Datalight: Consulting and Training on MISRA C Compliance

Datalight develops, markets, and supports software that makes the consumer devices and embedded computers that run the world more reliable, responsive and cost-effective. Datalight works with market-leading companies from industries such as automotive, smart grid, industrial automation and aerospace/defense, and even helped IBM build the world's first smart phone.

The Challenge

The MISRA C coding guidelines are used and referenced across the embedded software landscape and represent a standard that embedded software developers respect. Datalight's embedded file system software products are designed with safety, high reliability, and performance as critical features. When Datalight was designing its Reliance Edge™ embedded file system software, MISRA C compliance was a key requirement, and increasing the engineering team's MISRA C expertise was a critical factor in creating a more manageable and cost-effective development process.

The Solution

Barr Group provided training, coaching, and review for Datalight's engineers as they developed the Reliance Edge embedded file system software. The first step was Barr Group's Firmware Defect Prevention for Safety-Critical Systems training course to provide a foundation on coding standards, code reviews, and static analysis in general and MISRA C guidelines specifically. Immediately following the training, Barr Group provided open-format coaching and guidance to assist Datalight's engineers in rapidly increasing their MISRA C expertise. And several months later, Datalight asked Barr Group to return for a final review and analysis as the Reliance Edge development effort was approaching release.

> *"Barr Group's training and consulting in coding standards and MISRA was instrumental as Datalight created our Reliance Edge file system product for use in safety-critical systems. We leveraged Barr Group's deep expertise to successfully convert what initially appeared to be a daunting effort into a manageable plan for MISRA C 2012 compliance."*
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> - Tony Questad,
>   Director of Engineering,
>   Datalight