



**Aerospace Industry Guideline
for IUID Data Exchange
Between Partner and Prime**

Version 4.0
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Developed By:
**Electronic Enterprise Integration Committee
Aerospace Industries Association, Inc.**

Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime

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Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime

History Page

Date	Version	Change	Reason
10-11-2005	1.0.1	Section 5. Removed numbers 1,2,3,4 from End-to-End IUID Process Flow Diagram,	They were never referenced
10-11-2005	1.0.1	Section 6.2.1. Changed Item record from As-Required to Required	Primes always need the information in the Item Record. The specification originally did not require the Item Record if only RecordType = E (Event) records were in the transaction.
11-1-2005	1.0.2	Section 6.2.3. Added "Item" to mandatory spreadsheet list.	Wording should have been corrected in version 1.0.1
11-1-2005	1.0.2	Section 6.2.4. Added "Item" to mandatory record list	Wording should have been corrected in version 1.0.1
11-1-2005	1.0.2	Section 6.2.5. Added "Item" to mandatory record tag names list.	Wording should have been corrected in version 1.0.1
01-13-2006	1.0.2	Section 8.3. Added "or the ATA CSDD" to the end of the first sentence in the definition of IUID. Also, added sentence under Glossary header explaining that these are not the official DFAR definitions.	The phrase "or the ATA CSDD" was mistakenly omitted from the original definition. Sentence was added to explain the origin of the included Glossary term definitions.
05-19-2006	1.0.3	Sections 4 and 6 changed all occurrences of <u>DoD IUID Flat File Specification</u> , version 3.0 to <u>DoD IUID Flat File Specification</u> , version 1.0.	This is a typo correction, it should always have said version 1.0.
05-19-2006	1.0.3	Section 6.2.2. Modified the file naming convention to include the Prime's Purchase Order Number to coincide what was agreed upon in the AIA RFID Data Exchange Guideline. (Partner's CAGE Code or DUNS Number)_Prime's Purchase Order Number_CCYYMMDD_HHMMSS.(txt or xls or xml)	This change was requested by some partner's who needed to know by the file name what the Purchase Order Number is.
6-09-2006	1.0.4	Section 6.2.2. Changed filename convention to support format with and without Prime's Purchase Order Number	To satisfy the business needs of prime's and partner's filename conventions with and without Prime's Purchase Order Number are needed.
7-30-2010	1.0.5	Upgraded this document to explain why	Enhancement to DoD

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		this guideline is no longer is sync with the latest DoD IUID Flat File Specification.	IUID Flat File Specification determined not needed by industry.
7-30-2010	1.0.5	Updated URL for DOD IUID Website	Location of IUID Information on DPAP website changed.
7-30-2010	1.0.5	Updated URL for AIA Industry Guideline for IUID Data Exchange Between Partner and Prime	Location of IUID guideline on AIA website changed.
11-22-2011	4.0	Updated the version number to match the associated specifications, templates and samples.	Updated to keep guideline and associated documents in sync.
11-22-2011	4.0	Added paragraph to section 4 of this guide explaining that the IUID Specification was updated to support the two data elements needed to identify an End Item as Special Tooling or Special Test Equipment.	Updated to satisfy new DoD requirements

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Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime

1. Executive Overview

Issue: All DoD prime contractors are required to supply specified IUID data elements to the DoD for all procured items that meet the criteria or are identified to need IUID marking. To satisfy the DoD requirements, Primes will need to electronically receive IUID data from suppliers and subcontractors (partners). A common solution set defining the exchange IUID data between partners and primes is critical to the primes' ability to deliver and maintain accurate IUID data.

Solution: AIA member companies chartered the Electronic Enterprise Integration Committee (EEIC) to develop this common solution set for the Aerospace Industry.

Deliverable: *“Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime”* assisting trading partners in implementing partner to prime IUID data exchanges. This Industry Wide Best Practice provides a common set of data exchange formats and transmission methods (protocols). From this common set each partner may choose those that best match their company's technical capabilities. Please keep in mind that this document is provided as a GUIDELINE and not a mandatory standard. Trading partners are encouraged to use this guideline. Use of it will simplify the data exchange process and reduce costs in the supply chain. Voluntary use of this common instruction guide will ensure consistent formats and methods for IUID reporting.

Target Audience: All DoD contractors, primes and suppliers as trading partners.

When Used: The data formats and data transfer methods in this guideline should be used whenever partners need to satisfy the prime's IUID data requirements identified in the purchase order for a IUID marked item.

Benefits: Use of this Industry wide Best Practice will facilitate, simplify, and reduce the cost of compliance with DoD IUID requirements by:

1. Minimizing the number of data formats and data exchange methods required for partners to support. We have identified three data formats: Microsoft Excel, Flat File (ASCII text), and XML; and three Data Exchange Methods: Email, FTP, and Web Portal.
2. Limiting the number of interfaces needed by primes and partners from their legacy systems, which would otherwise have been needed to support these data exchanges in an environment where a common industry guideline did not exist.

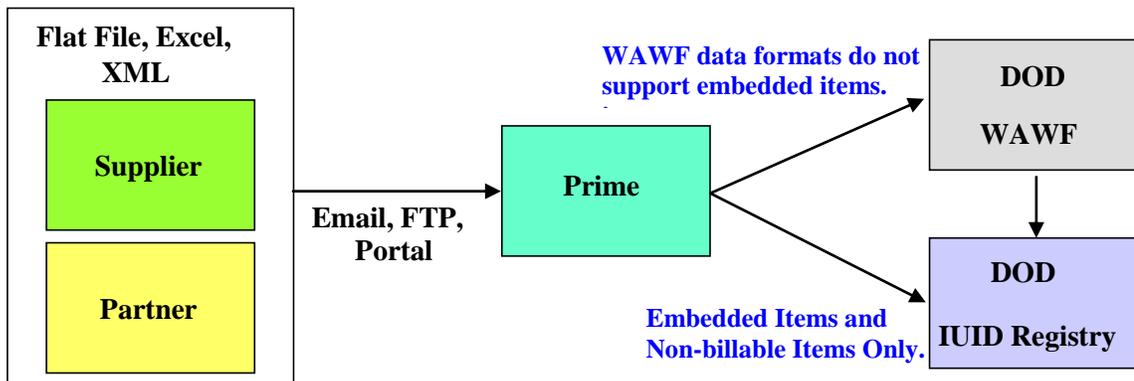
Implementation & Affordability: To validate the guidance document, the AIA EEIC conducted a pilot program to create and transfer data as outlined in the process flow enclosed. The pilot was successful in demonstrating all aspects of the Guidance Document using tools currently available in the marketplace. The common format was established based upon the DoD IUID Flat File Specification requirements and modified by adding additional fields to address information partners may need.

Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime

2. Guiding Principles for Use:

- In this document, a customer is always called a “prime” and a supplier, subcontractor, or partner is always called a “partner”.
- This document should be used whenever a trading partner has a contractual requirement from a prime to supply IUID data for an item procured by the prime. This requirement applies to items, which may eventually be embedded into a prime’s end item, or may be a simple stand-alone pass through to the customer from the prime.
- If a prime contracts with a partner to direct ship an item to the DoD the following options exist:
 - a.) The prime can request that the IUID data be sent back to them using the data formats and exchange methods defined in this guideline.
 - b.) The prime can request that the partner send the IUID data directly to the DoD. In this case the partner must use the DoD data formats and exchange methods. The data formats and DoD guidance are available from the DoD web site:
<http://www.acq.osd.mil/dpap/pdi/uid/index.html>.
 - c.) Both “a” and “b”.
- Primes should support the acceptance of data in one or more of these Data Formats and Data Exchange Methods that support the capabilities of their partners. It is recommended that large primes support all three of the Data Formats or at least the Email and FTP Data Exchange Methods.
- Trading Partners (prime and partner) must agree on the Data Format, Data Exchange Method, and Data Security to be used. This agreement may be documented via a Global Trading Partner Agreement (GTPA). The GTPA provides a documented common set of rules by which trading partners agree to exchange data electronically, thus minimizing barriers encountered when engaging with new trading partners. A copy of this agreement may be downloaded for public use at (www.aia-aerospace.org/library/ebusiness/ebusiness.cfm/GTPA_mode_2k4_tmp.doc).

3. High Level IUID Process Flow



4. Purpose of this Guideline Document

This is a GUIDELINE and not a standard. Trading Partners (primes and partners) are not bound by the AIA to use this guideline. However, use of it will simplify the data exchange process and reduce costs in the supply chain. Voluntary use of this common instruction guide will ensure consistent formats and methods for IUID reporting.

The purpose of this document is to facilitate the flow of data from partners (suppliers and subcontractors) to the primes as needed to meet DoD IUID contract requirements. Typically, each prime and their respective partners would handle similar data deliverables differently. The lack of a common industry approach adds complexity and cost to the supply chain. Partners are too often forced to support multiple data formats and transmission methods. The same problem exists when primes exchange data with other primes.

Partners have varying technical capabilities and resources. In addition, partners may have limited demand to supply items requiring IUID. This guideline document provides options from which a partner can choose to match their capabilities to the solution approach.

The fundamental core component of this Guideline is the DoD IUID Flat File Specification, version 1.0, which supports the DoD Guide to Uniquely Identifying Items, v1.5 (June 7, 2005). However, when the AIA Project Team began to analyze industry-to-industry communication requirements in more detail, it became apparent that the definition of a small number of data elements in the DoD IUID Flat File Specification, version 1.0 document needed to be adjusted to accommodate the (industry) prime and partner relationships. Therefore, our Industry Guideline contains additional columns called "Industry Requirements" and "Additional Industry Guidelines", which override the DoD instructions when sending IUID data to a partner. The AIA Project Team intends to incorporate any DoD and/or Industry specification changes in future releases of this document, as compliance requirements change; and it is determined that these changes impact the data that needs to be passed from Partner to Prime.

The DoD has since upgraded the original IUID Flat File Specification document this guideline was based on; and effective 12/31/2010 the DoD will no longer accept submittals in the version 1.0 IUID Flat File Specification format. The AIA EEIC surveyed its members through the IUID Industry Users Group at that time and it was determined that the current version of the AIA Guideline would still provide the necessary information to primes. None of the DOD IUID specification changes prior to version 4.0 have required an changes to the data passed from Partner to Prime; but just between Prime and the DoD. Any changes to keep this AIA guideline aligned with the DOD Flat File Specification are restricted to only those situations where it is absolutely necessary in an effort to limit the impact of change and related costs to all industry members.

A new data element to identify whether an End Item is classified as "Special Tooling" or "Special Test Equipment" along with a data element requesting the effective date were added to the version 4.1 of the DoD IUID specification in February 2011. It was determined that there was a need to provide the capability for the exchange of this data within the supply chain. To support this, two data elements were added to the Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime, guideline version 4.0 on December 07, 2011.

Three different data formats have been identified that will satisfy each company's needs.

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4.1 Data Format

Data Format	When Used	Skill Level
Microsoft Excel Template	<ol style="list-style-type: none"> Where requirements to support IUID are low. In the interim to meet IUID data deliverable requirements while a more sophisticated approach is developed. 	Low
User Defined Format or (Flat File)	<ol style="list-style-type: none"> Created as a simple output interface from COTS packages like Microsoft Access. As an output format generated from any legacy application. 	Moderate
XML Schema	<ol style="list-style-type: none"> As an output format generated from any legacy application. As an output format available from many database query tools. 	Advanced

Table 1 Data Format

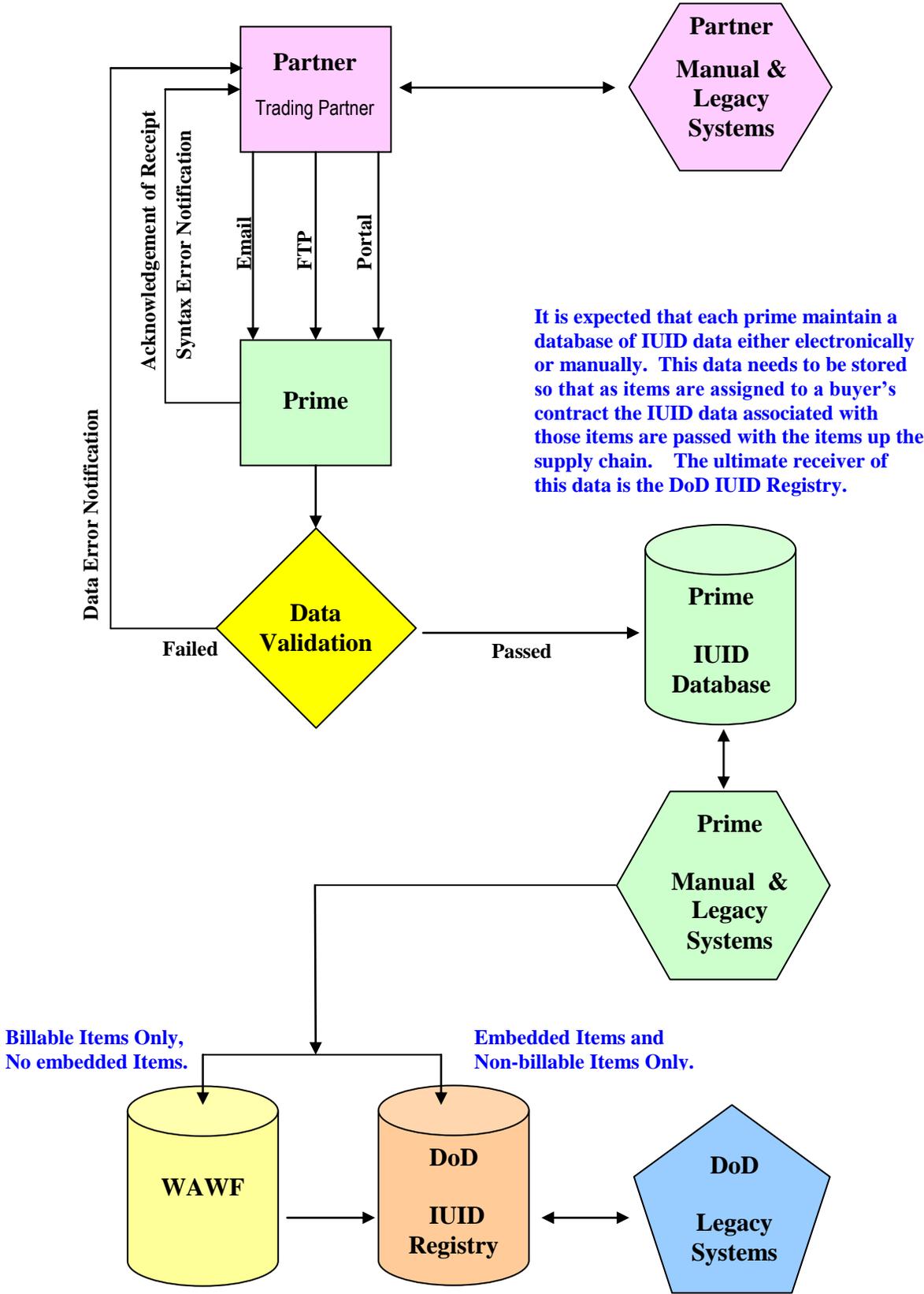
To transport this data between trading partners three different transmission methods have been identified. Each transmission option will support any of the three data formats.

4.2 Transmission Methods

Transmission Methods	When Used	Skill Level
Email (SMTP)	<ol style="list-style-type: none"> All trading partners can support email. The selected data format file is attached to the email and sent to the email address supplied by each prime. 	Low
FTP (File Transfer Protocol)	<ol style="list-style-type: none"> This is a cost free transfer method that can be used to transfer any of the data formats to a location provided by the prime. The setup cost is minimal. User Id and password must be supplied by the prime. 	Moderate
Web Portal	<ol style="list-style-type: none"> This is only available when the prime has a Web Portal application. Each prime must provide instructions for logging into and uploading/downloading data files. 	Moderate

Table 2 Transmission Methods

5. End-to-End IUID Process Flow



6. Technical Specifications

6.1 Data Element Dictionary

The DoD IUID Flat File Specification is a core component of our Aerospace Industry IUID Data Element Dictionary. It was determined that minor changes to some data element definitions were needed to bring the DoD requirement more in line with industry business requirements. Also, some data elements required by the DoD do not need to be exchanged between partner and prime. The data exchange for all formats is based on the same AIA IUID Data Element Dictionary. This data dictionary is completely synchronized with the DoD IUID Flat File Specification: We have adopted both the DoD data element naming convention and all data element definitions. Even though the DoD specification this guideline was based on have been enhanced over the years we feel this existing AIA guideline still satisfies industries needs.

The AIA IUID Data Element Dictionary can be found in the AIA IUID Flat File Specification.xls as part of the full guideline package. This data dictionary is the basis for all AIA Data Exchange Formats. The tan colored column shows the “Industry Requirement” or usage of the data element, which may differ from DoD usage. For example: the DoD definition for AcquisitionCost states that “*Required from Vendors for new procurement; not required when reporting legacy items.*” A prime will almost always have this data so we do not require the partner to supply again.

6.2 Data Formats & Examples

Three types of data elements are defined for use: Data elements that are always “Mandatory”, those that are needed on a “Conditional” basis (as-required), and those that are “Optional” at this time. You will also find some data element names with a DoD Requirement of “Industry Defined”: These data elements were added to the DoD IUID Flat File Specification at the request of industry, their use will depend on specific business requirements.

Three data format types will satisfy the needs of partners and primes. The format types are Microsoft Excel, Flat file, and XML. The exact same full set of data elements exists in all three data format types. The structures of all three data element formats are also the same, for example a Record Number in the Flat File format is identical to a Spreadsheet Name in the Excel format or a Record Tag Name in XML.

Flat File Record Number = Excel Spreadsheet = XML Record Tag Name

Available on the AIA Public Web Site (www.aia-aerospace.org/library/library.cfm) are the Microsoft Excel Template, the Flat File layout, the XML Schema, and Sample Files that you will need to follow in implementing the data exchange.

6.2.1 Understanding and Using the Structure in more Detail

As stated in section 6.2 the structures of all three data element formats are the same; a Record Number in the Flat File format is identical to a Spreadsheet Name in the Excel format or a Record Tag Name in XML.

Flat File Record Number = Excel Spreadsheet = XML Record Tag Name

Since all are identical, we will explain the structure using the Flat File Record Number. Besides the Record Number we have a Record Type which, except for the “H” - Header and “T” - Trailer

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denotes the action you are trying to perform. Currently, the only valid action Record Types are “A” – Add and “E” – Event. “Add” record types are just what they imply, you are sending the prime new IUID data for a new item that has never been sent before. The “Event” record type is only used to record a change in certain IUID data on an existing piece of Government Furnished Property (GFP).

The list of Record Numbers and a brief description of each:

- 000 – Header.** (Mandatory, denotes the beginning of a file and identifies the sending entity.)
- 100 – Item Record.** (Required to provide IUID data to a prime for each item (UII) that will be added, corrected, or removed from the prime’s IUID Database. This is the most commonly used Record Number a partner will supply to a prime.)
- 200 – Custody Record.** (As-Required to add or change information regarding what entity has custody of a GFP item. It is unlikely that this Record Number will be used frequently by Industry.)
- 300 – Mark Record.** (As-Required to add or change information regarding a mark on an item. It is likely that a partner will only use this Record Number if they are adding a “2D Compliant” UII mark to a GFP item that previously was not mark with a “2D Compliant” UII mark.)
- 400 – Part Number Change Record.** (As-Required to record a change to a GFP item’s Original Part Number.)
- 500 – Parent Record.** (As-Required to record a change to a GFP item’s Parent UII)
- 900 – Trailer.** (Mandatory, denoted the end of the file, the date it was sent and the Record Number count. This count is used to verify that a complete file was transmitted.)

The sequencing of the records is also important. Each file must begin with a 000 – Header and end with a 900 – Trailer. In between you must have all the records in the following order.

H^000^... Header Records
A^100^... Add Item Records
A^200^... Add Custody Records (Must be associated to an Item Record in the same file)
A^300^... Add Mark Records (Must be associated to an Item Record in the same file)
E^200^... Event Custody Records
E^300^... Event Mark Records
E^400^... Event Part Number Change Records
E^500^... Event Parent Records
T^900^... Trailer Record

This record sequence is utilized in all three data exchange format types. In the Flat File and the XML the record sequence must be as above. In the Excel Spreadsheet format simply load the data into the spreadsheet under the appropriate tab name; the receiver must sort the data as needed. It is recommended that the received of the file sort the data, regardless of format sent, into what they need to load their database.

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6.2.2 File Naming Convention:

In order to ensure that all files are unique and to assist in tracking and reporting it is important that a file naming convention guideline be established. The recommended formats are as follows:

(Partner's CAGE Code or DUNS Number)_CCYYMMDD_HHMMSS.(txt or xls or xml)

or

(Partner's CAGE Code or DUNS Number)_Prime's Purchase Order Number_CCYYMMDD_HHMMSS.(txt or xls or xml)

[Note: The use of the Prime's Purchase Order Number in the file name is required only if requested by the prime.](#)

Example: Where partner's (supplier or subcontractor) Cage Code is 70070 and Purchase Order Number is PO1122334455

Flat File: 70070_PO1122334455_20050615_143556.txt
Excel: 70070_PO1122334455_20050615_143556.xls
XML: 70070_PO1122334455_20050615_143556.xml
ANSI X12: 70070_PO1122334455_20050615_143556.x12 (If sent via E-Mail, FTP, or Web-Portal. Traditional EDI using a Value Added Network does not support this convention.)

or without Purchase Order Number

Example: Where partner's (supplier or subcontractor) Cage Code is 70070

Flat File: 70070_20050615_143556.txt
Excel: 70070_20050615_143556.xls
XML: 70070_20050615_143556.xml
ANSI X12: 70070_20050615_143556.x12 (If sent via E-Mail, FTP, or Web-Portal. Traditional EDI using a Value Added Network does not support this convention.)

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6.2.3 Microsoft Excel Template

This Excel template has all the data elements built into its structure as well as the rules for use. Data cannot be saved into the template; data can only be saved into an Excel spreadsheet based on the template. All the "Mandatory" data elements are shaded in green; the "Conditional" are shaded in beige and the "Optional" data elements are in white. If clicked, the red triangle in the column-heading cell of each column provides some rules for loading the data. The only mandatory spreadsheets are the Header, Item, and Trailer. All the other spreadsheets are used as-required. If a spreadsheet is used then the data elements on that spreadsheet must be supplied according to the requirements outlined in the AIA IUID Data Element Dictionary. Unneeded columns can be removed from the spreadsheet and the columns can be rearrange to simplify data loading. However, the column header in row 1 **MUST NOT** be deleted or changed in any way. Also, the name on the spreadsheet tabs **MUST NOT** be changed. Data loaded into a spreadsheet is not validated until the spreadsheet is sent to the prime, so reviewing the data for correctness before sending is important. After the spreadsheet is populated it must be sent to the prime using one of the agreed upon data exchange methods.

The screenshot shows a Microsoft Excel spreadsheet titled "Sample 1 of AIA IUID Excel Spreadsheet.xls". The spreadsheet has 11 columns and 34 rows. The first row (row 1) contains the column headers: RecordType, RecordNumber, UII, ItemType, PopulationType, CompliantMarkFlag, UIIType, IssuingAgencyCode, EnterpriseIdentifier, BatchLot, and OriginalPart. The first three columns (RecordType, RecordNumber, UII) are shaded green, indicating they are mandatory. The remaining columns are shaded beige, indicating they are conditional. The data rows (rows 2-4) contain the following values:

RecordType	RecordNumber	UII	ItemType	PopulationType	CompliantMarkFlag	UIIType	IssuingAgencyCode	EnterpriseIdentifier	BatchLot	OriginalPart
A	100	D98765PN12345001	END	NEW	Y	UID2	98765	98765		PN12345
A	100	D98765LD22222093	EMB	NEW	Y	UID2	98765	98765		LD122222
A	100	D987651559	END	NEW	Y	UID1	98765	98765		RD6666666

Figure 1 Microsoft Excel Template Example

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6.2.4 Flat file

The File layout is available from the AIA web site referenced in section 6.1 of this guideline. The Flat File format is identical to the Excel format, each spreadsheet equates to a Record Number. The only mandatory record numbers are the Header and Trailer. All the other record numbers are used as-required. If a record number is used, then the data elements on that record number must be supplied according to the requirements outlined in the AIA IUID Data Element Dictionary. Data element fields must be separated by the “^” (Hex 5E) character. Each line of data must end with a carriage return and line feed (Hex. 0D0A). The file name must have an extension of “txt”. Data loaded into a flat file is not validated until the file is sent to the prime, so reviewing the data for correctness before sending is important. After the file is populated it must be sent to the prime using one of the agreed upon data exchange methods.

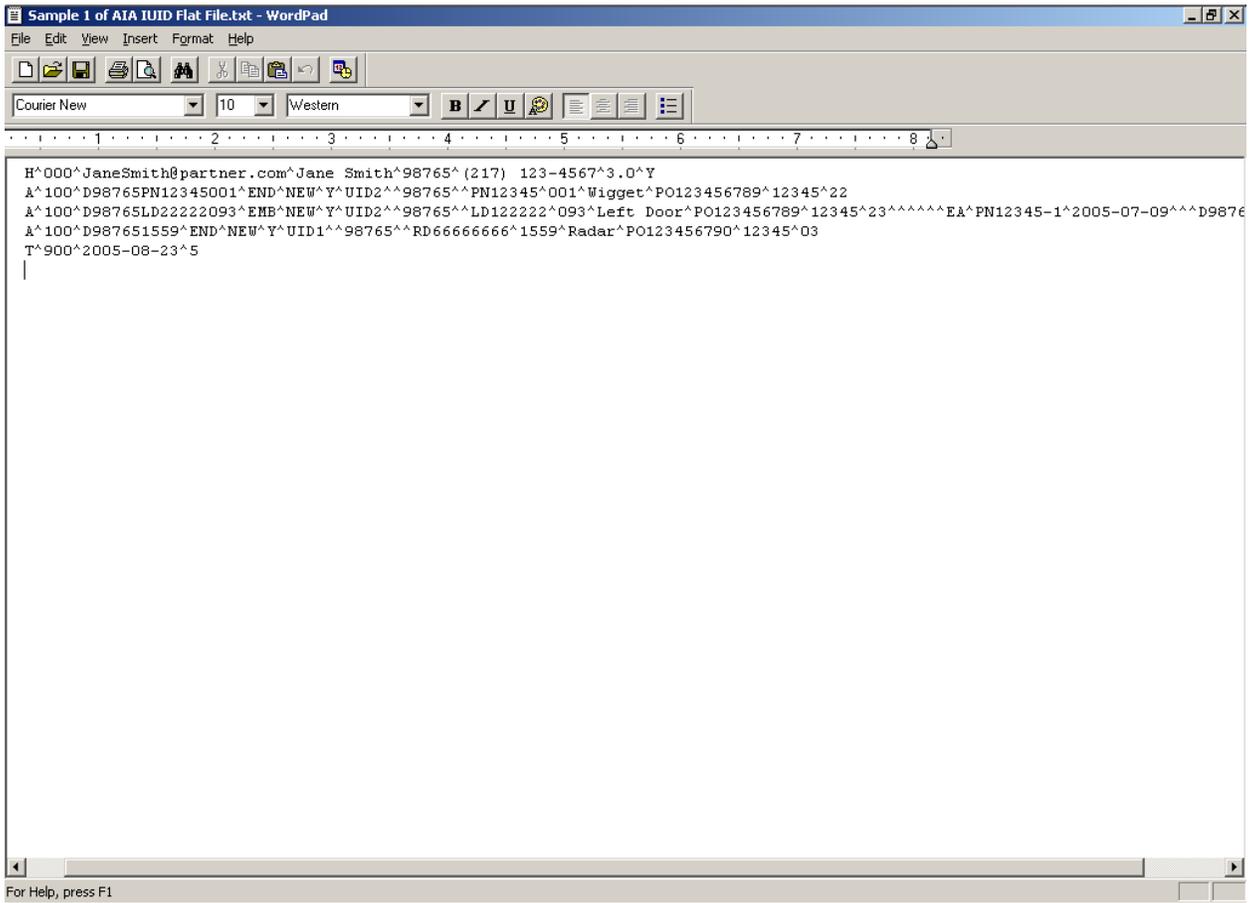
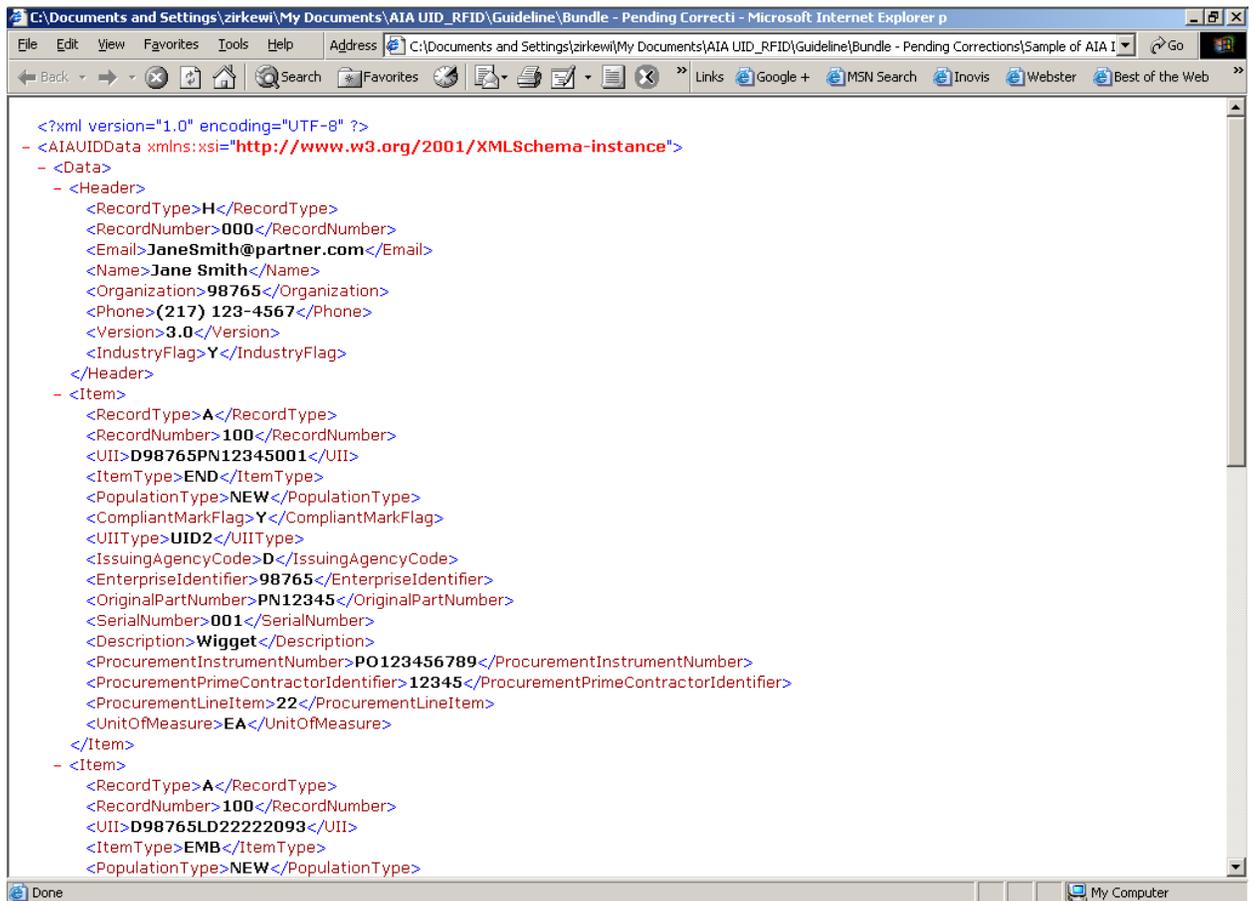


Figure 2 Flat File Template Example

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6.2.5 XML Schema

The XML Schema is identical in structure to both the Excel template and Flat File format. The only mandatory record tag names are the Header and Trailer. All the other record tag names are used as-required. If a record tag name is used then the data elements on that record type must be supplied according to the requirements outlined in the AIA IUID Data Element Dictionary. Data elements must be provided in the sequence they are listed in the schema but unused data elements can be dropped. If you validate the XML file against the XML schema before sending a syntax check will be performed which will confirm that you data satisfies all the data element rules. The XML file must then be sent to the prime using one of the agreed upon data exchange methods.



```
<?xml version="1.0" encoding="UTF-8" ?>
- <AIAUIDData xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
- <Data>
- <Header>
  <RecordType>H</RecordType>
  <RecordNumber>000</RecordNumber>
  <Email>JaneSmith@partner.com</Email>
  <Name>Jane Smith</Name>
  <Organization>98765</Organization>
  <Phone>(217) 123-4567</Phone>
  <Version>3.0</Version>
  <IndustryFlag>Y</IndustryFlag>
</Header>
- <Item>
  <RecordType>A</RecordType>
  <RecordNumber>100</RecordNumber>
  <UII>D98765PN12345001</UII>
  <ItemType>END</ItemType>
  <PopulationType>NEW</PopulationType>
  <CompliantMarkFlag>Y</CompliantMarkFlag>
  <UIIType>UID2</UIIType>
  <IssuingAgencyCode>D</IssuingAgencyCode>
  <EnterpriseIdentifier>98765</EnterpriseIdentifier>
  <OriginalPartNumber>PN12345</OriginalPartNumber>
  <SerialNumber>001</SerialNumber>
  <Description>Wigget</Description>
  <ProcurementInstrumentNumber>PO123456789</ProcurementInstrumentNumber>
  <ProcurementPrimeContractorIdentifier>12345</ProcurementPrimeContractorIdentifier>
  <ProcurementLineItem>22</ProcurementLineItem>
  <UnitOfMeasure>EA</UnitOfMeasure>
</Item>
- <Item>
  <RecordType>A</RecordType>
  <RecordNumber>100</RecordNumber>
  <UII>D98765LD2222093</UII>
  <ItemType>EMB</ItemType>
  <PopulationType>NEW</PopulationType>
```

Figure 3 XML Schema Example

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6.3 Data Exchange Methods

Email (SMTP) – Email is the simplest method for exchange files between trading partners. Each prime must provide their partners with an email address to which emails containing one of the data formatted file above must be sent. These simple rules must be followed:

- a. The subject of the email must be: **UIDDATA**, case does not matter. The prime must be able to identify that the email contains an IUID data file regardless of the case used in the subject. Even **UIdDaTa** must be identified as being **UIDDATA**.
- b. Attach the data file to the email. Multiple files can be attached as long as they don't have the same file name. The only file types accepted are: txt, xls, and xml.
- c. Since a computer may automatically process these emails, any embedded messages in the body of the email will be ignored. Messages should be directed to the buyer or whomever else the prime identifies as the contact.

FTP – The FTP utility is included at no cost with most operating systems, such as Windows, Linux, Unix, etc. If the prime supports FTP, as a data transfer method that prime must provide each partner with an ID and password for logging into the prime's FTP server and the IP address to which the files will be sent. We recommend that the prime's FTP server be located outside of their firewall. This eliminates the need for the prime to setup firewall rules and for the partner to supply a fixed IP address to the prime. If however, the prime's FTP server is located behind a firewall (or within a DMZ), the prime will need to know the IP address from which the partner is sending files and that IP address cannot be changed without notifying the prime. The steps in using FTP follow:

- a. The partner must log into the prime's FTP server using the FTP utility on their system with the IP address, ID and password the prime provided.
- b. The IUID data files must be sent to the FTP server using the commands provided with the FTP utility. Multiple files can be uploaded during one logon session. Care must be taken to not repeat the same file name. A second file sent with the same name as a previously sent file will overlay the previous file, if was not already processed by the prime. The only file types accepted are: txt, xls, and xml.
- c. Files are usually transferred almost immediately. After the last file is sent in the session, the user must logoff the prime's FTP server.

Web Portal – A web portal is often unique to a particular each prime. Therefore, the instructions for uploading data into that Web Portal must be provided by that prime. We only ask that the data format types match in type and structure those defined in this Guideline.

6.4 Prime to Partner Acknowledgement and Syntax Error Reporting Process

For files received via Email.

- a. Upon receipt of an email with a subject of **UIDDATA** the prime must extract the attachments from the email.
- b. The file will then be checked for simple syntax errors. An email acknowledging receipt of the file and whether it was accepted or rejected must be sent back to the partner using the partner's contact email address provided in the file.
- c. If the file was rejected, the reason for rejection must be provide back to the partner so they can resend a corrected file.
- d. It is recommended that the above steps be performed within 1 business day of receiving the file.
- e. Additional error reporting may be identified in Section 6.4.

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For files received via FTP.

- a. Upon receipt of a file via FTP the prime must move the file from its ftp server and perform similar processing to what was performed for Email above.
- b. The file will then be checked for simple syntax errors. An email acknowledging receipt of the file and whether it was accepted or rejected must be sent back to the partner using the partner's contact email address provided in the file.
- c. If the file was rejected the reason for rejection must be provide back to the partner so they can resend a corrected file.
- d. It is recommended that the above steps be performed within 1 business day of receiving the file.
- e. Additional error reporting may be identified in Section 6.4.

For files uploaded through a Web Portal.

- a. Uploading files through a prime's web portal is very different from the more batch-oriented processes used in the Email and FTP transfers. Acceptance notification and syntax error reporting are performed according to how the application was designed. Each prime is responsible for instructing their partners how and when acceptance notification and syntax error reporting are handled. Some applications may combine the syntax error reporting and data error reporting into the same process.
- b. If the file was rejected, the reason for rejection must be provide back to the partner so they can resend a corrected file.
- c. It is recommended that the above steps be performed within 1 business day of receiving the file.
- d. Additional error reporting may be identified in Section 6.4.

6.5 Prime to Partner Data Error Reporting Process

Data error reporting is different from simple syntax error reporting. Syntax error reporting only validates that all mandatory data elements are present and that the structure of the data provided matches the requirements of data layout or schema. Data error reporting is often performed as a separate process when the data is loaded into prime's database. Types of errors that could be found:

- a. Duplicate UII already in database.
- b. For types UID1 or UID2 the concatenation of the data elements that make up the UII supplied do not match.
- c. Date provided falls beyond acceptable date range limits.
- d. Others

Any of these errors will cause the file to be rejected:

- a. If the file was rejected the reason for rejection must be communicated back to the partner, so they can resend a corrected file. The email notification should be sent to the email address supplied in the partner's contact email address field in the data file.
- b. It is recommended that the above steps be performed within 1 business day of receiving the file.

6.6 Data Correction Process.

The inadvertent transfer of inaccurate data is always a problem; therefore, a means to correct inaccurate data is necessary. Our team is working with the DoD to develop a common approach to handling the correction of data. When a common approach is determined it will be included in a future release of this guideline.

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In the meantime it is the partner's responsibility to notify the buying organization of his prime as soon as possible of any anomalies in the transmitted data. The prime must then instruct the partner as to the correction process. For example, the prime may simple be able to manually correct the data in their database or the prime made delete the erroneous data from their database and ask the partner to send correct data.

Each prime must decide on their own what level of audit trail reporting is required to log these corrections. Keep in mind that the DoD may require documentation at some point to explain by whom, when, and why the correction or deletion were required.

6.7 Data Security.

The nature of the data exchanged to support the IUID effort does not require special security considerations. However, that does not eliminate the need for data security should one of the parties consider the data sensitive. Data security must be addressed between each prime and partner that may result in data security requirements being added to the data exchange process.

7. Disclaimer:

The DoD has not completed their development of all the IUID requirements. This guideline document only provides guidance for the requirements that have been released as of the date of this document. Future enhancements, updates, and/or corrections will be made to this guideline document as needed.

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8. Appendix:

8.1 Use Case 1 - Guidance Document Agreement

Use Case Element	Use Case Element Data
Use Case Title:	Guidance Document Agreement
Use Case User/Actor:	Partner and Prime
Use Case Fit Criterion:	Agreement is sought between prime and partner at the beginning of the IUID flow down process in order to establish proper reporting and data exchange.
Use Case Scenario:	<ul style="list-style-type: none">• Prime provides partner copy of this guidance document.• Partner reviews guidance document and then notifies prime of their readiness to reach an agreement.• Prime and partner discuss the options to determine the data format, data exchange method and any security requirements that may apply. Timing of the IUID data exchange to the prime must also be agreed upon. Understanding is reached for future data exchange.• Prime drafts agreement according to meeting minutes, business best practice and/or corporate methodology and submits to partner.• Partner concurs with agreement and guidance document becomes bound in IUID data exchange process.
Use Case Notes:	Example can be used to assist buyer and seller with mutual agreement for using the Aerospace Industry Guideline for IUID Data Exchange Between Partner and Prime.

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8.2 Use Case 2 - Simulated Data Exchange

Use Case Element	Use Case Element Data
Use Case Title:	Simulated Data Exchange
Use Case User/Actor:	Partner and Prime
Use Case Fit Criterion:	Partner receives purchase order from prime for items that need IUID with data reporting requirements. The data exchange format and method have already been agreed upon. Agreement indicates that the data exchange format is Excel and the method is Email. No special security on the data exchange is required. The data transfer must occur so that the prime received the data 2 business days before the shipment is to arrive at the ship-to point.
Use Case Scenario:	<ul style="list-style-type: none"> • Partner marks the items with the UII and ships. • Partner loads IUID data into a spreadsheet created from the AIA IUID Excel Template. • The spreadsheet containing the data is attached to an email and sent to the email address provided by the prime. The subject of the Email is UIIDATA. • The Email is sent so that it arrives at least 2 business days before the shipment arrives at the ship-to point identified by the prime in the purchase order. • The prime receives the email, extracts the attachment, and validates the syntax of the data. • If the file passed validation the prime Emails a confirmation to the partner notifying them that the file was “Accepted”. If the file fails validation the prime Emails the partner notifying them that the file was “Rejected”. The reason(s) for rejection must be provided in the Email. The partner must correct the data and resend the data. • After the prime accepts the file it still may need to be loaded into the prime IUID database. During that load process some other anomaly may occur because of the data causing the data to be rejected. The prime Emails the partner notifying them that specific data failed to load and the data was “Rejected”. The reason(s) for rejection must be provided in the Email. The partner must correct the data and resend the data. <p>Example of errors:</p> <ol style="list-style-type: none"> 1. UII sent was a duplicate to one already in the file. 2. Data sent was identified as an update to a UII entry already in the database but no such UII was found. <ul style="list-style-type: none"> • The prime successfully loads the IUID data into their IUID database. • Data exchange process completed. • If the partner determines that some of the data sent is inaccurate the partner must notify the prime’s buying organization as soon as possible. Some corrective action will need to be taken.
Use Case Notes:	The same scenario can be followed using the other data exchange formats and methods.

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8.3 Glossary

Most of the Glossary term definitions below are taken from the DoD UID Program Office website and may not exactly match the DFAR definitions. The exact DFAR definitions are available in the latest DFAR clause for part marking.

Item	An item is a single hardware article or a single unit formed by a grouping of subassemblies, components, or constituent parts.
IUID	A system of marking items delivered to the Department of Defense with unique item identifiers that have machine-readable data elements to distinguish an item from all other like and unlike items. Items are marked with a Data Matrix, the contents of which are encoded in the syntax of ISO/IEC 15434 and the semantics of ISO/IEC 15418 or the ATA CSDD. The Data Matrix contents may be either a Unique Item Identifier (Construct #1 or Construct #2) or a DOD recognized IUID equivalent.
Marking	The application of legible numbers, letters, labels, tags, symbols, or colors to ensure proper handling and identification during shipment and storage.
Partner	The business enterprise that is a supplier, subcontractor, or partner to a customer (prime).
Prime	Is the enterprise procuring an item from another enterprise (partner)
UID	Unique Identification; A <u>system</u> of establishing globally ubiquitous unique identifiers within the Department of Defense, which serves to distinguish a discrete entity or relationship from other like and unlike entities or relationships.
UUI	<p>A character string, number or sequence of bits assigned to a discrete entity or its associated attribute, which serves to uniquely distinguish it from other like and unlike entities. Each unique identifier has only one occurrence within its defined scope of use. The unique item identifier (UUI) is defined in two separate contexts:</p> <ol style="list-style-type: none">1. DoD UUI Data Set. A UUI is a set of data elements marked on an item that is globally unique and unambiguous. For items that are serialized within the enterprise identifier, the UUI data set includes the data elements of enterprise identifier and a unique serial number (Construct #1). For items that are serialized within the part, lot or batch number within the enterprise identifier, the UUI data set includes the data elements of enterprise identifier, the original part, lot or batch number, and the serial number (Construct #2).2. Use. The generic term, UUI, has evolved through usage to mean the concatenated UUI as a common data base key without regard to the data set construct being used. In this context, the term "UUI" may be used to designate UUI Constructs #1 and #2, or the DoD recognized IUID equivalents of Global Individual Asset Identifier (GIAI), Global Returnable Asset Identifier (GRAI), Vehicle Identification Number (VIN), or Electronic Serial Number ((ESN), for cell phones only).

8.4 External References:

- **Aerospace Industry Association** www.aia-aerospace.org
- **AIA Model Global Trading Partner Agreement**
www.aia-aerospace.org/library/ebusiness/ebusiness.cfm/GTPA_mode_2k4_tmp.doc

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- **OSD Defense Procurement and Acquisition Policy / UID**
<http://www.acq.osd.mil/dpap/pdi/uid/index.html> This site contains the DoD data formats and educational material, such as UID 101, to assist you in supplying data directly to the DoD.

8.5 Inventory of the Guideline Package Toolbox

The complete guideline package is available on the AIA Public Web Site (www.aia-aerospace.org/resource_center/ebusiness/iuid_rfid#IUID).

The complete package contains the following documents:

1. AIA Partner to Prime IUID Data Exchange Guideline.doc
2. AIA IUID Flat File Specification.xls (and AIA IUID Data Element Dictionary)
3. AIA IUID Excel Template.xsd
4. AIA IUID XML Schema.xdr
5. Samples:
 - i. Sample AIA IUID Flat File.txt
 - ii. Sample 1 of AIA IUID Excel Spreadsheet.xls
 - iii. Sample 2 of AIA IUID Excel Spreadsheet.xls (Shows subset of columns in different sort sequence.)
 - iv. Sample of AIA IUID XML File.xml