



Agenda

October 13, 2020

- A. DMSC new action group
- B. Status update from JEITA
- C. Reminder for issues already reported
 - Issue posted on github
 - <https://github.com/QualityInformationFramework/qif-community/issues/6>
 - Issue reported from Mr. Nakamura last year about the case MMR for common datum.
- D. Open
- E. Next Meeting

Participants

mark.thomas4790@gmail.com (Meeting Organizer)
tsukamura@qvi.jp
[Jennifer Herron](#)
emorse@uncc.edu
kramer@nist.gov
Cory Leland
keheimer.rosemary
totakahashi5053@nifty.com
[Allison Barnard Feeney](#)
[Larry Maggiano](#)
robert.lipman@nist.gov
[Daniel Campbell](#)
ryan@action-engineering.com
[Kramer, Thomas R. \(Assoc\)](#)
nishimura.mikio@jp.panasonic.com
soma@elysium.co.jp
[Bob Stone](#)
[Curtis Brown \(cbrown@kcp.com\)](mailto:Curtis Brown (cbrown@kcp.com))
suzuki@den.tu-tokyo.ac.jp
vm@capvidia.com
[Jimmy Nguyen](#)
[Mark Thomas](#)
kanada@kanto-gakuin.ac.jp
Robert Brown
ray.stahl@2vmobile.com
[Ray Stahl](#)
ray.j.stahl@gmail.com
larry.w.bergquist@outlook.com



DMSC new action group

- draft Charter in process
- Larry Bergquist and Ray Stahl to lead
- Members to be determined
(open invite to active participants)
- Proposed Name:
DMSC QIF Work Group- Non-Contact
Measurement: Resources and Workflow



Larry Bergquist
Email: larry.w.bergquist@outlook.com
Cell: (563) 542-8802

Industry Standards Involvement

- | | |
|--|---------------------|
| • ASME MBE (Model Based Enterprise) | Technical Secretary |
| • ASME Y14.5.1 Math Definitions | Secretary |
| • ASME H213 Harmon Geometrical Product Spec | Chair |
| • ASME H213 JAC-2 Harmonization of Specif. & Measurement | Chair |
| • ASME Y14.46 Product Def Additive Mfg | Member |
| • ASME Y14.48 Universal Direction & Load Indicators | Member |
| • DMSC – Quality Information Framework (QIF) | |



Status update from JEITA

- In process : guidelines for non-contact measurement process
 - Intend to share for further discussion (translation available in Dec.)
 - Nov. meeting: share a summary of the key elements in the guidelines for non-contact measurement process?
- Will there be plan schema changes? If so please highlight for discussion. (Plans have references to resources and it may be helpful to process together.)

Reminder for issues already reported

1. addition of resources
 - Need to validate references
 - Note: Be aware of potential performance issues with large dataset that are typical for non-contact measurements.
 - .net framework specific?
 - Bob S. has offered to share benchmark information for a large dataset and a few fractions (i.e. 2/3, 1/3) of the dataset. May be able to offer workaround and benchmark.
 - Nov topic (attribute or elements better in which space)
 - JEITA has some representative data –
 - key contact Bob Stone: Dropbox or ? for data share

Success=

- * Add resource to schema release.
- To Be Determined- 3.x or 4.0
- + ISO publication is Desired

Missing measurement instruments in QIF

- Instruments assumed to be used in QIF
 - Hand tools, Cartesian/articulating arm CMMs equipped with tactile/optical sensors, X-ray CTs, Laser trackers and Theodolite
- Those in Our work
 - Hand tools
 - CMMs
 - Optical Digitizers
 - X-ray CTs

Missing in QIF

Prepared Measurement instruments class in QIF

- 9.6.3, Measurement Devices
 - p413, 9.6.3.2 Universal Devices
 - 9.6.3.2.1 *CMMType*
 - 9.6.3.2.4 *ComputedTomographyType*
 - 9.6.3.2.8 *LaserTrackerType*
 - 9.6.3 should cover the measurement devices to be used in QIF application inspection
- Proposal: add "*OpticalDigitizerType*"

Our proposal

- Proposal: add necessary items in 8.5.1.7 Measure Feature method
 - Create a new item: "optical digitizer measure feature method", or,
 - unify it into "coordinate meas. feat. method" including "laser tracker meas. feat. method" and "computed tomography meas. feat. method."



Reminder for issues already reported

2. identification of accuracy tests for added resources.

(example) B89?, ISO 10360-13?, JIS B 7440-8?

QIF has an element for this purpose called:

standard type, organization year, title, uri ... etc..

Need to verify and validate for this use case

-B8g (Larry to reach out and include material helpful).

Depending on how this is implemented ... may be QIF4.o (not 3.x)

Success= same criteria as item 1

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Accuracy inspection for devices

- 9.6.4 Coordinate Measuring Machine (CMM)
 - 9.6.4.1 CMM Accuracy Tests
 - 9.6.4.1.1 Cartesian CMM Accuracy Tests
 - 9.6.4.1.2 Articulating Arm CMM Accuracy Tests
- Proposal: add accuracy tests for optical digitizers
 - No test in ASME B89 series, but being developed as ISO 10360-13 in TC213
 - JIS B 7440-8 (JP) exists

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Our proposal

- Proposals: add OpticalDigitizerType in 9.6.3.2
 - From an opinion from our member (an expert of ISO/TC 213/WG10)
 - The structure of 9.6.4 will be harmonized with ISO 10360 series.
 - ISO 10360-2: Cartesian CMM with tactile sensor
 - ISO 10360-8: Cartesian CMM with optical sensor
 - ISO 10360-10: Laser tracker
 - CD 10360-11: X-ray CT
 - ISO 10360-12: Articulated arm CMM with tactile/optical sensor
 - CD 10360-13: Optical digitizer

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Reminder for issues already reported

3. from Mr. Nakamura last year about the case MMR for common datum.

- Confirm ISO GPS - yes
- Issue – discussion:

ISO GPS

- 2x hole
- 1st hole is datum feature A
- 2nd hole is datum feature B
- (A-B) used as primary datum
- (A-B)Ⓜ used as primary datum

ASME GD&T MMB

- DMSC goal: valid modifiers and combination of modifiers supported

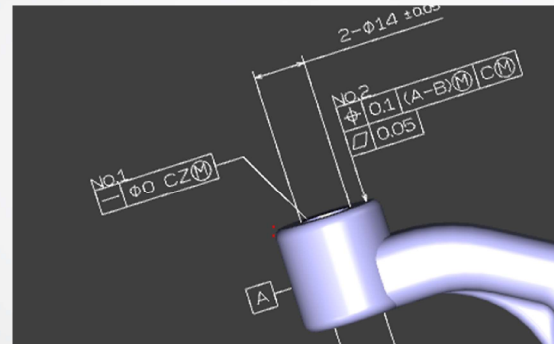
Success=

Discuss with more thoughts at next meeting

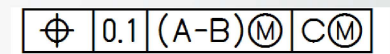
Confirm in Github - Larry



6395D0DE.pdf



Can this be specified?
Confirm other modifiers and rules.



or



when

2X $\varnothing 14 \pm 0.05$





Open



Next Meeting

Tue 11/3/2020	6:00pm-7:00 Chicago	Wed 11/4/2020	10:00am-11:00 Tokyo
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- Confirm next meeting
 - Topics
 - a. Work Group Charter review, Members
 - b. JEITA update: Summary of key elements in the guidelines for non-contact measurement process
 - c. Open item status
 - 1. Add "OpticalDigitizerType" to Resources
 - i. Review Performance with large dataset (Bob Stone)
.net specific? Compare attribute vs. element as the container
 - ii. Discussion / next steps
 - 2. Verify QIF Element Standards Type is compatible and sufficient for Standards used with proposed "OpticalDigitizerType"
(example) B89?, ISO 10360-13?, JIS B 7440-8?
 - d. Additional discussion regarding (ISO GPS):

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- Set up reoccurring meeting through March 2021 (Mark)
- Agenda reminder 1 week prior to meeting. (Larry)