

Editor's Note

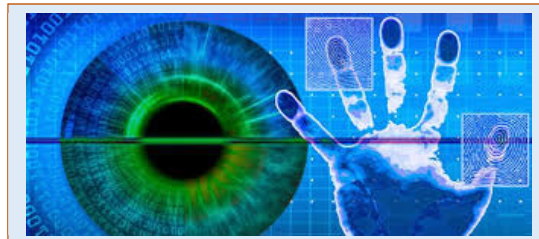
Welcome to your National Information Exchange Model (NIEM) Biometrics Domain newsletter. This publication provides Domain members with situational awareness of the latest features and related news of the Biometrics Domain, and enhances the exchange of intelligence and information across the Domains. Domain members represent the full range of operations dealing with the gathering, analysis, fusion, and dissemination of biometrics intelligence. Our readers represent a broad audience of decision makers, stakeholders, and practitioners of the NIEM Biometrics Domain. This newsletter discusses notable changes and current work in the Biometrics Domain. This issue covers topics such as State, Local, Tribal, and Territorial Tiger Team updates, maturing the NIEM Biometrics Voice data model, NIEM 5.1 DNA and release updates, building NIEM exchanges using JSON, ANSI/NIST-ITL guidance for contactless biometrics, the upcoming NIEM annual meeting, and NBDEC approved domain documents.



About the NIEM Biometrics Domain

The NIEM Biometrics Domain (NBD) 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 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.

Visit the [NIEM Biometrics Domain Community Online](#) [here!](#)



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Q2 2021 Issue

Editor's Note **P.1**

SLTT Tiger Team Update **P.1**

NIEM 5.1 Release Updates **P.2**

NIST Update: Contactless Fingerprint **P.2**

Maturing Voice Data Model for NIEM **P.2**

NIEM.gov, Data Formats, NIEM JSON **P.3**

DHS Immigration Technology Summit **P.3**

NBDEC Approved Domain Documents **P.3**

The NIEM Biometrics Domain Executive Committee (NBDEC) includes:

Chair: John Boyd (OBIM)

Co-Chair: Jennifer Stathakis (DOJ/FBI)

Co-Chair: William Graves (DoD)

Ombudsman: Diane Stephens (NIST)

State, Local, Tribal, and Territorial (SLTT) Tiger Team

On March 4, 2021, the NIEM Management Office (NMO) announced Mr. Paul Wormeli and Mr. Michael Phillips as the newly appointed Co-chairs of the NIEM SLTT Tiger Team. They are focusing on how NIEM can best support the highest priorities of each SLTT segment.

The SLTT Tiger Team's purpose is to advance information-sharing at the state, local, tribal, and territorial jurisdictions to protect, support, and respond to community needs.

Its mission is to increase NIEM's use in facilitating interagency and cross-domain information exchanges for these agencies and organizations to improve the safety and quality of life for our citizens. For more information or to participate, please contact information@niem.gov.

Maturing Voice Data Model for NIEM Biometrics at OBIM

The NIEM Biometrics Domain Working Group (NBDWG) lead at OBIM, Ms. Tara Etemadi, has been holding bi-weekly biometrics standards meetings to mature the Human Language Technology (HLT) / Voice Data Model for the NBD. Participants from DHS, Department of Defense (DoD), Department of Justice (DOJ), National Institute of Standards and Technology (NIST), the Project Team, and HLT Subject Matter Experts (SME) are reviewing the current NIEM and NIST Voice containers. The NBDWG is also developing a conceptual data model for voice and a glossary of terms and definitions. The conceptual models create a common vocabulary for all stakeholders by establishing basic concepts/scope of effort.

The focus of the NBDWG is to advance voice standards, ensure conformance to NIEM, and support development of elements/services in Identity Exchange Messaging (IXM) for the OBIM HLT prototype.

The team highly encourages HLT SMEs to join the standards discussions. If you know of any SMEs who have implemented, are implementing, or want to implement HLT as a biometric modality, please let the NBD team know so they can participate in this effort.

NIEM Release 5.1 – NBD Updates

NIEM publishes annual releases on a three-year cycle. A major release year will be followed by two minor release years. NIEM 5.1 will be a minor release and is currently under development. The NIEM 5.1 publication is scheduled for Fall 2021.

The NIEM 5.1 Alpha 1 was published for community review and the NBD team provided initial feedback. The NIEM 5.1 Alpha 2 is slated for the end of May 2021, and will include the feedback provided by the Biometrics Domain.

Previous releases and the status of the draft release, instructions, and links are available at: <https://niem.github.io/niem-releases>.

NIEM 5.1 includes approximately 60 new DNA attributes identified and agreed upon by the NBDWG. These are modifications to existing DNA attributes currently available in the NBD model. The goal is to reflect the NIEM Biometrics DNA changes in the NBD Data Model.

New or updated voice attributes may also be reflected in NIEM 5.1 if consensus is achieved through the NBDWG within the 5.1 release schedule.

NIEM 5.1 Release Planning

The updated NIEM 5.1 release schedule:

Major Inputs Due:

- Alpha 1: Mar 2021
- Alpha 2: May 2021
- Beta 1: June 2021
- Release Candidate 1: Aug 2021
- Release: Fall 2021

Additional phases (e.g., Beta 2) may be added as needed during the development process.

Participate in the NBD!

For more information or to join our working groups, contact us at:

OBIMFuturesIdentityNIEM@obim.dhs.gov

NIST Update: Contactless Fingerprint

NIST released its Best Practices Recommendation (BPR) on March 16 for Contactless Fingerprint Capture and Data Interchange. This BPR introduces an informative pathway for the integration of images captured by contactless devices into existing systems. The contactless fingerprint submission guidance provided in the BPR is based on the existing ANSI/NIST Type-9 and Type-14 records and includes the following key changes:

1. Updated Friction Ridge Impression types to introduce new contactless impression types.
2. Updated Type-9 record field 9.003 Impression Type (IMP) to reference new contactless impression types.
2. Updated Type-9 record field 9.904 Make, Model, Serial Number (MMS) to include additional information on the capture solution being used, including information on commercial off-the-shelf (COTS) hardware platforms, e.g., mobile phone.
3. Updated Type-14 record field 14.901 Friction Ridge Capture Technology (FCT) allowable value to only "1" (Other) if used for backward compatibility purposes.

4. Updated Type-20 record field 20.904 MMS to include additional information on the capture solution being used, including information on COTS hardware platforms, e.g., mobile phone.

Please contact Sharam Orandi at shahram.orandi@nist.gov for additional information.

NBAC Monthly Teleconference:

- May 27, 2021, 1:00 pm – 2:00 pm
- Jun 24, 2021, 1:00 pm – 2:00 pm
- July 29, 2021, 1:00 pm – 2:00 pm

Upgraded NIEM Site

The NIEM Management Office (NMO) leveraged Drupal 8 to upgrade the NIEM.gov website in order to modernize it. The NMO encourages members to visit the new site:

<https://www.niem.gov/>

Flexible Formats of Representing Data Exchanges

The NMO recognizes that organizations may have requirements to create exchanges in formats other than the original XML representation. This is why NIEM is focusing on developing profiles and guidance to help users build exchanges in formats that work best for them. Please contact the [NMO](#) regarding any data format needs that aren't being met by NIEM's current tools environment.

JSON with NIEM

The NMO understands that many organizations now use JavaScript Object Notation (JSON) instead of Extensible Markup Language (XML) for their data-interchange format when adapting to new reporting requirements or open data needs, creating mobile exchanges, or simply for ease of use. Please visit the NIEM JSON [page](#) to learn more about NIEM's approach to supporting the use of JSON with NIEM.



On February 23, 2021, the NBD team delivered a well-received presentation, "DHS OBIM NIEM Biometrics Domain Overview and Next Steps with Model Based Systems Engineering (MBSE)," during the Immigration Technology Summit to over 100 attendees.

Topics presented include:

- NIEM community support and organizational structure, NBD Documents available for the COI, quarterly newsletters
- Current Focus Areas: DNA, HLT, MBSE, Facial Image Quality Standards, and Person-Centric Identity (PCI) concepts
- NBDWG process overview and Map and Model Phase of the NIEM Information Exchange Package Documentation (IEPD) lifecycle
- DHS DNA Use Cases, DNA Data Model maturity, DNA outcomes, and maturity progression
- HLT Business Case, map and model subject areas, HLT maturity progression
- MBSE efforts to integrate models and the benefits of integration
- PCI concepts, areas for improvement, an IDENT overview as it pertains to PCI, and potential future state plans

Upcoming NIEM Annual Meeting

The NIEM Management Office (NMO) is planning this year's NIEM Annual Meeting scheduled for August 2021. The exact dates, schedule, and logistics will be revealed to the NIEM Community when finalized.

NBDEC-Approved Domain Documents Available Now

The NBDEC has approved documents developed by the NBD Team to benefit the community. The NMO will stand up a NBD GitHub repository where they will be posted. NBD members will be notified via email when the new site is complete and these documents are available.

- **Governance Process Plan:** Governance processes related to release management and publication, including a planned schedule, a unified strategy for Domain development and maintenance, and establishment of roles and responsibilities of the COI members as defined in the NIEM High Level Version Architecture (HLVA).
- **How-To Guide for Creating NIEM Biometric Exchanges:** Creating exchanges for NBD development and maintenance and identifying support processes, including exchange development for successful interoperability of NIEM exchanges.
- **Standards Development Plan:** Information pertaining to the NIEM structure and future architecture. The plan also addresses how to ensure that development of NBD content minimally disrupts OBIM architecture and maximizes the efficiency and effectiveness of OBIM plans and execution.
- **Enterprise Level Data Standards Execution:** The need, development, adoption, implementation, and maintenance of data standards required for efficient interoperability between disparate systems across the federal government.
- **Domain Management Plan:** The approach to supporting the day-to-day management and operations of the Biometrics Domain and details of support necessary to provide data standards services for Biometric Domain management and a baseline of the biometrics domain.