructure.

◦ When this presentation was written 98 local governments in Colorado had opted out of SB-152.

◦ Garfield County is included in this number

Why do we care?

◦ Alternate funding streams for building middle mile

◦ Lowering middle mile costs means local providers can set affordable subscription rates, at the same time as seeing a faster ROI
Case Study - Garfield County, CO
Politics and Economics of Community Anchor Institutions
Case Study - Garfield County, CO
Technology Using Existing Structures
Case Study - Garfield County, CO
Technology Using Existing Structures

INSERT MAP OF POTENTIAL POINT TO POINT MIDDLE MILE
Case Study - Garfield County, CO
Technology Using Existing Structures
Case Study - Garfield County, CO
Technology Using Existing Structures

INSERT MAP SHOWING LAST MILE FIXED WIRELESS COVERAGE TO HEAT
MAP HOUSEHOLDS
Rural Government Telecom Planning

- Economics
- Politics
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Questions?

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