

The background is a deep blue with a complex, abstract pattern of concentric, curved lines that create a sense of depth and movement, resembling a fiber-optic cable or a tunnel. A bright, glowing light source is visible at the end of the tunnel on the right side, casting a beam of light that illuminates the surrounding structure.

Fiber-Optics as a Municipal Enterprise

JEFF FIEGENSCHUH, CITY MANAGER

PAT BRUST, DIRECTOR OF ADVANCED COMMUNICATIONS

Meet the Presenters



Jeff Fiegenschuh
City Manager - Rochelle, Illinois



Pat Brust
Director of Advanced Communications

Rochelle, Illinois

- Located at intersection of I-39 and I-88
- 60 Miles West of Chicago
- Population approximately 9,500
- 100 square miles – electric utility service area extends beyond corporate limits



History of Rochelle Municipal Utilities

- Established in 1896
- Power originally used for downtown street lights until demand increased to include power to homes
- 1897 First well drilled
- 1935 Sewer plant built
- 1996 Launched Communications Division
- Located at intersection of I-88 and I-39



Rochelle Business & Technology Park

- Established in 2005
- Home to two Fortune 500 Data Centers and Rochelle Technology Center
- Borrowed \$5Mil for Tech Center Construction
- 160 Acres
- Dual substations
- Multiple telecommunications providers
- Multiple fiber feeds to park



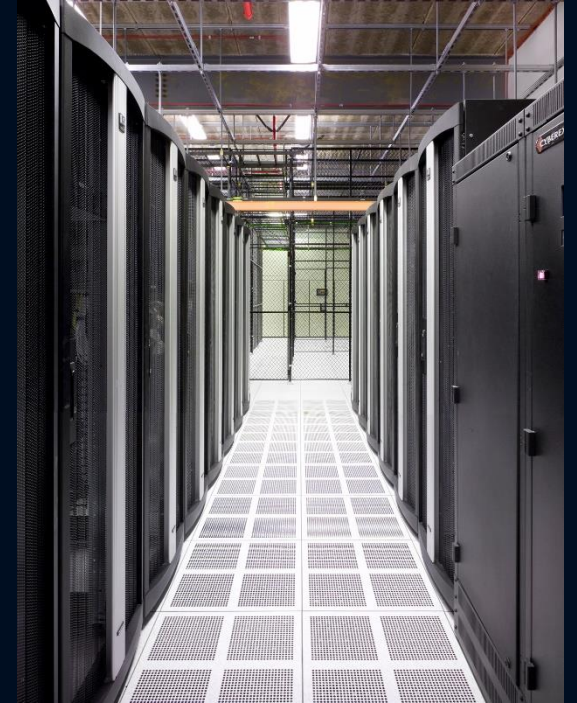
RMU Technology Center

- Co-location space available
- Connection to multiple telecom providers
- “Concrete bunker”
- City-owned infrastructure & support
- Positive cash flow
- Additional onside generation for backup power



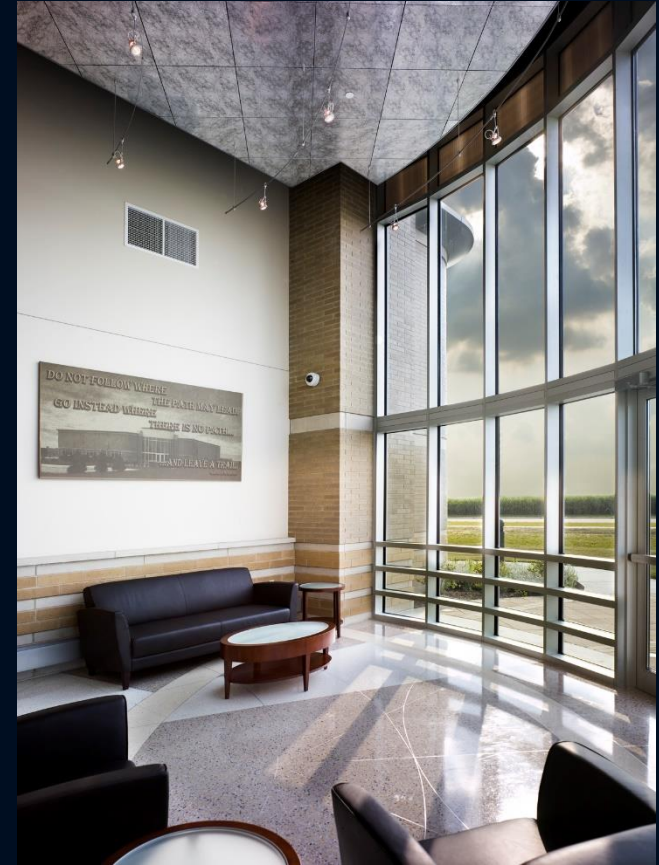
RMU Advanced Communications

- Created Internet Service Provider (ISP)
 - Dial-up internet
 - Wireless internet
 - Web hosting services
 - Fiber to businesses
 - VOIP phone service
 - Connected City/Utility facilities via fiber
 - Start-up \$1,000,000 interfund loan from Electric Dept.



Current Services

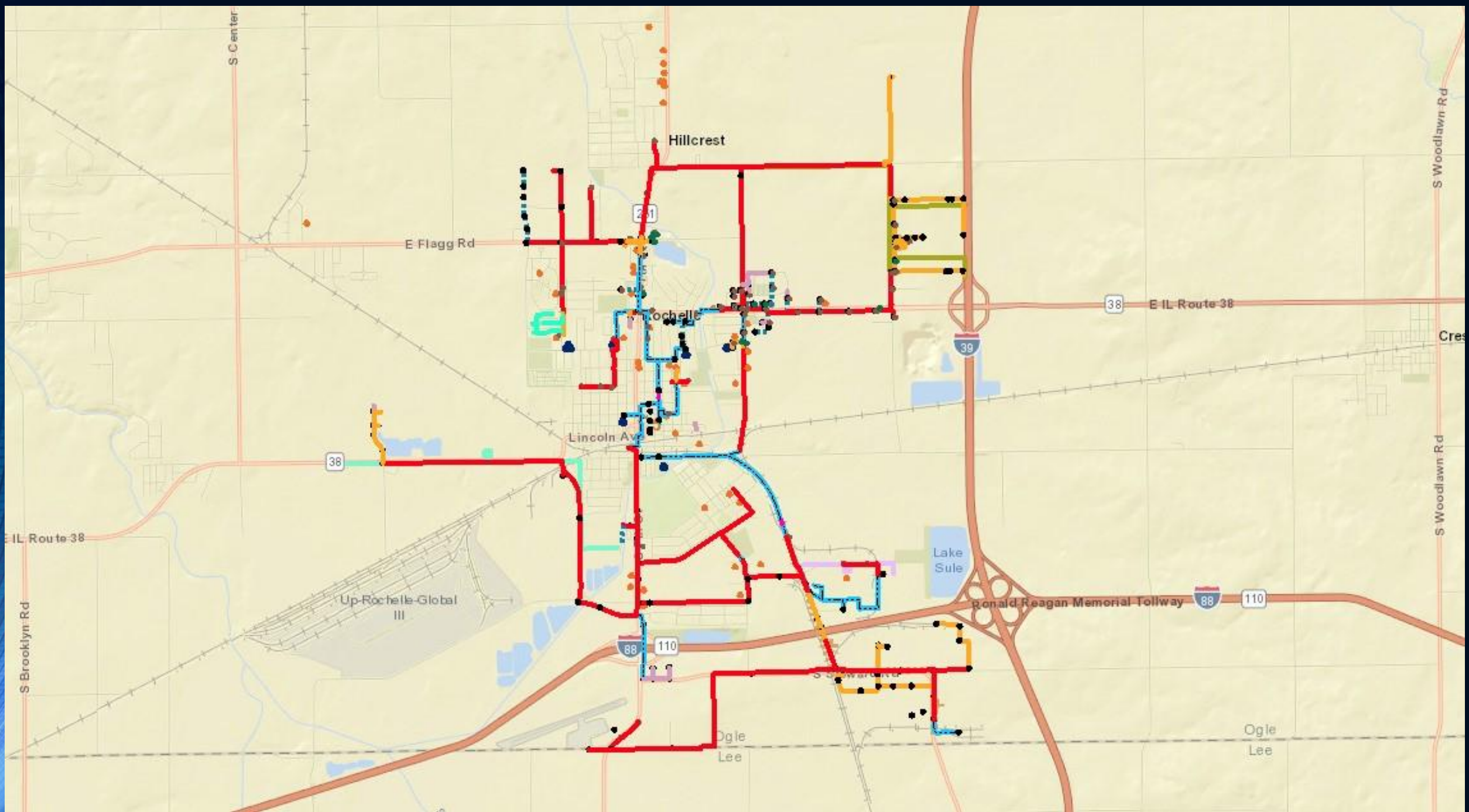
- Dark fiber – connection between two points
- Internet service to homes & businesses
- VOIP phone service
- Discontinued wireless service
- Co-location
- Free WiFi in multiple areas of town (pandemic)
- One of very few municipal internet service providers



Fiber in City Departments

- Water Department – SCADA System, Pumps, Wells, Towers
- Water Reclamation Department – Sewer & Lift Stations
- Electric – SCADA, Outage Management, Meter reading
- Police Department
- Fire Department
- City Hall
- Utility Billing
- Street Department
- Economic Development





The Future of Advanced Communications

- Fiber to the Home Pilot Project
 - Internal cost estimate for full implementation is several million; cost to run varies by location
 - Options include fully City-owned or partnership w/ provider
- Working with County on county-wide broadband initiative
- Exploring grant funding
- Documentation of system



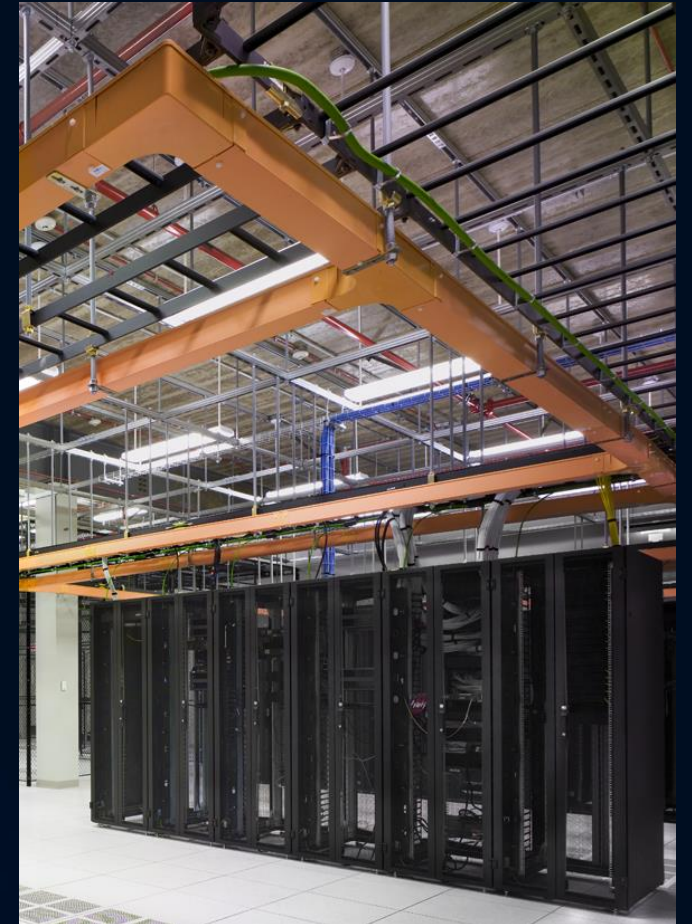
Fiber to the Home Pilot Project

- Small subdivision of 20 homes
- No alternate internet service
- Fiber already located nearby
- Cost of electronics less than \$100/home
- Placed by direct burial
- Cost to run fiber varies based on infrastructure – overhead, underground, easements, etc.
- Efficiencies with electric line crews running fiber
- Currently have on-call staff, will need 24/7 staffing



Benefits of Local Fiber-Optics

- Local support lowers response time
- Same tech every time
- No install charge with 2-year contract
- Cost based on need
- Flexibility based on need
- Electric department does splicing & running of fiber
- 10 mile x 10 mile service area
- Small neighboring towns could be pilot areas



Overcoming Challenges

- Negative fund balance in 2017
- Discussion of selling off communications utility
- Outdated equipment
- Inaccurate billing & contracts with customers
- No splice charts
- No documentation of fiber locations
total footage



Challenges of Local Fiber-Optics

- Small team
- Resources
- Funding
- Competition with investor-owned providers
- Political environment





Q&A