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QIF 2.0: Supporting the Metrology Life Cycle

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QIF 2.0: Supporting the metrology life cycle

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On October 30, 2014 the American National Standards Institute (ANSI) approved QIF v 2.0 (Quality Information Framework, version 2.0) as an American National Standard. This paper and presentation will describe how the QIF standard models the information necessary for quality workflow across the full metrology enterprise. We will begin with a brief description of the XML 'language' used in the standard, and how the 'machine-readable' format of the standard permits automated error checking and validation for compliance to the standard. We next examine the five major activities in the metrology enterprise (product definition, determination of measurement requirements, definition of the measurement process, execution of the measurement process, and analysis & reporting of the quality data) and how the standard enables information exchange between these activities. In each case, the QIF standard provides a template – or *schema* – for the information needed as inputs and outputs for each activity. These XML schemas will be described, highlighting both the technical and financial benefits of this type of standardization. Finally, some of the ongoing work beyond QIF 2.0 will be discussed, focusing on the Metrology Resources portion of the standard, and extensions to support portable and large-scale metrology systems.

Keywords: Standards, Metrology Data, Interoperability