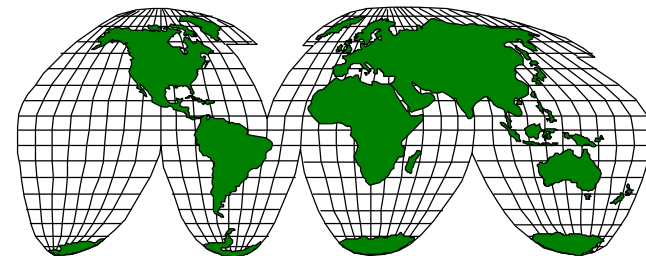




URISA BC TELUS Geomatics Web Based GIS

Grant Berry



**“Harnessing the Power of
Where”**



Presentation Agenda

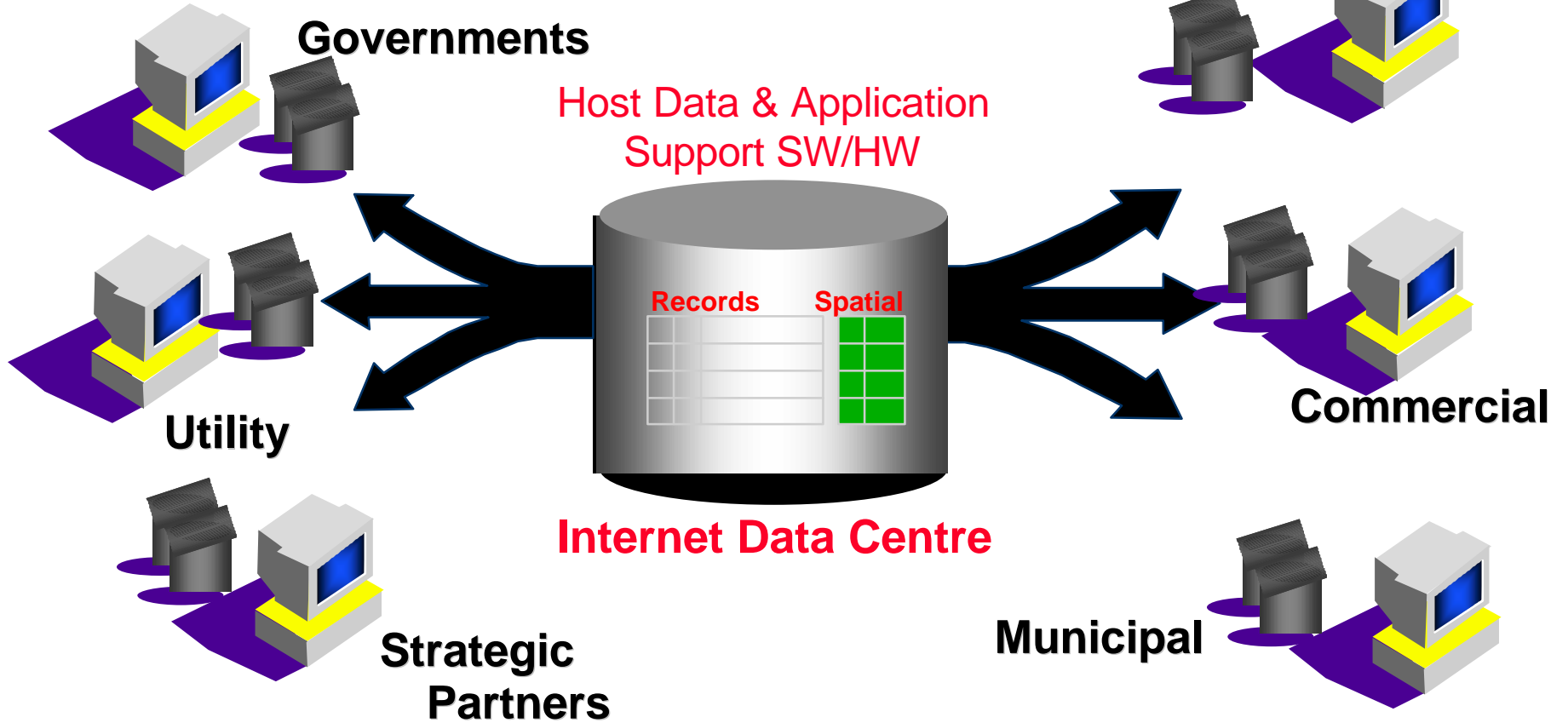
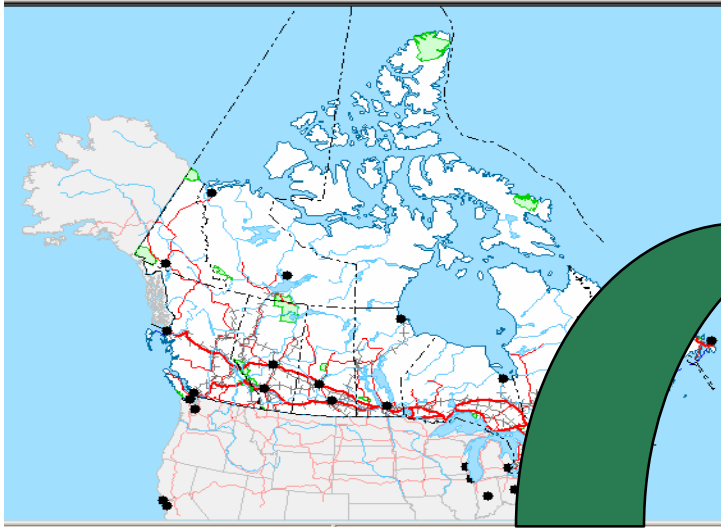
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- ✓ Overview of a Web Based Managed GIS
- ✓ Municipal Applications Overview
 - Automated Vehicle Location
 - Emergency Management
- ✓ Questions & Wrap-up

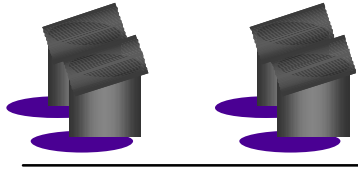
What is a Web Based GIS?

- ✓ **Fully Managed Service** - Hosts, manages & deploys access to application(s) to multiple parties from centrally managed facilities
- ✓ The applications are delivered over the Internet on a monthly subscription basis
- ✓ This delivery model speeds implementation, minimizes the expenses and risks incurred across the application life cycle
- ✓ overcomes the chronic shortage of qualified technical personnel available in-house

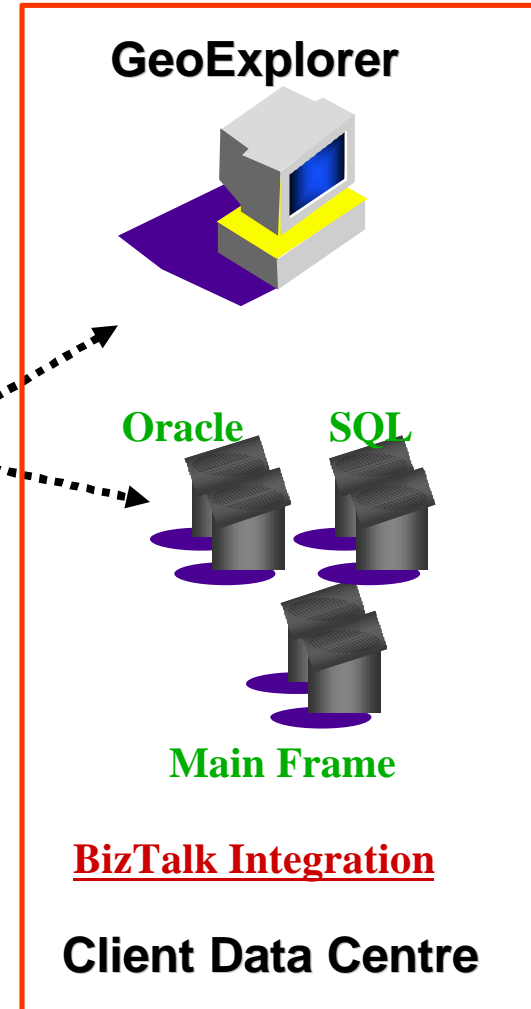
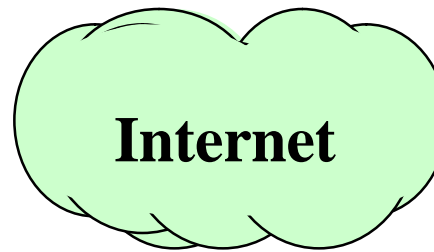
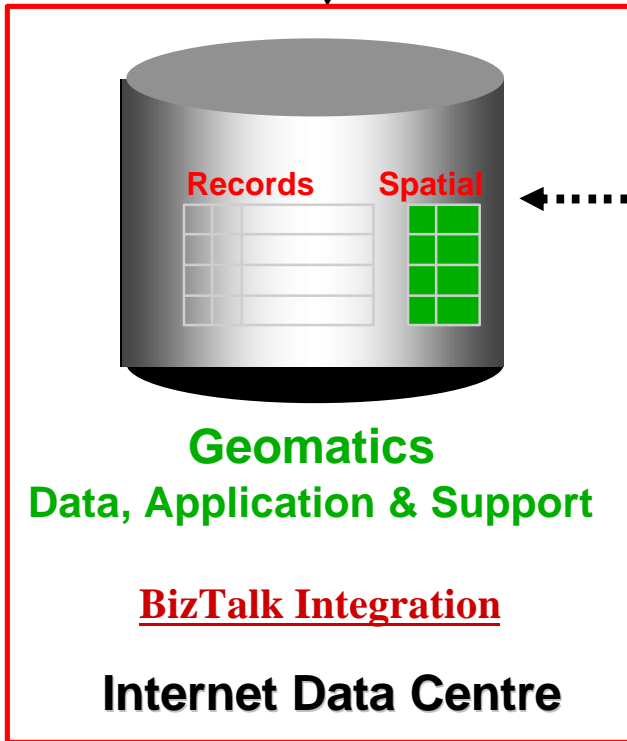
Fully Managed Model



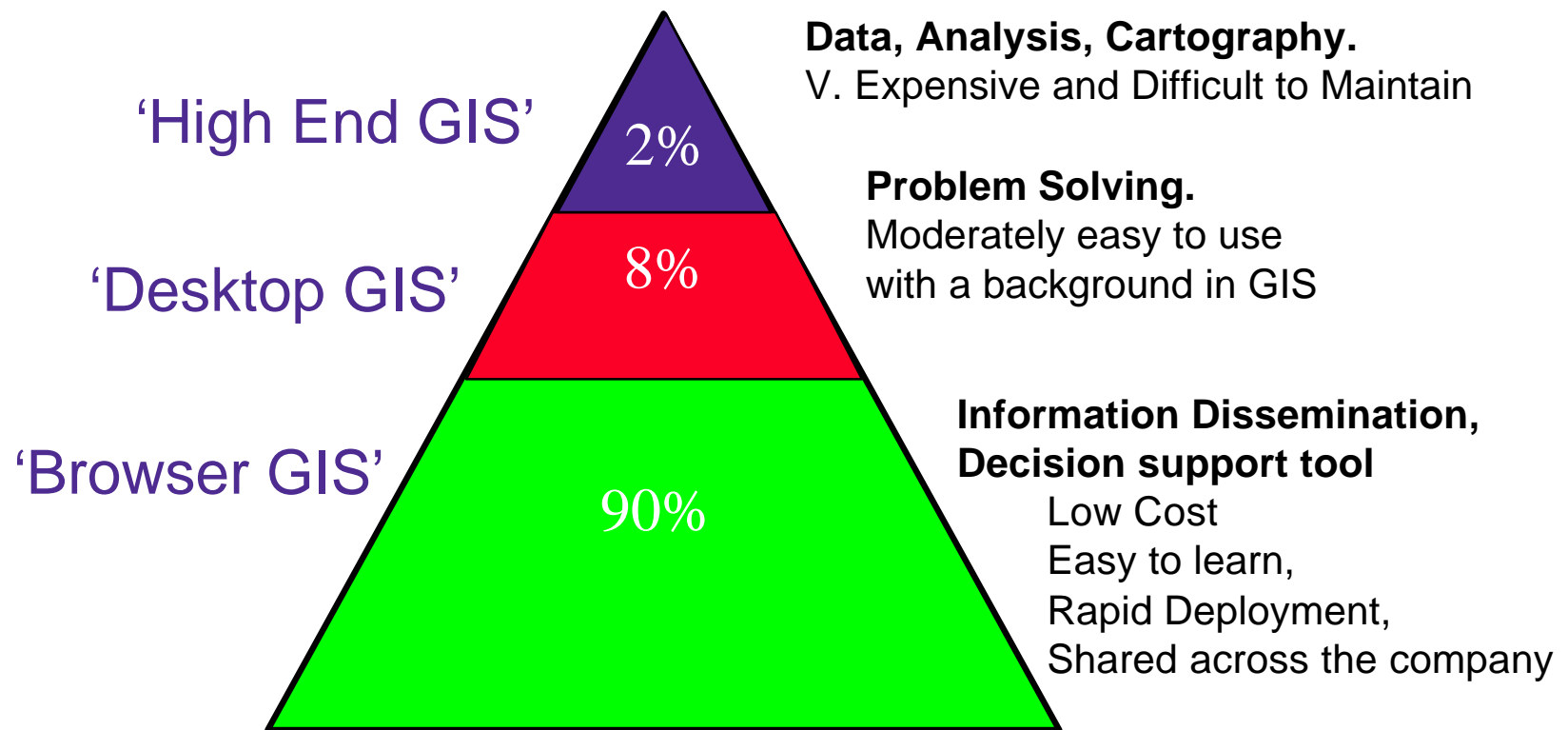
Integrated Model MS Biz Talk



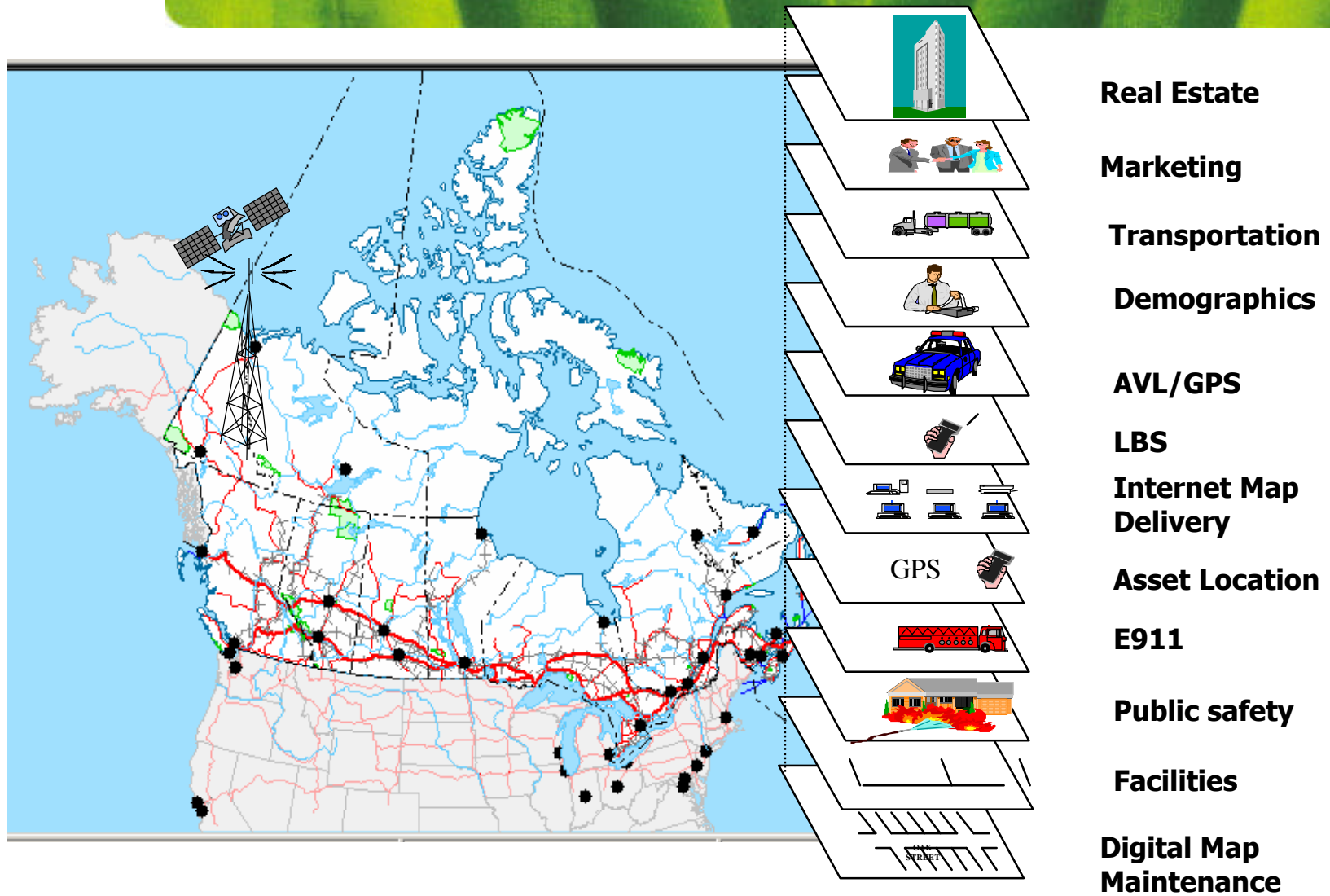
Strategic Partners



Satisfies the biggest number of users



Web Based GIS Applications



Web Managed GIS - Value Proposition

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- ✓ Lower Total Cost of Ownership - minimum investment in SW/HW/data/resources
- ✓ Allows companies to focus on their core business
- ✓ Internet Data Centre (IDC) – secure infrastructure
- ✓ Rapid Deployment – leverage from past development
- ✓ Real time information shared across the enterprise
- ✓ Benefit from strategic business partners (data layers)
- ✓ Leverage technology skills where a client may not have the required expertise

One Product across Many Markets

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GeoExplorer Core Application

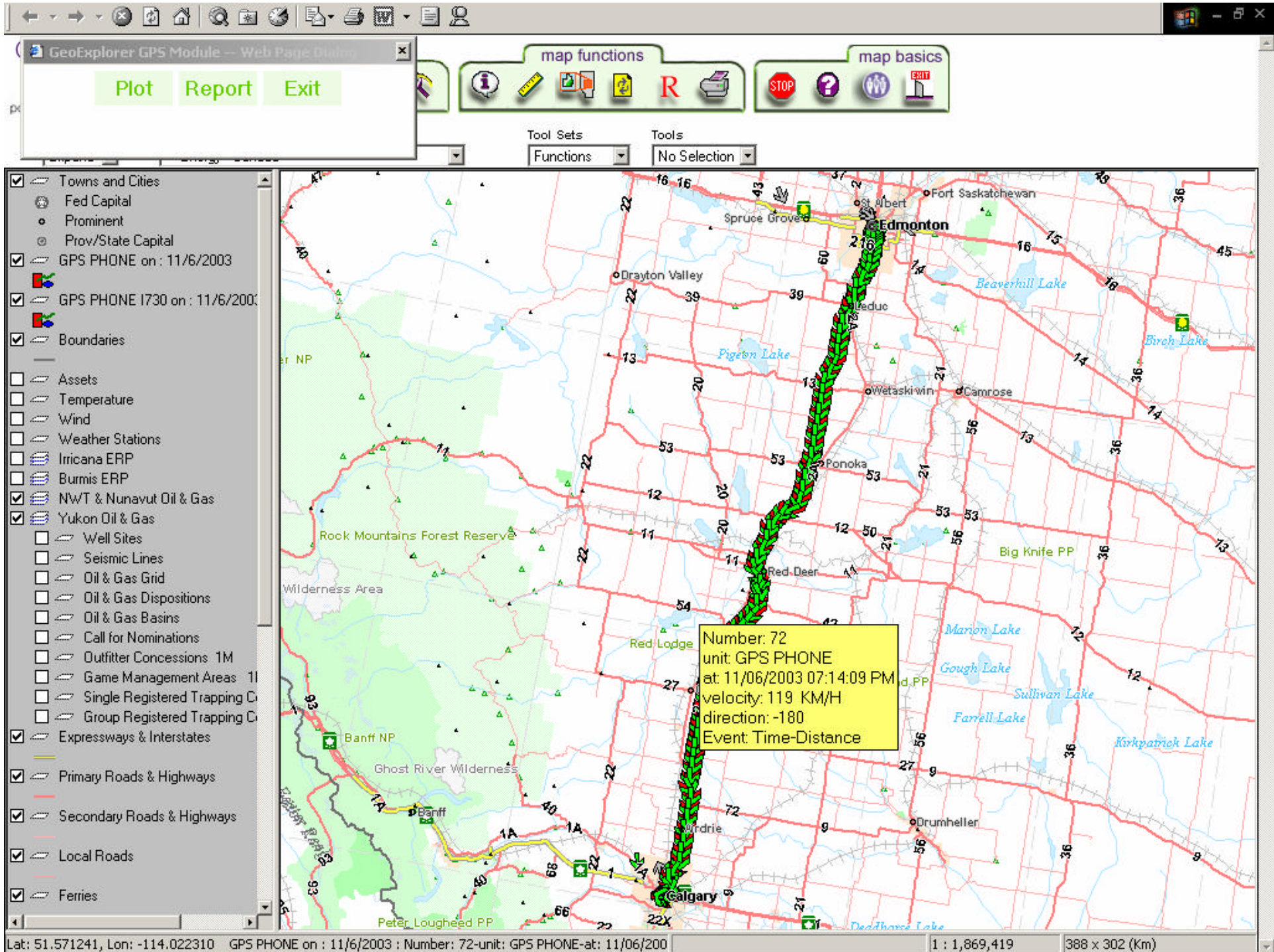
- ✓ Automated Vehicle Location (*AVL/GPS*)
- ✓ Emergency Management - Interactive Voice Response (*IVR*)
- ✓ Public Web Mapping
- ✓ Business Demographics - Demographic Analysis
- ✓ Asset Management (*Infrastructure & Queries*)
- ✓ Utility

Automated Vehicle Location

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Service Description

- ✓ AVL is the convergence of Global Positioning Systems (GPS), Geographic Information Systems (GIS), Wireless and Web technologies.
- ✓ AVL provides real time and historical fleet monitoring that enables businesses of all sectors to quickly view, query, report and react to evolving business dynamics.



Plot Report Exit

map functions

map basics

Tool Sets: Functions Tools: No Selection

- Towns and Cities
- Fed Capital
- Prominent
- Prov/State Capital
- GPS PHONE on : 11/6/2003
- GPS PHONE I730 on : 11/6/2003
- Boundaries
- Assets
- Temperature
- Wind
- Weather Stations
- Irricana ERP
- Burnis ERP
- NWT & Nunavut Oil & Gas
- Yukon Oil & Gas
- Well Sites
- Seismic Lines
- Oil & Gas Grid
- Oil & Gas Dispositions
- Oil & Gas Basins
- Call for Nominations
- Outfitter Concessions 1M
- Game Management Areas 1M
- Single Registered Trapping C
- Group Registered Trapping C
- Expressways & Interstates
- Primary Roads & Highways
- Secondary Roads & Highways
- Local Roads
- Ferries

Lat: 51.571241, Lon: -114.022310 GPS PHONE on : 11/6/2003 : Number: 72-unit: GPS PHONE-at: 11/06/2003 1 : 1,869,419 388 x 302 (Km)

More than just AVL

✓ GeoExplorer Application

- Integrated with Mike Handset, iDEN, CDMA & Satellite Networks (MSAT)

✓ Asset Monitoring & Routing

- real time, capture status changes, sensors/switches, speed, events, door open/closed, history (event reconstruction)

✓ Generating Queries & Reports

- speed, schedule adherence, vehicle utilization (idle time, distance, alarms, waiting), audit record of activity

✓ Employee Safety

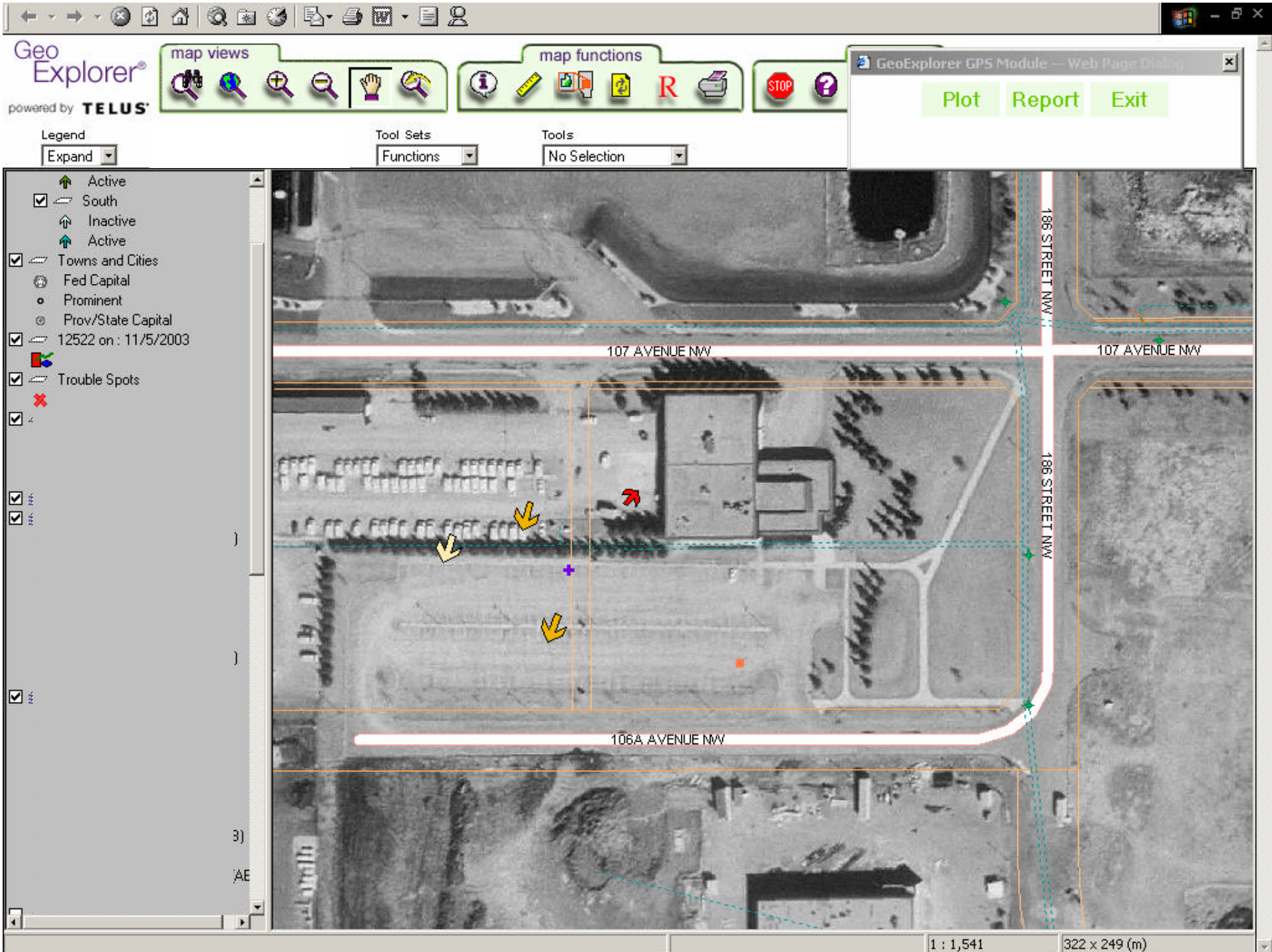
- 2-way communications between field and control centre

AVL Modules

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The current AVL Modules include,

- ✓ TELUS Tracker – core AVL tracking
- ✓ TELUS Action Tracker – New Mike GPS handsets
- ✓ TELUS Productivity Reporting – Detailed analysis
- ✓ TELUS Field Safety – employee safety (workalone)
- ✓ TELUS Fleet Monitoring (OBD)– reduce maintenance costs
- ✓ TELUS Road Maintenance – spreaders, plow up/down

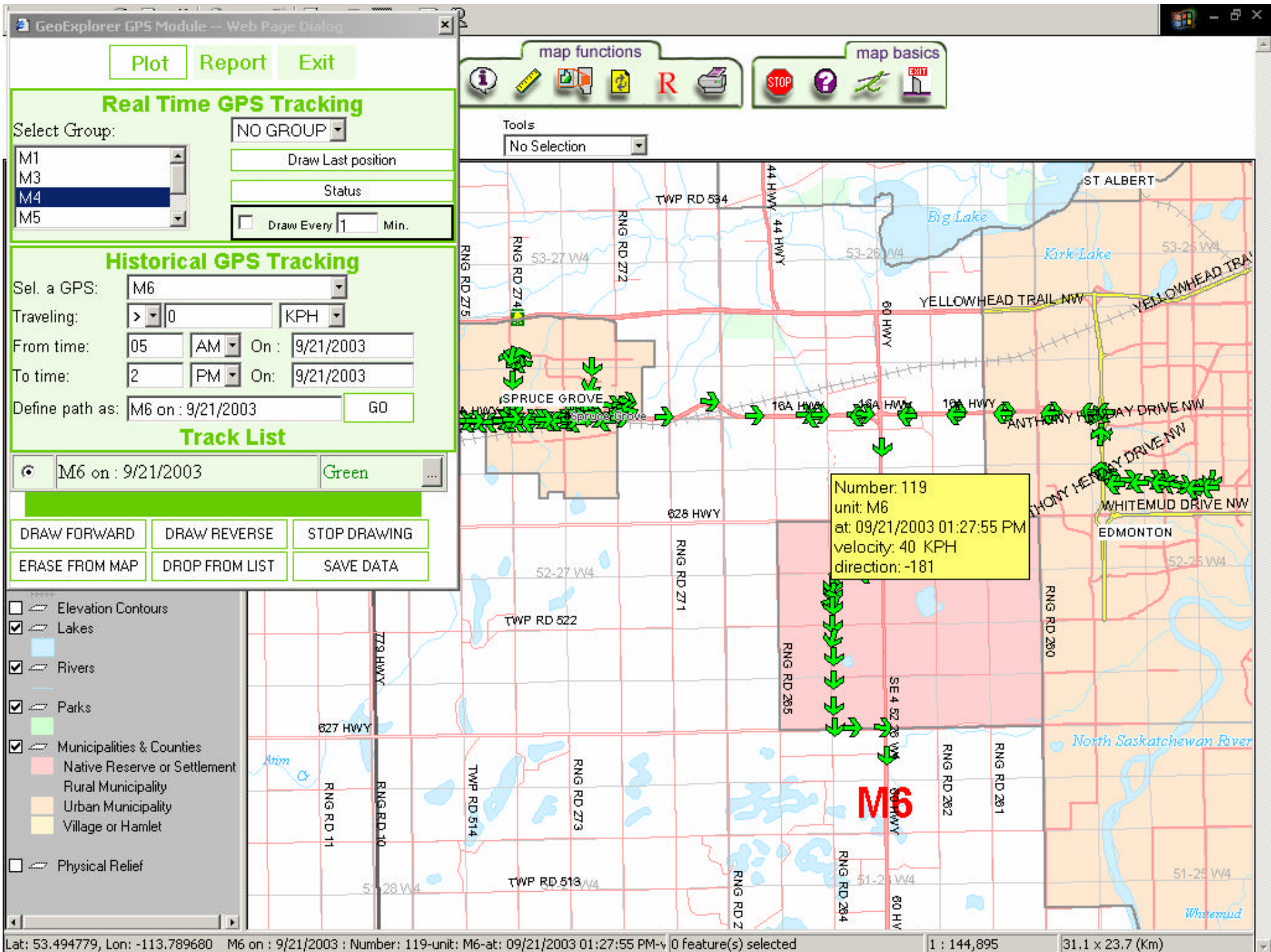


TELUS Geomatics AVL Roadmap

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The vision builds on improvements in technology, wireless capabilities and client acceptance,

- ✓ Core base of value added AVL Modules
- ✓ Text messaging and in-vehicle devices
- ✓ Dispatch and routing integration
- ✓ Capturing engine diagnostics
- ✓ Mobile computing and back office communications
- ✓ In-vehicle web forms and integrated applications



AVL Hardware

The Following are examples of current devices in use

TechnoCom Integrated LMU (iDEN and 1xRTT)



TechnoCom Tethered iDEN Unit



PDT100 Satellite Unit



More AVL Hardware

Micronet NET 960 In-Vehicle Terminal



Laptop/PDA Support Via iDEN or 1xRTT Modem



New GPS Enabled Handsets



Key Client Experiences

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By working closely with all clients, new and innovative enhancements to the overall AVL application are continuously realized

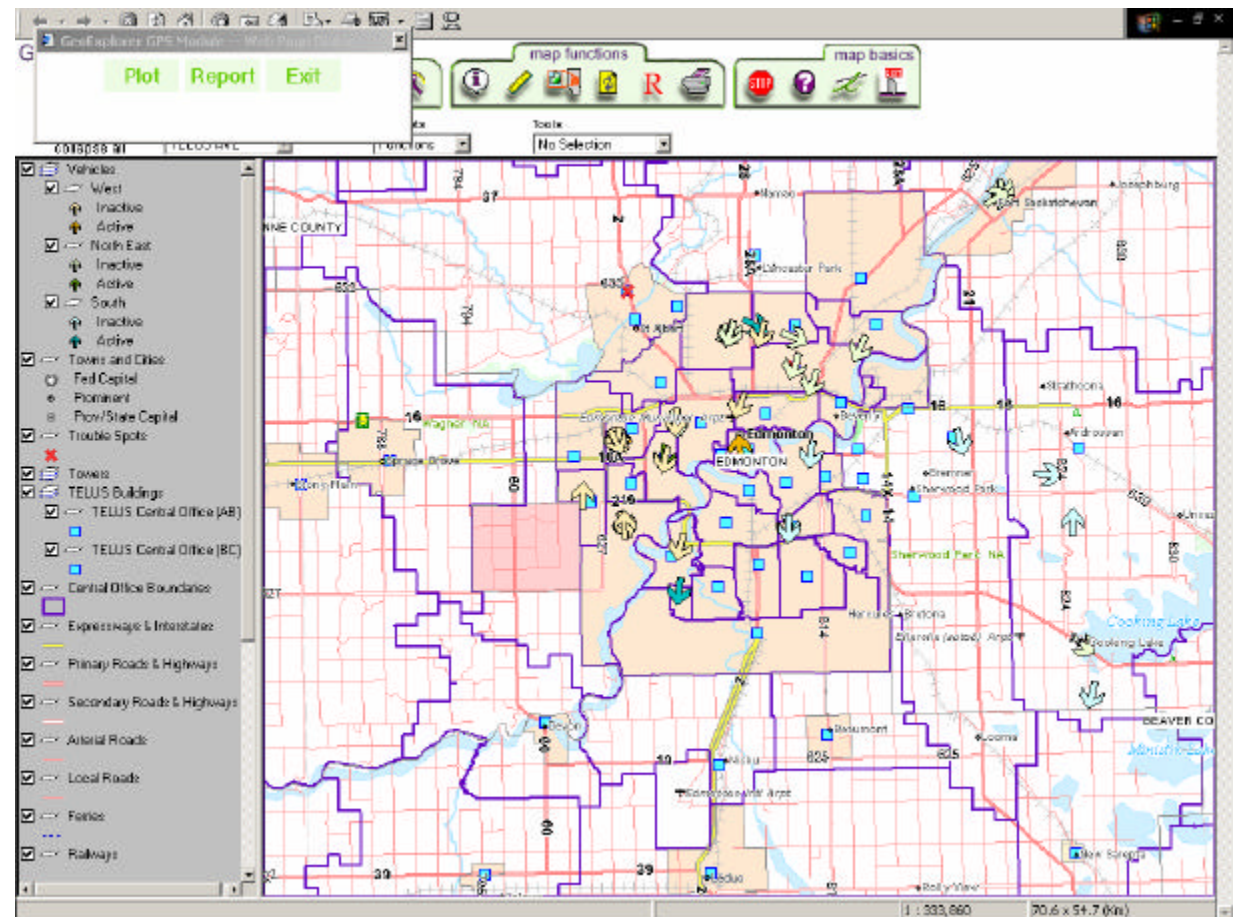
This process benefits all system users, as improvements are rolled out to the entire base of users with each new release

Only by partnering with clients, embracing their issues as our issues do we truly build the best possible solutions

Examples - Large Municipalities

The City of Edmonton has a range of application needs,

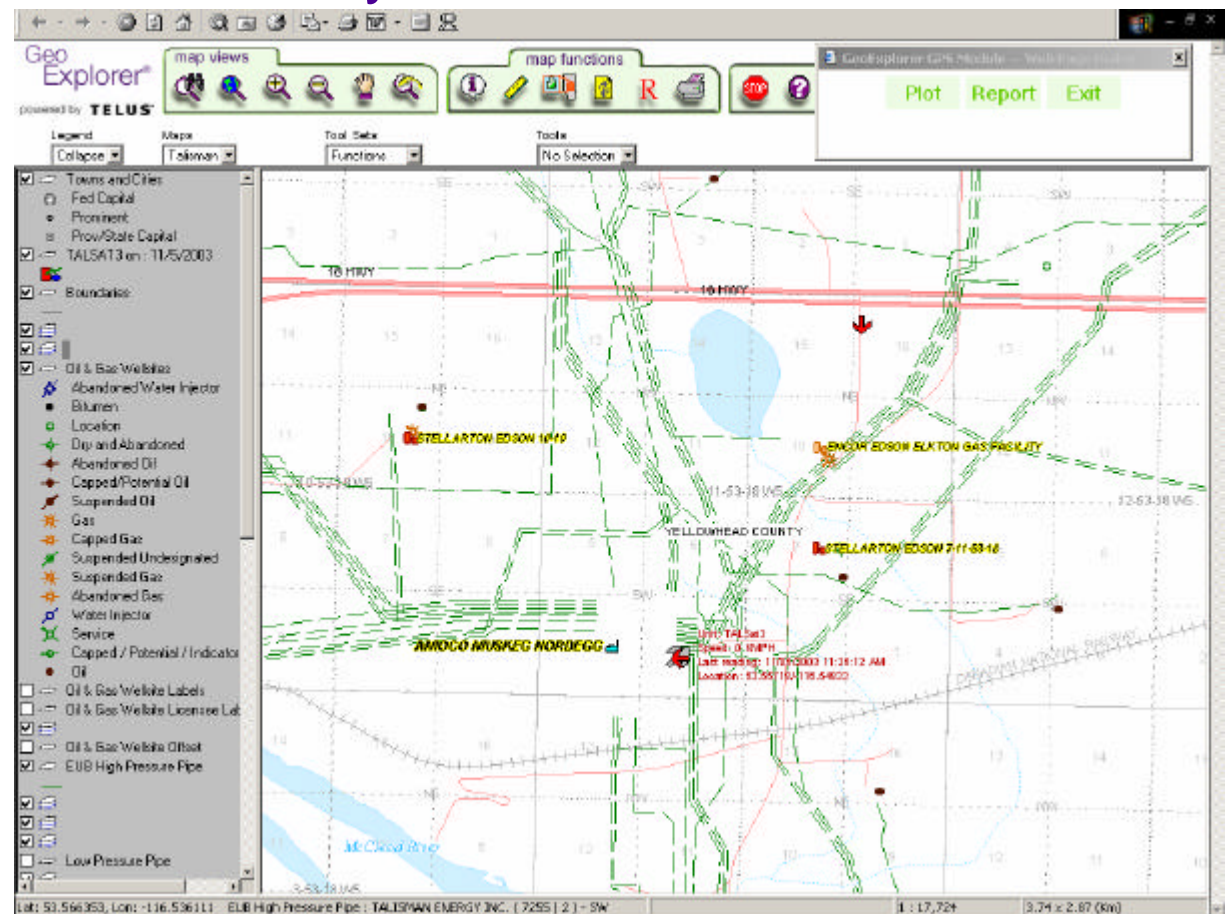
- ✓ Road Maintenance
- ✓ Contractor tracking
- ✓ Drainage units
- ✓ Mobile office
- ✓ Patrol vehicles
- ✓ Critical areas
- ✓ Work order timing



Examples – Oil and Gas

Talisman Energy and Pason Systems Inc.

- ✓ Employee safety
- ✓ Remote locations
- ✓ Across provinces
- ✓ High data volumes
- ✓ Detailed mapping
- ✓ In-vehicle devices
- ✓ Mobile office
- ✓ Satellite, 1x, MiKE
- ✓ Heavy reliance



Return On Investment Variables

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- ✓ Increase safety to employees
- ✓ Measure increased productivity/efficiency
- ✓ Measure increased revenue
- ✓ Measure decreased costs
- ✓ Assess competitive advantage due to increased customer service

AVL ROI



Company Overview

Service company that works in the utility business. Objective of AVL includes performance management, vehicle utilization & reduced downtime due to lost drivers

Solution

Install 40 units in trucks, and provide GeoExplorer application

Cost (1 year)

$40 \times \$2000 = \$80k$ (one time fee)

$40 \times \$120/\text{mos} \times 12 = \$57,600$

Total Cost = \$137,600

Savings (1 year)

7-10% reduction in OT (based on Salary \$200k/mos) = \$12-20k/mos

Fuel Savings (idle time) \$50/mos/vehicle x 40 = \$2000/mos

Saved time to direct drivers (lost crew) 3% of payroll - \$6000/mos

10% reduction in cell usage (40 x \$100/mos) x 10% = \$400/mos

Reduction in Divestco oil & gas data (GeoExplorer) - \$200/mos

Total Savings = \$20,600/mos x 12 = \$247,200-\$343,200

6 mos ROI

Emergency Management

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Service Description

- Fully integrated web based Geographic Information System and Interactive Voice Response to support client needs in emergency situations – Public Safety.

Functions

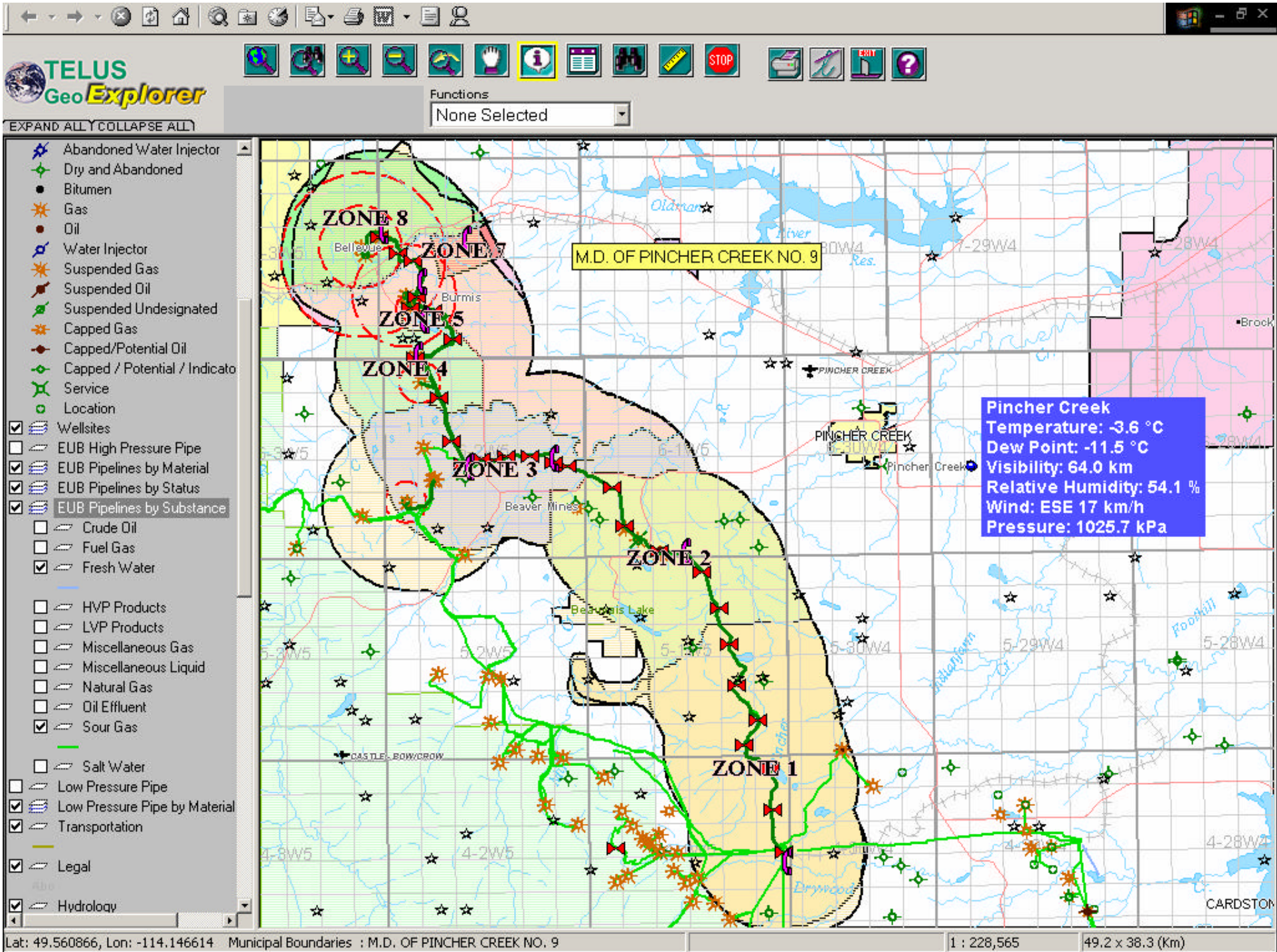
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- ✓ Fully managed, hosted solution.
- ✓ Available around the clock.
- ✓ Flexible, easy to use application.
- ✓ Access up-to-date, maintained geographic data using a high-end, scalable GIS over the internet.
- ✓ Pre-recorded or live, on-the-fly voice messages.
- ✓ Provide increased call capacity with TELUS' multiple simultaneous outbound calling capabilities.
- ✓ Call status reports available online.

Value Proposition

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- ✓ Increase Public Safety
- ✓ Meets regulatory requirements
- ✓ Fully integrated/redundant & secure environment
- ✓ Ability to deliver a high volume of calls
- ✓ Reduce employee and responder standby time and operational costs required for emergency notification
- ✓ Provides micro to macro view of area
- ✓ Integration with other GeoExplorer modules (AVL, Asset Manager)





[contact details](#)

[address details](#)

[business/school details](#)

[notification details](#)

Contact Details

First Name:

Last Name:

Date Of Birth:

Gender: Male Female

Family Role:

Home Owner:

Primary Contact:

[Save Changes](#)

[contact details](#)[address details](#)[business/school details](#)[notification details](#)

Address Details

HOME ADDRESS

Street Number:

Street Number Suffix:

Street Prefix:

Street Name:

Street Type:

Street Suffix:

City:

Province:

Postal Code:

MAILING ADDRESS

Same As Home :

PO Box Number:

Street Number:

Street Number Suffix:

Street Prefix:

Street Name:

Street Type:

Street Suffix:



contact details



ERP info



location info

contact details

address details

busir

notification details

Business/School Details

Title:

Business/School Name:

PO Box:

Street Number:

Street Number Suffix:

Street Prefix:

Street Name:

Street Type:

Street Suffix:

City:

Province:

Postal Code:

[Save Changes](#)

Emergency Management Case Study

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Northeast Region Community Awareness and Emergency Response Association – NR CAER

Business Requirements

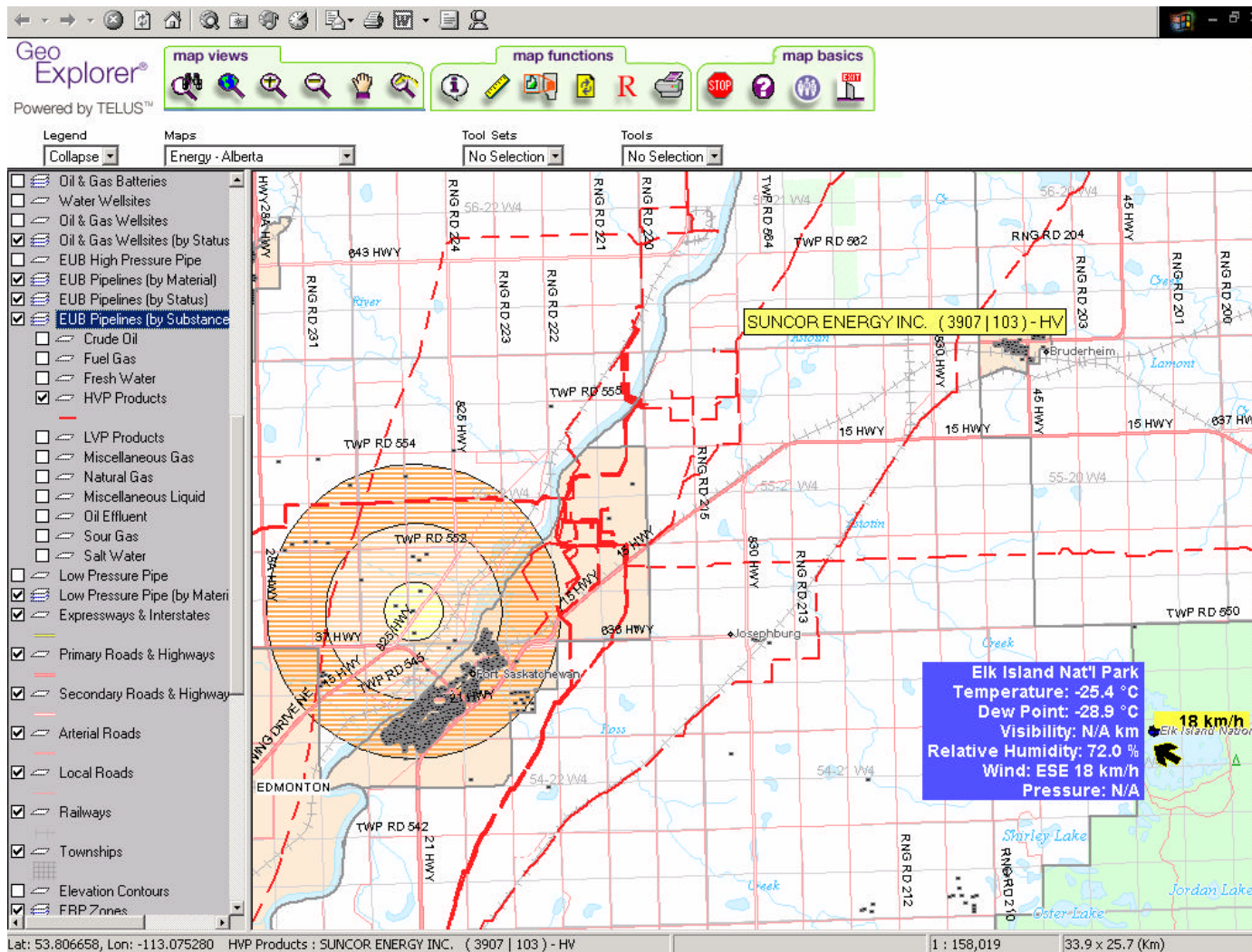
NRCAER is a 45 member association that promotes the cooperation of industry, government agencies and communities with respect to Emergency Management in the Fort Saskatchewan area. The association requires the following:

- ✓ Geographic mapping, including up to date resident information and data storage.
- ✓ Access to multiple users at different locations.
- ✓ Ability to notify the approximately 10,000 residents and internal staff when a potential incident occurs (minimum 1500 calls/hour).

Solution

- ✓ 15 seats of GeoExplorer to access geographic data and manage contact information
- ✓ IVR application (96 ports shared inbound/outbound)
- ✓ TELUS long distance services and 1-800 line to facilitate voice recording of emergency messages through IVR
- ✓ Member companies have access to additional services and modules for areas outside the NRCAER region. For example, Asset Management, Vehicle Tracking, enterprise-wide Emergency Management.

Emergency Management



Emergency Management Case Study

Town of Peace River

Customer Challenge

- The town is located in the flood plain of the Peace River, and has experienced past flooding of businesses, residents and roadways. Past methods of evacuation using media such as local radio and television were attempted, but they were ineffective due to the poor communications and response.

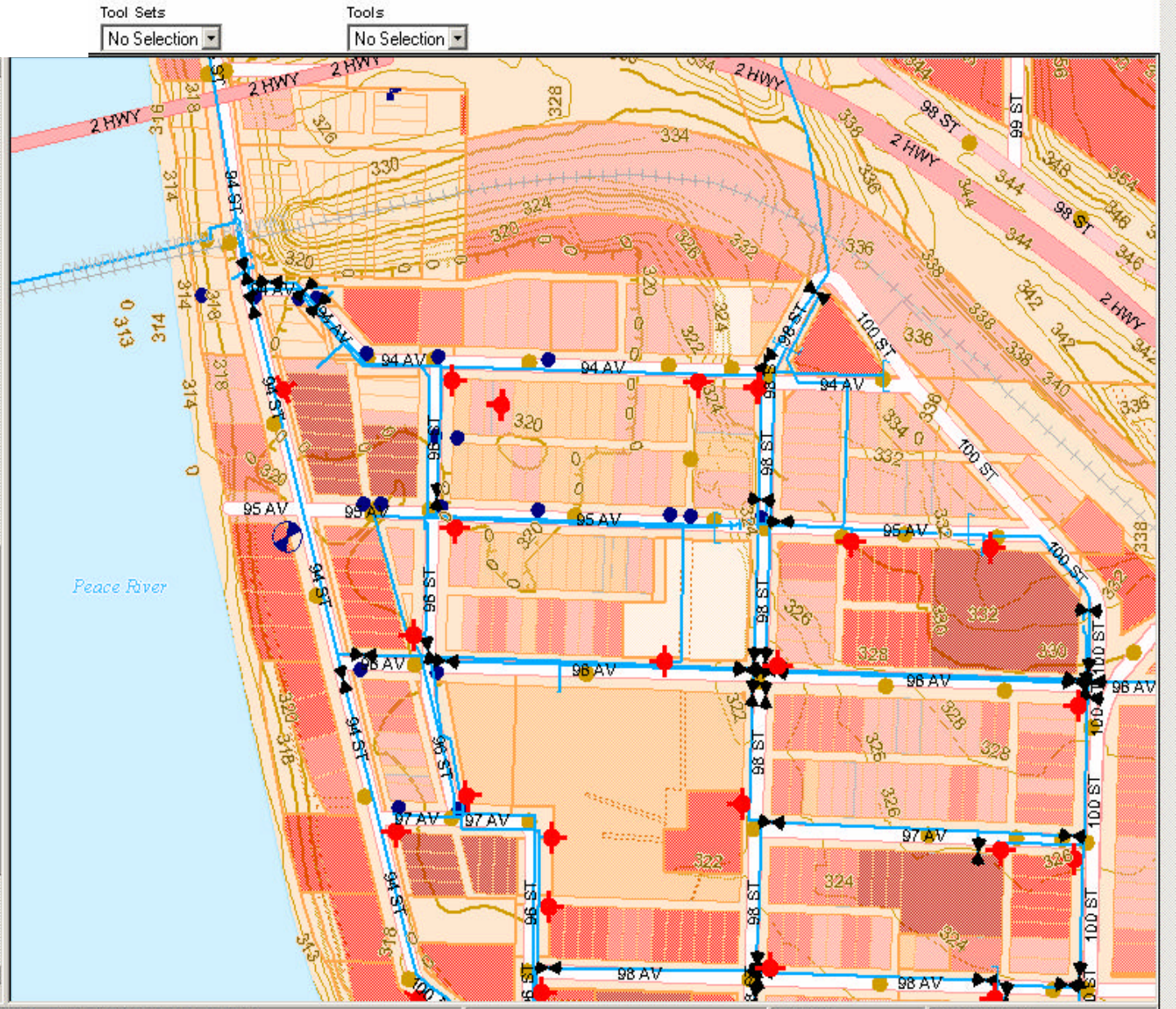
Solution Provided

- TELUS Geomatics is providing a fully managed web-based Geographic Information System (GIS) integrated to TELUS' Interactive Voice Response (IVR) system to quickly identify the area of flooding and notify the residents for evacuation. This decision support tool is a TELUS turn-key solution that provides emergency personnel with quick and effective means to notify the public 7x24 hours a day.

Customer Benefits

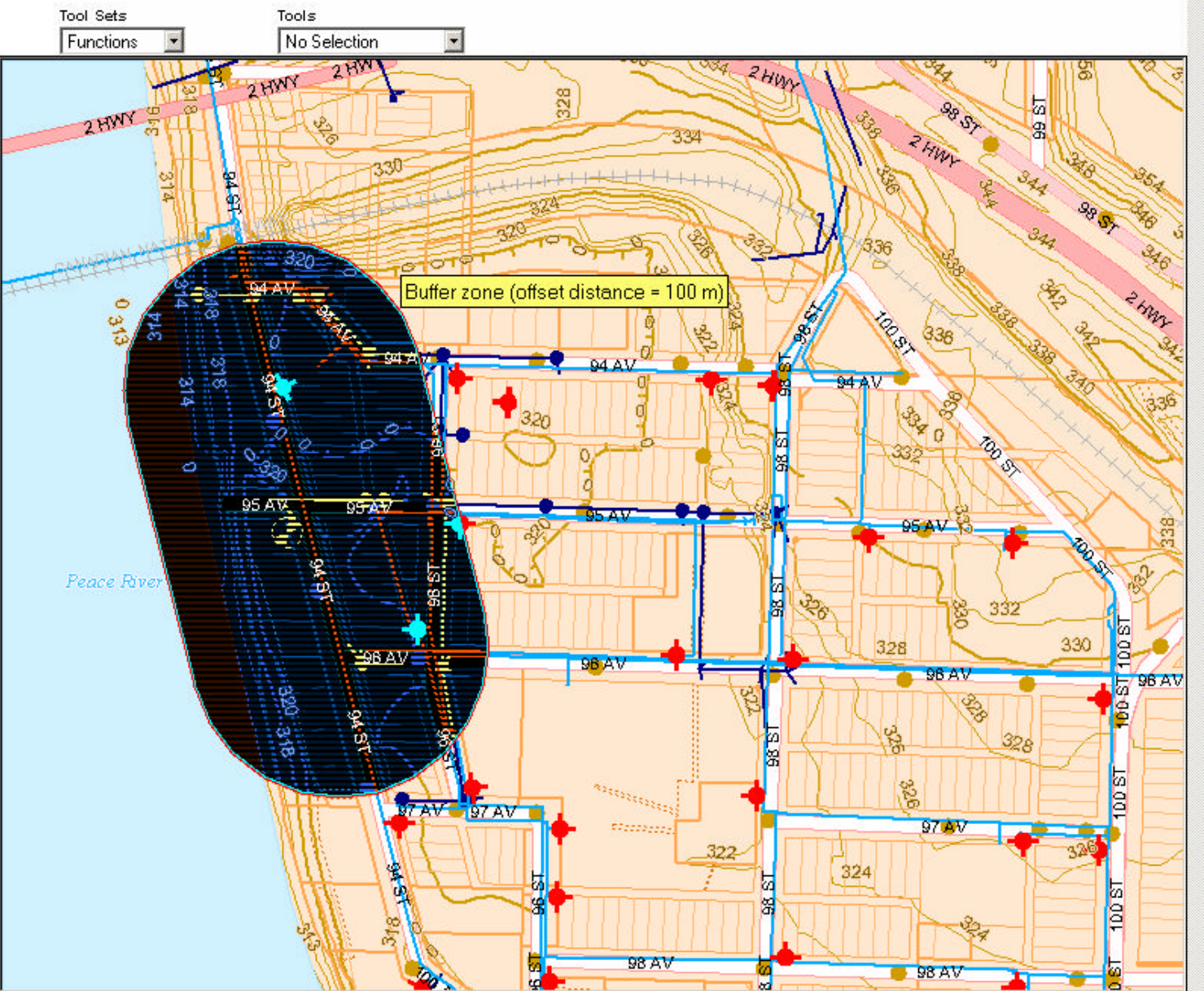
- Fully integrated and managed solution, quick response time and reduced cost of ownership
- Supports small to mid size municipalities that can not afford to implement an in-house solution
- Access to various layers of data to support critical decision making

- Legend
- Railways
- Address Points
- Lot/Block/Plan Labels
- Lot/Block/Plan
- Parcel
- Owner
- Utility Accounts
- Bylaw
- Properties - Last Tax Levy
- Elevation 2 m Hypso
- Elevation 10 m Hypso
- Elevation 20 m Hypso
- Aerial Imagery 0.32 m
- Physical Relief - Hillshade



map views | map functions | map basics

- Legend
- Towns and Cities
 - Fed Capital
 - Prominent
 - Prov/State Capital
 - Infrastructure
 - Signs
 - Sign Support
 - Water Hydrants
 - Water Valves
 - Water Valve Reducer
 - Water Main
 - Distribution
 - Hydrant Lead
 - Water Feed
 - Water Hydrant
 - Storm Manholes
 - Storm Catch Basin Manhole
 - Storm End Cap
 - Storm Inlet/Outlet
 - Storm Manhole
 - Storm Manhole Valve
 - Storm Catch Basin
 - Storm Main
 - Sanitary Manholes
 - Sanitary Clean Out
 - Sanitary End Cap
 - Sanitary Lift Station
 - Sanitary Manhole
 - Sanitary Manhole Valve
 - Unknown
 - Sanitary Valve Reducer
 - Sanitary Main
 - Structures
 - TELUS Trench
 - Buffer layer



Geo Explorer
Powered by TELUS™

map views

Legend
Collapse

- Towns and Cities
 - Fed Capital
 - Prominent
 - Prov/State Capital
- Infrastructure
 - Signs
 - Sign Support
 - Water Hydrants
 - Water Valves
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- Sanitary Main
- Structures
- TELUS Trench
- Buffer layer

TELUS Geomatics - IVR - Microsoft Internet Explorer

TELUS IVR SYSTEM

Message Groups

Select a Scenario Group
to access Scenario Types

Message Types

Description

Flood Evacuation #1 - March 24

Duration (in minutes)	Attempts (until contact)	Delay (in minutes)	Message Repeats
60	2	10	3

Callees by Group Selection

Callees by Custom Feature or Location

Callees by Map Selection

Name	<input checked="" type="checkbox"/> Home	<input checked="" type="checkbox"/> Bus.	<input checked="" type="checkbox"/> Cell	<input type="checkbox"/> Alt.	<input type="checkbox"/> Car	<input type="checkbox"/> Pager
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Callees by Callback

x: 357,619.117516, y: 1,232,603.443777 (METER) Buffer layer : Buffer zone (offset distance = 100 m) | 1 'Buffer layer' selected | 1 : 3,834 | 791 x 624 (m)

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Questions & Wrap-up