

Credit Based Exchange For Utility Information

Request For Data Release

- Currently The Surveyors don't have access to the utilities information. This proposal outlines a system where the data can be accessed, but not released to the surveying community

What we suspect BC One Does

- Data is passed to the company who has assets in the area
- The company sends out somebody to physically locate their assets
- This could cause the initiating organization to become the organization who needs to find the asset

BC One Problems

- No information is visible from the website to the public or through the members login
- Only web service is to verify submitted data before it is processed

Reasons for Land Surveying Wanting The Data

- Our field staff need to know “roughly” where lines and cables exist so they can find it
 - During winter months signs and posts can be covered
 - Pipe Locators do not find fiber optic cable very easily

Economic Reasons For Data Exchange

- The cost of BC One Service workers to process our requests
 - Phone
 - Administration
 - Possibly sending out field staff

Costs Of Mistakes

- Service interruptions to your customers
- Overtime pay and materials to fix line interruptions
- Possible injury to workers

Efficiency Reasons

- Having an automated process will eliminate processing and administration
- Feedback will be instant
- Avoid multi-company communications

Current Problems

- Trust
- Payback

Technical Outline

- Phase 1
 - Create a SOAP service that utilizes .NET and ArcObjects technology using a binary data and a token for retrieving and submitting data
- Phase 2
 - Create a webpage for this service

One Phase Vs Two Phase

- Writing a web service first will allow people who have developers to integrate it into in-house applications or their own internal web sites
- The technology is more portable and less susceptible to requirements change

Terminology

- Client – User, Land Surveying Company, Interested Party
- Server – The infrastructure that supports the service provided by ICIS. This is where the data is housed

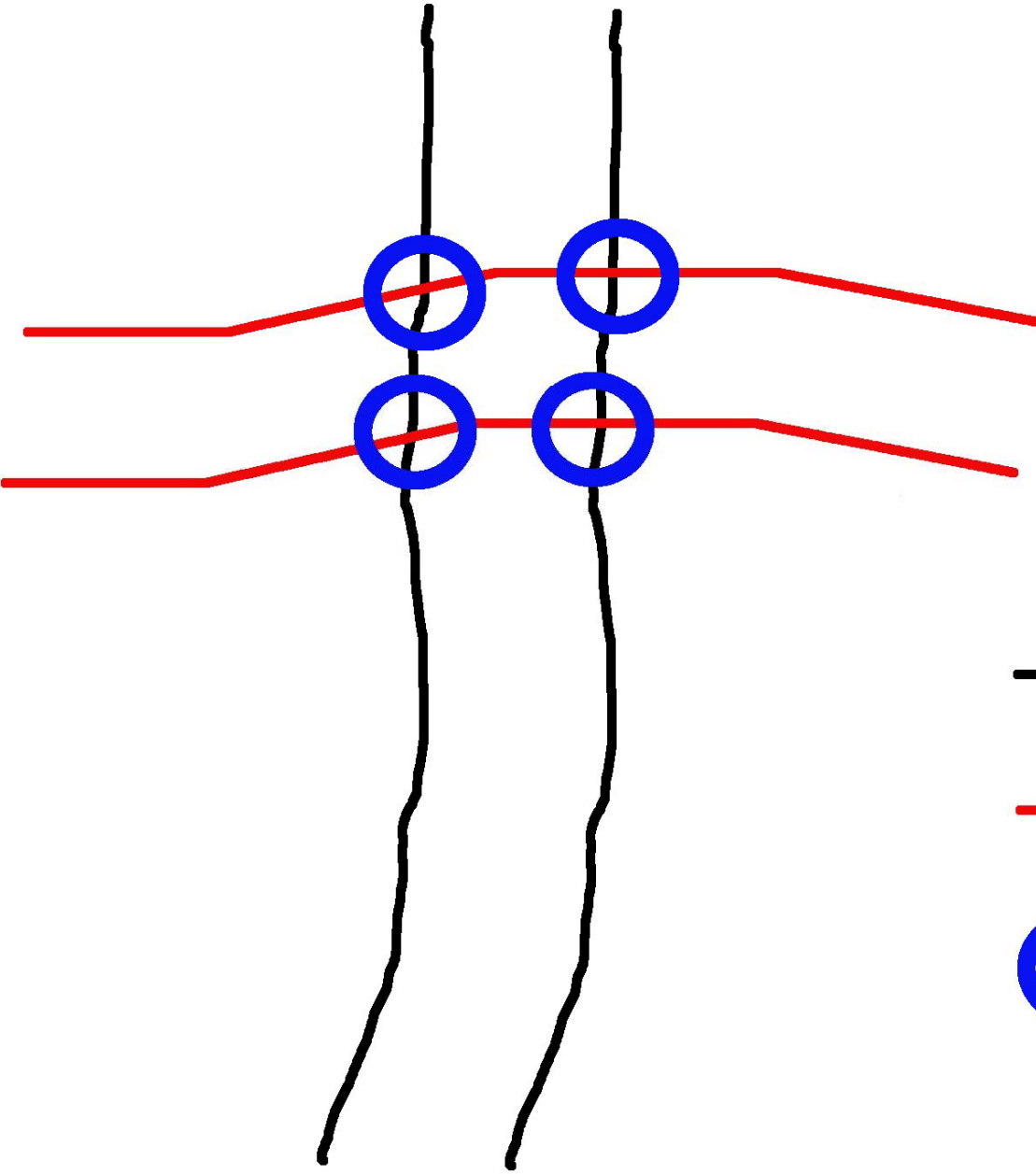
Trust Mitigation 1

- The client will not have access to the data except for this service



Client Uploads Request

- The client will create a shape file and submit it to the service
- The service will then calculate intersections of that shape file

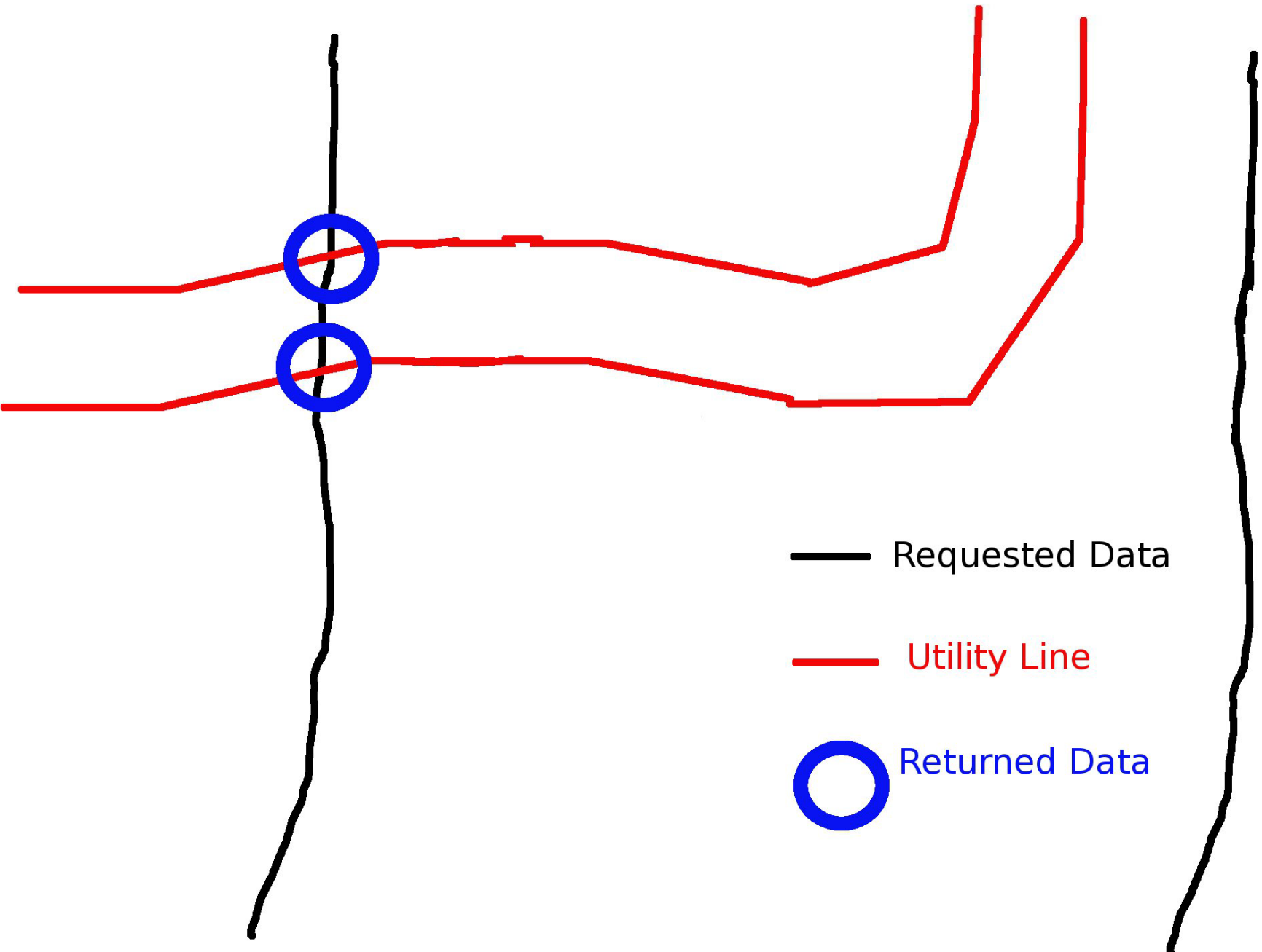


— Requested Data

— Utility Line

○ Returned Data

What would stop a
person from
selecting a large
area?



— Requested Data

— Utility Line

○ Returned Data

Trust Mitigation 2

- Clients are unable to get all of the data in one request

Additional Measures

- Limits will be set by “someone” on width and length of acceptable submit

Credit Based System

- “Token” - the identity of the user, implies username, password
- The server keeps track of credits
- Each time a token is used in retrieving data through the service credits are used up

Trust Mitigation 3

- Client is unable to process request after request and “farm” the data out
- Similar to the limiting factors imposed by BC One

Credit Generation

- Initial Setup Credit will be determined by “someone”
- All credits need to be earned

Earning Credits

- Credits are earned by taking the data downloaded. Surveying it and uploading back to the system.
- Credit earning ratio will be adjusted as needed, but will be close to 1:1

Payback

- Verified and accurate data uploaded to the system at no cost

Website (Phase 2)

- With the web service in place a technology can be chosen so all ICIS member who don't have access to developers can access the service
- This web service will be compatible with all rich internet application such as Flash and Silverlight

Collaborated Development Initiative

- Coders from the ICIS community will be joining together on initiatives like this one to develop tools and services for the betterment of the community

Advantages

- Developers influence project selection
- Collaborative Bonuses
 - Gaining of skills
 - Measurement of competency
 - Peer learning

People Were Invited but

Nobody came...



Development Side Effects

- A template will be created for other web services
- This project could be easily tweaked and duplicated to serve other purposes
- Template for learning

Questions