

Geocoding

Practical Applications Beyond Regulatory Compliance

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EPI Communications Consultants

Lubbock, Texas

- Strategic and Business Planning
- Telecommunications Network and Systems Design
- Telecommunications Mapping and Records Conversions
- Telecommunication Route Survey/ Construction Planning
- Right-of-Way Acquisition
- Construction Management Services
- Geographic Information Services (GIS)

What is geocoding?

- Geocoding is the process of transforming the description of a location, such as an address or a name of a place, to a location on the earth's surface.
- Your company has likely made a significant investment in developing geocoded data for current and potential service locations to satisfy HUBB requirements.
- When this information is combined with other geo-referenced data, you have a powerful tool to help face challenges quickly and economically.

Recap of Regulatory Requirements

USIC HUBB (New Reporting for Most as of 3/1/2018)

- The USAC HUBB report requires filing the latitude and longitude coordinates, with six (6) digit accuracy, for all locations where service is available. Various programs (A-CAM, CAF-BLS) required filing differing deployment data within different windows of time.
- Six (6) digit accuracy represents a spatial resolution of four (4) inches.

FCC 477 (Legacy Reporting)

- The FCC 477 report requires filing the maximum upstream / downstream bandwidth available to both consumers and businesses, as well as the technology of delivery, for each census block (CB) within the provider's serving area.
- Using HUBB data to update FCC 477 information can aid in filling in "gaps" in previous reporting.

Georeferenced Information

Your Facility Records (OSP , Access Equipment Sites, Serving Area Boundaries) – THE MOST VALUABLE

Political / Tax District Boundaries

Subdivision Plats

Commercial Databases (D&B Hoovers, etc.)

Satellite Imagery

Surface Responsibility Data

Topography / Geology Data

Watershed Data

Wetland Maps

Threatened and endangered species habitat locations

True or False?

Six (6) digit resolution (xxx.xxxxxx) in a GPS coordinate represents accuracy of within approximately one (1) meter

True

False

True or False?

False - Six (6) digit resolution (xxx.xxxxxx) in a GPS coordinate represents accuracy within approximately four (4) inches

Accuracy comes with a cost! Unless driven by a regulatory requirement, select an accuracy level that best fits your requirements. Normal handheld GPS accuracy is approximately ten (10) meters, or thirty three (33) feet.

How Can I Use This Information?

- Evaluate Data Graphically
- Operations
- Marketing
- Planning and Monitor/ Control
- Implementation Efficiency

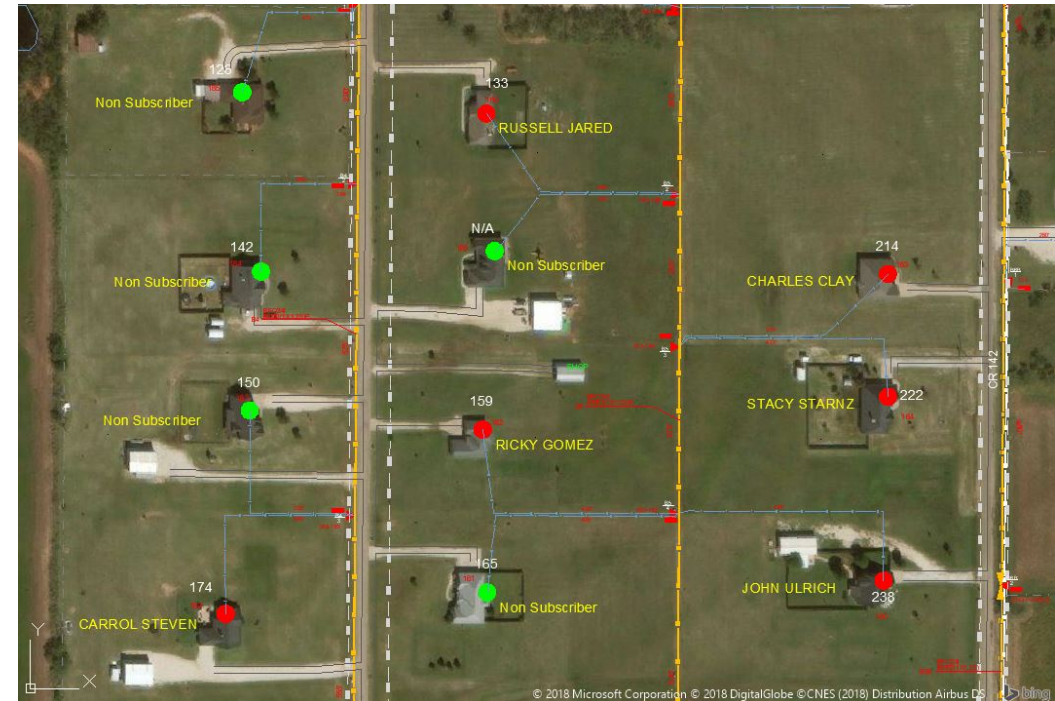
Data Evaluation

Customer Location and Facilities

THE DATA IN A SPREADSHEET.....

Customer Name	Fiber SA	House No.	Street Name	Fiber Route	Fiber Ped	Fiber Assign
Non Subscriber	RNCH	Unkonwn	FRY BLVD	B5	2	165
JOHN ULRICH	RNCH	238	CR 142	B5	4	160
Non Subscriber	RNCH	165	FRY BLVD	B5	4	161
RICKY GOMEZ	RNCH	159	FRY BLVD	B5	4	162
CHARLES CLAY	RNCH	214	CR 142	B5	3	163
STACY STARNZ	RNCH	222	CR 142	B5	3	164
RUSSELL JARED	RNCH	133	FRY BLVD	B5	2	166
CARROL STEVEN	RNCH	174	FRY BLVD	B4	3	182
Non Subscriber	RNCH	150	FRY BLVD	B4	3	183
Non Subscriber	RNCH	142	FRY BLVD	B4	2	184
Non Subscriber	RNCH	126	FRY BLVD	B4	1	185

THE SAME DATA GRAPHICALLY.....



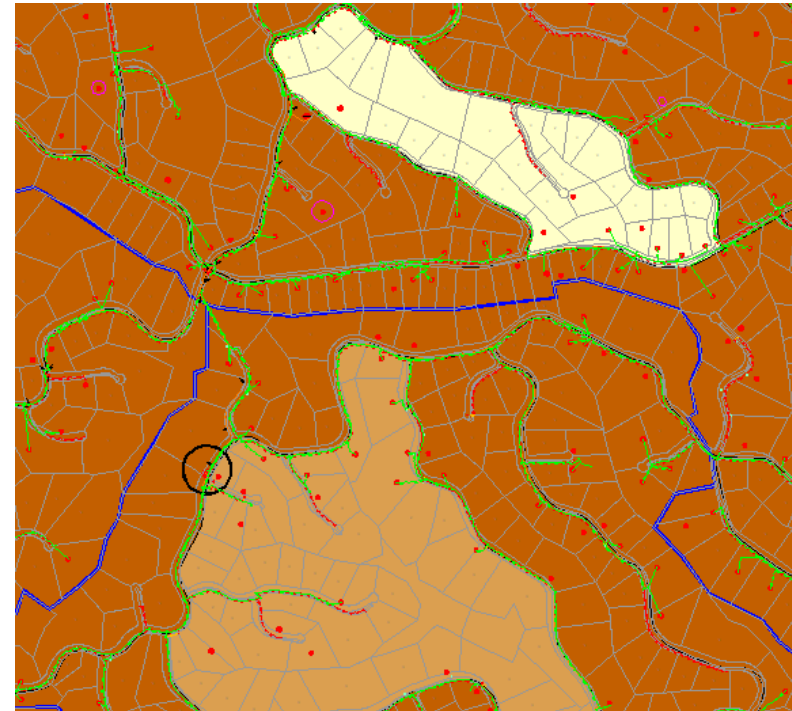
Data Evaluation

Census Blocks and Bandwidth

THE DATA IN A SPREADSHEET.....

Census Block	DBA Name	Tech Code	Consumer	Con Down	Con Up	Business	Bus Down	Bus Up
61385928357194	The Telephone Company	10	1	0.768	0.384	1	0.768	0.384
61385928357708	The Telephone Company	10	1	0.768	0.384	1	0.768	0.384
62145923356223	The Telephone Company	10	1	6	1	1	6	1
62145923356254	The Telephone Company	10	1	6	1	1	6	1
62145923356875	The Telephone Company	10	1	3	0.384	1	3	0.384
62145923356878	The Telephone Company	10	1	6	1	1	6	1
62145923356880	The Telephone Company	10	1	3	0.384	1	3	0.384
62145923356881	The Telephone Company	10	1	3	0.384	1	3	0.384
62145923356882	The Telephone Company	10	1	3	0.384	1	3	0.384
62145923356883	The Telephone Company	10	1	6	1	1	6	1
62145923356884	The Telephone Company	10	1	6	1	1	6	1
62145923356885	The Telephone Company	10	1	6	1	1	6	1
62145923356886	The Telephone Company	10	1	3	0.384	1	3	0.384
62145923356887	The Telephone Company	10	1	6	1	1	6	1
62145923356888	The Telephone Company	10	1	6	1	1	6	1
62145923356891	The Telephone Company	10	1	6	1	1	6	1
62145923356894	The Telephone Company	10	1	6	1	1	6	1
62145923356895	The Telephone Company	10	1	6	1	1	6	1

THE SAME DATA GRAPHICALLY.....



Operations Support

Account

Bobby W Bryant (20746-3)
1346 Oak Hill Rd
Valley View, TX

Services Info Nearby Facilities

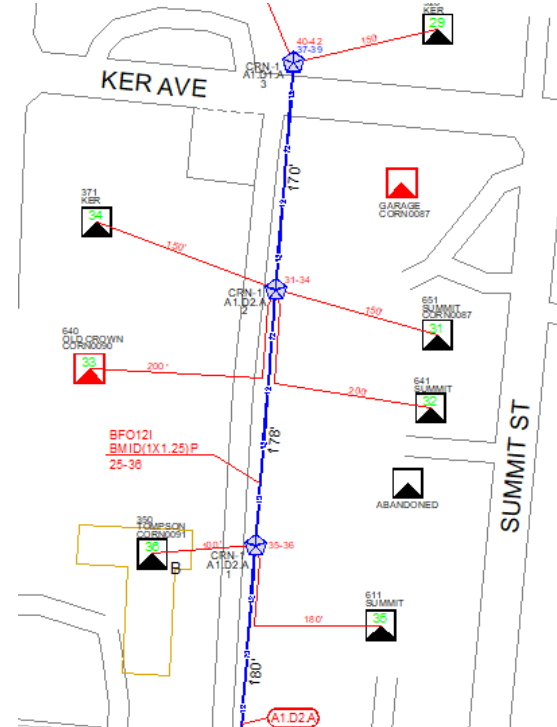
Facility 1

Remarks:

Fiber Strand
VE-F5=152
Service Area: VLVE
Remarks: N3-2-17-2-6

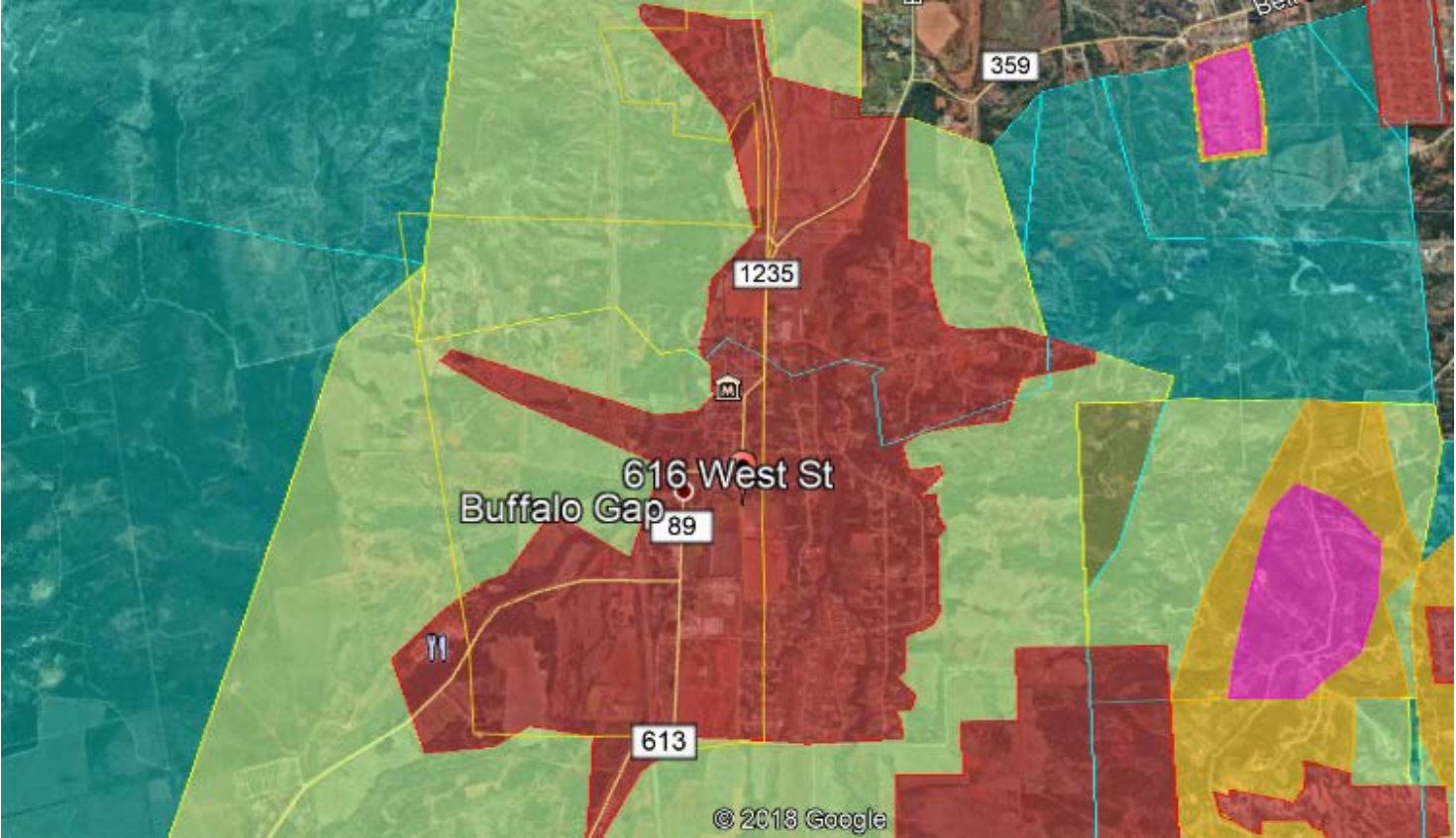
Calix E Series ONT
ONT CXNK0010C883
Service Area:
Remarks:
FSAN Serial Number: CXNK0010C883
H.248/MGCP IP: 192.168.19.19
IP Address:
Logical Ont ID: 4206
Registration ID:

Calix E Series Ethernet Port (ONT)
ONT CXNK0010C883 Gigabit Ethernet Port
Service Area:
Remarks:



subs	
"ACCOUNT Name"	Non-Sub Drop
"ADDRESS_Id (Legacy)"	
"Assigned Number"	None
"Blade Assignment"	
"Current DSLPlan"	
"Full Address"	371 KER
"House No"	371
"JUNCTION_Name (Legacy)"	2
"JUNCTION_Route (Legacy)"	A1D2A
"Ped/HH #"	2
"Port Assignment"	
"Revised House No"	
"Revised Street"	
"Revised Tag ID #"	
"Route No"	A1.D2.A
"Sub Assign (Fiber #)"	34
"Tag ID Number"	EPI017
"Verified Phone #"	
ADDRESS_CITY	
CSA	CRN-1
ID	6
NOTES	
STREET	KER
TYPE	

Marketing – CSR Tools



Planning

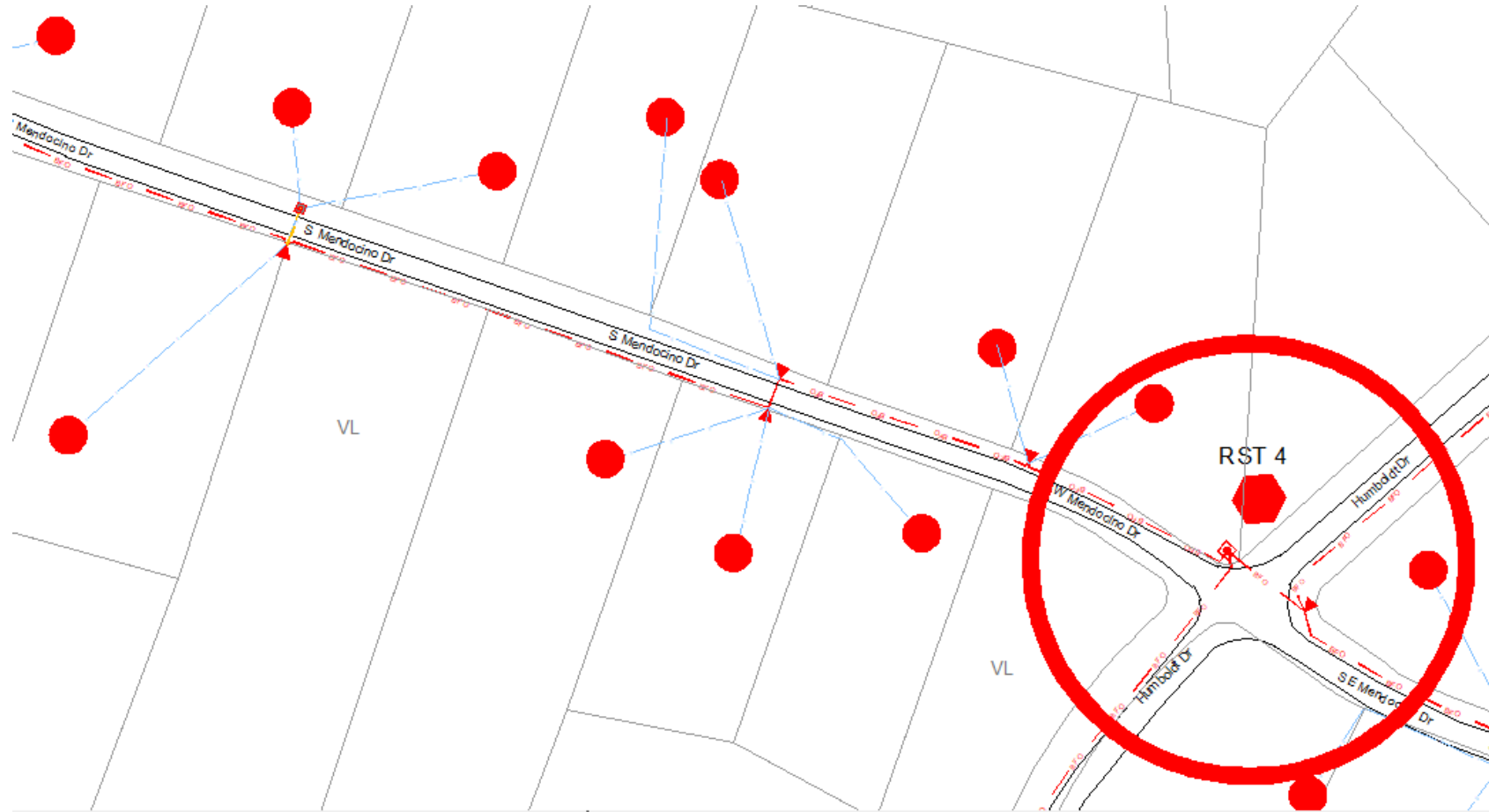
Efficient Preparation of Budgetary Designs

- Simplified layouts based on potential service locations
- Development of budgetary costs from historical models
- Be ready for funding opportunity

Targeting Upgrades for Maximum Impact

- Targeting funded areas (A-CAM Companies)
- Planning and Tracking Maximum Allowable Loop Limits (CAF-BLS Companies)
- Quickly Analyze Deployment Methodologies

Simplified Design Process



Development of Budgetary Costs

Identify Target Areas for Upgrade

- A-CAM
 - Identify areas with eligible passings
 - Prioritize based on maintenance needs, high growth areas, and lowest cost per eligible passing.
- CAF-BLS (Rate of Return)
 - Look as far into the future as possible to allow balancing low and high cost areas
 - Prioritize based on maintenance needs, high growth areas, and not exceeding the maximum allowable loop limit.
- Develop a Plan for Future Funding Opportunities
 - \$600M earmarked for rural broadband included in recent spending bill.
 - Could represent up to \$2B in loan/ grants
 - RUS is analyzing and will be providing guidance as soon as possible.

A-CAM Capex Forecast Workbook

CAF-BLS Capex Forecast Workbook

True or False?

Many data sources that could be of value to my company are free of charge.

True

False

True or False?

True – Many data sources are prepared by federal, state and local agencies for use by the public.

Implementation Efficiency

- Construction maps built upon preliminary design deliverables.
- Surface responsibility data can be used for preliminary path selection for planning or avoidance of state or federally managed lands
- Environmental data is used to address mitigation planning for T&E species, historic properties, and Storm Water Pollution Prevention Planning (SWPPP) requirements.
- New facility information is integrated with existing subscriber/passing data for records updates, cutover planning, and marketing activities.

In Summary...

- Geocoded data you created for HUBB reporting can be used for many other purposes.
- Other georeferenced data is available to you for little or no cost.
- The combination of the two is a powerful tool for operational and planning purposes.
- Information developed for planning tasks can form the basis for detailed engineering tasks. Nothing is wasted!

Questions?

For Further Information....

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