

Item Unique Identification (IUID) Enables Streamlined Acquisition And System Engineering

**NDIA System Engineering Conference
26-29 October 2009
San Diego, CA**



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Historical Methods of Identification

- Logistics and Engineering – NSN, Manufacturer and Part Number
- Property Management – Tail Number, Hull Number, Asset Tag (usually for local tracking)
- Manufacturing – Part Number, Serial Number
- Maintenance – Manufacturer, Part Number
- Tracking (regulatory and security) – Mixed
- Acquisition – Contract and Line Item Numbers and Quantity
- Finance – Fund Cite and Requisition Documents

UID Hierarchy

- Unique Identification (**UID**) is a system of identifying entities to distinguish them from each other.

- Item Unique Identification (**IUID**) is a system of marking items with Unique Item Identifiers (UIIs) that distinguish them from all other like and unlike items.

- Other efforts include:
 - Real Property Unique Identification (RPUID)
 - Acquisition Program Unique Identification (APUID)
 - System Unique Identification (SYSUID)
 - Organization Unique Identification (OUID)
 - Internal DoD (FMID)
 - External to DoD (CAGE, DUNS, etc.)

What Does IUID Provide?

Uniquely identifying tangible items will provide the “**data key**” to item life cycle traceability in DoD business processes and information systems and provide reliable data and accurate data, via **Automatic Identification Technology (2D Data Matrix)**, for engineering, logistics, management, financial, accountability and asset management purposes.

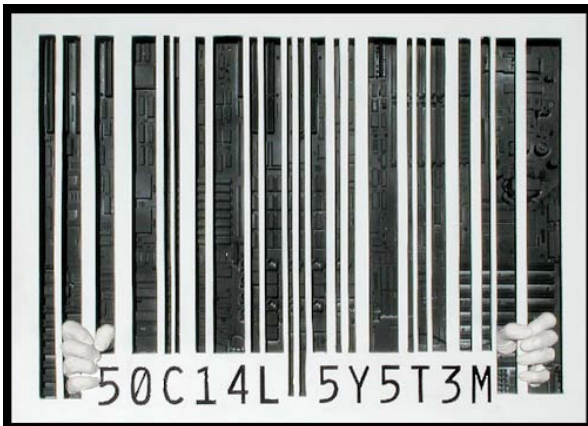
Required on all new Solicitations since 1 January 2004

AND

Legacy item compliance mandatory between 2008 and 2015

Automatic Identification Technology -Back to the Future

“I think the industry has sold itself on a program that offers so little return that it simply won’t be worth the trouble and expense”



discussing the potential
of the barcode in **1975***

*“Scanning Hits a Snag,” Progressive Grocer, December 1975, p. 47

Automatic Identification Technology

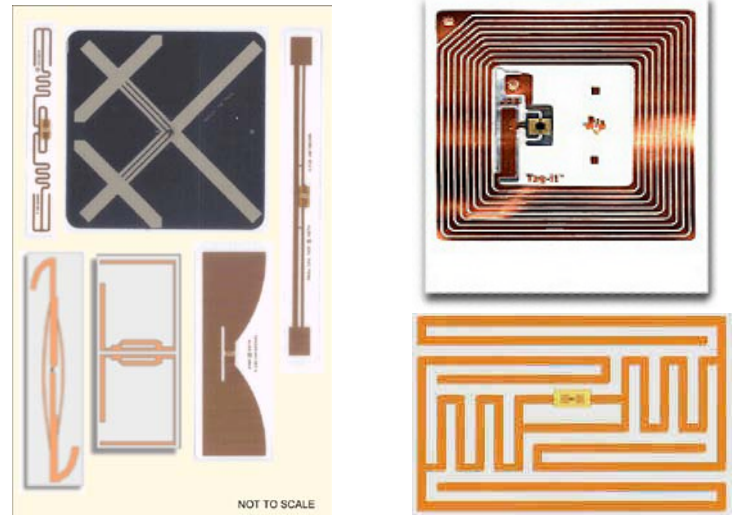


1D Barcode

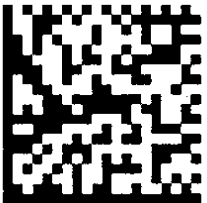


Contact Memory Buttons

Passive RFID Tags



2-D Barcodes



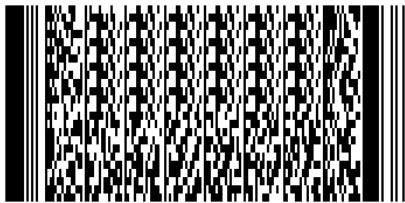
Data Matrix



QR Code



MaxiCode



PDF417



Bullseye



Aztec

Active RFID Tags



Marking Techniques



- Labels (Stickers)
- Data Plates
- Dot Peen
- Laser Etch
- Chemical Etch
- Silk Screening
- Thermal Spray
- Ink Jet Printing
- Laser Ablation
- Laser “Annealing”
- Cast/Forged
- Laser Bonding
- Embroidery
- Photo Etch

Compliant UII marks are optically read...so almost any marking method will work!

Key Direction from IUID Policy Updates

- **Apply IUID to legacy items in inventory and operational use**
- **All program and item managers plan for and implement IUID**
 - ACAT 1D programs submitted plans by June 2005
 - All others to MDAs by January 2006
 - All new programs must submit a plan as part of their System Engineering Plan
- **Government Furnished Property (GFP) must meet IUID policy requirement effective 1 Jan 2006**
 - DD 1662 for annual inventory of GFP eliminated
- **Plans must address:**
 - All existing serialized assets will be entered in IUID Registry
 - UII marking capabilities established such that marking can commence when equipment is returned for maintenance

Key Direction from IUID Policy Updates

- **DUSD (Logistics and Material Readiness)** develop IUID implementation plan for organic depot maintenance operations
- **Jan 2007:** OUSD Materiel Readiness & Maintenance Policy released “Implementing Item-Unique Identification in DoD Maintenance” (dated 31 Jan 07)
 - The Concept of Operations for IUID-Enabled Maintenance in Support of DoD Materiel Readiness
- **14 March 2008:** Memo Under Secretary (AT&L)
 - Policy for IUID of Tangible Personal Property – Oversight of IUID Implementation Planning and Execution
- **16 June 2008:** DoDI 8320.04 Item Unique Identification (IUID) Standards for Tangible Personal Property
 - <http://www.dtic.mil/whs/directives/corres/pdf/832004p.pdf>
- **24 October 2008:** Memo Under Secretary (AT&L)
 - Nuclear Weapons-Related Materiel (NWRM)
- **3 Aug 2009:** Under Secretary AT&L Ashton Carter, “Preservation and Storage of Tooling for Major Defense Acquisition Programs (MDAPs)”
 - Requires IUID and the planning for Preservation and Storage of Tooling for prior to Milestone C (SEP) and at Milestone C (LCSP)

IUID Policy Overview

- Policy memorandum released on July 29, 2003 (with subsequent updates) established IUID as a mandatory DoD requirement on all solicitations issued on or after January 1, 2004.
- IUID is required for all property items delivered to the Government if:
 - *Acquisition cost is greater than or equal to \$5,000*
 - *Items with an acquisition cost below \$5,000, when identified by the requiring activity as DoD serially managed, mission essential, or controlled inventory*
 - *Items with an acquisition cost below \$5,000 as determined by the requiring activity*
 - *Regardless of value, any DoD serially managed subassembly, component or part embedded within an item and the “parent” item in which it is embedded*
- Wide Area Workflow (WAWF) is the preferred method for capturing IUID data and is the mandatory DoD invoicing system

Create and Generate the UII

The components that make up the UII are identified in the table below.
Each enterprise has two options for creating the UII.

	UII Construct #1	UII Construct #2
Based on current enterprise configurations	If items are serialized within the Enterprise	If items are serialized within Part Number
UII is derived by concatenating the data elements IN ORDER:	Issuing Agency Code* Enterprise ID Serial Number	Issuing Agency Code* Enterprise ID Original Part Number / Lot or Batch Number Serial Number
Data Identified on Assets Not Part of the UII (Separate Identifier)	Current Part Number** Other Traceability Number***	Current Part Number ** Other Traceability Number***

*The Issuing Agency Code (IAC) represents the registration authority that issued the enterprise identifier (e.g., Dun and Bradstreet, EAN.UCC). The IAC can be derived from the data qualifier for the enterprise identifier and does not need to be marked on the item.

** In instances where the original part number changes with new configurations (also known as part number roll), the current part number may be included on the item as a separate data element for traceability purposes.

*** The data identifier 30T has been designated for use as a traceability number that is not part of the UII. For example, applications may specify 30T for encoding lot or batch number when the lot or batch number is not required or desired in the UII.

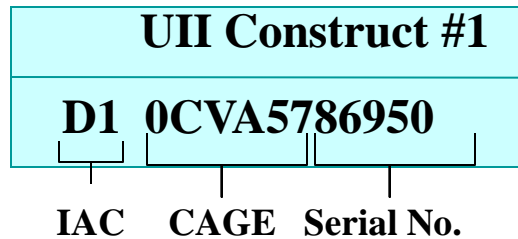
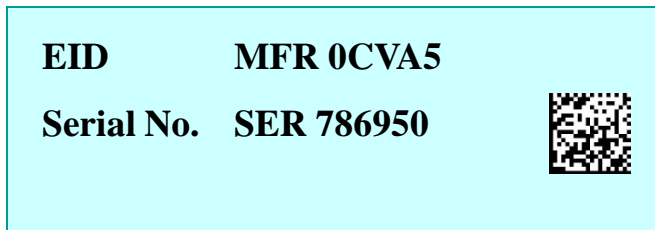
Create and Generate the UII

BUSINESS RULES

The UII shall be derived from its discrete component data elements.

The UII is not required to be marked on the item as a separate data element.*

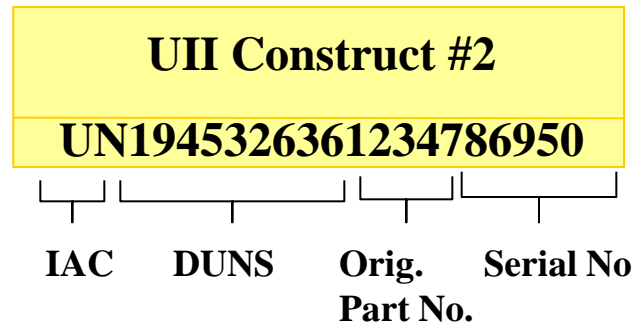
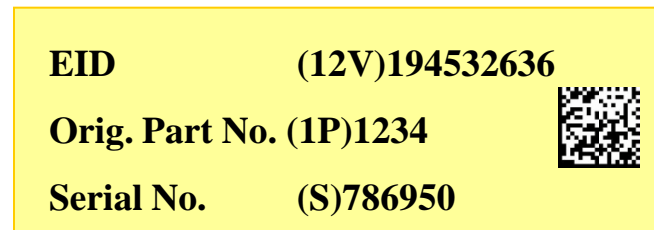
UII Construct #1¹



¹ This example uses Text Element Identifiers

² This example uses MH10.8.2 Data Identifiers.

UII Construct #2²



*If the enterprise chooses to mark the UII as a discrete data element on the item, the component data elements must also be marked on the item as discrete data elements, in addition to the UII.

System Engineering Requirement

➤ **AT&L Memo-Implementation Planning & Execution 14 March 2008**

➤ System Engineering Plan

Describe overall IUID Implementation Strategy to include

Requirements Generation

Marking

Data Submission

Describe role of IUID in program sustainment strategy

List Metrics

Implementation Timeline

➤ Life Cycle Supportability

Property accountability & management and financial accounting enabled by IUID

Incorporate capability to use IUID in all new Automated Information Systems (AIS) used for management of property

➤ **DODI 5000.02 “Operation of the Defense Acquisition System, 2 December 2008**

IUID Implementation Plan required per DoD Instruction 8320.04

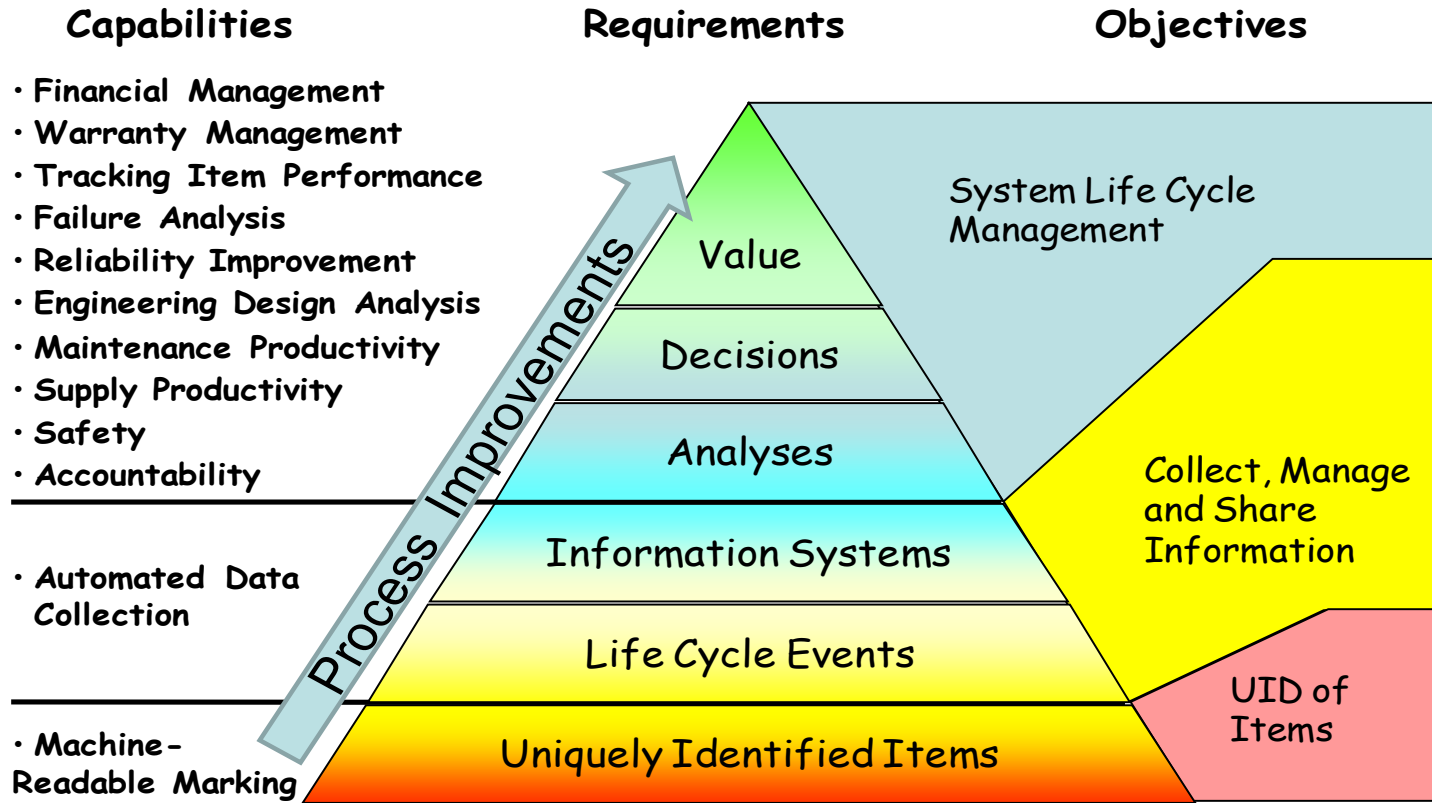
Milestone A (summarized in SEP)

Milestone B (annex to SEP)

Milestone C (annex to SEP)

UID of Items Enabled Intensive System Life Cycle Management

DRAFT



Source: Study Draft 0.7 NATO Allied Publication AUIDP-1

Systems Life Cycle Management View

- UII is one of the “common data keys” needed for System Life Cycle Management to link item level data and information across multiple systems and owners
- Comprehensive UII visibility from “as-built” configuration through distribution and deployment process to item configuration at disposal
- Existing mandated tracking uses UII as a common approach across all in scope platforms
 - Tracking via serial numbers is not new (e.g. Flight Critical Safety Items, controlled items, serially managed)
 - Individual systems or reporting requirements generate “point” solutions that do not encourage common usage
- Supply Chain Management decision making using UIIs.
- Complete lifecycle traceability
- Common data exchange formats virtually eliminate translation requirements

Just Imagine the Systems Benefits Possible with:

- Fully defined Product WBS at all points during the lifecycle to which :
 - Operational, maintenance and reliability data can be associated
 - Failure data can be assigned at the item level
 - Operational planning can reduce logistics tail and target skills
- The change in culture with data that:
 - Reliable and Accurate
 - Used to pull authoritative data from databases to pre-populate work orders, requisitions, PQDR, SDR
 - Labor savings associated with automatic data capture

Online Resources

Official DoD UID Policy Office Website

www.uniqueid.org

Comprehensive resource of UID and IUID policies, standards, directives, videos and success stories.

Be sure to sign up for the *IUID in Action* eNewsletter!

IUID Helpdesk

defensepolicysupport@ebpsc.org or 1.877.376.5787

Defense Acquisition University

www.dau.mil

DAU offers 2 distinct online courses to increase your IUID knowledge
CLE040 “Item Unique Identification Marking” and CLM200 “Item Unique
Identification”

Back-Up Slides

DoD IUID Registry

➤ Purpose:

Collect IUID and pedigree information of tangible items owned by DoD
Distribute IUID and pedigree information to DoD users
Provide single point of reference for DoD tangible items that have assigned Unique Item Identifiers

➤ Operational Environment:

IUID Registry – database located in Battle Creek, MI
Operated by Defense Logistics Information Service (DLIS)
Resides on Business Process Network backbone

➤ Submit Data

By WAWF
XML or flat file through GEX
Manually via IUID Web Entry Site at
<http://www.bpm.gov/iuid>



DoD IUID Registry Statistics

as of 30 September 09

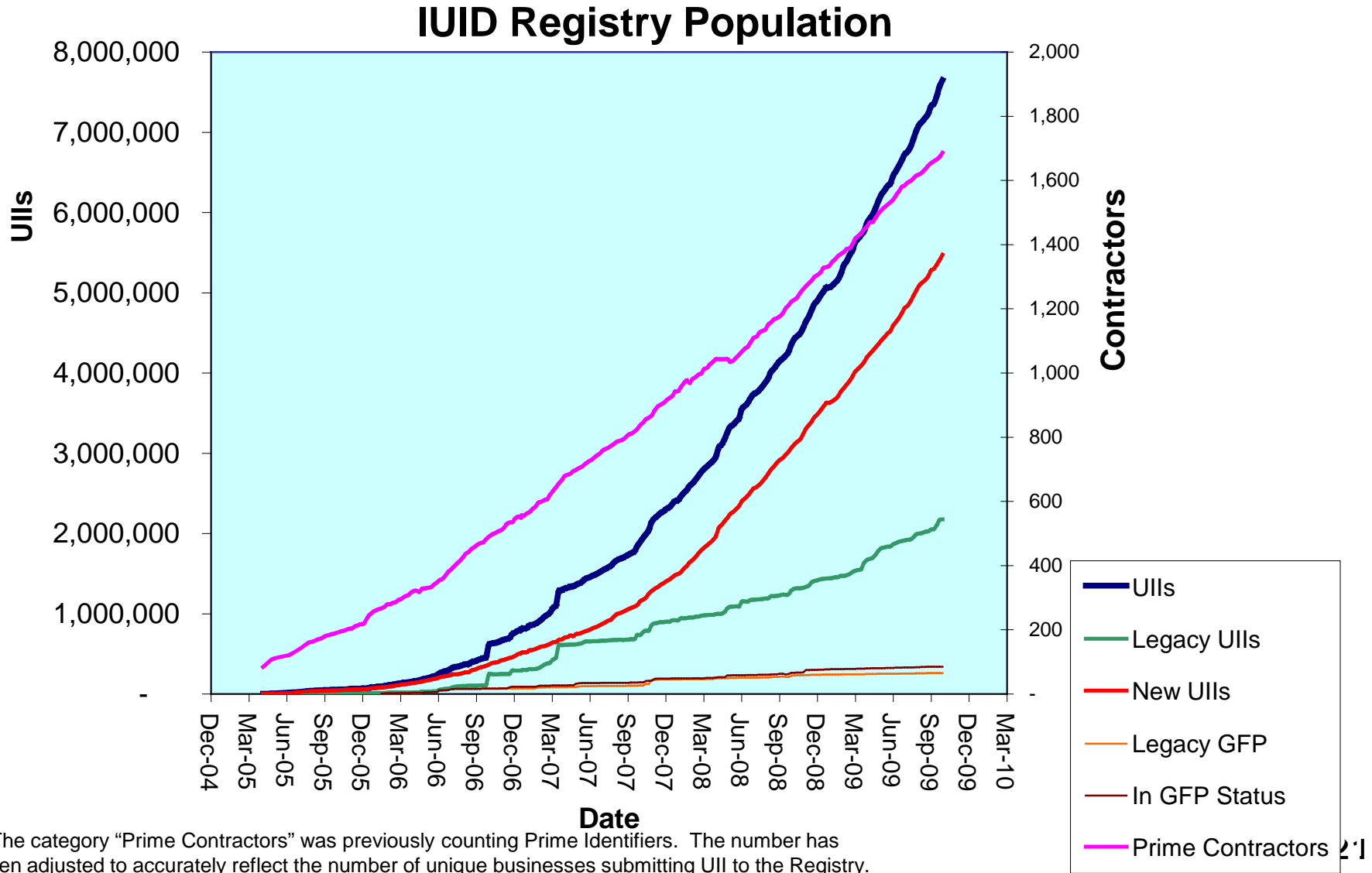
- **7,650,056 Items registered**
- **5,474,069 New items**
- **2,175,987 Legacy**
- **1,687 Contractors have delivered new Ulls**
- **990 of the contractors (59%) are small businesses***
- **1,520,434 of the new items (28%) are from small businesses***
- **Growth rate of over 49,000 new Ulls/week****
- **340,849 Items are in GFP status**

* Based on current size status in CCR

** Legacy and GFP Ulls often come in large batches and weekly rates for those are not meaningful

Registry Population

as of 30 September 09



* The category "Prime Contractors" was previously counting Prime Identifiers. The number has been adjusted to accurately reflect the number of unique businesses submitting UII to the Registry.