

# CASE STUDY



Fidelity Communications wanted a Proactive Network Maintenance solution.

We helped them  
*predict the future.*

"The ability to be more proactive in our network maintenance before customers call is a big thing for us."



**ZCorum™**

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## FIDELITY COMMUNICATIONS

# PROACTIVE MAINTENANCE

FIDELITY NEEDED A PROACTIVE NETWORK MAINTENANCE SOLUTION TO PROVIDE BETTER SUPPORT TO THEIR LOCAL RESOURCES IN ORDER TO INCREASE CUSTOMER SATISFACTION.

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### THE STARTING POINT

In early 2012, Fidelity Communications acquired 14 cable, phone and Internet systems in four states adding about 30,000 new individual customers to their phone, cable TV and high-speed Internet services. In 2014 Fidelity had licensed ZCorum's TruVizion diagnostics to get a clear line of sight into their network to better troubleshoot subscriber and plant issues. Customer service reps were using TruVizion on every screen, and in the Network Operations Center, TruVizion was in use on every monitoring screen.

### THE CHALLENGE

With operations in five states with eighteen individual CMTS headends, the next step in Fidelity's plan was to implement a Proactive Network Maintenance (PNM) solution to better support their local resources

"WITH THE IMPLEMENTATION OF PREEQUALIZATION WE NOW HAVE AN UNDERSTANDING OF WHERE ISSUES MIGHT BEGIN CROPPING UP AND TO SOME DEGREE, COLLECTIVELY ANALYZE THE WHY. THE ABILITY TO BE MORE PROACTIVE IN OUR NETWORK MAINTENANCE BEFORE CUSTOMERS WOULD CALL US WAS A BIG THING FOR US."

-JARROD HEAD  
DIRECTOR OF ENGINEERING AT FIDELITY

in each market. Improving subscriber satisfaction was of foremost importance, so the main goal was to give their staff a way to find issues before a customer was impacted and calling in for repairs. The objective was to proactively go into the field and take care of plant issues as part of routine maintenance before minor impairments became major problems. This was something they knew they needed but would be a new way of maintaining their network health of their network and CPE, Proactive Network Maintenance (PNM) for fixing issues before they impact subscribers, and a software-based return path spectrum analyzer for isolating ingress in their plant.

### THE SOLUTION

In order to accomplish their goals, Fidelity did their research and decided to implement a trial of ZCorum's PreEqualization Analyzer. ZCorum worked with Fidelity's engineers to install the software and get them started with interpreting what they were seeing on their screens.

During their initial testing of PreEqualization Analyzer, Fidelity's outside plant engineers began using the tools heavily every day. They would begin by viewing the modems in the highest priority alert state and the corresponding correlation groups and comparing them to their plant records. When checking the VTDR distance in the software they were impressed with how those measurements were correlating with their own maps of cable and equipment out in the plant.

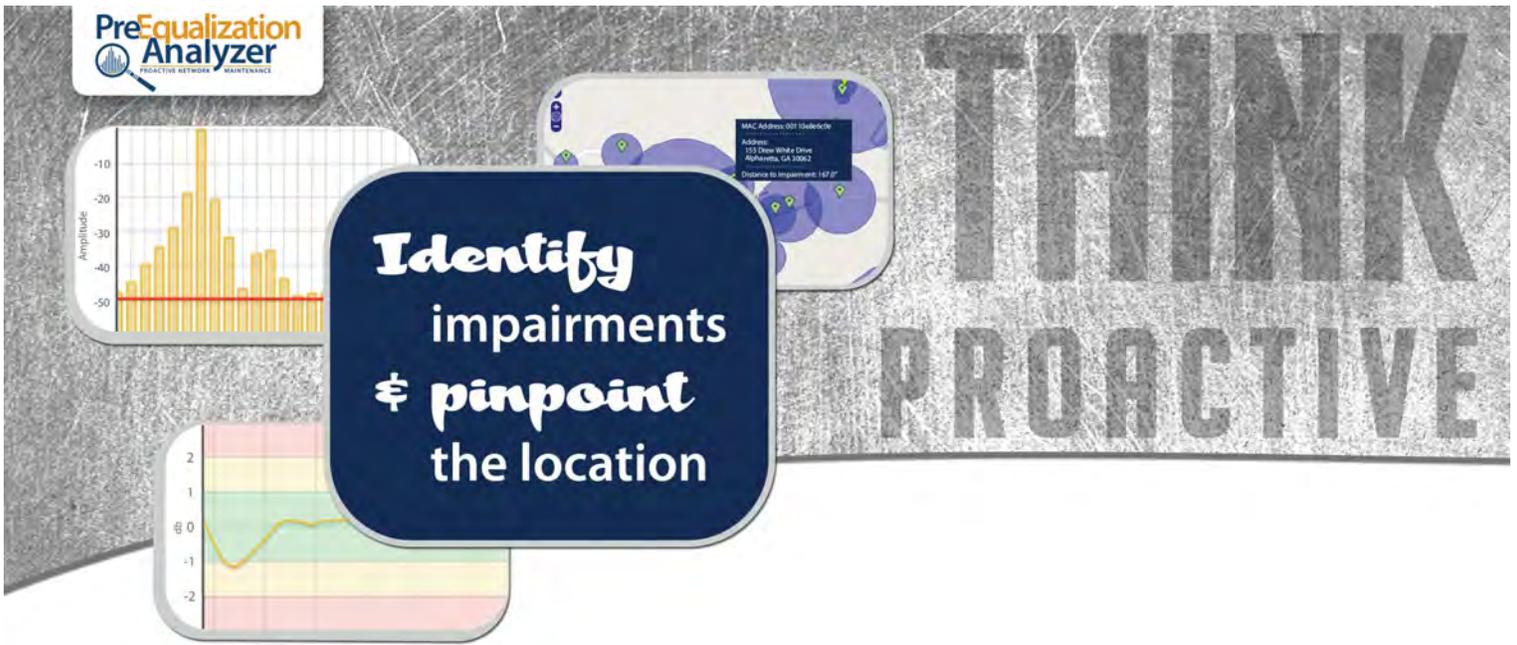
Putting a strong emphasis on their broadband structure, they made the decision to invest in PreEqualization Analyzer.

### THE RESULTS

Since implementing the tool, Fidelity's technicians have utilized the correlation groups and the VTDR measurements in PreEqualization Analyzer to determine the approximate location of impairments. Field technicians have successfully followed the measurements, found issues and repaired them. In one instance the software was indicating that an impairment was approximately 850 feet out. With that measurement and in conjunction with their strand map, they knew there was an amp in that area. Technicians were able to go right to that amp and fix the problem.

The tool has also indicated issues at 50 feet out, clearly marking those problems as somewhere at the home or in the drop.

Their efforts have been aided by TruVizion, ZCorum's cross-platform modem diagnostics software that was previously installed across their network.



The VTDR measurements in PreEqualization Analyzer and the node data in TruVizion have proven to be so accurate that Fidelity has been able to find issues that need attention and get those issues resolved proactively with less time in the field for their technicians. They're avoiding unhappy subscribers down the road and that was their main goal from the beginning.

Another advantage they considered an icing-on-the-cake bonus, was the ability of Fidelity's line techs to check the software from the office before going out in the field.

They're able to see issues without having to travel to the headend at all. They're going straight from the office out to wherever the issue is and getting it repaired.

Fidelity now has various work groups throughout their networks that are using the PNM tool. A support team for the whole organization is pulling data from PreEqualization Analyzer and TruVizion and compiling node health reports. Using these reports supplement the high alert modems report and the post install reports in TruVizion. With these reports Fidelity is making the entire range of data from the tools more on target and suitable for their different individual markets.

"With the implementation of PreEqualization we now have an understanding of where issues might begin cropping up and to some degree, collectively analyze the why. The ability to be more proactive in our network maintenance before customers would call us was a big thing for us," said Jarrod Head, Director of Engineering for Fidelity Communications.

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## THE BOTTOM LINE

Fidelity Communications needed a PNM solution to be proactive in their plant maintenance in their systems across five states. After deploying ZCorum's PreEqualization Analyzer software, Fidelity's technicians were able to analyze correlation groups and VTDR measurements to determine approximate locations of impairments. Their field technicians have successfully followed measurements, found issues and repaired them. The solution will reduce support calls and truck rolls ensuring Fidelity's continued high level of customer satisfaction in a highly competitive market.

# ADDITIONAL RESOURCES

## FREE TRIAL

START YOUR FREE  
30 DAY TRIAL OF  
PreEqualization  
Analyzer  
TODAY



COMPLETE THE FORM  
TO GET STARTED



CLICK HERE TO START YOUR  
FREE 30 DAY TRIAL OF  
PREEQUALIZATION ANALYZER

## CASE STUDIES



**Click here** to read how Fidelity Communications implemented a 3 step plan to find impairments first, fix them fast, and fix them forever.

## WHITE PAPERS



**Click here** to read DOCSIS 3.1 and the PNM Toolbox



**Click here** to read DOCSIS Pre-Equalization: Vastly Powerful, Often Undervalued



**Click here** to read DOCSIS Evolution and How 3.1 Will Change Everything



## VIDEOS





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