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Beginner's Guide to QIF Implementation by Bob Stone, DMSC

Posted on July 14, 2017 by Michelle Nordwald

Bob Stone of the Dimensional Metrology Standards Consortium will present at the 2017 **Quality Information Framework (QIF) Symposium**. The 3D Collaboration & Interoperability Congress (3D CIC) and QIF Symposium will be held in Golden, Colorado on October 3-5, 2017.

PRESENTATION**Hello World: The Complete Beginner's Guide to QIF Implementation**

QIF, the **Quality Information Framework** ANSI standard, is an XML based data model for storing and transferring all quality information, from the model-based definition right on down to actual measured results. QIF is big! It has to be for all it does. Getting started with and implementing support for QIF in your 3D CAD software application can seem a bit daunting at first. The printed standard comes in 8 parts, about 1,500 pages total. The QIF XML schema files together comprise 40,000 lines. And the various XML source code generators out there can produce anywhere from 80 to 400 thousand lines of code. Hidden in there are the handful of lines of code and concepts you need to get started. This presentation will:



- Show some of the software tools available to create object libraries from the QIF XML schemas, and how to use these libraries to map your application's data into and out of QIF.
- Demonstrate three open source "Hello World" applications – each with the same functionality, developed in three different programming languages, using object libraries generated by three different software tools. A brief overview of the source code techniques used by each to navigate typical QIF data structures for both producing and consuming QIF documents will be presented.
- Take prospective implementers well along the QIF learning curve, with information about available resources, where to find them, and how to use them.

PRESENTER**Bob Stone**

Member

Dimensional Metrology Standards Consortium



Bob Stone is a software developer with **Origin International Inc.** He has 30 years of experience in metrology and associated software development. He started his career at a small R&D company developing a novel non-contact paint thickness measurement device employing X-ray fluorescence and gamma ray backscattering. During this time he also collaborated with the SoftFit fixtureless manual CMM measurement of sheet metal parts project in conjunction with GM Canada developing alignment and fitting algorithms. Bob's association with Origin began in 1992. In addition to porting SoftFit's fitting technology to Origin's CheckMate offline programming, reporting and analysis software, he has added graphical reporting, statistical, and point cloud metrology capabilities to CheckMate.

Bob began work in metrology standards development with the Dimensional Measuring Interface Standard (DMIS) version 4.0, released in 2001. He is one of the primary authors of the **Quality Information Framework** (QIF), having been involved with that standard since its inception. As a member of the **Dimensional Metrology Standards Consortium** (DMSC), Bob chairs the QIF Execution Working Group, charged with the task of maintaining and enhancing DMIS, and transferring the measurement program execution functionality of DMIS into the QIF XML-based data model. Bob received his B.Sc. in Physics from the University of Guelph.

3D CIC + QIF SYMPOSIUM

The **3D Collaboration & Interoperability Congress** featuring the Quality Information Symposium focuses on 3D CAD collaboration and interoperability for the entire product lifecycle. With the 2017 theme of **UNITE: Engineering & Shop Floor Collaboration**, real users share their experiences with turning design concepts into manufacturing product reality using 3D models. The joint 3D CIC and QIF Symposium event will be held **October 3-5, 2017** at the **American Mountaineering Center** in Golden, Colorado. Find out more and register for 3D CIC + QIF Symposium at 3dcic.com.



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