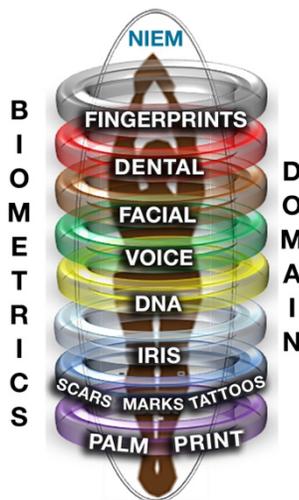


Editor's Note

Welcome to your National Information Exchange Model (NIEM) Biometrics Domain newsletter. This publication provides Domain members with situational awareness of the latest features and related news of the Biometrics Domain, and enhances the exchange of intelligence and information across the Domains. Domain members represent the full range of operations that deal with gathering, analysis, fusion, and dissemination of biometrics intelligence. Our readers represent a broad audience of decision makers and stakeholders, as well as practitioners of the NIEM Biometrics Domain. This newsletter presents notable changes and current work in the Biometrics Domain. This specific issue covers topics such as the NBAC ET3 updates, the NIEM 5.0 Release, Biometrics Domain Outreach, Member Survey, Human Language Technology, Facial Image Quality Standards, the Biometric Standards Working Group, and ISO/INCITS updates on DNA Standards.



About the NIEM Biometrics Domain

The NIEM Biometrics Domain is a data model of agreed upon terms, definitions, and formats. It supports information sharing and promotes interoperability between mission-based organizations engaged in activities such as homeland security, national defense, border management, immigration benefits, and global law enforcement through the joint development and alignment of Extensible Markup Language (XML) Biometric Standards. The NIEM Biometrics Domain (NBD) was launched in July 2012 and functions under the stewardship of the Office of Biometric Identity Management (OBIM) within the Department of Homeland Security (DHS). OBIM transitioned to the DHS Management Directorate after passage of the Cybersecurity and Infrastructure Security Agency Act of 2018.



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The Biometrics Domain operates under the oversight of its executive committee, which includes:

Chair: John Boyd (OBIM)

Co-Chair: Jennifer Stathakis (DOJ/FBI)

Co-Chair: William Graves (DoD)

Ombudsman: Diane Stephens (NIST)

NBAC Emerging Technologies Tiger Team (ET3) Update

The ET3 team, led by Jalal Mapar from DHS Science and Technology (S&T) met on June 16, 2020, and they are working with the Modeling and Simulation (M&S) Committee, led by Syed Ahmed, also from S&T. The ET3 team is going to continue to work with the M&S Committee to collaborate on their simulation work in alignment with the DHS NIEM First memo, released May 3, 2019. The ET3 and M&S Committee will meet on a recurring bases. If interested, please contact Stephen Sullivan: stephen.m.sullivan14.ctr@mail.mil.

For additional information on any of these topics, or to discuss participation in any working groups, contact the NIEM Biometrics Domain Team at: OBIMFuturesIdentityNIEM@obim.dhs.gov

NIEM 5.0 Harmonization

The NIEM Harmonization Working Group's weekly meetings address issues in preparation for the NIEM 5.0 major release. Open issues are tracked in the NIEM Releases GitHub repository at <https://github.com/NIEM/NIEM-Releases/projects/3>.

The "NIEM-5.0" project tracks the status of current issues. The "Pending Review" column lists issues / recommendations awaiting final NBAC review.

Key approved items:

- 1.) Move Core code elements to code namespaces.
- 2.) Refactor software components in Core.
- 3.) Consider additional GML adapters.
- 4.) Review document-related components.
- 5.) Review metadata-related components.

New recommendations:

- 1.) Rename Entity as LegalEntity in NIEM Core.
- 2.) Review measure value representations and types.
- 3.) Review activity-related components.
- 4.) Review assessment-related properties.
- 5.) Review capability-related components.
- 6.) Review orientation-related components.

Please provide feedback and comments via the issue links on GitHub.

NIEM Annual Meeting

NTAC: August 24 to 28

NBAC: September 14 to 18

About the NIEM Release 5.0

The NIEM 5.0 major release is scheduled for fall 2020. It includes new and harmonized content for Core, domains, and code tables. It integrates Core Supplements 4.0.1 and 4.0.2 and will incorporate new architectural changes from the upcoming NIEM Naming and Design Rules specification version 5.0.

The release packages are available on the NIEM Releases GitHub repository. Alpha: <https://github.com/NIEM/NIEM-Releases/releases/tag/niem-5.0alpha1>.

Beta: <https://github.com/NIEM/NIEM-Releases/releases/tag/niem-5.0beta1>.

The package includes XML schemas, documentation spreadsheets, a change log, a JSON-LD context file, and a README file. Please send feedback to:

niem-comments@lists.gatech.edu.

Content changes include the addition of Controlled Unclassified Information (CUI) metadata, updates to the FBI National Crime Information Center (NCIC), National Data Exchange (NDEx), the Uniform Crime Reporting (UCR) code tables, etc.

ANSI/NIST ITL NIEM Update & Tool

The American National Standards Institute (ANSI)/National Institute of Standards and Technology (NIST) Information Technology Laboratory specification number 1-2011 Update: 2015 is NIEM 4.01 compliant. NIST has developed a tool at <https://www.nist.gov/programs-projects/ansinist-itl-standard> to assist migration and mapping between ITL versions of NIEM 2.1 and NIEM 4. Users are requested to utilize the tool and provide any comments back to biometrics-editor@nist.gov.

Contact Us to Participate!

Please contact the NBD Team at:

OBIMFuturesIdentityNIEM@obim.dhs.gov if you are interested in collaborating and contributing towards Standards Governance through meetings held by OBIM Futures Identity (FI).

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Biometrics Domain Outreach

The NBD leadership is trying to expand the domain member list by securing contact details of Subject Matter Experts (SME) in biometric speciality areas including DNA, voice recognition, and contactless fingerprints. NBD leadership is looking to continue to mature the Biometrics Domain model by incorporating and updating the Registry of U.S. Government (USG) Recommended Biometric Standards. Active participation from the biometrics community aids the NBD leadership's strategy to address interoperability as a whole, with a special focus on defining and resolving issues related to operational interoperability.

Calling Voice and DNA SMEs!

OBIM's FI team is currently finalizing their DNA Pilot and working on a Voice Recognition Prototype. Parallel effort is in progress to update the NIST Type 18 and Type 11 Standards to reflect the requirements arising out of these initiatives. OBIM is looking for SMEs in DNA and voice recognition to review open items for discussion based on their field experience working with these emerging technology standards.

Member Survey & Feedback!

The NBD Team is updating their member list details and requesting feedback from the community. Please take a moment to complete the [NIEM Biometrics Domain Member Survey](#). This form will be used to compile a more detailed member list, identify participation interest in Biometric Standards development, and analyze the suggestions for potential improvement.

Click [here](#) to visit the NIEM Biometrics Domain Community Online!

Upcoming NBAC Monthly Teleconference:

- Aug 27, 2020, 1:00pm – 2:00pm
- Sep 24, 2020, 1:00pm – 2:00pm

INCITS Update

On June 11, 2020, the 75th meeting of the International Committee for Information and Technology Standards (INCITS) M1.7 occurred. The M1.7 Task Group is focused on standardization of the content, meaning, and representation of information used by the biometric data interchange formats.

The M1.7 Task Group discussed biometric profiles, data interchange formats, technical interfaces, and societal aspects of biometric implementations.

Here is more information on each category:

[Biometric Technical Interfaces and Profiles](#) - Covers standardization of necessary interfaces and interactions with biometric components and sub-systems.

[Technical Implementations of Biometric Systems](#) - Addresses biometric profile standards for interoperability and data interchange.

[Cross Jurisdictional and Societal Aspects of Biometric Implementations](#) - Study and standardization of technical solutions to societal aspects of biometric implementations.

Potential changes to the Type 18 DNA standard came up but further discussion was delayed until after the ISO DNA

ISO DNA Update

The virtual International Organization for Standardization (ISO) meetings to discuss updates to Biometric Data Interchange Formats - Part 14: DNA Data, occurred the week of July 13, 2020. During the meetings, proposed disposition of comments on ISO/International Electrotechnical Commission (IEC) CD 1 Revision 19794-14 were reviewed. As part of the collaboration process to update the ISO DNA standard, the DHS OBIM Store Match Share (SMS) project team submitted responses to the ISO editor's questions on items that were partially accepted. DHS OBIM will continue collaborating with ISO on updating their standard, which sets the path for the NIST Type 18 DNA Standards and possible NIEM Biometrics Domain updates for the NIEM 5.1 release.

Facial Image Quality Standard

DHS OBIM is continuing prior work on Facial Image Quality Standards by leveraging the 2009 US-VISIT Facial Image Quality Improvement & Face Recognition Study. They have initiated a Facial Image Quality Standard Working Group with these objectives:

- Examining DHS-collected face images to identify attributes that impact facial image quality.
- Drafting a face image quality guideline / standard for assessment.
- Reviewing NIST-provided analysis results based on DHS data.
- Preparing and promoting a standard.

Expected outcomes include:

- Increasing the quality of facial images captured during DHS operations.
- Maximizing facial recognition accuracy.
- Developing a capability of reporting face quality across the Enterprise.

Biometrics Standards Working Group (BSWG)

DHS established the BSWG in support of the DHS Standards Executive, the overarching strategy and framework for addressing interoperability as a whole at DHS. The mission of the BSWG is to assist the Standards Executive through DHS S&T's Biometrics Standards support role for DHS, and to foster a unified effort for DHS biometrics implementation and operation.

The BSWG will serve as a platform for sharing, networking, collaborating, and coordinating biometric standards throughout DHS. The BSWG may also identify preferential parameters for the implementation and operation of DHS-related biometric equipment and services.

The BSWG will relay DHS positions to, and provide technical contributions to, national and international standards bodies. They may create biometric focused sub-groups, as necessary, to provide technical contributions or standards development on behalf of DHS and its participating elements.

Human Language Technology (HLT)

OBIM FI selected NIST Type 11 as a standard for building an HLT prototype. They plan to work with NIST to update the standard while detailed requirements on voice recognition are being finalized. OBIM is also modeling the HLT prototype at the conceptual and logical level using a Model Based Systems Engineering (MBSE) approach. OBIM's NIEM support team is performing a gap analysis to determine possible changes to the existing NIEM implementation of the NIST Type 11 standard. OBIM is also interested in collaborating with DHS and DoD teams to understand their plans and interest in HLT.