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ISO 8000-116 ALEI : [US-GA.BER:19056389]

 www.dfmdata.com

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 4073 Rosewood View Drive
Suwanee, Georgia 30024

Via Electronic Submission

October 21, 2024

OCC:

Chief Counsel's Office
Attention: Comment Processing,
Office of the Comptroller of the Currency
400 7th Street SW, Suite 3E-218,
Washington, DC 20219

Board:

Ann E. Misback
Secretary
Board of Governors of the Federal Reserve
System
20th Street and Constitution Avenue NW,
Washington, DC 20551

FDIC:

James P. Sheesley
Assistant Executive Secretary
Attention: Comments/Legal OES
(RIN 3064-AF96),
Federal Deposit Insurance Corporation
550 17th Street NW,
Washington, DC 20429

NCUA:

Melane Conyers-Ausbrooks
Secretary of the Board
National Credit Union Administration
1775 Duke Street,
Alexandria, VA 22314-3428

CFPB:

Comment Intake—FDTA-INTERAGENCY
RULE
c/o Legal Division Docket Manager
Consumer Financial Protection Bureau
1700 G Street NW,
Washington, DC 20552

FHFA:

Clinton Jones
General Counsel
Attention: Comments/RIN 2590-AB38
Federal Housing Finance Agency
400 Seventh Street SW,
Washington, DC 20219

CFTC:

Christopher Kirkpatrick
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre,
1155 21st Street NW,
Washington, DC 20581

SEC:

Vanessa A. Countryman
Secretary
Securities and Exchange Commission
100 F Street NE,
Washington, DC 20549-1090

Treasury:

Chief Counsel's Office
Attention: Comment Processing
Office of Financial Research,
Department of the Treasury
717 14th Street NW,
Washington, DC 20220

RE: Comments on the Financial Data Transparency Act (FDTA) Joint Data Standards (JDS)

OCC: Docket ID OCC-2024-0012; RIN 1557-AF22
Board: Docket No. R-1837; RIN 7100 AG-79
FDIC: RIN 3064-AF96
NCUA: Docket Number NCUA-2023-0019, RIN 3133-AF57
CFPB: Docket No. CFPB-2024-0034, RIN 3170-AB20
FHFA: RIN 2590-AB38
CFTC: RIN 3038-AF43
SEC: S7-2024-05, RIN 3235-AN32
Treasury: Docket No. TREAS-DO-2024-0008, RIN 1505-AC86
[Federal Registry Notice of Proposed Rulemaking](#)

Dear Sir or Madam,

DFM Data Corp. Inc. ([ISO 8000-116 ALEI](#): [[US-GA.BER:19056389](#)]) appreciates the opportunity to comment on the FDTA JDS being advanced by rule. This multiple agencies' Request for Comment (RFC) in the Federal Registry on August 22, 2024 is a critical step in voluntary consensus-based, joint standards development.

This comment addresses several important themes in the proposed rule and adds supporting context and references where applicable.

DFM Data Corp., Inc., through its Founder and CEO, Michael Darden (michael@dfmdata.com), remains interested to engage further in harmonizing domestic and international supply chain transaction data, with financial data transparency standards covering the proposed Agencies', and adding several who would also benefit FDTA JDS.

Comment Headlines:

1. [Comment Introduction; Michael Darden bio; DFM Data Corp., Inc. Introduction](#)
2. [Government Multi-Agency Collaboration on Rulemaking and standards](#)
3. [Standards Development Organizations \(SDO\), WTO Principles](#)
4. [Lexicon, Data Elements, and Formatting Standards](#)
5. [Legal Entity Identifiers \(LEI\)](#)
6. [Security / Accessibility / Participation, Communication Protocols](#)
7. [Critical Emerging Technologies \(CET\) Generate Financial Transactions](#)
8. [People's Republic of China \(PRC\): Intellectual Property and Shipbuilding](#)
9. [Enforcement of Joint Data Standards](#)
10. [Conclusion](#)

Headline 1:

Comment Introduction:

The JDS Notice of Proposed Rule (NPR) has advanced sufficiently to request public comment. These 'Agencies': *The Office of the Comptroller of Currency (OCC), Board in Governors of the Federal Reserve System (Board), Federal Deposit Insurance Corporation (FDIC), National Credit Union Administration (NCUA), Consumer Financial Protection Bureau (CFPB), Federal Housing Finance Agency (FHFA), Commodity Futures Trading Commission (CFTC), Securities and Exchange Commission (SEC) and the Department of the Treasury (Treasury)*, represented in the NPR are related to **financial transaction systems** and regulations under the Financial Data Transparency Act of 2022.

The multi-agency JDS development effort is ambitiously targeting the complex topic of standardizing domestic and international financial transactions occurring from traditional commerce, and able to support the real time dynamic requirements of near real time e-commerce financial transactions. The NPR has overlooked or by choice omitted input from supply chain related Agencies not listed, but clearly involved throughout the domestic and international global goods movement process that has since COVID, been spotlighted as a hotspot for technology harmonization and data compliance to a standard throughout the domestic and international financial transaction landscape.

The FDTA has appropriately identified that **no single Agency is fully positioned to independently generate a comprehensive rulemaking about all financial transactions** without adding processing friction. The JDS specifically identifies how **this rule will not overstep any individual agency authorities** and how **other agencies should be consulted with this rule**.

When these Joint Data Standards are agreed upon as published standards in advance of individual agencies adoption, further proposing these standards serve as **the framework** for each participating agency to incorporate the standards into the regulations relevant to their scope. Each Agency shall create roadmaps facilitating alignment across included agencies.

A logical approach that empowers **each participating government agency to independently update their specific regulations** and harmonize the JDS outcomes across government agencies.

My first observation when reviewing this rule was, Why **only** these 8 Agencies?

These 8 Agencies are **not the only government agencies involved and rulemaking in commercial financial transactions**, in government, in domestic transactions and in more complex, multi governmental international transactions that often involve financial settlements in multiple currencies on multiple technology and communication platforms?

How are the trillions of dollars in supply chain related financial transactions represented and why not at this early point, intentionally **include those agencies that have**

oversight over these domestic and international multilayered transportation transactions?

If you accept the premise that supply chain Forecast Phase and Supplier selection processes, and their related Goods Movement Process generate financial transactions, then I suggest including for at minimum consultation from: the Secretary of State, the Secretary of Agriculture, the Secretary of Homeland Security, the Office of Management and Budget, Homeland Security Advisor, National Cyber Director, Agency for International Development, Export-Import Bank of the US, Federal Maritime Commission, and the Surface Transportation Board.

Perhaps the current understanding of linkages between the global goods movement process and the supporting supply chain stakeholders, and the financial transactions that are born from these agreements **have not yet been clarified as qualifying financial transactions** by the current set of government agencies that regulate commercial financial transactions.

There are also additional relevant active Standards, from fully accredited standards development organizations (SDO) that follow **World Trade Organization (WTO) Principles**. More in comments, Headline 3.

Now is the time in the consensus standards development, for detailed diverse comments to be received to make the proposed rule more robust before it unleashes any unintended consequences. Comments are offered to improve this rule and more closely align with influential input from vital stakeholders in the Public Private Partnership for joint consensus standards development.

Michael Darden bio:

Michael serves as an active Member of **ASTM International Committee F49, 'Digital Information In The Supply Chain'**. Michael is the SubChair for the F49.01 Terminology SubCommittee that earned the official Standard designation of [F-3682-24c: 'Standard Terminology for Goods Movement Process \(GMP\) Precise Foundational Definitions'](#); [ASTM F49 also lists 17 currently open work items](#) related to digital information in the supply chain.

Michael actively participates with the **Global Blockchain Business Council (GBBC)**, in their Taxonomy Committee, Technical Committee, Digital ID Committee and their Supply Chain Committee which now includes BITA, led by FedEx, UPS, Delta, and Salesforce.

Michael invented '**Dynamic and Predictive Information Processing System and Method for Transport Assets**' and is the current owner of [USPTO 7,755,515](#).

Michael is CEO of DFM Data Corp., where he has championed the multi-year, standardization development efforts of the Transport Unit Identifier (TUID, ISO 8000-119) by engaging as a commercial registry with the US-based non-profit ECCMA.

DFM Data Corp., Inc. (DFM Data) background:

DFM Data was formed in April of 2019. The company developed foundational communications technology for messaging globally unique Transport Unit Identifiers (TUID) and their Status. DFM Data spread its harmonizing collaboration message through a series of published whitepapers and the establishment of the TUID Working Group. The DFM Data TUID Working Group work findings are displayed on the TUID Working Group [webpage](#), chronicling the last 2+ years of bi-weekly, chartered meetings to **advance the concept of a universal globally unique Transport Unit Identifier (TUID) that includes the ISO 8000-116 Authoritative Legal Entity Identifier (ALEI).**

ECCMA reacted to the DFM Data distribution of White Paper 1 called '[Driving Collaboration Between Digital Freight Matching Providers](#)© released on 2021-02-24, and White Paper 2 called [Draft Method for a Transport Unit Identifier \(TUID\)](#)© released on 2021-07-22. ECCMA subsequently advanced the DFM Data proposed TUID concept through to **ISO TC 184/ SC 4 Industrial Data** for pre-standardization work. Shortly after initiating the TUID Work Item in TC 184/ SC 4, ECCMA convened **TC 184/ SC 5/ WG16 Supply Chain Interoperability and Integration (SCII)**, where ECCMA has since advanced a series of **ISO 25500** Supply Chain Interoperability and Integration standards for ISO ballot processing toward standardization.

DFMDC's third TUID White Paper: [Rationale and Plan for a Standardized Supply Chain Transport Unit Identifier](#) by [Dr. Vic Uzumeri](#) published and distributed on 2023-06-12.

The TUID method defined in ISO/DIS 8000-119 is a formatting of existing ISO Standards to produce a useful human and machine readable globally unique and logically formatted Transport Unit Identifier at the first intention to ship goods subject to a transport order between a buyer and a seller. The ISO 8000-119 prefix as specified in ISO 8000-115 is '**ISO.TUID:**'.

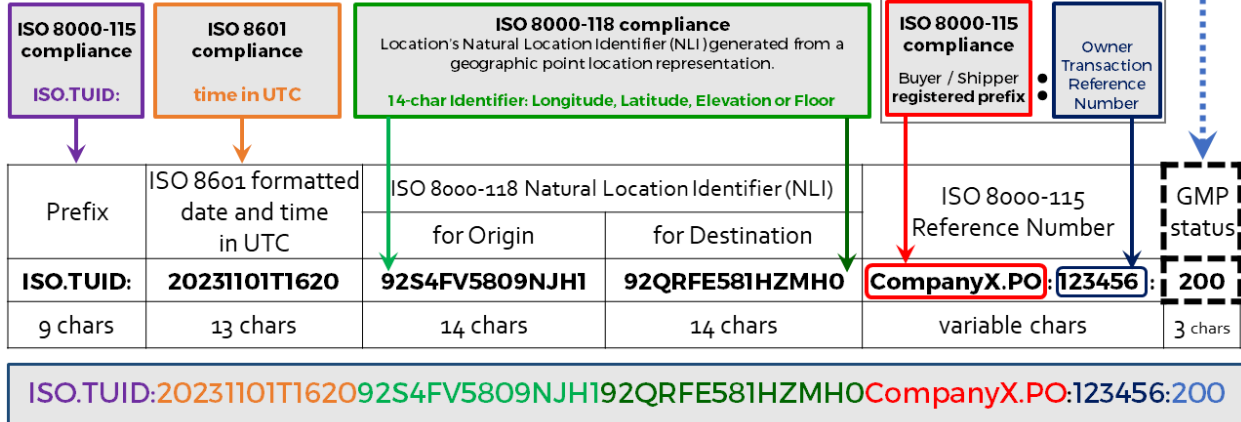
The **ISO.TUID:** defines the data elements in sequence to follow this ISO prefix. ISO 8601 **Date and Time Format**, the ISO 8000-118 **Natural Location Identifier (NLI)** for the Origin, the ISO 8000-118 **Natural Location Identifier (NLI)** for the Destination, the Legal Entity ISO 8000-116 **Authoritative Legal Entity Identifier (ALEI)** of the payer, and the Legal Entity's Reference Number of the payer involved in this transaction.



Goods Movement Process (GMP)		
STATUS #	DESCRIPTION	EXPLANATION
200	Posted	Buyer, origin, destination, and purchase order defined
300	Pre-Booked	Carrier qualified to transport, to be confirmed with assets
400	Booked	Carrier confirmed assets pending movement of goods (RateCon)
500	En-Route	Carrier driver and assets, with goods in transit
700	Delivered	Carrier driver and assets, with goods unloaded at destination
800	Invoiced	Carrier invoiced services for goods movement 'as used'
900	Completed	Settlement/Archive



Updates in Status are communicated with the TUID



Concatenated for communication in the following format:

[(ISO8000-115)'ISO.TUID:']

[(ISO8601)YYYYMMDDHHMMSS]

[(ISO8000-118)NLI-LONG-LAT-ALT]

[(ISO8000-118)NLI-LONG-LAT-ALT]

[(ISO8000-116)ALEI:CountryCode-StateCode.Registry:Control#]

The ISO 8000-116 ALEI is a variable length field that is formatted from the Control Number that is issued by the Secretary of State of each State and Country, when companies are legally formed by application to the Sec. of State Corporations Division.

DFM Data had been aware of the GLEIF entity and business model supported by the Regulatory Oversight Committee (ROC) that enables GLEIF authorized Local Operating Units (LOU) to create new GLEIF LEI entity identification numbers when requested. The GLEIF method of generating new Legal Entity Identifiers follows a proprietary 20-digit code, where the first 4 digits represent the GLEIF LOU (issuer), the next 14 digits are randomized characters, and the last 2 digits are calculated check digits.

LEIs bear the initial cost of \$60 to establish and \$40 to renew each LEI annually.

The FTDA criteria for a qualifying LEI specifies: **Non-Proprietary, Publicly Available, Open License, Free of Charge**, and based on **Voluntary Consensus**.

The ISO 8000-116 ALEI is known as the **Authoritative Legal Entity Identifier**, an approved Standard from ISO that was omitted from the FDTA LEI evaluation while seeking qualifying, standardized LEI options.

See [Headline 5](#) for more detailed comments on Legal Entity Identifiers (LEI).

The first topic I will comment on is, Headline 2: **Government Multi-agency collaboration on Rulemaking and standards** approach to consensus-based Joint Data Standards Development.

Headline 2:

Government Multi-agency collaboration on Rulemaking and standards

Besides the eight Agencies related to financial transactions listed, consider including supply chain transactions as financial transactions under this rule. I referred to the list of government agencies that are involved in the President's Supply Chain Task Force - The **Council on Supply Chain Resilience**. See [FACT SHEET: President Biden Announces New Actions to Strengthen America's Supply Chains, Lower Costs for Families, and Secure Key Sectors](#) (2023-11-27) and the [Executive Order on White House Council on Supply Chain Resilience](#) (2024-06-14).

The Supply Chain Resilience Council consists of:

- (a) Members (**BLUE Text for should be included**)
 - (i) the **Secretary of State**;
 - (ii) the **Secretary of the Treasury**;
 - (iii) the Secretary of Defense;
 - (iv) the Attorney General;
 - (v) the Secretary of the Interior;
 - (vi) the **Secretary of Agriculture**;
 - (vii) the **Secretary of Commerce**;
 - (viii) the Secretary of Labor;
 - (ix) the Secretary of Health and Human Services;
 - (x) the Secretary of Housing and Urban Development;
 - (xi) the **Secretary of Transportation; Multiple Divisions**
 - (xii) the Secretary of Energy;
 - (xiii) the Secretary of Veterans Affairs;
 - (xiv) the **Secretary of Homeland Security**; (CBP)
 - (xv) the Administrator of the Environmental Protection Agency;
 - (xvi) the **Director of the Office of Management and Budget**;
 - (xvii) the Director of National Intelligence;
 - (xviii) the **United States Trade Representative**;
 - (xix) the Chair of the Council of Economic Advisers;
 - (xx) the Administrator of the Small Business Administration;
 - (xxi) the Director of the Office of Science and Technology Policy;
 - (xxii) the **Assistant to the President and Homeland Security Advisor**;
 - (xxiii) the Assistant to the President and National Climate Advisor;
 - (xxiv) the **National Cyber Director**;
 - (xxv) the Senior Advisor to the President for International Climate Policy;
 - (xxvi) the Chair of the Council on Environmental Quality;
 - (xxvii) the Administrator of the National Aeronautics and Space Administration;
 - (xxviii) the **Administrator of the United States Agency for International Development**;
 - (xxix) the Director of the Office of Pandemic Preparedness and Response Policy;
 - (xxx) the **President of the Export-Import Bank of the United States**; and
 - (xxxi) the heads of such **other agencies** and offices as the Co-Chairs may from time to time **invite to participate**.
- (b) The Co-Chairs shall **invite participation of the Chairman of the Federal Maritime Commission** and the **Chairman of the Surface Transportation Board** to the extent consistent with their statutory authorities and obligations.

To include supply chain transactions in scope as financial transactions, my comment proposes **wider inclusion of a broader set of agencies**. Participation of supply chain

related **government agencies who oversee domestic and international transportation related financial transactions** in this JDS:

- The Secretary of State, Corporations Division, Registry 'Issuer'
 - State: Secretary of State Corporations Division
 - Issuer of Corporate Control Number
- DHS - Dept Homeland Security
 - Coast Guard - Customs and Border Protection (CBP)
 - CBP - [ACE Modernization](#)
- DoC - Department of Commerce
 - USPTO Registry of IP Ownership, Property ownership
 - Value exchanged with 'Assignment of Property'
 - Updating the USPTO Patent Ledger
 - Government Contracting with new issued SAM # (Replaced D&B with a NEW NUMBER, instead of using existing LEI).
- FMC - Federal Maritime Commission (as noted and specifically related to [OSRA 2022](#) Section 4 Shipping Exchange Registry, 3PL LEI)
- STB - Surface Transportation Board (as noted, Rail interoperability, BIG legacy players, Infrastructure Grants, old fixed sensor technology for tracking)
- DOT - Department of Transportation (many sub agencies)
 - BTS - Bureau of Transportation Statistics
 - MARAD - [MSCI Advisory 2024-011](#), Effective date started 2024-10-09
 - FMCSA - Federal Motor Carrier Safety Administration
 - [46 CFR 371.3](#), Broker (3PL LEI) transparency rule, 10-31-24
 - MC # (Carrier LEI) Administration - Entity Fraud, new system in Development
 - OMMP - Office for MultiModal Policy to coordinate national and state-level freight strategy, as required by the Bipartisan Infrastructure Law
 - [UNLAWFUL BROKERAGE ACTIVITIES REPORT TO CONGRESS](#)
 - Administrative Law Judge's ruling in a case from 2019 blocks the agency's authority to fine bad actors for commercial violations, the "Riojas decision", renders FMCSA with "No enforcement capabilities" (see DOJ)
 - [FLOW](#) - Freight Logistics Optimization Works
 - Network of sharing forecast data by Buyer LEI
 - Stakeholder LEIs
- DOD - Department of Defense
 - Defense Logistics Agency (DLA)
 - Defense Commissary Agency (DeCA)
 - Govt contracting SAM # (Replaced D&B with a NEW NUMBER, instead of using existing LEI).
 - Example of ANOTHER PROXY ID. Counter to Paperwork Reduction Act.
- USTR - US Trade Representative
 - China IP 301 (2019 ongoing Tariffs)
 - China Shipbuilding 301 (2024 ongoing Investigation)
- DOJ - Department of Justice
 - Enforcement of Laws and Rulemakings

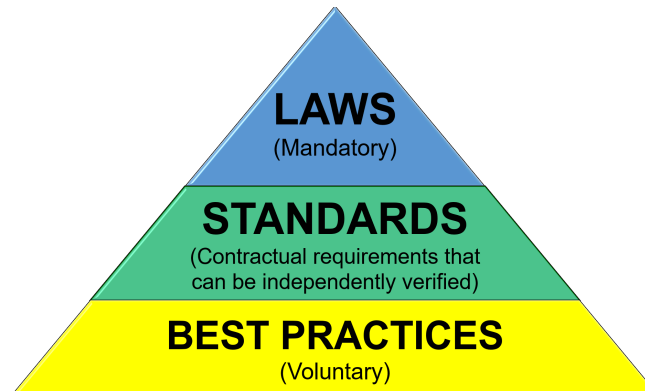
- Financial Crimes- [FINCEN](#)
- Enforcing FMCSA violations with Federal Court Lawsuits

The FTDA Joint Data Transparency rule encourages additional interagency collaboration, even beyond the included Agencies, but appears to overlook and not classify the Planning, Execution, and Reconciliation Phases of the domestic Goods Movement Process as financial transactions; or the Planning, Execution, and Reconciliation Processes of International multimodal Goods Movement Process as financial transactions.

Reference to the identity of the buyers and sellers, the brokers and intermediaries, and the contracted logistics service providers (LSP), the Legal Entity Identifiers make up the trust in today's dynamic supply chain. Each of these supply chain legal entities need to be able to authenticate in a globally accepted manner known as a Legal Entity Identifier (LEI).

More comments at [Headline 5: Legal Entity Identifier \(LEI\)](#).

Headline 3:
Standards Development Organizations (SDO) and the WTO principles



The World Trade Organization's (WTO) Agreement on Technical Barriers to Trade specifies the [Six \(6\) Principles for Standards Development](#): Transparency, Openness, Impartiality and Consensus, Effectiveness and Relevance, Coherence, and Broader Participation.

There are a few SDO organizations that consistently rise to this level of scrutiny and accountability of an official standards development organization.

The FDITA NPR specifies the International Organization of Standardization (ISO) as the recognized standards body, and specifically cites standards:

[ISO 3166](#) - Codes for the Representation of Names of Countries and their Subdivisions

[ISO 4217](#) - Currency Codes

[ISO 4914](#) - Financial Service - Unique Product Identifier (UPI)

[ISO 8601](#) - Date and Time

[ISO 10962](#) - Securities and Related Financial Instruments - Classification of Financial Instruments (CFI Code)

[ISO 17442-1](#) - Financial Services - Legal Entity Identifier (LEI)

The Draft International Standard (DIS) for the TUID, ISO 8000-119, includes existing standards and if these transactions are indeed considered financial transactions, then either the TUID should provide the option for the GLEIF LEI, or you may be compelled to recommend the ISO 8000-116 ALEI as an alternative recommendation or an additional recommendation.

Work by DFM Data has identified the following organizations that are cited in supply chain and goods movement activities:

Other Noteworthy International Supply Chain Standards Organizations:

[ASTM International](#), [American Society of Mechanical Engineers \(ASME\)](#), [International Electrotechnical Commission \(IEC\)](#), [Internet Engineering Task Force \(IETF\)](#), [Institute of Electrical and Electronics Engineers \(IEEE\)](#), [International Telecommunication Union \(ITU\)](#), [GS1](#), [Universal Postal Union \(UPU\)](#), [World Wide Web Consortium \(W3C\)](#)

Global Organizations with proposed standards: [International Air Transport Association \(IATA\)](#), [International Chamber of Commerce \(ICC\)](#), [International Civil Aviation Organization \(ICAO\)](#), [International Labour Organization \(ILO\)](#), [Organization for the Advancement of Structured Information Standards \(OASIS\)](#), [United Nations Centre for Trade Facilitation and Electronic Business \(UN/CEFACT\)](#), [World Customs Organization \(WCO\)](#)

The initiative to develop Joint Data Standards also aligns with the very recently published '[Enabling Standards Development Through Public-Private Partnerships](#)', by ANSI in August 2024.

Headline 4: **Lexicon, Data Elements, and Formatting Standards**

Under Part II Section E. Request for Comment: Accounting and Reporting Taxonomies,

The FDITA does not explicitly require the establishment of specific taxonomies as joint standards and, therefore, it is not clear whether the establishment of specific taxonomies is necessary to enable high quality data, given that the use of any taxonomy would further this objective. Therefore, while the Agencies considered establishing joint standards related to taxonomies, they are not proposing to do so. However, the Agencies invite comment on: (option 1) whether to establish a joint standard for taxonomies based on certain properties, and if so, the properties that should be set forth in the joint standard; or (option 2) whether to establish specific taxonomies, and if so, the taxonomies that should be set forth in the joint standard (such as those listed above or other specific taxonomies). The Agencies also invite comment on use of the term “taxonomy” and whether the Agencies should define the term by rule, and if so, how the term should be defined.

Taxonomy / Lexicon:

As a whole, the global supply chain and logistics industry has not yet aligned on a research strategy, not to mention an agreed upon commercial lexicon or taxonomy (or terminology, or dictionary, or glossaries, or semantic layer, or ontology; all of which refer to a term and its definition at any point during a transaction or movement of goods). Language is imprecise and varies culturally and product-/category-specific glossaries have emerged from **needs** over time, and so we now have dozens of published supply chain glossary sources in multi-languages and they have not been previously harmonized.

The Federal Maritime Commission (FMC) also calls out the term ‘Container Availability’ as being often confused in the vessel operations of the Goods Movement Process. Upon independent investigation in ASTM International Subcommittee F49.04, organized under work item [WK87207](#), **container availability happens no less than 14 times during a single coordination** of a container’s movements.

To further illustrate this point of need, the FMC [Maritime Transportation Data Initiative \(MTDI\) report](#) published in April 2024 lists Appendix 1.7 as the *MTDI Lexicon* with 200 terms and definitions.

ASTM International F49 Work Item known as [WK87215](#), the F49.01 Terminology Subcommittee (that I serve as SubCommittee Chair) discovered and inventoried over 50 industry and standards bodies glossaries and list of terms to cross-reference the proposed FMC MTDI Lexicon.

ASTM F49 Executive Committee authorized the comparison of the FMC MTDI Lexicon terms with a combination of industry sources and standards bodies glossaries. We found an almost unbelievable misalignment of basic terms, and an inconsistent method of defining terms and their definition across the selected glossaries.

ASTM F49 expanded the selected glossaries for assessment to seven: **ASCM** (Association for Supply Chain Management) Dictionary, **CSCMP** (Council of Supply Chain Management Professionals) Supply Chain Management Definitions and

Glossary, **DCSA** (Digital Container Shipping Association) Glossary, **GS1** Glossary, Maritime Administration Glossary of Maritime Terms, **UN/CEFACT** Bureau Program Support Library Maintenance Controlled Vocabulary, and the **WCO** (World Customs Organization) Glossary of International Customs Terms.

The [Form and Style for ASTM Standards Part E Terminology in ASTM Standards](#) specifies the ASTM method for defining terms in a consistent and reliable format.

The MTDI Lexicon lists 200 terms and their definitions that the FMC will reportedly use in forthcoming rulemakings related to The Ocean Shipping Reform Act (OSRA) that passed into law in June 2022. Many of these FMC published terms have been adopted or adapted from the Dutch-based, non-profit organization, with major shipping lines as its Members in 2019, widely known as **Digital Container Shipping Association** or [DCSA](#).

DCSA has drafted and published member-sponsored [standards](#) for the International shipping industry's scheduling, track and trace, and port operations of vessels, the exact business that all 10 Members of DCSA perform as a service and that they alone have governance / administrative controls over what is included in their closed session, non-consensus based standard development that is self-published on the DCSA website at the direction of the DCSA non-profit organizations members: Mediterranean Shipping Company (MSC), Maersk, CMA CGM, Hapag-Lloyd, ONE, Evergreen, Yang Ming, HMM and ZIM. None of these shipping lines are flagged from the US, and several are under the control of the PRC or users of the Spyware software known and distributed as LOGINK, which is [banned by the US Congress for Pentagon use](#), and also banned for port operations in the US and by our trading partners.

The preliminary [peer-reviewed article based on this WK87215 work item](#) was endorsed by over 30 industry experts from a variety of organizations related to the Supply Chain and the Goods Movement Process.

DCSA industry developed standards, with developed roots from NEAL-NET, have now been publicly endorsed by the US Federal Maritime Commission.

GLEIF has also had foundational support from representatives of the State Bank of China.

Data Elements:

Standardized data elements can lead to efficient and accurate communications. Looking backwards at the goods movement process, the International Chamber of Commerce under its Digital Standards Initiative has outlined the 37 KTDDE trade documents and the Data Elements that they contain.

I suggest the Agencies independently review the [ICC DSI Initiative](#), the [ICC-WTO Standards Toolkit](#), and the ICC DSI [Final Report on Key Trade Documents and Data Elements](#) with analysis of 37 trade documents commonly used with classification of data elements, as well as the [22 recently published use cases](#) where many are related to Digital Identity for commercial purposes.

Formatting:

Formatting of the data elements is primarily done for data storage or data transmission. Data Type / Length / Characteristics are all critical elements to incorporate into standardized data management plans. Consideration must be made for preparing data in compliance with documented standards or procedures.

Headline 5:

Legal Entity Identifiers (LEI)

See citation 39 of the Federal Registry Notice- NOT Free, Is Proprietary

During the Forecast Phase of Supply Chain management, goods and their vendors are identified and screened for efficient sourcing of goods for purchase. Prequalifying vendors typically entails the research of compliance and checking with references to assure that the entity is who they say they are.

Entities are formed when a person applies with a state to register a business. The State who receives the application registers the business name and type and is assigned a 'Control Number' by that state. Registered businesses can also apply commercially for any additional '**proxy identifiers**' that may be otherwise recognised in trade or in other business dealings.

When a new company is formed in the US, the application for a state business identification number is required to show, in order to open a bank account. Commercial bank accounts require proof of business registration and are more secure.

In some parts of the world however, some world banks allow for accounts to be established with identification that is not related to the business.

A GLEIF LEI number is a proxy ID created without verification and in some countries, can use this GLEIF Identity to be used to open a bank account for conducting business.

Example of Proxy Identifiers (not qualified)

- The Business Identifier Code
- Data Universal Numbering System
- Commercial and Government Entity Code
- North Atlantic Treaty Organization Commercial and Government Entity Code
- Research, Statistics, Supervision & Regulation, Discount & Credit Database Identifier
- Taxpayer Identification Number (TIN)

Qualifications for an Entity Identifier [***“a common nonproprietary legal entity identifier that is available under an open license for all entities required to report to”***]

Administrator	Entity Identifier	Non-proprietary	Publicly available	Open license	Free of charge	Voluntary consensus
Society for Worldwide Interbank Financial Telecommunication (SWIFT)	Business Identifier Code (BIC)	✗	✗	✗	✗	✓
Dun & Bradstreet (D&B)	Data Universal Numbering System (DUNS)	✗	✗	✗	✗	✗
Defense Logistics Agency (DLA) Commercial and Government Entity (CAGE) Program Office	Commercial and Government Entity Code (CAGE)	✗	✓	✗	✓	✗
NATO Support and Procurement Agency (NSPA); being overseen by the NATO Allied Committee 135 (AC/135) National Codification of Directors	North Atlantic Treaty Organization Commercial and Government Entity Code (NCAGE)	✗	✓	✗	✓	✗
Federal Reserve System	Research, Statistics, Supervision & Regulation, Discount & Credit Database Identifier	✗	✓	✗	✓	✗
an Authorized Economic Operator (AEO), e.g. in the US, the Social Security Administration (SSA) or by the Internal Revenue Service (IRS)	Taxpayer Identification Number (TIN)	✗	✓	✗	✗	✗
GLEIF	Legal Entity Identifier (LEI)	✗	✓	✓	✗	✗
GLEIF	vLEI Verifiable LEI	✗	✓	✓	✗	✗

Administrator	Entity Identifier	Non-proprietary	Publicly available	Open license	Free of charge	Voluntary consensus
GS1	Global Location Number (GLN)	✗	✗	✗	✗	✗
Government Register; ECCMA (manages a prefix registry by country, i.e. a database of validated ALEIs)	Authoritative Legal Entity Identifier (ALEI) / International Business Registration Number (IBRN)	✓	✓	✓	✓	✓
ECCMA; SmartPrefix Registrars	SmartPrefix	✓	✓	✓	✗	✓

Which entity identifier works globally and meets all the qualifications?

- **Non-proprietary**
- **Publicly available**
- **Open license**
- **Free of charge**
- **Voluntary consensus**

See ECCMA.ORG | eNLI.ORG | eALEI.ORG | eKYS.ORG

ISO Standard for ALEI cited by [ECCMA: \(ISO\) 8000-116 ALEI : IBRN](#)
[What is an authoritative legal entity identifier and how is it related to other legal entity identifiers?](#), a presentation document prepared by Hayley Thompson

[What is an International Business Registration Number \(IBRN\)?](#)

NIST Digital Identification:
<https://nvlpubs.nist.gov/nistpubs/specialpublications/nist.sp.800-63b.pdf>

Encourage engagement in a Know Your Supply Chain Audit.

ISO Standard for LEI cited by GLEIF: ISO 17442-1:2020

SCOPE: specifies the minimum elements of an unambiguous legal entity identifier (LEI) scheme to identify the legal entities relevant to any financial transaction.

Structure of the LEI

This document (standard) uses the following conventions for data element representations:

a) Character representations:

— a: upper-case letters (alpha characters A–Z only);

— n: digits (numeric characters 0–9 only)

— c: upper-case alphanumeric characters (A–Z and 0–9 only).

b) Length indications:

— nn!: fixed length; ISO 17442-1:2020

— nn: maximum length.

The format of the LEI shall be:

— 18!c2!n.

The LEI consists of 20 alphanumeric characters decomposed as follows:

— characters (18!c) without separators or “special” characters;

— the 19th and 20th characters (2!n) shall be the check digit pair, as calculated from the scheme defined in the document of the standard

Structure of LEI codes																			
1	2	3	4	5	6	7	8	9	...	18	19	20							
LOU code				Entity-Identification												Check-sum			
G.E. Financing GmbH																			
5493				0084UKLVMY22DS												16			
Jaguar Land Rover Ltd																			
2138				00WSGIIIZCXF1P5												72			
British Broadcasting Corporation																			
5493				000IBP32UQZ0KL												24			
Bank of Nova Scotia																			
L3I9				ZG2KFGXZ61BMYR												72			

[Wikipedia](#) shows the first 4 digits represent the LOU (issuing agent) from GLEIF.

In 2024-10-20, Mr Zaiyue Xu, the CEO of CIPS (China International Payment System) announced their early adopted ISO 20022 and ISO 17442 #LEI ‘**since day one**’ contributed to the adoption of those two critical standards in Payments as recommended by the FSB, G20, B20, Wolfsberg Group, PMPG, ICC DSI, FATF, etc.

LEI is a proprietary formatted 20 digits with an initial cost and yearly renewal cost, thus, not free.

Headline 6:

Governance / Security / Access / Participation, Communication protocols

Financial transactions created within the Supply Chain and Goods Movement Process experience legacy processes that lack the supporting systems to enable real-time transaction processing at each phase of the transaction. Original paper Bills of Lading (B/L) are at the foundation of the global supply chain and they were built on the batch processing of paper documents that travel with the goods. The passage of the electronic Bill of Lading (eB/L) law paved the way for digital trade agreements and digital trade processing but the real time process of the supply chain requires systems that facilitate the fluid and secure movement of goods.

Governance:

Supply Chain goods movement governance is largely based on the trade document known as the Bill of Lading and its Terms and Conditions.

The traditional Bill of Lading vs Electronic Bills of Lading:

- Traditional B/L, Paper triplicate copy Bill of Lading. Proven, Trusted, Long Legacy
- eB/L, digital in nature, representative of the paper document for trade. Low levels of adoption as identity challenges and uncertainties remain.

Security:

Trillions of dollars in supply chain transactions have been targeted as prime opportunities for Cyber crime. Security protocols must address potential internal threats. Financial data is highly sensitive, ensuring robust security measures is crucial. Implementing proper access controls is essential to prevent unauthorized access to sensitive financial data.

As new technologies emerge, security measures must continuously adapt to address new potential vulnerabilities. see Critical Emerging Technologies, [Headline 7](#)

While the goal is to create standardized data systems for better interoperability, this can create new security vulnerabilities. Example 'LOGINK' see [Headline 8](#)

Ensuring that security measures comply with various financial regulations (e.g., GDPR, CCPA) across different jurisdictions can be complex.

As financial systems often integrate with various third-party services, managing the security risks associated with these connections is crucial.

Access / Participation:

Roles and Role Management, agreed upon mechanism for agreement with terms and conditions. Participants take on a role for the transaction and gain access for participation in a paper or digital transaction.

Wet Signature vs Digital Signature

Digital Signature:

- XAdES (XML Advanced Electronic Signatures). This uses an XML approach to create a signature.
- PAdES (PDF Advanced Electronic Signatures). This extends the existing PDF specification and also restricts its implementation in some areas (in order to enhance trust).
- CAdES (CMS Advanced Electronic Signatures). This extends the approaches of using Cryptographic Message Syntax (CMS) signed data.
- JAdES (JSON Advanced Electronic Signatures). This extends the JSON Web Signature (RFC 7515) methods.
- ASiC (Associated Signature Containers). This binds one or more signed objects into advanced electronic signatures.

Traditional Wet Signature:

Authorized signing parties in the same place with the document, executed in witness of the signing by both parties, or agreement is prepared by one party, and then signed and sent to the other party for counter-signing.

Communication Protocols:

In the modern world of logistics and supply chain, identifying preferred mechanisms for communication are paramount in engaging in a financial transaction. The first important distinction is timeliness of the communications, batch processed or real time. The means of communication often dictate the format and structure of the data to be shared.

Headline 7: **Critical Emerging Technologies Generate Financial Transactions**

[List of Critical Emerging Technologies](#) (Report from the National Science and Technology Council, Executive Office of the President of the United States)

Reference: [US Government National Standards Strategy for Critical Emerging Technologies \(USG NSSCET\) Implementation Roadmap](#) and related [White House fact sheet](#)

Reference: [Enabling Standards Development Through Public-Private Partnerships](#). Prepared by the American National Standards Institute (ANSI). August 2024. ansi.org/pppforcets

Key Takeaways:

- ANSI serves as a bridge between the public and private sectors, facilitating public-private partnerships where government and industry together develop standards to achieve policy objectives. ANSI serves the diverse interests of more than 270,000 companies and organizations and 30 million professionals worldwide.
- ANSI membership comprises businesses, professional societies and trade associations, standards developers, government agencies, and consumer and labor organizations. ANSI serves as administrator and coordinator of the U.S. private-sector system of voluntary standardization, and is the official U.S. representative to the International Organization for Standardization (ISO) and, via the U.S. National Committee, the International Electrotechnical Commission (IEC).
- ANSI has defined PPPs as “collaborations between one or more government agencies and one or more private-sector organizations for the purposes of delivering a project or service, and which involve the sharing of resources, responsibility, risks, and benefits.”
- The five SD-PPP models identified are:
 - direct participation
 - standards acceleration
 - funded standards development
 - funded participation
 - policy and conformance driven
- Three phases of standards development:
 - pre-standardization,
 - standards development
 - Implementation
- Sub-phases for standards development include: premature, exploratory, planning, development, and implementation.
- Standards develop at the pace of regulation and technology ability.
- Effective implementation of the USG NSSCET ... could be achieved by expanding communication with the private sector, including through strategic partnerships, information sharing arrangements, and other cooperative efforts between U.S. government agencies and private sector standards stakeholders,

such as standards developing organizations (SDOs), industry associations, civil society, and others that participate in international standards activities.

- The government strategy stresses the importance of ensuring that the “rules of the road” for CET standards embrace transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and broad participation— Also outlined in both the USSS and USG NSSCET, the broader standardization community recognizes the need for continued education about the role and benefits of voluntary consensus standards.
- Each technology matures at a different pace, and adoption by the various sectors where technology convergence is a factor is not simultaneous.
- Numerous factors will impact when the timing is right and what the stakeholders will standardize first.
- ‘Standards readiness’ is not defined.
- An established way to evaluate and measure standards readiness is also not defined.
- Should the evaluation of standards readiness be aligned with Technology Readiness Levels (TRLs), DoD Manufacturing Readiness Levels (MRLs), or developed independently? **Let’s discuss.**
- Does the standardization community need standards readiness “levels,” and if so, how can one go about developing such a scale and how could it be measurable? **Let’s discuss.**

Headline 8:

People's Republic of China (PRC) Supply Chain 'IP' and 'Shipbuilding'

China's Belt and Road Initiative

- Belt and Road Portal - <https://eng.yidaiyilu.gov.cn/>
- Belt and Road Initiative Collection by Carnegie China - <https://carnegieendowment.org/china/belt-and-road-initiative?lang=en>

China 2035 Standards Plan

- Arjun Gargeyas. February 21, 2023. ***China's '2035 Standards' quest to dominate global standard-setting.*** Hinrich Foundation. <https://www.hinrichfoundation.com/research/article/trade-and-geopolitics/china-2035-standards-project-restructure-global-economy/>
- Yi Wu. July 26, 2022. ***China Standards 2035 Strategy: Recent Developments and Implications for Foreign Companies.*** China Briefing. [https://www.china-briefing.com/news/china-standards-2035-strategy-recent-developments-and-their-implications-foreign-companies/#:~:text=Following%20the%20'Made%20in%20China,Things%20\(IoT\)%2C%20and%20artificial](https://www.china-briefing.com/news/china-standards-2035-strategy-recent-developments-and-their-implications-foreign-companies/#:~:text=Following%20the%20'Made%20in%20China,Things%20(IoT)%2C%20and%20artificial)

USTR 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation

[USTR 2024-0007](#)

China USTR 301: Investigation of China's Acts, Policies, and Practices Targeting the Maritime, Logistics, and Shipbuilding Sectors for Dominance

[USTR-2024-0005](#)

[Michael Darden Comment on USTR-2024-0005](#)

Chinese Standardization - <https://sesec.eu/chinese-standardization/>

China in International Standardization -

<https://sesec.eu/chinese-standardization/china-in-international-standardization/>

China's efforts to dominate key sectors like maritime, logistics, and shipbuilding through its Belt and Road Initiative could lead to a concentration of technological power. China could leverage its growing influence to shape international standards in ways that benefit its own interests. concerns about data protection and privacy. China's technological influence could be used as a tool for economic coercion, potentially forcing other countries to adopt Chinese standards or technologies. The expansion of Chinese technological influence raises national security concerns for many countries, particularly in critical infrastructure and communication networks.

Just imagine if we were to gift wrap the global goods movement and the legal entity identifiers to comply with the digital systems the PRC has already deployed to gain the economic advantages.

Headline 9: **Enforcement and Joint Data Standards**

The US govt has many enforcement agencies:

https://en.wikipedia.org/wiki/Federal_law_enforcement_in_the_United_States

Enforcement of standards in Centralized vs Distributed networks:

Distributed networks require a member participating in governance with approved compliance mechanisms. Typically, these networks manage a set of roles: Issuer, Holder and Verifier.

Each user is designated a role to gain access to functions that are important for completing their work related to a given financial transaction related to the service of moving goods.

Centralized networks have systemic rules and ecosystem guides that require adoption for use. They also require forced formatting of data for use.

International Supply Chain Example: PRC LOGINK - centralized, forced compliance, one format, one platform. FREE. Supplemented PRC Support to expand. These transactions are all nested international financial transactions between Legal Entities.

MARAD:

- [MARAD MSCI Advisory 2023-002](#)
Worldwide-Maritime Port Vulnerabilities - Foreign Adversarial Technological, Physical, and Cyber Influence
- [MARAD MSCI Advisory 2023-009](#)
Worldwide-Foreign Adversarial Technological, Physical, and Cyber Influence
- [MARAD MSCI Advisory 2024-002](#)
Worldwide-Foreign Adversarial Technological, Physical, and Cyber Influence
- [MARAD MSCI Advisory 2024-011](#) (2024-10-09 (NEW))
Worldwide-Foreign Adversarial Technological, Physical, and Cyber Influence

Implementing new standards can be costly. Rigid enforcement could stifle innovation or fail to account for sector-specific needs. Enforcing standards internationally face legal and practical hurdles. Some entities may lack the technical capacity to comply fully with data standards.

Monitoring and Auditing: Ensuring consistent enforcement across all participants could be resource-intensive.

Penalties for Non-Compliance: Determining appropriate and effective penalties without being overly punitive.

Adaptation Time: Allowing sufficient time for entities to adapt to new standards without disrupting operations.

Ensuring that enforcement is applied consistently across different sectors and organizations.

3 levels of security consideration / readiness:
Logical, Physical, Digital

Enforcement:

No shortage of agencies that have enforcement authority.

https://en.wikipedia.org/wiki/Federal_law_enforcement_in_the_United_States

Conclusion:

Reviewing the FDTA and the JDS, I prepared my comments to suggest additional US Agencies be engaged in the financial transactions that are generated in the international commerce marketplaces to further advance the paperwork reduction act implications. My comment then showcased several Standards Development Organizations that should also be considered for standards development work with a public-private standards development work under the WTO/TBT principles. My comment then goes on to recommend the establishment of the Taxonomy / Lexicon for financial terms to assure understanding by the many stakeholders. On the topic of Legal Entity Identifiers, I showcase the ISO 8000-119 ALEI as an identifier that meets all the criteria posed in the FDTA. Security and access, participation and communication are topics for alignment across Critical Emerging Technologies. And, I close with the international threat of the PRC developing standards and using their influence to force adoption of competing standards. Lastly, I point out the importance of enforcement on Joint Data Standards.

I am interested and available to discuss these comments before this rule is final.

Thank you for the opportunity to comment.

Best,

Michael J. Darden

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