Handheld Diagnostic Tool Webinar Q&A

Question	Answer
Does EST ever plan to provide an EST fire alarm troubleshooting class?	We offer a Basic Fire Alarm class through the training department. It is called "Intro to Fire Alarm Systems". If you are looking for something geared towards basic troubleshooting, we can look into adding a class for that.
Is an OSD supported?	Yes.
I downloaded new software and the screen on the HDT is now blank. Any ideas?	Make sure you didn't inadvertently send the GUI file to the Interface update and vice versa. Typically, a blank screen after an update is due to an issue with the firmware. Resending the firmware file resolves that issue.
Will we be able to reset the device address to 0 like we could with the SIGA-pro?	The HDT does provide the ability to program a device address. If you are looking to essentially return a device to Factory default where everything is wiped from the registers on the detector, we do not yet have that functionality.
How long is the battery in the unit expected to last?	Life expectancy of the battery is similar to other batteries. It really depends on how often it is used and where it is stored.
And by battery, I mean lifetime, not run time.	The life of the battery really depends on how often you use the HDT and the environment the HDT is stored in. I'd expect this battery to last a few years.
Does the HDT work for Kidde and EST - or do you need one for each? Tried resending several times no joy. Anyway, to reboot to factory default.	There is a KI-HDT for Kidde and the SIGA-HDT for Edwards. You would need one for each channel. Let me start a case for you. There might be an option where you can send it to me and we can try to recover it. I can do that after the webinar.
Where do I get the GUI file?	Firmware files are available on My Eddie. Resources & Training>Software. Download the following files: SIGA-HDT Software, Computer SIGA-HDT Firmware, Interface KI-HDT/SIGA-HDT Firmware, Display

Question	Answer
So, the GUI file is where?	The GUI is going to be the filed labelled SIGA-HDT Firmware, Interface Unfortunately, the tool does not tell you if you are sending the incorrect file. Is a common mistake we have seen previously.
Tried to download firmware and no success	Ok, what's the date code on the back label of your HDT?
silver back with 16336	Ok, it's out of warranty; I'll create a case for you and send you an email. In the case email I will provide where to send the HDT. I'll see if we can recover it for you.
Other than the built-in screen what is the difference between the HDT and the MFT?	Outside of the portability of the HDT, the MFT has not been updated as well as the HDT. Engineering has solely been focusing on HDT looking to sunset the MFT. Plus MFT will not provide features such as the Green LED Inhibit.
Is SLC in and out important?	In terms of troubleshooting the loop, that is the absolute last thing I worry about. The data in and out really doesn't matter.
What can cause what we call a 'false' T-Tap to develop? This is when we have wired a Class A SLC with no T-Taps, but over time a map fault will occur, and when pulling a map we see a T-Tap. Is there a most common cause for this?	False T-Tap could be caused by several variables. I typically suggest looking for things such as induced voltage on the wiring, pinched or crushed wires, (sometimes guys get a bit aggressive with tightening the clamp on a Romex connector) also watch for poor connections at the base terminals, as well as the spring clips on the base. The spring clips have a tendency to get compressed over time creating a poor connection between the head and base. You can gently lift up on the spring clips and reinstall the detector. If you are using a newer base the spring clips should be fine as Engineering beefed them up to resolve that issue.
Will you do it for the heat sensor green led also?	Currently we only did it for the detectors, based on complaints of guests in hotel rooms. I can pass that option on to Engineering as an enhancement.
What does initialize do on the HDT?	The initialize loop function enables the device to perform some initial actions such as resetting all devices and opening all isolators. This function uses the device serial number to assign new short addresses, read device address, version numbers, device types, shorts on the SLC, and checks for ground fault on the SLC loop.

Question	Answer
It says GUI version is 0.00. Can the HDT tell you if there is too much noise interference on the loop?	It can't tell if there's noise on the wire, but it can identify if there's a problem with communications.
Will the HDT help with a blank map?	Consider the HDT as a portable loop controller. If the loop is shorted, the HDT will not be able to map the devices.
Will the ground fault test, check whether there is a ground fault or will it tell you where it is located on the loop?	It only checks if there's a ground fault and if it's on the positive or negative leg.
Can the KI-HDT work across brands e.g., SIGA and KI?	Because we interrogate different devices, we don't have the ability to cross brand using just one HDT.
Error loading integrity check failed. Tried loading from new unit USB.	Are you attempting to update an HDT? If yes, we may need to work with you outside of the webinar.
What is the difference between the MFT and HDT?	MFT was the original tool we released. It was not portable in that you had to have it tied to a PC. HDT is portable as well as provides connection to PC using PC Software. MFT will eventually be sunset as Engineering continues to develop the HDT.
I have seen the diff value for modules show up as a 'positive diff' when I know for sure the module in question is wired correctly. Is this a known issue or have you seen this before?	Modules and SIGA-SDs are typically posting a negative diff value regardless of how data in and out are wired. We may need to investigate this further with regards to HDT firmware and module firmware/date codes.
SIGA-HDT are compatible with QuickStart QS4 panel for mapping issues?	You can try interrogating the devices on the QuickStart. We have not done any testing here since the QuickStart is obsolete. You may find that some of the values in the report might not be 100% accurate, but it could aid in some aspects of troubleshooting. You're welcome to try it, but I can't speak to the results you will see.

Question	Answer
I've been told in the past that the "DIFF" values when the swap between + and - means that the SLC IN and SLC OUT are swapped. Is this true? And can this cause issues with mapping?	Data in and Out reversed is one of the last things I look at when troubleshooting a map fault. It really doesn't matter. If we exhausted all other troubleshooting and still couldn't get the loop to map reversing the wiring would be the very last thing to check. On a detector a negative Diff would indicate the wires are reversed but that would not prohibit the loop from mapping.
What is the function of the Diff column?	The Diff value will show you a hexadecimal value based on the mapping current of that device. A device with a low DIFF value would be worth investigating as there may be a wiring issue at that base, or could be a bad base.
What causes a map inconsistency on CC1s?	If you are referring to that Internal Fault issue we saw at Resort World, we have an open QIT with Engineering on that issue.
Can this be specific to help with an EST2 upgrade	It will read a Signature map and return all the devices on the map.
Different tech than the MFT which does?	We have not added any new feature sets for the MFT. Going forward the HDT will be the main tool we utilize for resolving map faults.
Where do we download the software?	My Eddie Resources &Training>Software> look for three files: SIGA-HDT Software, Computer SIGA-HDT Firmware, Interface KI-HDT/SIGA-HDT Firmware, Display
We have encountered problems where adding OPTICA detectors to previous loops have caused detectors to mis-report their bases and generate troubles. Does the HDT allow us to correct these issues?	Adding Optica to an existing loop of devices can expose underlying issues with the loop since the Optica draws 2x the mapping current. The reason Optica draws more current is for mapping consistency.
Is this Signature HDT tool compatible for use on both EST and Kidde/Vigilant systems?	We do not cross brand the HDT between Edwards and Kidde. Really because the devices are different.
Can you open and clean a SIGA-OSD?	You should be able to get the detector clean enough through the grill, but if you need to take it apart you can spin the cover off the bottom half of the detector.

Question	Answer
Just load software on laptop after cleaning the detector do we redo dirty test again? or it will be updated by itself?	When you clean the detector, enter the date then save that. Doing that will update the register in the detector so that when you reinstall it on the panel the values will be updated.
What is the advantage of the HDT over the MFT? Not speaking of that particular issue; asking for other problems I've seen on different properties.	The MFT was the original tool used to help diagnose mapping issues with devices. Since the MFT was released, we have moved to the HDT. The HDT is portable, where the MFT was not. Another advantage of the HDT is that Engineering has been developing firmware/software for the HDT, where the MFT is being sunset.
Can you program an address into a Signature device using the HDT, like the SIGA-Pro?	Yes, you can assign a device address using the HDT, however if mapping is disabled on the system, you must still manually update the serial number for the new device. Failure to update the serial number in the project could result in an unprogrammed device trouble.
What is Map fault analysis?	It is the HDT reading the map and returning what it finds.
Just received new unit trying to load software on computer and I received that error trying to install can we print this map?	Download the software from MyEddie.
If the EST doesn't come back with a map will the HDT tool?	Yes, and it will identify where the map could not map.
SIGA-SD devices show as a negative contact rating is this correct for a smoke reference number.	SIGA-SD and modules will always post a negative Diff value.
If map is crashing on panel/SDU, will HDT generate map?	Yes, as it sees the map.
How long does it take to fully charge the HDT?	I can't say for sure. If your battery never fully charges you may need a new battery.

Question	Answer
I've always used the MFT and HDT due to having used both on the same job with different results. This was going back 5 years ago when that happened. After talking to tech support about the differences the main one they claimed was that the MFT didn't initialize the loop is that the case?	Both tools have a Restore Loop function. The MFT during the Restore loop would close isolators and restore communications to all devices on the SLC. The HDT has an option to initialize the loop which closes isolators and attempts to communicate with all devices on the loop. The HDT also has a Restore loop option which will show you how many devices the HDT is seeing on the SLC and the current state of those devices.
What difference does the panel type make?	None.
What is Read EEPROM?	It reads the hex values in the EEPROM.
Why don't they put this into the SDU instead of a separate tool?	This has been passed on.
Are the options with a laptop using the HDT tool much better than using the tool standalone without a laptop?	Yes, please watch the HDT Features and Benefits webinar.
Can the HDT give you a map if the loop is T-Tapped then tied back into itself?	Yes, the HDT will identify a loop within a loop.
Can it locate a star-tap?	It will locate multiple T-Taps.
Can it also still report a map and identify all reverse polarity devices on the loop if there are many?	It will read up to the first device that has the polarity backwards.
How does the SDU mapping errors compare to the HDT for finding mapping fails?	Please refer to the HDT Features and Benefits and Troubleshooting Scenarios webinar recordings.
What will display on the HDT if you have a loop in a loop?	All the devices that are part of a loop in a loop will have DIFF values that are half the normal value. If you look in the SIGA-HDT User Guide on Page 50 we show an example of a loop in a loop.
Can we upgrade the firmware version of the smoke detector?	Detector firmware is written at the factory and not currently field upgradable.

Question	Answer
Doesn't the HDT ship with battery disconnected?	Yes, when you first receive the HDT, the battery will be disconnected.
Does the HDT work better with it being plugged in to a power source rather than running on battery power to run analysis or to program individual detectors?	The power source should not matter.
Are there any tips on making the batteries last longer before needing to be swapped?	I don't think so, I would try to avoid extreme temperature swings, if you store it in the back of your truck/van. Life expectancy in my opinion is dependent upon how often it is used and the environment the HDT is subjected to.
What does bad parity on initialization mean?	Bad Parity can occur if there is a communication problem; the HDT will typically retry 3 times to communicate with devices on the loop. If this only happened one time, I wouldn't be concerned with it.
My HDT has no additional hardware. Does Edwards have just the charging power supply and chord available? If not, what is the transformer voltage?	Any phone charger will charge it as will a computer USB port.
I ran the HDT on a loop and it pulled the map, but the EST software pulls a blank map how is that?	Somewhere it found something wrong, watch the webinars to see how to interpret the date it gives you.
Is it possible to update device firmware such as an OSD?	No.
Are there any SLC configurations that can damage the unit that we need to be aware of?	No.
If you need to replace the HDT battery, can you get a generic one from someplace like Batteries plus, if you need it sooner than an HD-Batt can be shipped?	There are currently 10 HDT-BATT in stock.

Question	Answer
What is a legacy loop controller?	3-SxDC, or 3-SxDC1 could be considered "Legacy" versions.
I don't find diagnostic software on My-Eddie for our KI-HDT. Only firmware. Is there software for it?	This has been passed along.
Do you initialize the loop to reset ISO modules?	Yes.
Just received mine and it has a 5v 3000ma charger. You said the SIGA-HDT would work with the KIDDE devices. Will the signature diagnostic software also work with KIDDE devices, or do you need to run the KIDDE software?	It should.
Can HDT reset devices that are faulted INTERNAL FAULT?	No.
What is the evolution from really old head, base that had copper connections to the metals used today?	The early Signature bases used a gold plated contact pad; after that generation the bases used a tin contact. Over time we found that the tin pad could become weak pulling away from the trace on the detector leading to Map Faults. We resolved that potential issue by re-enforcing the spring clips.
Will we be able to reset the device address to 0 like we could with the SIGA-PRO?	I remember being able to program a device address with the SIGA-PRO, but not reset it to "0". HDT will follow similar functionality.
I have an old version 1.0 HDT on my desk that when plugged into a pc will light up and show the logos etc., but then powers right off. Is a good assumption that it's a battery issue?	Could be. If it is a few years old at this point, it may be worth starting with changing the battery.
Trouble tables on EST4. How do I see that	When I was talking about trouble tables tab that was on EST3. We don't yet have as robust of Signature diagnostics in the EST4 yet. That will start to change as we move forward with future releases of 4-CU.

Question	Answer
It was stated that anything greater than 5 is what we should see in diff values. I noticed the diff values you are showing have multiple negative values. Can this be explained?	+5 or -5 diff values.
Can you elaborate on the significance of the values for Q V and DIFF on the report? Do those values help in troubleshooting the map?	The difference between mapping and not mapping. They may help.
Can you program an address into a Signature device using the HDT, like the SIGA-Pro?	Yes.
Should a SIGA-IM show + or - DIFF if wired correctly? Is there a normal value for modules?	The farther away from 0 the value is the better.
What if the diff value is + on a super duct or module? Does that indicate wrong type programmed or a faulty device?	Check the data in and out.
The error installing HDT software is: Installer integrity check has failed More information at http://nsis.sf.net/Nsis_error This was a new unit using the thumb drive to load Info:	This can be found on the website.
Can the green led inhibit be done through EST3 or EST4 SDU program?	Only though the HDT. I do not recall an option in the 4-CU to inhibit the LED on an Optica. 3-SDU we definitely did not have that option.
Can the HDT be used for co det life remaining?	No.
Are the batteries in the HDT LiON or NiCAD?	LiON

Question	Answer
Can the HDT pull "sensitivity" values from detectors?	No.
Would different versions or generations of detectors on a loop affect the ability of a panel to map	No, you can mix different generations of detectors on the same loop.
Can you get a sensitivity report from the HDT?	No.

Question	Answer
Continuation from yesterday's question for SIGA-SD, as to the negative value we see, am I to assume that SIGA-IM are negative in value as well?	I believe the IMs will show a negative diff, but well set it up in the lab and provide a definitive answer in the transcript of the questions.
Is it possible to add a feature to compare old map to the current or existing map on the EST4 panel? Also, can we print the map?	We don't have a way to print the map from the HDT as of today. We can take that back to Engineering as an enhancement for a future release.
When I went to EST3 school a year and a half ago the teacher told us that you can locate a ground fault right down to between two devices with the HDT. I have not been able to figure out how to do this.	He may have been referring to the Mapping Errors tab in the SDU. With the HDT we get device specific data, versus the SDU mapping can only get you to a section of the loop.
I didn't think it could be, but can the HDT be hooked directly to the loop controller?	No, you want to take the field wiring off the loop controller when you interrogate the devices.
Approximately how long does it take for the software upgrade from pc to HDT?	It should only take about 5 minutes total to update the GUI and Interface firmware.
My HDT tool has an intermittent connection issue with the mini USB port. Can it be serviced/repaired?	We don't have a service/replacement program in place at this time. We have looked at HDT's here in Tech Support but we don't typically perform board level repairs.
What is the maximum t-taps allowed? I know this would be by panel type.	On the 3-SxDC cards we can go to a max of 124.

Question	Answer
I have had my HDT for about 6 months and the battery is not holding a charge anymore.	Double check that the battery was connected to the HDT. Remove the back cover and verify that connector is in place. Sometimes people forget that the HDT ships with the battery disconnected. If it is, then you would need to replace the HDT-BATT.
Have you found that the new SIGA-SB bases are helping to avoid Map Faults versus the old SIGA-SB bases (due to the bowing from over-tightening the mounting screws)?	We beefed up the spring clips on the new bases to eliminate poor connection between the head and base that can lead to mapping issues or overtightened bases causing them to warp.
How do you fix a T-Tap on a UIO6 board with mini modules?	The data line on the UIO should be separated by the terminal block. If you have the two pair of wires on the in and the out, and it is showing as a t-tap, we would need to look at that further.
Base strain relief tabs break over time. Beef them up.	I'll pass that feedback along to the Engineering team.
WHAT ABOUT A LOOP BACK WILL IT FIND IT LIKE MFT?	Loop within a loop? Yes. The HDT can show you that. Devices with half of a normal DIFF value would potentially be a loop within a loop. Page 50 in the SIGA-HDT User guide will go into a bit more detail for loop in a loop.
Can the loop data HDT received be saved as a file and import to 3-SDU or 4-CU?	No, the HDT data is a separate file, and we don't import any of that data into the panel.
When looking for ground faults, does the HDT tool give you the serial number of where the ground is coming from? Or does it only tell you from which wire its coming from?	It only identifies if the ground fault is on the + or – wire.
What happens if I have short in my data loop circuit? is HDT still seeing the devices after the short?	It will only see the devices up to the device.

Question	Answer
Can you explain what can cause device internal fault/trouble please?	There are several variables that can trigger a device to generate an internal fault. You would need to use the Trouble Tables Tab in the SDU to upload the internal fault data. Once you know what the internal fault is we can walk through potential causes. Detectors mounted too close to fluorescent lights can generate false alarms, min qui troubles, and other internal faults.
Will this work on class A circuit?	Yes, but when using on a Class A circuit you want to remove the return side from the loop controller.
What is the device address on the map? number with D or S?	Device address and short address.
The star tap didn't actually cause an error, right?	The HDT identified where the star tap was as multiple t-taps. This can cause a map fault on a loop controller.
Do the in and outs matter on a loop. Could this cause map faults?	They can but reversing the wiring at devices on the loop should be one of the last variables to investigate.
Would you be able to see a star tap on a regular map, or would it prevent the map from completing normally?	Maybe.
Why are t-taps not allowed, almost every job we have has multiple t-taps?	You can have a maximum of 124 t taps on the 3-SxDC cards. We don't want star taps on the loop.
When was the latest firmware update?	Latest firmware is V1.28 and V1.32. Both of those are up on My Eddie. I want to say that we released those versions a year or two ago.
Where does it say "No Startaps"?	I believe we mention in the EST3 manual that star taps are not recommended. To work around them create t-taps in the j box.
Is there a bulletin for this topic? Wiring perpendicular as well as 3 ft from a fluorescent light.	I believe we'll include it.

Question	Answer
What version software are you running I'm running 1.6. I don't have the device tab in the upper left.	We are using V1.28 and V1.32 on the HDT, and the PC software is V1.8. All three of the files are on My Eddie under Resources & Training>Software.
If a star tap can't be wired divide the neg on the in and out of the base. Remove from the wire nut.	Right, essentially create a couple of T-Taps.
What does it mean if device returns but shows no serial number?	It's possible that the memory could have been erased from this device, and that is not a normal occurrence. We would need the model and firmware version to look into this further. When situations such as this are encountered you should contact Tech Support.
So, it means, star T-tap, HDT will read it but the panel will not be able to read? Is it correct?	Yes. HDT can read a star tap but the loop controller may not be able to consistently map the loop resulting in intermittent map faults at the panel.
If the 3-SDU is pulling a blank map will the HDT tell you where the problem is?	Yes. HDT will interrogate each device on the loop and it will list devices which have failed contact analysis or mapping consistency. The devices in those lists are ones you want to check.
If few devices are reversed in the middle of the loop but then remaining flip back to normal. Will the HDT still stop at the first reversal or go past the read the remaining good?	It can only read up to where the wire was reversed.

Question	Answer
I may have missed it, but what is the reading on the loop analysis that tells you a device is wired with the ins and outs backwards?	A detector with a negative DIFF value would be one where the in and out are reversed. Page 49 in the SIGA-HDT User guide will provide a bit more detail on that.
Do you plan to show a fail to map instead of just a map fault?	The HDT will still read the map.
Will you simulate a crashing map?	Usually, a crashing map is due to capacitance dropping out on the loop. We can try to set that up for a future session.
Isn't it true that fluorescent lights can cause internal faults on Optical detectors?	Yes. It is possible to see internal faults such as Min Qui troubles on detectors that are mounted too close to lights.
Can you use the HDT on Quick start panel?	It's Signature devices. Yes.
On a Class A SLC Loop, will the HDT map to each side of the shorted/reversed device(s)?	For a Class A loop, when using the HDT, you want to disconnect the return side of the loop.
Just a thought… we have multiple sites that have random map faults occur. It would be nice to be able to compare maps. Old map that is good and new map that is faulted. Rectifying a map fault through the SDU is just a patch and is done way too often. Very helpful to be able to save maps for comparison.	You can save maps from the SDU. There is also an option to print from the SDU mapping screen. You could potentially take that map from the SDU and compare it to the current map you are seeing with the HDT software. Ultimately using the HDT would address any device issues so that once you get the report to run clean and not list devices which fail contact analysis or mapping consistency. Once you get there the map should be stable and no longer post map faults.

Question	Answer
The resistor across a base is to cause a voltage drop. What is the value of resistor used in ohms?	0.22 ohms.
Can it identify when the line is looped on itself? Meaning if a T-tap branch was connected back on itself. And, if so, does it show on which devices it was on?	Yes. HDT can show a loop in a loop. We have an example of that in the SIGA-HDT User guide on Page 50.
Can you do it with the meter?	I am not sure what this is in reference to, I am not sure if this came up during the discussion around troubleshooting a ground fault on the loop.
Can HDT provide the sensitivity reading of detectors?	No.
For contact analysis fails after checking listed devices, should you also check the before and after devices also?	No, usually just the device that reported.
Would it flag every t-tap as a possible false end of line?	No.
Yesterday, you said, we can use HDT with one base connected to do programming to this device. I don't understand which program can be done for this single device.	Program an address for a device or clear the dirty head.
Can it clear a map fault with just tool?	It identifies where it is so the problem can be physically corrected.

Question	Answer
You say to disconnect the return on class A, why? The HDT has class A return on the tool. We have used on class A circuits without disconnecting return and not had issues.	It's easy to find the last device communicating.
Can you show a short?	Please review the HDT Troubleshooting Scenarios webinar recording.
Is the computer software available on the Kidde website?	We found yesterday that the PC Software was not on Kidde side of My Eddie. I have notified the My Eddie team to get it up there.
Is the HDT able to reset a dirty detector after cleaning it?	Yes.
I have a site that has devices that were manufactured in 2004 will these older device cause map faults?	Date code will not be the sole reason for the map fault. Focus on the items we spoke about at the beginning of the call or refer to the SIGA-HDT User guide for potential causes of map faults.
Realistically, how long would it take to Initialized and run Map Fault Analysis on a loop with "T" taps & 200+ devices Loop won't map on EST4 but maps fine with HDT.	Hard to put a set time on that but with that many devices it could take 10-20 mins possibly.
Any ideas if you have a reverse wiring condition on a detector, will the bad device show before, on or after the detector?	Up to the device, but not including.

Question	Answer
Our biggest issue is when the loop controller will not map (what we call a crashing map), and the MFT does not flag any issues. Is there a way to analyze all the data that the 3-SDU program receives, or the data the MFT receives to find what is preventing the loop from mapping?	Review what I looked at in the webinar, odds are it may have found something from a low diff value to.
When connecting my HDT to a star tap with 6 cables, the HDT had a problem. It acted like it was shorted out. Is that a battery problem? It had at least 50% battery. The device model selection was for EST3, when I changed it to io the HDT was able to do a diagnosis.	I wouldn't suspect a battery issue on the HDT. It sounds more like a current draw issue from the field devices. Typically setting the panel type doesn't matter. We don't emit more current from the HDT based on the panel type selected.
What steps would you suggest taking with the HDT when you first get your loop wired and devices installed. Prior to connecting to your Loop Controller?	In this instance I would start with initializing the loop and then let the HDT go through the mapping analysis.
Does it assign a short address based on resistance? Can short addresses be used as a tool to troubleshoot?	Short address is assigned when the device is first added to the loop. For normal troubleshooting of mapping issues, we don't rely on the short address. However, there are times when we have mapping or device troubles where we work with techs and we find the short address is missing. In that instance, we go into the project and manually assign a short address or resolve duplicate short addresses. Mapping is based on resistance of the loop. The loop controller goes out and finds the device with the highest serial number and then works back from that point assigning short addresses as it goes.

Question	Answer
Does/can the tool provide the device address that it's programmed as in the panel?	Yes, the map shown on the HDT will display the short address and device address.
Does the HDT have a limit to the number of devices it can check on a loop if multiple devices are bad due to possible lightning damage?	A loop can have a maximum of 250 devices.
Can you detect a GF on a UIO6R?	You can detect ground fault on the loop itself. If there was a ground on a circuit for a module on a UIO6 I would expect to get that module posting a trouble. If the ground is on the signature line of the UIO, you're only going to see the ground for the data line.
On the Class A SLC question, alternately connecting to each side of the SLC loop should help identify the reversed polarity device ... true?	That's not necessary since you can poll one side of the loop and use a negative diff value to show if a detector has reversed in and out.
HDT will identify a map fault and can show a cleared fault but a panel loop download will be required if a change was detected.	As long as you have not rewired a device and changed the Data in and out connection you should not have to upload the map and reconcile after placing it back on the panel.
Use HDT with computer software for better results as opposed the just the HDT on a loop?	Yes, PC software makes it easier to see the map of devices and the diagnostics of the devices.
Will the HDT clear the map fault on the system without having to also use the 3-SDU programming software?	You can address devices which failed contact analysis or mapping consistency. Once you run the HDT and those lists are clear, once you put the loop back on the panel it should map successfully.

Question	Answer
Nested loops can be a cause of a map crashing. Will it detect troubles or alarm signals on any devices?	It can identify those. On the Restore loop screen the HDT will show device counts of devices that are in Trouble, Alarm, or in a Ready state.
If I manually program a module or a detector with a specific address and then install it on the loop, shouldn't an EST3 correct the map fault after a reset or restart? What I have found is, that if there is a surge on the data line and these devices are on the other side of the surge the EST3 will not correct the map fault.	That may or may not happen, when the loop controller sees the new device start it should remap the circuit to identify where the new device is.
You can tell which devices are in alarm under "restore"?	Usually when you initialize the loop it will show you a table with the devices that are Normal, Alarm Supervisory or Trouble.
What is the probability of a detector that has reached 80% dirty returning to normal after a good cleaning and reset with HDT?	Depends on what the debris in the detector was honestly. In my experience for a detector that high, it's been hit or miss. Typically, when you clean it and write the Maint. Date the register will update and clear the Maint. Alert.
Will the HDT function with an active device on line? For example, an alarm or supervisory device?	Yes, the HDT can show you devices that are in an active alarm or trouble condition.
Is there a maximum number of maintenance performances for a detector?	Not necessarily. As long as you can get it cleaned and resolve the Maint. Alert, as long as the detector remains functional and complies with code requirements it should not need to be replaced.

Question	Answer
Regarding future 3-SDU updates, will current model numbers be listed in device types?	We have been working to update devices without having to add additional models into the SDU to make it easier for customers to swap out devices without having to perform downloads.
What is the benefit of using this vs using the iO-CU software to map?	Not everyone carries an extra iO panel in their truck just for troubleshooting maps.
These were detectors removed from a detention facility and the major debris was dust and wool blanket lint mix.	Ok, if you can get it clean, write the Maint. Date, that should be good enough to go back on the system.
What amount of induced voltage is acceptable on the SLC Loop and when should we be concerned?	You really want 0 volts. The more you have the more likely you are to see issues where a Map will try to map and fail or not map at all.
When using the HDT and as it scans when you have 95 devices on loop and it starts showing you have 210 devices in alarm multiple supervisory and troubles that count up to more than the amount of devices on the loop what is the most likely cause of this?	I would start in this case by metering each side of the loop to ground. Check for induced AC or DC voltage on the loop to ground.
The detectors were cleaned and reset, but the duration of service after was very short.	I am assuming they went back into Maint. Alert shortly after you cleaned them? Prisons are a tough environment. I have found there are times where a device hits 80% or above and I can't save it and I have to replace.
Can the red led be turned on by the HDT or thru the panel?	No.

Question	Answer
If I have a map fail, I will look at 5 devices before and 5 after what the 3-SDU flags.	This appears to be a comment to the group about a method to troubleshoot a map fault on the EST3.
We have had map migration issues from EST2 to EST4 and re-initializing the loops with the SIG-HDT tool does seem to resolve these problems.	This is more of a statement than a question. It seems like the customer is validating that the HDT has helped solve mapping issue when going from EST2 to EST4.
Does it work on analog card or loop card?	Only Signature devices.