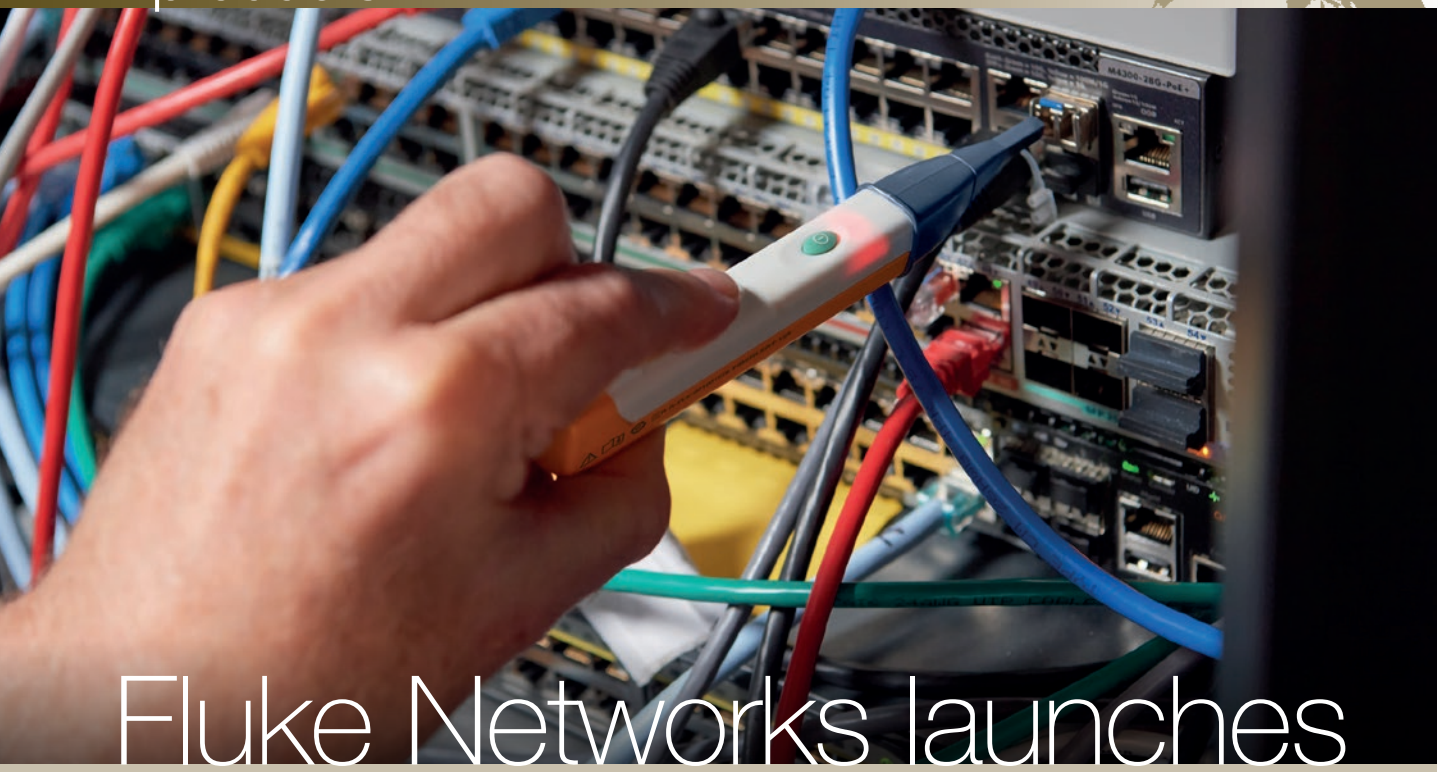

Fluke Networks launches FiberLert™, the first live fibre detector

Troubleshooting device promises to save time – and the eyesight – of engineers.

Fluke Networks, based in Everett, WA, USA is one of the leading names in certification, troubleshooting and installation tools for the network cabling industry. With a global presence and offices worldwide, they pride themselves on innovation and solutions by working closely with the engineers they cater for.

By way of explanation; 25 years ago the company identified a selection of working groups internally, awarded each $100,000 and challenged them to come up with new business opportunities while "watching how customers work and analysing the problems they face". The upshot of this experiment was unexpected.

The biggest headache for network technicians is that there is no easy way to assess whether any given problem relates to hardware, software of the cabling. As a result, the company came to identify a need for handheld electronic tools that could automatically identify trouble spots and where they originated.

This is how Fluke continues today and their latest product, FiberLert™, is, they tell Broadband, the world's first live fibre detector and is designed to simplify the work of technicians and engineers. It is a handheld tool that detects invisible near-infrared (850-1625nm) wavelengths used in fibre-optic communication to troubleshoot cable, port, polarity and transceiver issues. Basic tests on fibre can be carried out with just one hand, and identifies polarisation issues and failed transceivers, making it easier for the technician to multi-task. The presence of near infra-red light is indicated by means of an audible sound and LED.

FiberLert™ is a essentially a troubleshooting tool that allows technicians and engineers to test for the presence of near infra-red light without the need for complicated setup or interpretation of the measurement data. When placed in front of an active fibre optic port or patch cord, the tester emits a continuous light and optional tone.

Broadband Journal caught up with Fluke Networks training manager and test and measurement expert Robert Luijten, based at Fluke's Eindhoven offices, to find out more.

Broadband: Tell us about FiberLert™. What sets it apart?

Robert: The product is singular for two reasons. Firstly, when it comes to testing fibre optic links there is quite a bit of instrumentation on the market, but they tend to be quite costly. This is a relatively low-cost product – FiberLert™ is a very economical choice. Secondly, when many technicians and engineers that are exposed to fibre they can feel it's a bit like a black magic. Sometimes it works and sometimes it doesn't.

This system is accessible to anybody that works with a fibre optic link. And it's so simple to use; you just hold it in front of a port or connector. And if it lights up or beeps then you know if a link is active or not. In networks, there are a lot of these patch panels out there.

The biggest problem occurs when engineers run into the so-called dark fibres, which are either unused or defective links. Fibre re-routing often occurs and to be able to easily identify available ports is a big benefit as it limits having to report to a trial-and-error approach.

Broadband: That must save a lot of time.

Robert: It is worth mentioning that there are a lot of fibre transceivers currently in use. Fibre transceivers are little devices that get plugged into switches and they convert an electrical signal into an optical signal. The same dynamic exists here too: does it work or doesn't it work? It's something that you don't want to look into it because the non-visible light could seriously damage your eyesight.

Broadband: A common hazard.

Robert: There's an interesting parallel at work with the FiberLert™ because around 25 years ago Fluke introduced a similar piece of kit called the VoltAlert, which did the same thing for the electrical world. The tip of this glows red and a beeper sounds when voltage is detected.

Broadband: So Fluke adapted the same technology to fibre?

Robert: Exactly. Funnily enough it was such a small instrument and so inexpensive that we actually struggled to get the sales team to push it at the time, it but we actually sell large quantities of VoltAlerts every year. It is popular because it is such an easy-to-use tool. A lot of people don't necessarily want to know all the details. All they need is 'go, no-go' information. Simple but effective.

Broadband: Sometimes simplicity is far more appealing – especially if you are in a harness working on a power line. A high-risk situation where you invariably need three pairs of hands!

Robert: Correct. Sometimes the magic is not in how much a piece of test equipment can do, but how intuitive and easy it is.

Broadband: Well, Steve Jobs understood that. I can imagine with your product that with the amount of fibres in the POPs, in the poles, and is there light or not, and is it operational, that I imagine that is a handy tool to have for the installers. What is the primary application? Is it indeed the cable TV engineer field testing, or is it used in the head end?

Robert: We would say the target customer is basically anybody that is exposed to optical fibre.

Broadband: I see - that is very wide.

Robert: It varies. It could be construction. It could be a network technician responsible for connecting devices. It could be a network engineer in the data centre that is re-routing signals, and it could be somebody that works with fibre in the last mile.

Broadband: People often say, "I have dark fibre in my home, and I never know if they hook my up when I want, and if they hook me up when they place an NTU,'. Basically, is there light or isn't there light?

Robert: Yes that's right. Dark fibres can be caused by a multitude of problems – dirt, routing problems, you name it. The FibreLert™ is a very simple tool to find out whether or not there is light. I don't think that people are going to go and remove connectors and put them back in, but it could happen in a case like that, that they say, "Oh, which one is it?" And how quickly can you tell?

Broadband: Normally, if there are problems on a coaxial cable you have a test device and you can check: is there an RF voltage? Yes or No? But on a fibre, you just don't know. There's that well-known joke in the industry that people ask a new engineer, they say, "If you want to check if there's light, you try to look into the fibre." And that is also the last thing that you will ever see, because it will burn your eye.

Robert: Haha yes I remember that!

Broadband: This is the biggest problem for technicians and engineers, especially inexperienced ones.

Robert: When I knew about development of the product, I actually said, "Why don't we call it The EyeSaver instead of FiberLert™?"

Broadband: Well, it is an eye saver.

Robert: I found it a bit strange at the time but market research indicated that not many people actually have a fear of blindness when they work with fibre – how mad is that?



Broadband: Obviously, it's an important part of our fibre training. We try to keep warning people as much as possible, as it is a very real danger because you intuitively want to check.

Robert: A lot of that light actually falls in the non-visible spectrum which makes it even more dangerous of course.

Broadband: Hence the reason for the launch of FiberLert™ I assume? The light is there, but it's sometimes in the visible area or not, so it's impossible to see if those light wave frequencies are used by the operator, you have no other way of checking than with this device. This solution sounds like it's been a long time coming.

Robert: That is correct. The only other way to detect light would be to use a much more expensive optical power meter.

Broadband: You've correctly identified a need for this across multiple industries.

Robert: As we have already discussed, the FiberLert™ is a tool that is of value to anybody working wiht fibre-optic cabling infrastructure.

Broadband: Which provides the customer with a lot of confidence evidently. I think the interesting part of this is that If you're talking about buying a FiberLert™ that doesn't even require an investment; they can probably go off an operational budget.

Robert: Precisely. In the world of fibre, which is obviously a smaller world than the voltage or the electrical world, I can see this becoming a tool that basically everybody has in their toolbox.

For more information, see www.flukenetworks.com

