



KEYSIGHT
WORLD 2019

Embracing Keysight Technologies On-Site Now! Expert Support Service

Product manager/ Keysight Technologies

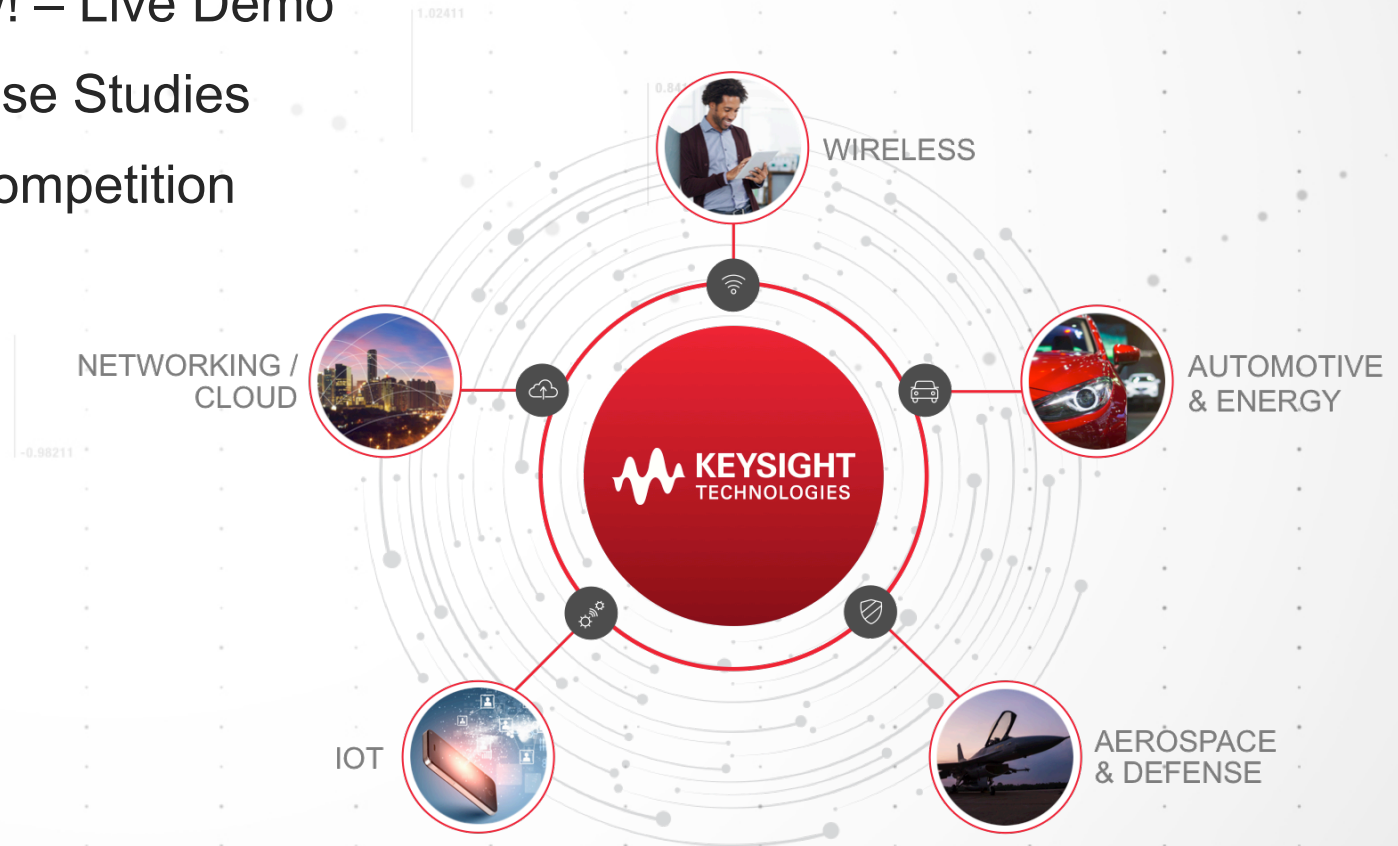
Derek Yu



Agenda

KEYSIGHT TECHNOLOGIES ON-SITE NOW! EXPERT SUPPORT SERVICE

- What is Keysight Technologies On-Site Now! Expert Support Service
- Using Keysight Technologies On-Site Now! – Live Demo
- Keysight Technologies On-Site Now! -- Case Studies
- Keysight Technologies On-Site Now! vs Competition
- Feedbacks from Keysight support team
- Summary



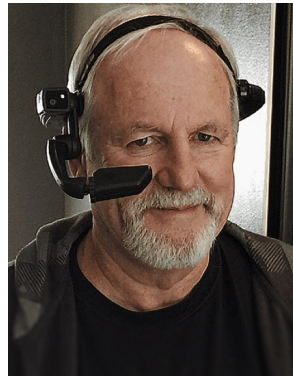
**What is Keysight Technologies
On-Site Now!**



What is Keysight On-Site Now!

DESCRIPTION OF EXPERT SUPPORT SERVICE

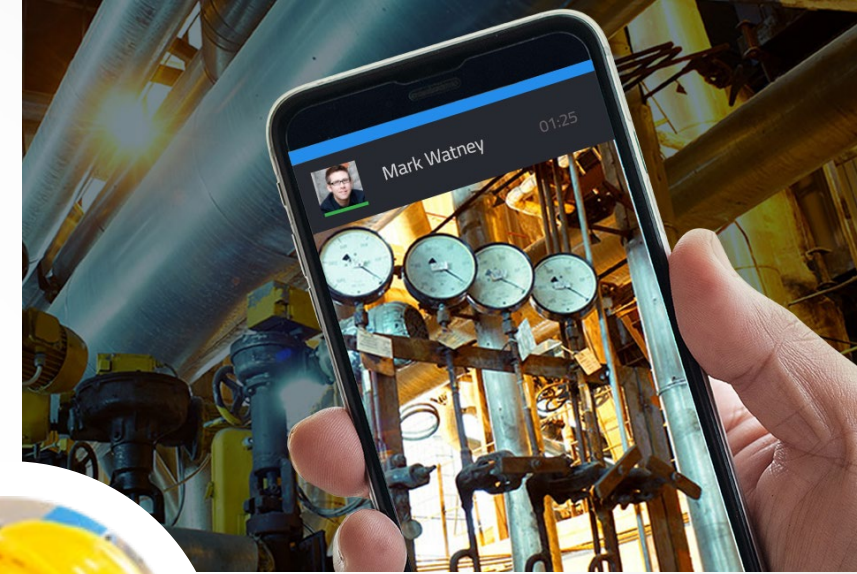
- Envisions to simplify troubleshooting of customers issues with the help of Keysight On-Site Now Expert support service.
- Keysight's customer and Expert consultant can use a real-time voice, video and content sharing platform.
- This will allow expert consultant to guide customers with issue resolution steps
- “You-See-What-I-See” concept



expert consultant



On-site Engineer



Challenger Message


KEYSIGHT TECHNOLOGIES ON-SITE SUPPORT NOW! EXPERT SUPPORT SERVICE

Current State: Customer Thinks/Does	<ul style="list-style-type: none">Experienced engineers can resolve the most of issues. Urgent issues require expert should be very few. Roughly once within 3~4 months.Current urgent issues are able to be supported by Mobile phone or WebexCustomers prefer to have someone going on-site immediately than have to “play along” with remote support.
Gap: What the customer doesn't see/understand	<ul style="list-style-type: none">If our engineer has been requested onsite, The customer also need more procedures to do preparation. Once purchasing Keysight expert support service, the customer will not require any complex onsite preparing procedures.Repairing will require full use of both technician's hands, and there is difficult of trying to follow repair instructions while holding a mobile phoneData security is very important to protect customer's confidential
B: New Approach: The action the customer should take is	<ul style="list-style-type: none">Live support from professional expert through the Keysight On-Site Support Now.Hand free to repair hardware or software issues.Preventing miscommunication thru Mobile phone and Webex.
Our Solution (Keysight's unique differentiators)	<ul style="list-style-type: none">Keysight (On-Site Support Now) solution is a companion tool that will help customers solve problems faster.Getting access to Keysight services & support immediately as oppose to waiting for an engineer to arrive on-site to troubleshoot would have resulted in mitigating loss of millions \$s of manufacturing downtime & production output.
Description and Key Features	<ul style="list-style-type: none">Keysight On-Site Support Now is an end-to-end, interactive support collaboration platform with a real-time two-way exchange of live video, messaging, and voice between Keysight's expert consultant and your technician.

Product Structure and Pricing

EXPERT SUPPORT SERVICE USING GLASSES



- We are not selling Glasses, but we are selling : Support/Service
 - Adding new optional support contract for Keysight Glasses service.
 - Pre-requisite: General ICT support contract signed with Keysight.
- The Expert Support Contract
 - Default 2 years for Expert Support Service Contract with Keysight.
 - Offering installment plan for Expert Support Service Contract (Only for 2 yrs.)
- Industry:
 - Any of our customers (Especially high volume, In-Line)
 - ✓ In-Line system customers
 - ✓ New uptime agreement customers
 - ✓ Customers who has high engineer/technician turn over & far away from Keysight support team.
- Expert consultant Resources Arrangement
 - No change to FSE resources
 - One day TAT (turn around time) for technical support will be reduced.



On-Site Now!
Expert Support Service

Enhanced Communication

Dedicated Support



Benefits of Keysight Technologies On-Site Now!

PRODUCT DESCRIPTION

- What are the benefits of Keysight Technologies On-Site Now!
 - Fast On-Site response from expert consultants
 - Step-by-step instructions from expert consultants
 - Minimize system downtime with pre-recorded video to repair defects or to perform preventive maintenance
 - Reduce repair costs with accurate identification of replacement parts
 - To improve repair rate with real-time visual collaboration
 - Easy hardware/software upgrade when a newer model is available
 - Both hands free
 - Voice commands



Keysight Technologies On-Site Now! Scenarios

DESCRIPTION OF EXPECTED/TARGETED CUSTOMER TYPES

- Inline (i3070 & i1000D) customers
 - In-Line tester is more complicated mechanical structure than standard tester. Customers may not very familiar with system. This will cause lots of support issues.
- New customers
 - Most of new customers don't understand ICT that may have miscommunications and wrong operations between technician and Keysight expert.
- Non-expert customers
 - Some customers are far away from Keysight support team. Customers is very difficult to have Keysight expert consult on site support.



Board Test

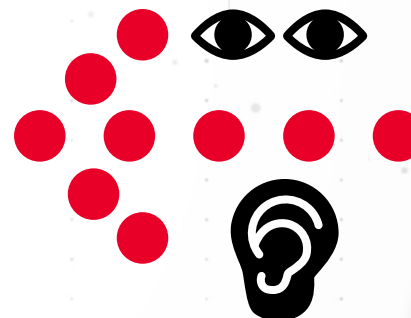
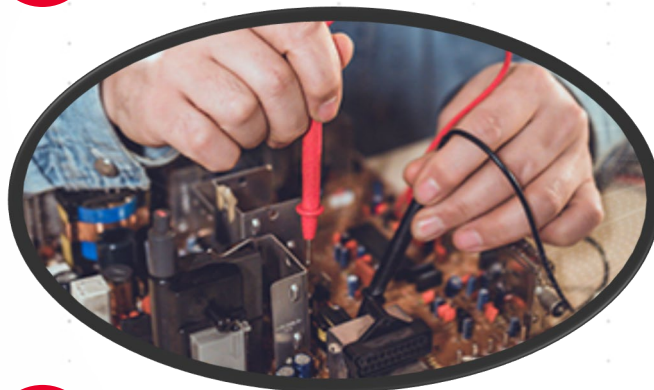
Adding Expert Support Service

IMPROVE ISSUE RESOLUTION

Return to Keysight



Cooperative



On-Site

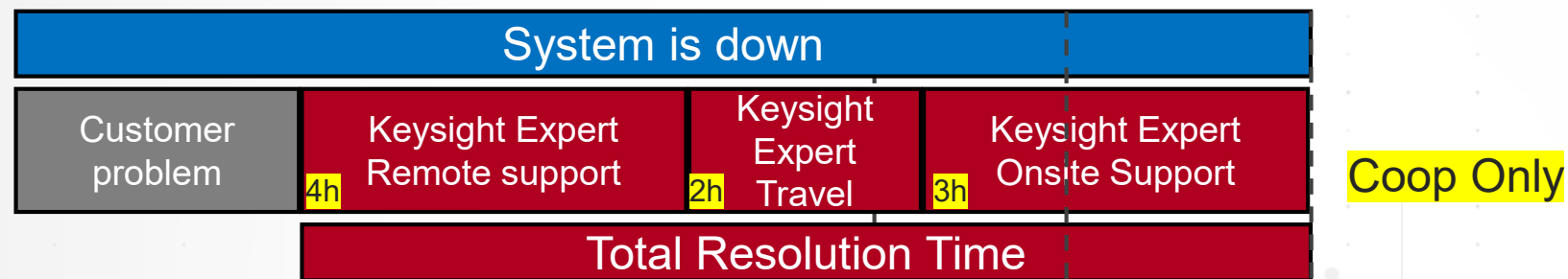


Expert
Support
Service

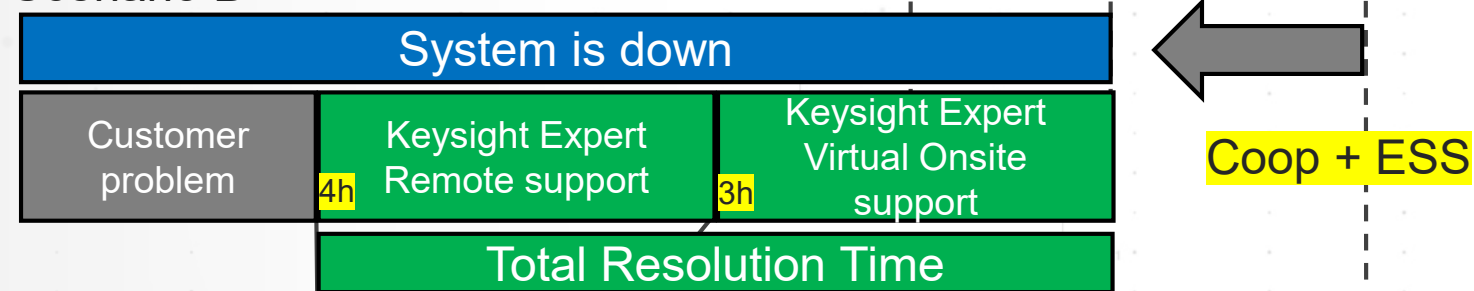
Reducing Customer's Downtime

SOLVING COMPLEX ISSUES FASTER

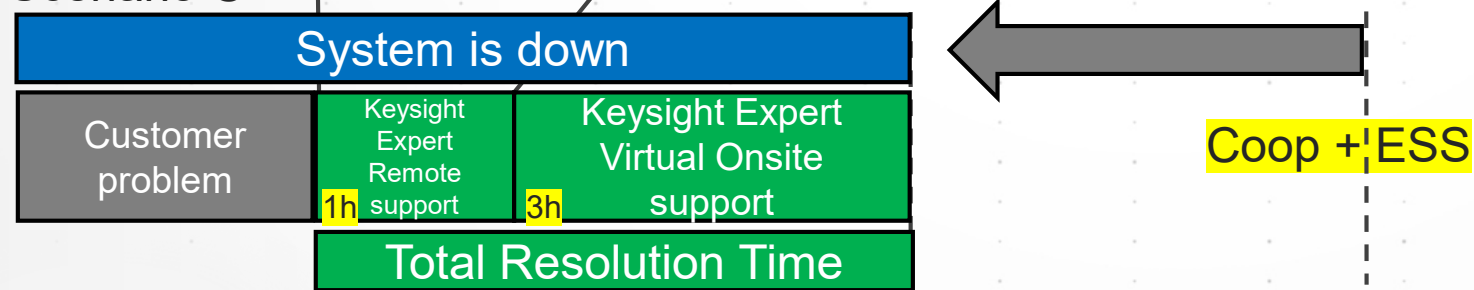
Scenario A



Scenario B



Scenario C



- Response time is within 2 hours per EMT Coop Support service exhibit S0015

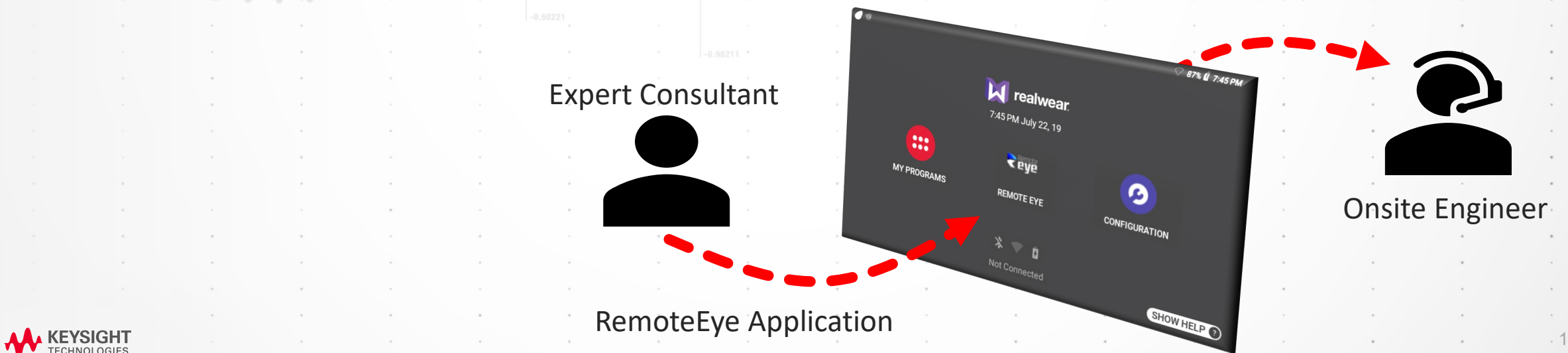
- **No travel time** to be on-site ... virtually on-site
- ➔ Reduce downtime

- **Faster resolution** from realtime visual and audio feed
- ➔ More reduced downtime

Adding Expert Support Service

COOPERATIVE SUPPORT EXAMPLE

- You log call to CCC (Entitlement via ICT system contract)
- CCC contact Expert Consultant
- Expert Consultant contact you within 2 hours to resolve the technical issue of the ICT system remotely
- Without ESS, Expert Consultant can only resolve the issue over phone or webex.
- With ESS, Expert Consultant can enable use of Keysight On-site Now to connect to you virtually
 - You put on the Keysight On-Site Now glasses
 - Expert Consultant connect to you via web application
 - Expert Consultant continues troubleshooting using Keysight On-Site Now
 - ✓ Added audio and visual information from Keysight On-Site Now enhances issue analysis



**Using Keysight Technologies
On-Site Now!**



Keysight Technologies On-Site Now! -- Parts

SMART GLASSES PARTS



Realwear HMT-1 glasses



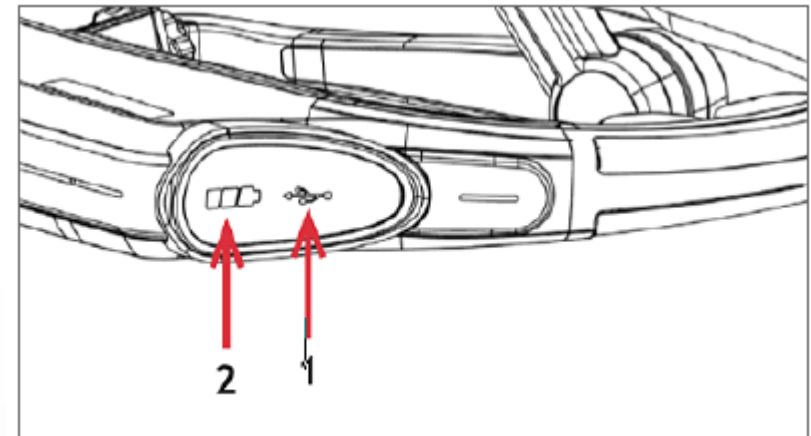
Battery housing



Battery



Charger



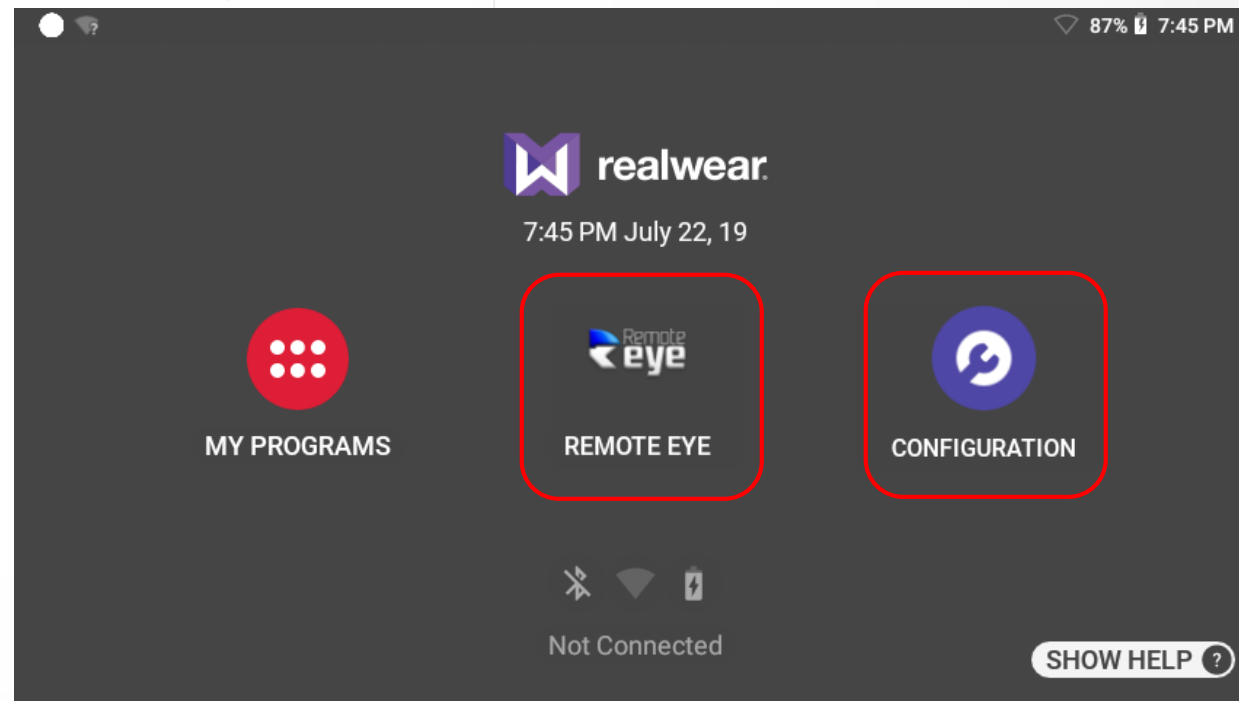
Charger port

Connecting to Expert Consultant

CONNECTING TO REMOTE EYE TOOL

- After putting on the Glasses ... After connecting to Wifi ...
- Launch RemoteEye to connect to Expert Consultant
 - At Home Screen (“Navigate Home”), say “Remote Eye” to launch the RemoteEye application
 - Wait for Expert Consultant to connect
- Other common voice commands
 - Configure Wifi
 - ✓ At Home Screen (“Navigate Home”), say “Configuration” to scan the QR Code
 - View User Manual
 - ✓ At Home Screen (“Navigate Home”), say “My Programs” to view contents of “My Programs” folder
 - ✓ Say “My Files” to view contents of “My Files” folder
 - ✓ Say “User Manual” to open the pdf file
 - ✓ Say “Page Down” or “Page Up” to navigate the document
 - ✓ Say “Zoom Level 3” or “Zoom Level 4” to view the text more clearly

Seen in Keysight On-Site Now glasses



Connecting to an Expert Consultant

IF 3-CHARACTER INVITATION CODE IS SHOWN

- If you see a 3-character invitation code when you launch the RemoteEye application, please pass this code to the Expert Consultant.
- The Expert Consultant will use this code to connect to your Keysight On-Site Now glasses

Pass this
3-character invitation code
to Expert Consultant

Invitation Code

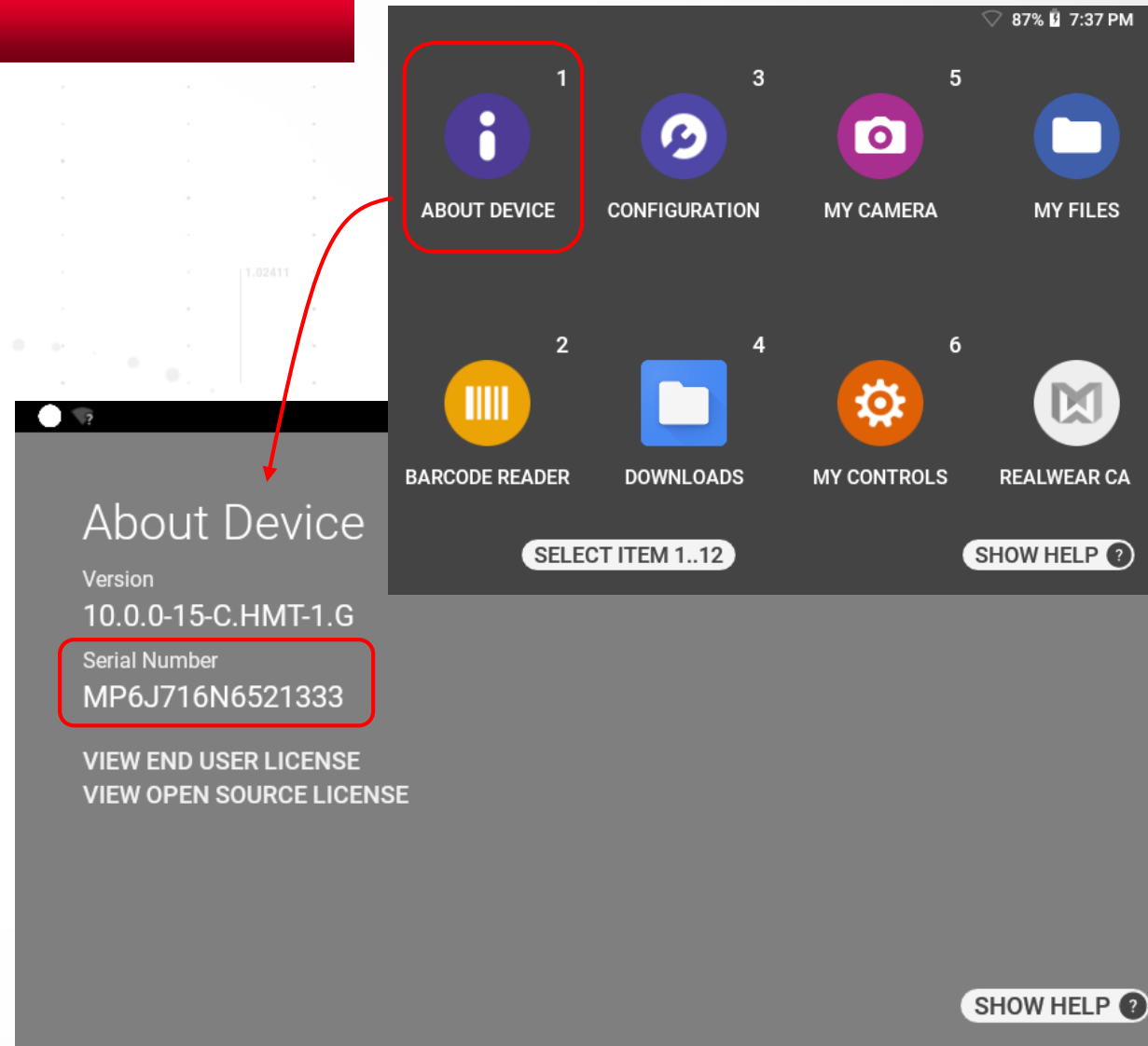
Please send to your remote assistant:

jlu

Viewing Device Serial Number

IF DEVICE IS “LOST”

- From the Home Screen (“Navigate Home”),
- Say “My Programs” to view contents of folder
- Say “About Device” to view
 - Firmware version
 - Device Serial Number (15 character code)
- Administrator can now find the Device in the Expert Consultant Accounts
 - Find the serial number in your Region’s and other Region’s Expert Consultant Accounts
 - ✓ Need to log into each account 1-by-1 to check



Switching to Live Demo

Case Studies on Keysight Technologies On-Site Now

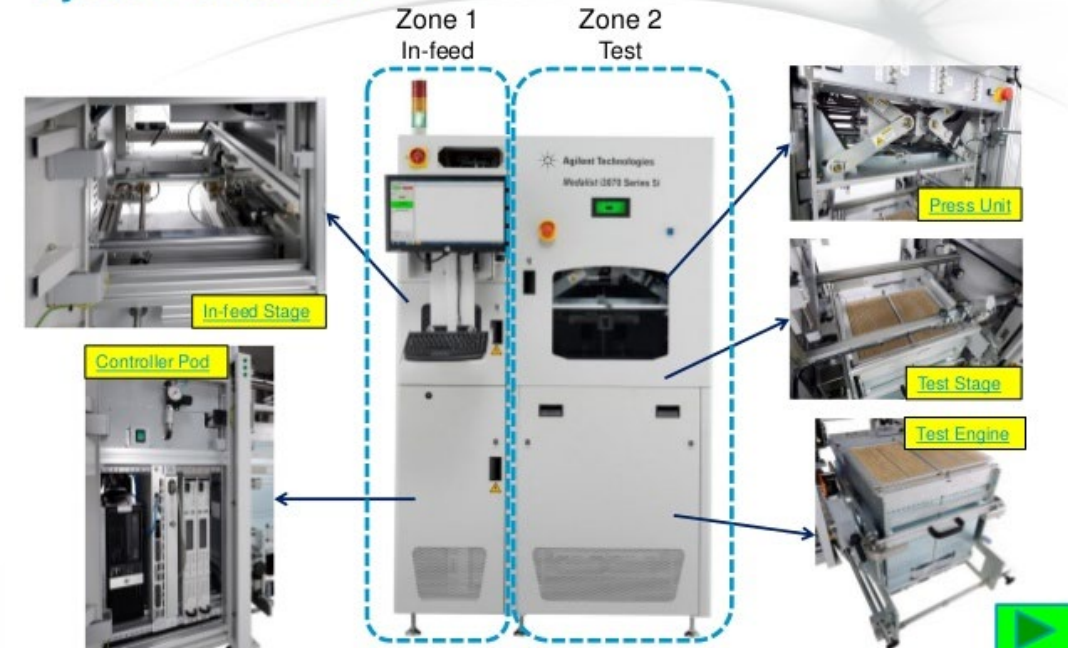


Troubleshooting Inline ICT systems

FIRST CASE STUDY

- Can easily stick head into tester with Glasses on
- View board flow sequence, sensor activations, handler movements etc
- Listen to noises while inline handler is functioning
- Red dot to point at items in handler
 - “Tighten this screw”
- Screen capture and annotate to give instructions to onsite Engineer
 - “Push the sensor in this direction”
- Share screen with onsite Engineer
 - Share wiring diagram of the relays/switches
 - “check this wire”
- Video capture troubleshooting process for future reference
- Add Expert Consultant (Multi-Expert call) when needed

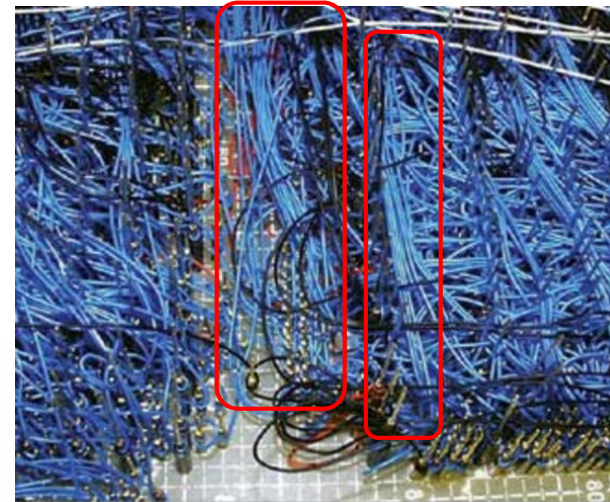
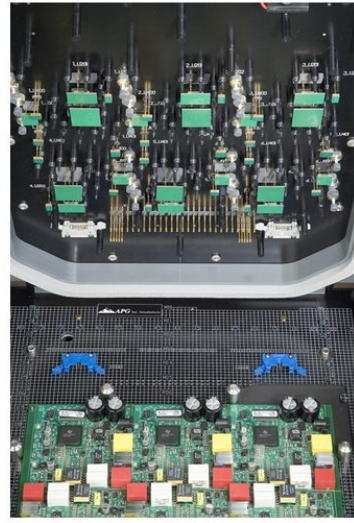
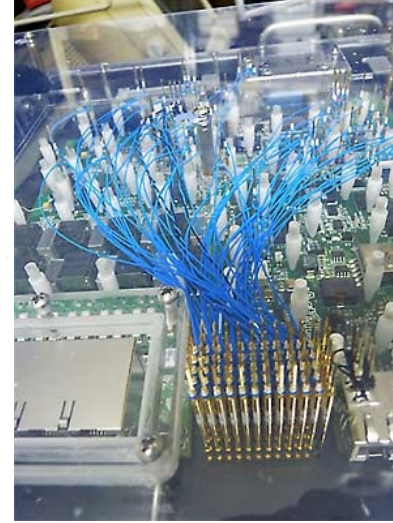
System Overview



Fixture Troubleshooting

SECOND CASE STUDY

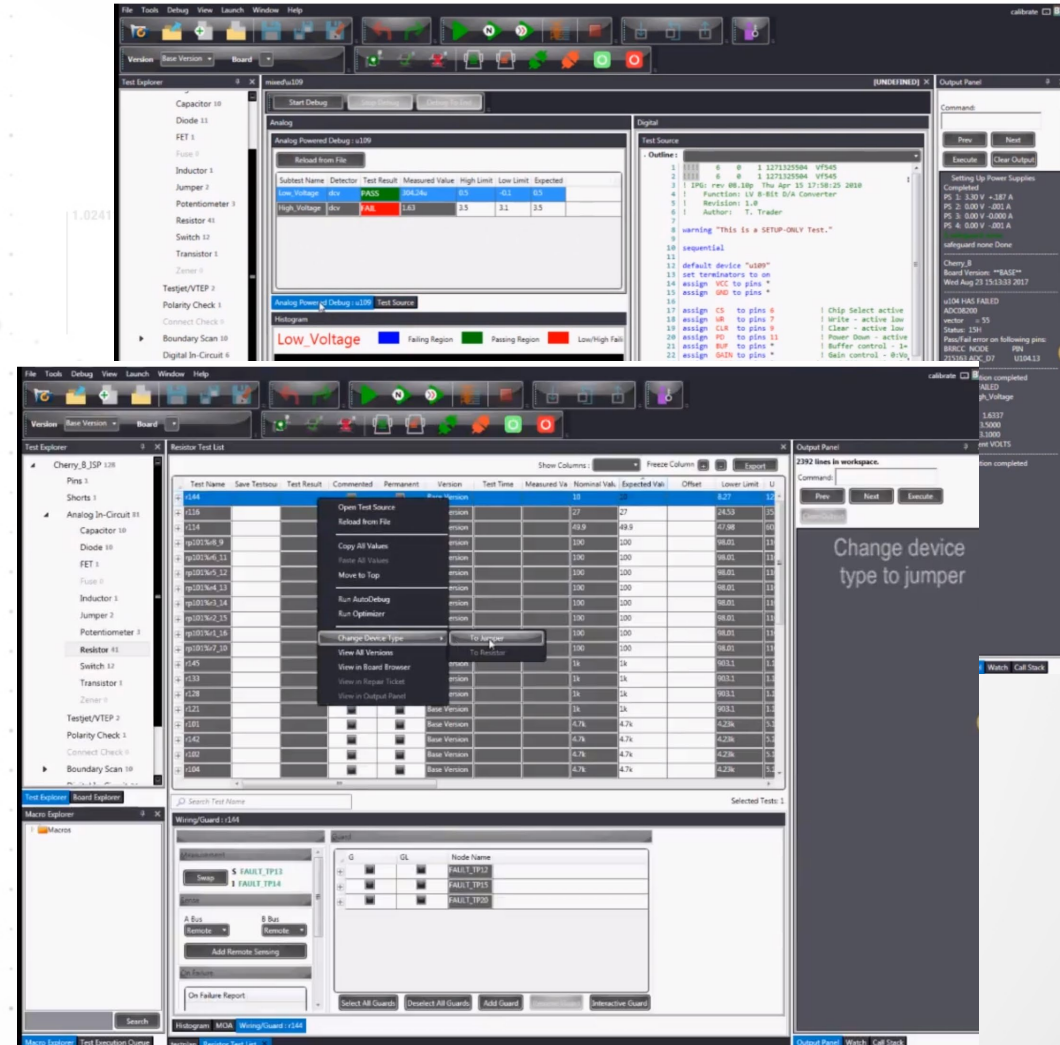
- Check the condition of the fixture in realtime
 - Check no wear and tear on movable parts
 - General check of inside of fixture
 - ✓ Fixture electronics?
 - ✓ Density of wires
 - ✓ Wire routing condition
 - Are wires bunched together? → can cause cross-talk
 - Twisted pair wires used?
- Check probe or P-pin alignment
- Check VTEP condition
- Check fixture mechanisms
 - Side access mechanisms to connect peripherals during test
 - Check movement obstructed or not
- Check vacuum sealing
 - Listen for leakages



Test Program Troubleshooting

THIRD CASE STUDY

- Application problems
 - See failure symptoms
 - View how user launches applications
- Testplan problems
 - See test sequence flow and when failure occurs
 - See testplan code
 - See changes implemented immediately and its effect on the tester
- Test debug
 - See consequences of test option changes
 - See how fixture performs during test
 - ✓ Problem could be due to poor fixture vacuum
 - See multimeter readings



Keysight Technologies On-Site Now vs Competitions

Keysight Technologies On-Site Now! vs Competition

MINIMIZE SYSTEM DOWNTIME

Keysight On-Site Now	Phone (personal or company)	Webex (company)
Virtually on-site - No travel time wasted	Not virtually on-site	Not virtually on-site
Realtime view of the situation - See and hear in realtime - Point-of-view advantage	Record video and picture taking	Realtime view of situation
Hands free headset - Voice Commands	Need one hand to hold Phone	Need one hand to hold device (If on Phone)
Continuous troubleshooting time	- Troubleshoot in blocks of time - Simple troubleshooting situations	Continuous troubleshooting time
Secure - Cust Company Approved device	Not Secure - Not a Company approved device (personal)	Secure - Cust Company Approved application
Not Easy access - Off when not used - Locked in storage - Need to retrieve from storage area - Need to connect to wifi	Easy Access - Always on - Always with me - Always connected	Not Easy access - Need to launch application - Need Webex account - Need to connect to wifi

Feedbacks from Keysight Expert Consultant



How often do support calls require photo/video capture to help to resolve the issues?

FIRST FEEDBACK

- Majority
 - Needed to monitor movements
- Hoe Yam

1 in 3 or 4 months
- Kingson Wang

1/3 of all support calls
– Andrew Wheeler

1/10 of all offline support call or
1/2 of all inline support calls
– Abdelatif

Summary:

About 1/3 of all support calls need video or photo capture. Especially for inline support

How much benefit to the customer can we give in our support?

SECOND FEEDBACK

SAP customers expect 2h onsite response time
– Hoe Yam

- Faster and effective to reduce downtime
- 1 to 2 hours

Phone or laptop need special permit each time

vs

Issue permit once for glasses

- Kingson Wang

Any downtime reduction is valuable
– Andrew Wheeler

Summary:

Downtime reduction is important to customer. Some customers expect **less than 4h onsite response**. It is technically possible using Keysight On-Site Now!

2 hours average downtime
– Abdelatif

Are the glasses easy to use?

THIRD FEEDBACK

- HMT-1 more comfortable than Epson
- HMT-1 resolution better than Epson
- Voice commands work on thick Vietnamese accent in loud manufacturing environment
- Good for customers who are not as knowledgeable on i3070.

– Andrew Wheeler

- Does not have many features
 - Difficult to setup wifi
 - Difficult to login to company LAN
 - HMT-1 not comfortable
- Rodrigo

- Too many steps needed to get connected on wifi
 - Cannot remember the commands
 - Easier to use mobile phone
 - Hard to adjust the arm
- Mark Bridle

Summary:

- We need to train Experts on how to setup and use.
- HMT-1 better than Epson

Conclusion



Conclusion

KEYSIGHT TECHNOLOGIES ON-SITE NOW! EXPERT SUPPORT SERVICE

- **We are not selling Glasses, but we are selling :
Support/Service.**
- **Keysight Technologies On-Site Now! solution is a companion tool.**
- **Getting access to Keysight ESS immediately.**
- **Call to actions:**
 - Try the Demo glasses by yourself
 - Get started thinking about new optional support model
 - Start talking to your colleagues, Engineering team and customers.
 - This is NOT restricted to troubleshooting. TALK to Keysight.





KEYSIGHT
WORLD 2019

