Leverage Urban
To Build Rural
2002 Winter Olympics

- First Fiber Optics
  • Connecting Cameras
  • Connecting Traffic Lights
  • Connecting VMS

- First Trade
  • $800,000 for 5 blocks of a single 2 inch conduit.
CentraCom

- Lt. Governor Spencer Cox
University of Utah Dark Fiber Research Ring and Data Center
DTS

- DTS Telecommunion Laws
- 72-7-108 allows for service to State Agencies.
UCAN

• Utah Communications Authority
• Radios Push to Tal
• First Net
• What Is the DOT Connection
State Laws and Rules

• Utah Code 72-7-108
• What happened to Utah Code 72-7-109
• Rule R907-64
• Rule R907-65
Federal Laws

• United States Code – USC - TITLE 23—HIGHWAYS - CHAPTER 5-RESEARCH, TECHNOLOGY, AND EDUCATION - §514. Goals and purposes - (b) Purposes 4) to promote the innovative use of private resources in support of intelligent transportation system development;

• The 1998 FHWA policy change allowing states to accommodate longitudinal access of utilities within interstate rights-of-way;
• The 1996 Telecommunications Act authorizing states to enter into agreements with telecom companies;
• Federal Webinar Ken Leuderalbert PE
• BLM Issues
• Rural Interstate Corridor Communications Study Report to States 2009
Dig Once

• Broadband Opportunity Council Agencies’ Progress Report  January 2017
• UDOT – No Policy
• Dig Once Policy Considerations Implementing Dig Once policies at the local, rather than at the statewide or national level, would be more effective given the complexities of implementing a policy that spans jurisdictions. Federal, state and local infrastructures, for instance, are subject to different laws regulating build-out plans for deploying broadband. In addition, most work for managing and maintaining utility facilities on roadways are the responsibility of counties and cities, including requests for utility permits to install and conduct work on existing facilities. An approach that encourages cooperation, but does not prevent excavation when needed is most supported by federal, state and local agencies when implemented as part of the cooperative planning process.
Extent of the UDOT Network

- UDOT has about 2,517 miles of fiber optics. This total includes UDOT fiber 960 miles with PPP (Public, Private, Partnership) fiber 1,558 miles. The St. George connection is with a pipeline for 300 miles not a road. South Central Fiber Circuits 312 miles connect Cedar City, Bryce Canyon, Kanab, Parowan and Beaver. The percentages I calculated are for road miles and do not include the rural fiber circuit trades of 612 miles.

- Utah Interstate Miles 978
- Interstate Fiber Miles 443 fiber miles 45%
  - I-15 400 miles with 281 fiber miles 70%
  - I-215 29 miles with 29 fiber miles 100%
  - I-80 197 miles with 87 fiber miles 44%
  - I-84 120 miles with 23 fiber miles 19%
  - I-70 232 miles with 23 fiber miles 10%
- Level 1 Road Miles 2,980
- Level 1 Fiber Miles 1,442 49%
- Level 2 Road Miles 1,960
- Level 2 Fiber Miles 20 1%
- Total Interstate, Level 1 and Level 2 Road Miles 5,875
- Total Interstate, Level 1 and Level 2 Fiber Miles 1,905 32%
UDOT Trade Partners
Cities  Counties  Special Services

Pleasant Grove
Utah’s City of Trees

SPRINGVILLE
The Art City

Ogden
Utah
It's all within reach

Sandy
Heart of the Wasatch

AMERICAN FORK
1853

CENTRAL UTAH WATER
CONSERVANCY DISTRICT

provo
Welcome Home

Salt Lake City

SALT LAKE COUNTY

Cedar City, Utah

City of St. George

CITY OF OREM
UDOT Trade Partners
Telecoms
UDOT Trade Partners
State Agencies

U T A

UTAH AGRC

DTS

UCA

THE UNIVERSITY OF UTAH

Utah Governor’s Office of Economic Development
BUSINESS • TOURISM • FILM
Trade Agreements Public vs Private

- Difference between Public Partner and Private Partner
  - Interlocal Cooperative Vs Lease Agreement
    - City, County, State, Public Safety,
    - Who is UDOT allowed to serve?
      - UT code 72-7-108 language on state buildings.
      - Crown Castle Library at Alta
      - Trade Agreements 30 years
      - Telecom Restrictions
Cottonwood Canyons
Peak Traffic Days Are Powder Days
Avalanches
Why Build the Cottonwoods?

- No monitoring road Conditions
- Poor communications
  - Operations groups
  - Emergency response - Avalanche
  - Ski resorts and lodges
  - Everyday users
Crown Castle International

- Wireless infrastructure company
- Supports all carriers
- Proposed DAS in each canyon
Crown Castle Received

- Build Fiber-Optic Backbone in ROW
- Wireless Towers in ROW
- Use of UDOT fiber conduit
- Hub building on UDOT ROW
UDOT Received

- 24 strands on fiber cable
- Spare conduit
- Access to all poles for equipment
- RWIS Installation
- Power for devices
- Hub space for equipment
NEPA - 1 Year
Project Summary

• Projects Estimate: $5 Million
• 35 poles
• 24.5 Miles fiber optics
• 7200 Volt Electrical Systems
• 12 new cameras - 8 RWIS - 15 chain-up signs
• Improved communications for All Users
• Avalanche Operations Center
• Future ITS expansion (dms, etc.)
References

  Broadband Opportunity Council Agencies’ Progress Report January 2017

- Pictures –
  - Cottonwood Canyons Pics Brad Smith Horrocks Engineering https://www.horrocksengineers.com/
  - Slides 1,2,3,61 - PresenterMedia.com 4416 S. Technology Dr Sioux Falls, SD 57106
  - Slides 27-31 – Utah Tourism https://www.visitutah.com/
  - Slide 10 – University of Utah - (c) 2019 Brian K Blaylock http://kbkb-wx.blogspot.com/2017/03/the-university-of-utah-downtown-data.html
  - Slide 9 – UDOT Hackathon Spencer Cox and Students – Lynne Yocom, November 2018
Links

- Utah Code 72-7-108 - [https://le.utah.gov/xcode/Title72/Chapter7/72-7-S108.html](https://le.utah.gov/xcode/Title72/Chapter7/72-7-S108.html)
- Dig Once Policy - [https://www.fhwa.dot.gov/policy/otps/policy_briefDigOnce.pdf](https://www.fhwa.dot.gov/policy/otps/policy_briefDigOnce.pdf)