



Success Story: Kurth Electronic

Streamlining telecom field work with maximum creativity and minimal cost

KDAB helps keep telecommunications pioneer at its pinnacle

All of the messages, phone calls, pictures, streamed songs, and videos that fuel our lives are supported by a massive global backbone of cables, fibers, and switches. As the continually connected world tries to satisfy our unquenchable thirst for data, this backbone requires maintenance – new segments must be installed, existing paths reconfigured, and broken links fixed on an ongoing basis. Moreover, to keep everything running smoothly as protocols multiply and speeds increase, intelligent technicians with extremely sophisticated tools are increasingly required.

Enabling the expert installers and troubleshooters that are keeping the planet connected is what Kurth Electronic has been doing for over thirty years. Recognized as a market leader in telecoms equipment, Kurth creates reliable, high quality products that remain affordable – with an explicit goal of making technicians more productive. To stay at the leading edge, they need to continually update their product line to add new capabilities while simultaneously simplifying the job of field engineers.

For the latest refresh of their premium tool line, Kurth wanted a powerful all-in-one tester to work with all common types of broadband services, protocols, and transports. They wanted to upgrade their older Qt 4 based software



KDAB helped Kurth upgrade the software for their powerful all-in-one tester, the KE3700 Multitester, so that it can work with all common types of broadband services, protocols, and transports.

 KDAB

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platform to Qt 5 in order to take advantage of new features, bug fixes, and software optimizations available in the newest release. To do this, they needed a reliable platform with a custom Linux operating system and common development core that would enable them to create future devices in the simplest possible way. And they needed expert help in eliminating some difficult bugs and adding complex new features.

The Kurth software team was aware of KDAB's leading role in several open source projects and, based on this expertise, reached out to KDAB. It quickly became apparent in initial

discussions that KDAB was ideally suited to assist Kurth in building their newest flagship product.

KDAB engineers started by porting Kurth's multitester codebase from Qt 4 to Qt 5, which included reorganizing modules and restructuring the build system. They then worked on resolving bugs and implementing optimizations that improved overall performance. KDAB also created a system that would allow Kurth engineers to programmatically create firmware variants using a simple text-based configuration file, helping Kurth rapidly turn around new products and easily keep ahead of their rapid development schedule.

With the platform baseline in place, KDAB further assisted by adding distinguishing features for the new product line. One unassuming yet particularly useful feature was a method that allowed technicians to bypass manual copying of test results from the multitester's display. By showing a QR code on the device that encapsulated

the test results, and by creating a mobile app that could read those QR codes and process the results, KDAB enabled Kurth to save their customers from tedious and error-prone hand-entry on each and every job. The innately cross-platform capabilities of Qt made it very straightforward and simple to create an app for both Android and iOS platforms. The application was simple and intuitive with no training required and, as the technicians already carried smart phones, Kurth was able to add this major productivity feature without additional hardware or training costs.

Kurth Electronics now has a solid software foundation for their Multitester product line. They have even applied for a patent on the unique QR code feature, further reinforcing their position as a leading provider of broadband-testing tools. Enabled by improvements from KDAB, Kurth can continue to stay ahead of their competition and make technicians more productive.



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About the KDAB Group

The KDAB Group is the world's leading software consultancy for architecture, development and design of Qt, C++ and OpenGL applications across desktop, embedded and mobile platforms. KDAB is the biggest independent contributor to Qt. Our experts build run-times, mix native and web technologies, and solve full stack performance issues and porting problems for hundreds of customers, many among the Fortune 500. KDAB's tools and extensive experience in creating, debugging, profiling and porting complex applications help developers worldwide to deliver successful projects. KDAB's trainers, all full-time developers, provide market leading, hands-on, training for Qt, OpenGL and modern C++ in multiple languages. Founded in 1999, KDAB has offices throughout North America, Europe, and Asia.