

PLANET UNDERGROUND.TV THE ROUNDTABLE Transcript

2017 REVIEW

Michael Frye—Division Controller, Leica Geosystems

David Kelly—Regional Manager, US Radar

Alan Haddy—President, UTTO



One of the main themes that emerged from the most recent Roundtable was technology, and how it will force change in the damage prevention industry. The consensus is not if these changes will happen, but when will they happen, and how soon. Some major technological innovations are occurring as we speak, and having representatives from three major tech-based companies discuss these changes was an illuminating and eye-opening experience. Here we transcribe the Roundtable featuring Michael Frye from Leica Geosystems, David Kelly from US Radar and Alan Haddy from UTTO. Their discussion and debate on current technology trends and where they will be heading, offers a fascinating glimpse into the future of our industry.

What is your vision of how a detection instrument will look like in the future and how that will add another dimension for excavators and utility planners due to the power of the information and data collected?

Alan:

So, historically with locating devices, we've had the lone wolf technician out there with a device, who must be taught. He is skilled with difficult task, he's

in a really difficult environment with multiple tasks and facilities he has to locate. He's out there on his own. We see the next generation of equipment connecting him into the whole process and his support staff. We think that the optimal way is to connect that device to the field tech, the ops manager, and the GIS team. This occurs by the transition of just marking and locating, to: marking, locating and capturing that point and then turning that into data information that can be used in the future. We're working with all the device manufacturers to push towards that data model, capture and reuse. Management is the concern, moving data from device to cloud and back without interfering the workflow, the main challenge is that motion. Are any of you guys working on those issues?

Michael:

We are at Leica, we have software packages coming out that will do that. It is important once you have the data, to know what to do with it, and how can you use data for the future to make it powerful. We have DX manager—the people out in the field have input on that, and how it goes to cloud then to the office.

Alan:

We've run into issues with generating volumes of data, such as depth, frequency, current, and GPS measurements, and keeping it manageable. We saw one customer who had 600 field techs using field equipment for two



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Top: David Kelly - US Radar

Center: Michael Frye - Leica Geosystems

Bottom: Alan Haddy - UTTO

years. With the latest generation of UTTO, we are capturing much more data, up to 1000 points a second. From our latest pilot program, we had two field techs, and in two weeks generated the same amount of data as 600 techs did in more than two years. That's the challenge of moving data.

David:

With capturing that data, you have to do it from the field tech's perspective. It's nice that the engineer sits back in the office and post-processes all that data, but what does this mean for the operator? You don't want to interrupt the workflow, but how do you get the most quality out of someone that isn't that interested in GPS, or photography, or aerial imagery? How do we train them, at a fundamental level, to get a high precision GPS point and send this back to this office?

We need to develop these technologies that speak to the field operator, the people with a little mud on their boots. Maybe we need to get an industry standard of how these field techs work from within, maybe see what helps translate the data back to the office and determine what is and what isn't useful. So, it's driven more by the field operator and how they respond to the technology. Talking about collecting thousands of points in a few seconds, that can be data overload for the field operator.

When you tie in a GPS system or centralized GIS system, the engineers recognize we're working in past, present and future planning, so it has an impact for the company, but it has an even bigger impact on the field operator. They may not fully understand yet, how they have the power to reference a point in the past, and reference to what they see now and what they can expect to see in a future locate.

Alan:

It's the verification of those GPS points that drove this expansion of data requirements where you have customers that demand six inch accuracy with GPS points. And our response is, well, what have you done to verify that six inch GPS point? It's not just checking on the process of the individual field tech but verifying the accuracy of it. If we say to the customer, you have to press one extra button, we can get resistance, "No we're not doing it, we're not gonna change." The challenge from a developer standpoint is to leverage technology to provide solutions. The tech to some degree has to be hidden in the background yet remain practical.

Michael:

That is necessary. From the operator's perspective, we all know that there's a lot of turnover, and that the technology needs to be very simplistic, simple and convenient. Too much data has to be filtered and processed in a way where it's applicable to everyone going forward.

Alan:

For us, I think that the locator of the future is not too much different than the locator of today. GPS will not get rid of locators—it's a component that assists in the process. The model may change where a locating device may become more like a smart phone. A locator device is more like part of a software service, and all the other benefits you get with it, but the actual need for someone to go out and spray—that's not going away.

Drones and all that are kind of cool, but practical? I'm not so sure. Generically flying drones around peoples' heads downtown is problematic, and not going to be too practical anytime soon. I can see technology changing the flow of how we do things better and quicker, but I don't think it's going to be revolutionizing the industry overnight.

David:

In my opinion the market is saturated with software options. You have name brands like Leica as a staple, but also smaller outlets that develop their own solutions, or another type of line locator. The future locator will have to navigate what tools work best together and figure out how to refine the process to enhance damage prevention, for tying in for future plans using GPS. What will help that future locator navigate the technology is having an industry standard.

Alan:

I think that the CGA is working towards that standard, managing all the competing software solutions. I think the solutions will even come up with a standard themselves. I agree that some type of guideline would definitely be good. In training through Staking University, we're developing the simulator platform where we can, for the first time, qualify a locator's training materials, and that ties into taking those techniques into the real world, then assessing actual performance and taking those GPS points. This lays the foundation for a 20-year vision of changing the way things are located. Those are all avenues we're pursuing.

David:

In a table yesterday, they asked us to describe the culture of the locator. And a repeating theme was that of the hard worker being outdoors, proud in the work they do, and providing a service that needs to be highly accurate. Maybe piggyback off that—introduce in the training the need to capture quality data. Let's say they're doing a GIS for a telephone pole and the guy takes a picture 50 ft. away and says, ok I'm going home. Compare that to a guy that stands there and holds position and gets a good geo-reference. It's the training and exposure to technology that is important, good quality versus bad quality.

Alan:

Yes, we hear, "We don't have that way of measuring right now." That's the first step, training, to reward good and retrain bad. Typically in the industry, we don't have a way of measuring this. My background is in the field tech



side, and we're trying to knit the enterprise and field tech side together. You know they have it hard, these guys work in all sorts of weather, it's not a big brother solution, it's rewarding good and retraining bad. The market will determine where the data goes and how it's used, as well as security issues therein.

Michael:

That was my next question to you guys: Where do you see that whole part of the process? We talk a lot about the field operator, so what happens next?

Alan:

Well, it's the excavator we want to have all this information. That's the front line of damage prevention—the locator tech is really serving the excavator. Ultimately all that information must go to the excavator side. It's a challenge we aren't prepared to take on right now, but in a couple years' time perhaps. I can't get excited about digital storage and management, that's something the web does very well, but the marketplace will figure that out.

Michael:

At Leica, we have a new video where it shows the workflow process where the operator gathers the data, it goes into machine control, then the excavator has it show up on his equipment. Then you're really using the data collected out in the field in a useful way. Once it's stored, you got to look at the next process, to use it on the machine control, and not damage any utilities, it's in the machine, then where does it go next? Somebody is going to want that data in the future. Our job as developers is to make that ubiquitous so that not just one super contractor can make use of that data, but anybody that is going to dig in a certain area and use HDD.

David:

Are you seeing what's next for the future of the locator—after machine con-

trol—are you seeing anything from the market that indicates what will happen next, and who's asking for the data in the field?

Michael:

We see where you want to store this info in a secure way, and you want to make it available, but then for private and government facilities, they don't want that information going anywhere. We see the need for it, and people want seamless operation on the cloud, to be available to all stakeholders involved, but we're not sure if we know the threshold between making it available and making it secure.

David:

I see this data is there, and people want to grab it. We can cross that bridge. It goes back to if there would just be a standard of what could be released exactly, but that ball is not moving forward enough yet. I get that call that

★ **"I get that call that says, 'We don't want you to know where our stuff is, it's top secret, but don't damage it by the way.' Those are incompatible positions." -David Kelly**

says, "We don't want you to know where our stuff is, it's top secret, but don't damage it by the way." Those are incompatible positions.

We have customers that want to keep their data secure, but every 500 ft. along the street they have a big pole saying don't dig here because we have something under the ground. I think it's more of a bureaucratic issue than a practical issue. I don't know if there is anything that can't be solved, it would be significant though for the industry to break down those barriers.