

*Digital Metrology
Standards Consortium*

DMSC

What is New for QIF?

Jennifer Herron, Founder & CEO



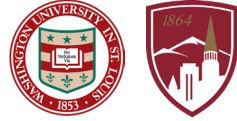
FOUNDER & CEO

Jennifer Herron

(She/Her)



EXPERTISE



B.S. in Mechanical Engineering

M.S. in Computer Engineering

- Advised **180+** organizations
- Strategic MBD and MBE Implementation Coaching
- MBD and MBE Solution Architecture
- MBD Pilot Planning
- MBD Modeling Standards and Best Practices
- Multi-CAD MBD and GD&T Authoring and Publishing
- MBD Supply Chain Readiness Coaching
- MBD-related software tool testing

CREDENTIALS



- Board Member, Digital Metrology Standards Consortium (DMSC), QIF
- ASME Y14 Series, Voting Member
- ASME Y14.46 Additive Manufacturing Product Definition, Voting Member
- ISO 10303 TC 184, DMSC Liaison
- AIAG TDP, Voting Member
- Dare to Lead Certified
- Certified Scrum Product Owner®, Scrum Alliance
- Patent for Toroidal Propulsion and Steering System (Snake)

PUBLICATIONS

- Re-Use Your CAD: The Model-Based CAD Handbook* - [2nd Ed.](#) & [1st Ed.](#)
- Industry [Blogs](#)

QUOTE

If you are going to CHANGE the results of your business, you have to change the WAY you do business.

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About the DMSC and QIF

Who is the DMSC?

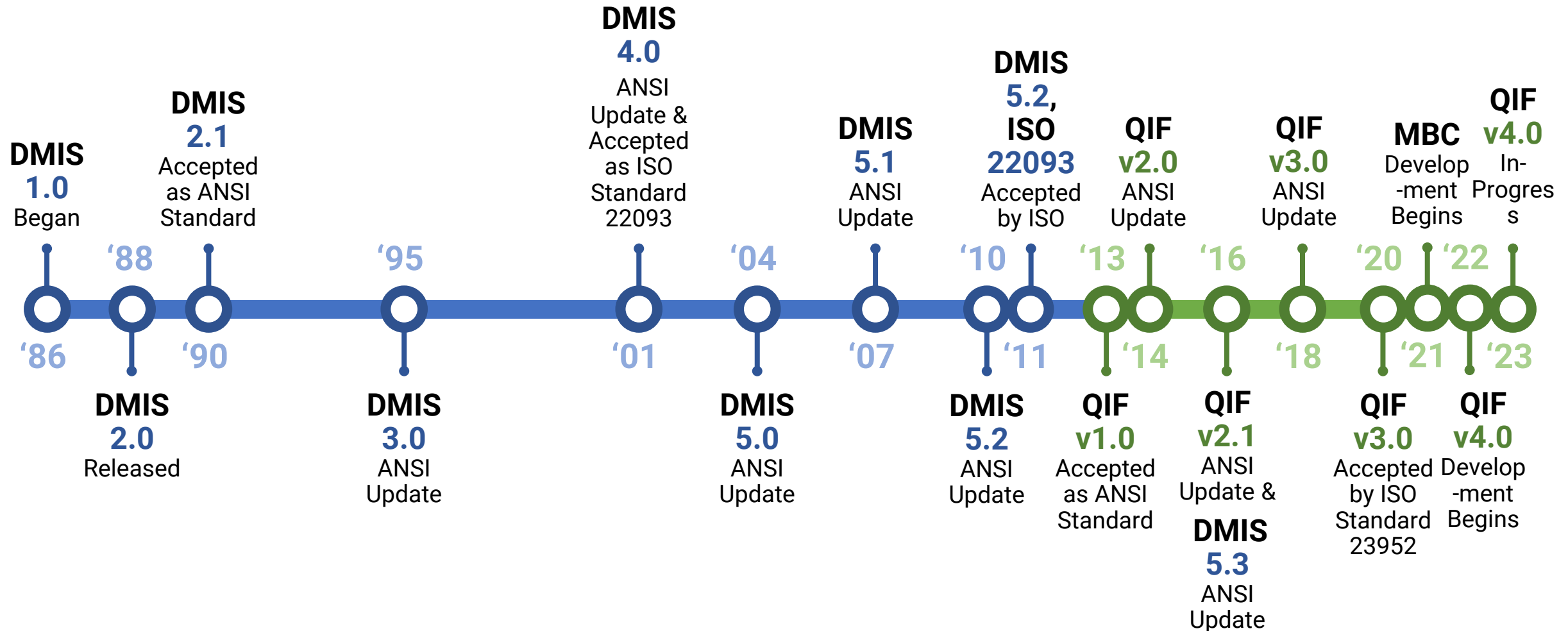
We provide a standardized, **interoperable** data framework for manufacturing.

We create Quality Standards that **impact** the **digital thread** through **digital metrology** and interoperability.

The DMSC is ANSI Accredited and ISO TC184 SC4 A-Liaison



DMSC's Quality Standards Pedigree



Quality Information Framework (QIF)

Dimensional Measuring Interface Standard (DMIS)

ISO 22093:2011 – Industrial automation systems and integration – Physical device control – Dimensional Measuring Interface Standard (DMIS)

ISO/ANSI/DMSC QIF 3.0 - 2018



ISO/TC 184/SC 4

Secretariat: ANSI

Voting begins on:
2019-07-22

Voting terminates on:
2019-10-14

Quality information framework (QIF) — An integrated model of manufacturing quality information

ICS: 25.040.40

PREVIEW

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.

FAST TRACK PROCEDURE

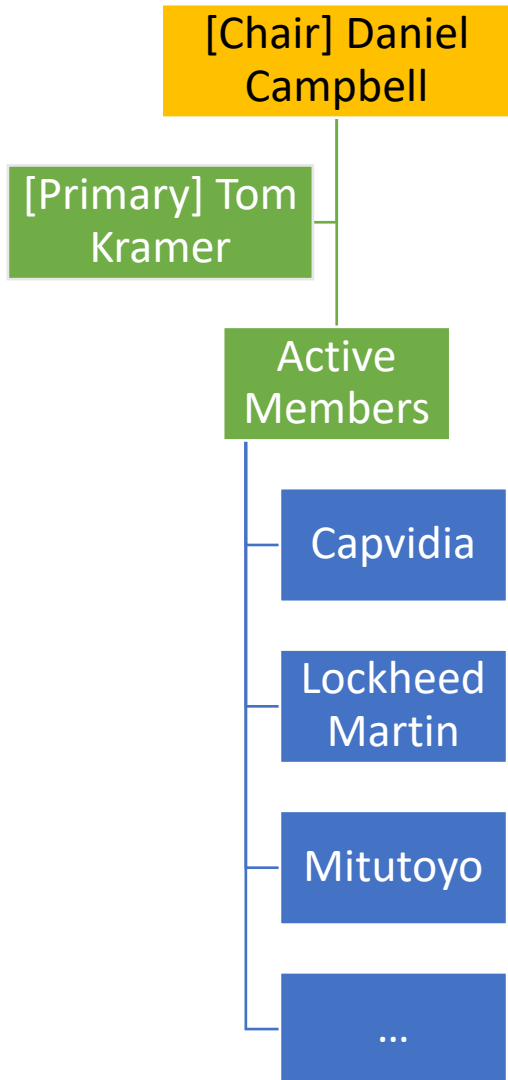


Reference number
ISO/DIS 23952:2019(E)

© ISO 2019

- **Sent to Resolution M: November 2018**
 - ISO / TC 184 / SC 4 approved by “Unanimous Consent” for Fast Track Ballot
- **ISO Approved: July 2020**
 - Approved and entirely harvested the ANSI/DMSC QIF v3.0 standard
 - Changed only the cover-sheet, copyright, headers, and footers
 - Includes an Explanatory report for harvesting QIF 3.0 into the ISO TC184 / SC4 Working Group 15 on Digital Manufacturing
 - Includes a mapping of entities found between STEP-AP 242 and QIF.

QIF 4.0 Development



Status	Item	QIF Information Model Area Implemented in
Done	Improved UUID usage through references	All
Done	The term QPId is being retired	All
Done	Increased unit usability and quantity, includes SI units	All
Done	Improved assignment capability for identifying a standard at the characteristic level	Instance File
Pending MBC Release	Updates based on Model-Based Characteristics (MBC) Standard	All
In-Progress	Improve constraint handling with XSLT	QIF Library
In-Progress	Improvements on existing content	QIF Plan
In-Progress	Adding optical digitizer measurement devices	QIF Resources

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In Conclusion

Impacting the Digital Thread with Quality



- QIF impacts Industry 4.0 & digital thread through quality interoperability
- QIF is a global standard
- QIF creates and defines containers for digital metrology storage and communication
- QIF's standardized containers simplify machine-to-machine connections
- The DMSC is harmonizing with adjacent standard organizations and is seeking broader engagement with all related standards organizations.

Join Us

- DMSC General Membership Meeting

- 20 July, 2023
- [Meeting details](#)



- [QIF 4.0 Working Group Meetings](#)



- [All Working Groups](#)



- [DMSC Membership](#)

- [Benefits Summary](#)



- [Membership levels & application](#)



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Resources for Accessing QIF Information

QIF on the Web



HOME / RESOURCES



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DOWNLOAD QIF →

Quality Information Framework (QIF)

Unified XML Framework Standard for CAD Quality Measurement Systems.



Resources

<https://qifstandards.org/resources/>

As a standards organization, the Digital Metrology Standards Consortium shares its content freely with the engineering, manufacturing, and industrial community as well as our media friends interested in advancing the Quality Information Framework (QIF) standard. In this newly launched Resource Library, you will find links to recorded tutorials, demos, orientations, whitepapers, and logos. Access to the QIF GitHub Community is made readily available here and on our [QIF Overview page](#) of this website. [Contact the DMSC](#) with your questions or requests for additional information.

DMSC Webinar Tutorials

 <p>QIF 101: Understanding QIF Basics</p> <p>Curtis Brown Lead Mechanical Engineer Honeywell FMEL™ Kansas City, MO DMSC, President</p>	 <p>QIF 201: Outlining the QIF Schemas</p> <p>Daniel Campbell VP Model-based Definition Covault www.covault.com</p>	 <p>QIF 301: A Beginner's Guide to QIF 3.0 Implementation</p> <p>Thomas (Tom) Kramer NIST Guest Researcher Research Associate of Catholic University QIF Developer & Software Developer</p>
Watch QIF 101 Presentation	Watch QIF 201 Presentation	Watch QIF 301 Presentation

QIF Application Demos

 <p>QIF C++ Binding Sample Simple read/write app</p> <p>Demo of sample apps for reading and writing QIF instance files using C++ bindings</p>	 <p>QIF C# .NET Binding Sample Simple read/write app</p> <p>Demo of sample apps for reading and writing QIF instance files using C# .Net bindings</p>	 <p>QIF Python Binding Sample Simple read/write app</p> <p>Demo of sample apps for reading and writing QIF instance files using Python bindings</p>
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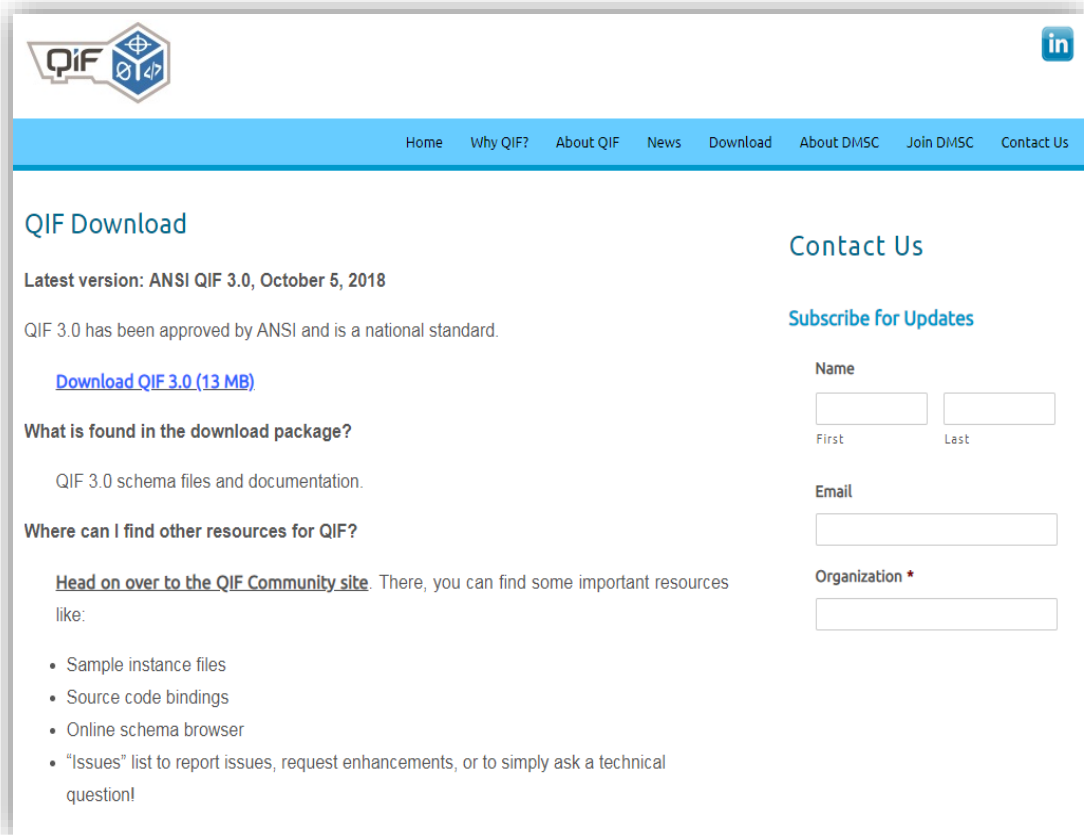
White Papers & History

 <p>Why QIF Matters: A Road Map for Digital Manufacturing</p> <p>Whitepaper Presented at NIST MBE Summit 2019</p>	 <p>Driving New Value & Innovation with QIF</p> <p>Whitepaper Presented March 2018</p>	 <p>DMIS and DMSC: History & Formation</p> <p>2009 Interview with Bailey Squier, DMSC Executive Director Emeritus</p>
 <p>NIST National Institute of Standards and Technology U.S. Department of Commerce</p> <p>NIST GCR 20-024 Open Standards for Flexible Discrete Manufacturing in the Model-Based Enterprise</p> <p>September 2020</p>		

QIF on the Web (continued)

Download QIF

<http://qifstandards.org/download/>



The screenshot shows the 'QIF Download' page. At the top left is the QIF logo. A navigation bar includes links for Home, Why QIF?, About QIF, News, Download, About DMSC, Join DMSC, and Contact Us. The main content area is titled 'QIF Download' and features the text 'Latest version: ANSI QIF 3.0, October 5, 2018'. Below this, it states 'QIF 3.0 has been approved by ANSI and is a national standard.' A blue link 'Download QIF 3.0 (13 MB)' is provided. The page also includes sections for 'What is found in the download package?' (QIF 3.0 schema files and documentation) and 'Where can I find other resources for QIF?' (Head on over to the QIF Community site). A 'Contact Us' section with a 'Subscribe for Updates' link and a form for Name (First and Last), Email, and Organization is also visible.

QIF Community - GitHub

<https://qualityinformationframework.github.io/>

- QIF Schema Browser
- QIF Sample Instance Files
- Source Code Bindings
- QIF “Issues” List
- QIF Standard Website
- Getting Started Video



The screenshot shows the 'QIF Community' GitHub page. It features the QIF logo and the text 'The online hub for the QIF community'. Below this, there are several sections with icons and text: 'QIF3 Schema Browser' (Are you busy writing support for the QIF format?), 'QIF3 Sample Instance Files' (Here are a set of sample QIF3 files), 'Source Code Bindings' (Here you will find bindings to help you automatically generate source code), 'QIF3 “Issues” List' (This is for more than just flagging issues), and 'QIF Standard Website' (The main QIF website). At the bottom, there is a link to a presentation: 'Here is a presentation which can show just how easy it is to get started with QIF!' with a small image of a presentation slide.



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