

the Energy to Lead

Keyhole Technology Consortium Program

Spring 2014 Meeting

- > April 2nd & 3rd, 2014
- > GTI
 - Location: Questar Gas
Salt Lake City, UT

Keyhole Technology Program

> Sign-in Sheet

> Confidentiality Statement

- The individuals, and the entities that they are representing, agree that all information which they receive from any other participant at the meeting will be held in confidence, will not be published in any form, and will not be discussed with or disseminated to any other individual or organization outside of this meeting, except for those with a need to know in their own organization.

> Antitrust Guidelines

- You must avoid any discussions or conduct that might violate the antitrust laws or even raise an appearance of impropriety.

Keyhole Technology Program

> Welcome and Introductions

- Overview of facilities

- > Guests include: Rabine Utility Paving, Ditch Witch, Tracto-Technik, and Vac-Tron

- Sign-in sheet

Keyhole Technology Program

> Welcome and Introductions

– Member introductions

> Your name and company

> What activities and/or interests do you have in the area of keyhole?

> What actions or knowledge are you looking to take from this meeting?

– May include addressing issues, needs, the sharing of information, etc.

Keyhole Technology Program

> Review Agenda

- Any comments on agenda?
- Any additions to agenda?

Keyhole Meeting – Spring 2014

> Discuss times and transportation for dinner

Squatters Pub

**147 W Broadway
Salt Lake City, UT
801-363-2739**

**Leave Springhill Suites at 6 pm for Happy Hour and
Dinner at Squatters Pub**

Keyhole Meeting – Spring 2014

- > **Your Participation** is critical to making both the meeting and the keyhole program efforts a success!



This



Not this!

Keyhole Program Mission & Priorities

> Program Vision

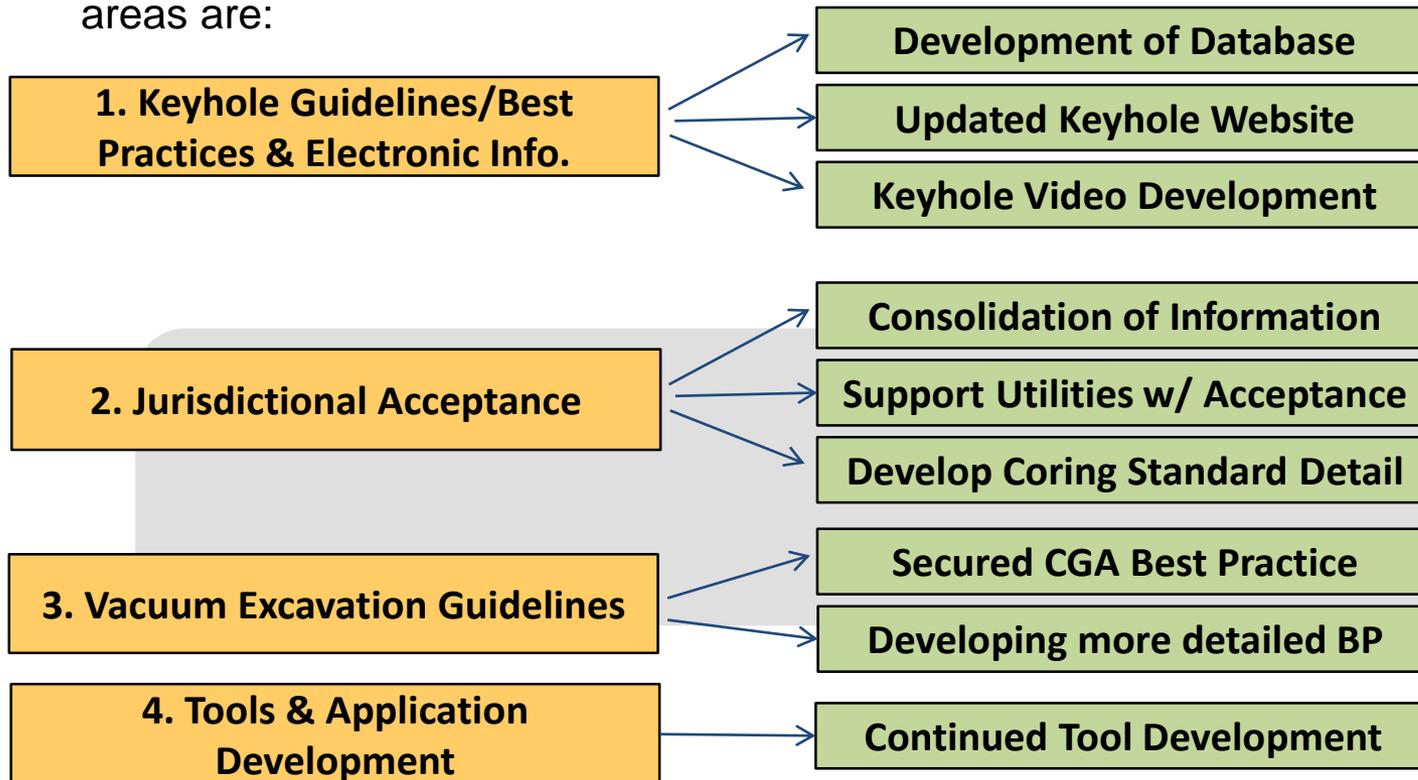
The program goals are to continue to provide value and share ideas with the stakeholders and to contribute to the acceptance and advancement of keyhole technology through:

- **Focus on customer needs:** Build strategy teams from the participating utilities, industry, and GTI to define the research and development needs and to guide the development and activities of the program focus areas.
- **Promote the use of the technology:** Establish and document procedures and gain acceptance by various jurisdictions (owners of the ROW).
- **Marketing and Implementation:** Provide training and establish guidelines and best practices for these applications.
- **Provide technical solutions:** Develop tools and new applications for various gas operations and maintenance work.

GTI Keyhole Program Focus Areas

> Priorities

The program has targeted four focus areas that have been identified from current research and through surveying the industry and participating utilities. These focus areas are:



Communication Tools

The following list contains the email addresses that have been created. In order to communicate with any of the groups, all you need to do is to type in the email address of the group with whom you wish to communicate and press send.

group@gtikeyhole.com

Sends email to all members of the keyhole program

utility@gtikeyhole.com

Sends email to all utility members of the keyhole program

manuf@gtikeyhole.com

Sends email to all non-utility members of the keyhole program

Other Electronic Information

> www.gtikeyhole.com

- > Various keyhole related information is available on this site. Most of this is public information to assist in advancing the technology.
- > Websites of manufacturers and other associations.

Online and Digital Media

- > GTI and manufacturers have been working to provide more awareness and information through online sources
 - Websites
 - YouTube videos
 - LinkedIn
 - Others
- > Email blasts (newsletters)
 - GTI, Utilicor, others
 - Will need input and content from all of you!
- > Discuss additional media needs & actions to take.

Trenchless Guidelines/Best Practices

Recent incidents have highlighted the need for better practices and better damage prevention rules

- > Review recent incidents
- > Perspective of group
 - Trenchless manufacturers
 - Vacuum manufactures
 - Utilities
- > Review Ontario/CGA Best Practice developments
- > Review other HDD best practices currently in place
- > Discuss Gaps and Next Steps
- > Identify team members



Training & Education

- > Initial Training Pilot Effort – July 2013 at Nat. Grid
- > Development of scaling up of keyhole programs – Tellus Underground
- > Current status of GTI contractor training program
- > Planning for what's next - Training
 - Various audiences
 - Training topics
 - Types of training is needed
 - Training operators / contract crews
 - Train the trainer
- > Discussion on Training

Residual Gas Removal

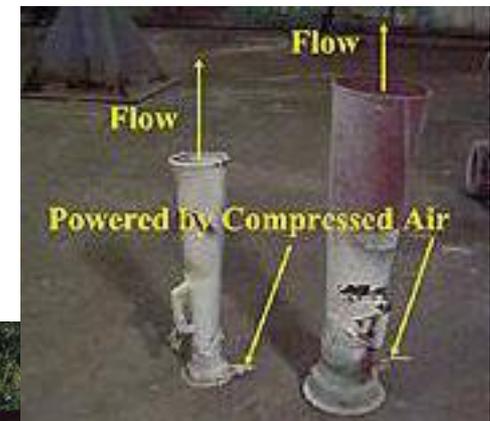
- > Review recent OTD Efforts
- > Questar/Vactron Presentation
- > Tellus Underground Presentation
- > General Discussion



Residual Gas Removal – OTD Project

OBJECTIVE

- > To identify technologies designed to address the removal of potentially hazardous residual gas in the ground. An evaluation of the best practices, performance and limitations of each approach will be studied.



GPS Mapping of Excavations

- > Questar Gas Presentation on Mapping – Tren Giles
- > Google Mapping/tracking of Excavations
- > Group Discussions on needs

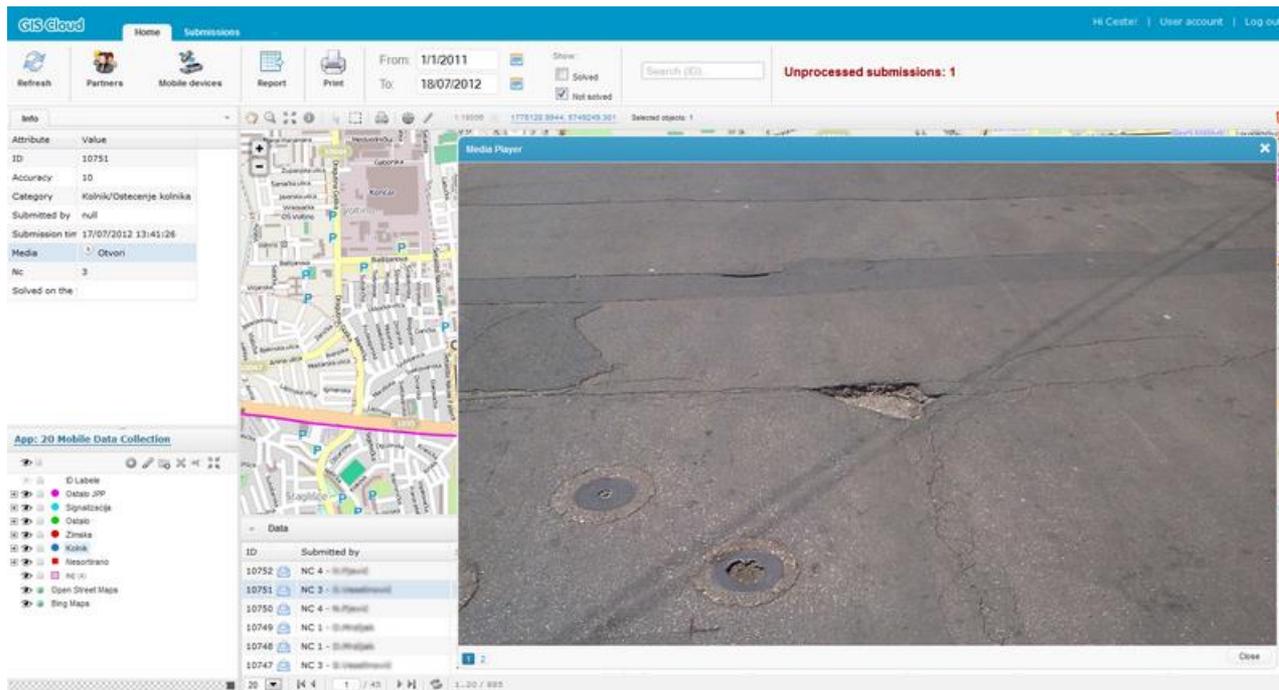


GPS Mapping of Excavations

- > Mobile data collection of field data
 - > What are the needs regarding the collection of excavation and restoration information?
 - > Track contractor and company crew work
 - > Monitor various types of restorations
 - > Temporary patches
 - > Permanent restorations
 - > Keyhole cores
 - > Road plates
 - > Landscape repair
 - > Etc.

GPS Mapping of Excavations

> Mobile data collection of field data



GPS Mapping of Excavations

Google



Get directions My places

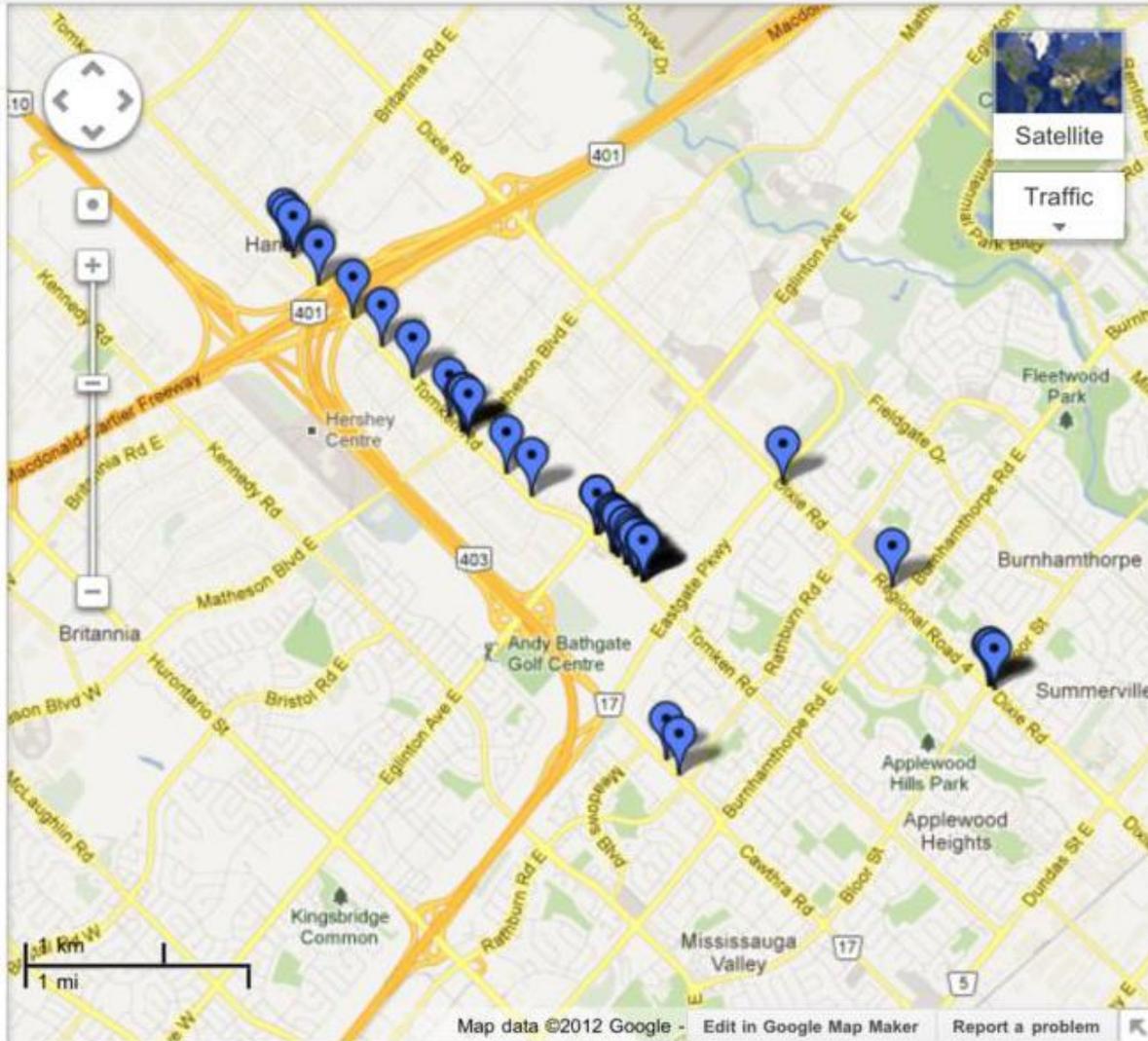
Collaborate

EDIT

T2- Tomken rd and Eglinton Ave Mississauga

11-22
Start Date May 28/2012
40 cores
Public · 0 views
Created on May 28 · By · Updated 2 days ago
[Rate this map](#) · [Write a comment](#) · [KML](#)

- T1
In road, 8 Inches (turn lane) Latitude 43.6249401 Longitude -79.6272230 Cored May 28/2012 Reinstated May 30/2012
- T2
In Road, 8 Inches(turn lane) Latitude 43.6254593 Longitude -79.6278462 Cored May 28/2012 Reinstated May 30/2012
- T3
In Road, 8 Inches (turn lane) Latitude 43.6257183 Longitude -79.6277490 Cored May 28/2012 Reinstated May 30/2012
- T4
In Road, 8 Inches (turn lane) Latitude 43.6256267 Longitude -79.6280083 Cored May 28/2012 Reinstated May 31/2012
- T5
In Road 8 Inches (in turn lane) Latitude 43.6260014 Longitude -79.6280771 Cored May 25/2012 Reinstated May 31/2012
- T6



Various Manufacturer & Utility Presentations and Demonstrations

- > Indoor and outdoor presentations and demos
 - Tracto Technik/TT Technologies Keyhole Drilling Machine Update
 - TT Technologies - 2" IPS & 1/2" CTS PE pipe splitting
 - Vactor Vacuum Excavator (presentation and demo)
 - Tellus pot-holing/daylighting vacuum excavation system
 - Coring – Utilicor various units (presentation/video)
 - Jameson – update on locating and new lighting technology
 - Kravitch tooling
 - Utility Updates
 - Others

International Update

- > Canada
- > UK
- > GDF Suez/GERG
- > Others



Since being introduced to British roads in 2009, keyhole technology has shaved hundreds of days off repair times.

End of Day 1 - Keyhole Group Dinner

Utility Only meeting 8:00-9:00am Thursday
Non-utility members can arrive at 9:00 am

Group Dinner:

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Salt Lake City, UT
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and Dinner at Squatters Pub

Keyhole Meeting – Day 2

- > Utility only round table review
- > Review Day 1 activities
- > Cover any Day 1 agenda items missed

Coating and Wrapping in Keyholes

> Evaluation update and discussions



Round Table Discussions

- > Group Discussions and Brainstorming
 - What are your needs or issues?
 - Keyhole and Traditional Practices

- > Summarize and identify action items

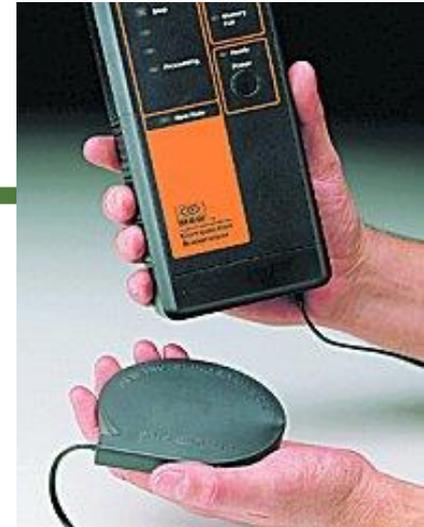
- > Identify future priorities for keyhole

- > Identify future priorities for industry in general



Soil Compaction Supervisor III

- > Current OTD project
- > A need exists to update the SCS as technology has advanced and as utilities needs have changed
- > Utilities are collecting more and more data on their systems and the SCS data collection needs to be enhanced to make the data collection easier and integrated into utilities current systems.

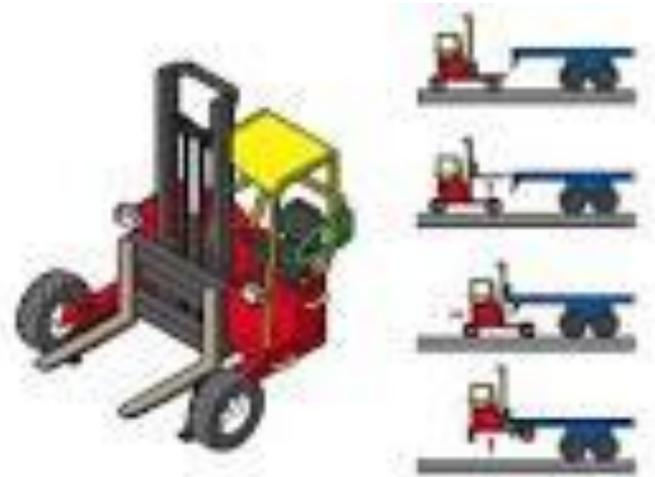


Jurisdictional Approval / Support

- > Any recent acceptance wins or issues?
 - City of Chicago Draft Construction Document
 - Status of Municipality support of keyhole coring?
- > GIROW Update – Mark Andraka
- > Presentations at local APWA and state One Call meetings?
- > Discussions and Next Steps

Keyhole Coring Needs

- > What needs do you have regarding keyhole coring?
- > Combo vehicles – Vac and Core trucks?
- > Additional needs?
- > Group Discussions



Keyhole Outreach Efforts

- > Recent Keyhole Presentations
 - UCT Conference & Exhibit – Jan. 2014
- > Upcoming Keyhole Presentations
 - AGA Operations Conference – May 2014
- > Various articles and local efforts

Keyhole Technology & Contractors

- > Partnering with Contractors
- > What is needed to continue the implementation of keyhole coring with our contractors?
- > AGA/DCA Utility Contractor Management on April 29th-30th in Chicago
- > AGA Keyhole Presentation – May Ops Conference

Keyhole Technology Program

- > Upcoming Events
- > Next meeting planning

Keyhole Technology Program

Thank you all for you input and discussion points!

