



Central Imagery Office

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Version 2.0

National Imagery Transmission Format Standard Profile for Imagery Archives Extensions (PIAE)

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1.0 Profile for Imagery Archives Image Support Extension

This support extension is designed to provide an area to place fields not currently carried in NITF but are contained in the Standard Profile for Imagery Archives. Most imagery related information is contained in the NITF main headers and Support Data Extensions (SDEs). The purpose of this extension is to minimize redundant fields while providing space for all information. This extension shall be present no more than once for each image in the NITF file. When present, this extension shall be contained within the image extended subheader data field of the image subheader or within an overflow DES if there is insufficient room to place the entire extension within the image extended subheader data field.

Table 1 Profile for Imagery Archives Image (PIAIMB)

Field	Name	Size	Value Range	Type
CETAG	Unique extension type ID	6	PIAIMB	R
CEL	Length of PIAIMB extension	5	00337	R
CEDATA	User-defined data	337	See Table 2 below	R

Table 2 PIAIMB Data and Ranges

Field	Name	Size	Fmt	Value Range	Type
CLOUDCVR	Cloud Cover	3	N	000-100, 999	O
SRP	Standard Radiometric Product	1	A/N	Y, N	O
SENSMODE	Sensor Mode	12	A/N	WHISKBROOM, PUSHBROOM, FRAMING, SPOT, SWATH, TBD	O
SENSNAME	Sensor Name	18	A/N	Valid Sensor Name	O
SOURCE	Source	255	A/N	Alphanumeric	O
COMGEN	Compression Generation	2	N	00-99	O
SUBQUAL	Subjective Quality	1	A/N	P-Poor, G - Good, E - Excellent, F- Fair	O
PIAMSNNUM	PIA Mission Number	7	A/N	EARS 1.1 page 4-28	O
CAMSPECS	Camera Specs	32	A/N	Alphanumeric	O
PROJID	Project ID Code	2	A/N	EARS Appendix 9	O
GENERATION	Generation	1	N	0-9	O
ESD	Exploitation Support Data	1	A/N	Y, N	O
OTHERCOND	Other Conditions	2	A/N	EARS 1.1 page 4-28	O

Table 3 Description of PIAIMB Data Fields

Field	Value Definitions and Constraints
CLOUDCVR	Indicates the percentage of the image that is obscured by cloud. A value of '999' indicates an unknown condition.
SRP	Indicates whether or not standard radiometric product data is available.
SENSMODE	Identifies the sensor mode used in capturing the image.
SENSNAME	Identifies the name of the sensor used in capturing the image.
SOURCE	Indicates where the image came from (e.g., magazine, trade show, etc.).
COMGEN	Counts the number of lossy compressions done by the archive.
SUBQUAL	Indicates a subjective rating of the quality of the image.
PIAMSNNUM	Indicates the mission number assigned to the reconnaissance mission.
CAMSPECS	Specifies the brand name of the camera used, and the focal length of the lens.
PROJID	Identifies collection platform project identifier code
GENERATION	Specifies the number of image generations of the product. The number (0) is reserved for the original product.
ESD	Indicates whether or not Exploitation Support Data is available and contained within the product data.
OTHERCOND	Indicates other conditions which affect the imagery over the target.

2.0 Profile for Imagery Archives Product Support Extension - Version C

The data found in the Product Support Extension addresses information regarding the products derived from source imagery. While there is product related data in the NITF main header and SDEs, many fields contained in the Standards Profile for Imagery Archives(SPIA) are absent. This extension aligns the SPIA and NITF for product information, and adds descriptive detail associated with products. This extension shall be present no more than once for each product. When present, this extension shall be contained within the extended header data field of the NITF file header or within an overflow DES if there is insufficient room to place the entire extension within the file's extended header data field.

Table 4 Profile for Imagery Archives Product (PIAPRC)

Field	Name	Size	Value Range	Type
CETAG	Unique extension type ID	6	PIAPRC	R
CEL	Length of PIAPRC extension	5	00201 - 63759	R
CEDATA	User-defined data	201-63759	See Table 5 below	R

Table 5 PIAPRC Data and Ranges

Field	Name	Size	Fmt	Value Range	Type
ACCESSID	Access ID	64	A/N	Alphanumeric	O
FMCONTROL	FM Control Number	32	A/N	Alphanumeric	O
SUBDET	Subjective Detail	1	A/N	P- Poor, F - Fair, G - Good, E - Excellent	O
PRODCODE	Product Code	2	A/N	EARS 1.1 Appendix 6	O
PRODUCERSE	Producer Subelement	6	A/N	Alphanumeric	O
PRODIDNO	Product ID Number	20	A/N	Alphanumeric	O
PRODSNME	Product Short Name	10	A/N	Alphanumeric	R
PRODUCERCD	Producer Code	2	A/N	Alphanumeric	R
PRODCRTIME	Product Create Time	14	A/N	DDHHMMSSZMONYY	O
MAPID	Map ID	40	A/N	Alphanumeric	O
SECTITLEREP	SECTITLE Repititions	2	N	00-99	R
SECTITLE1	Section Title	40	A/N	Alphanumeric	C
PPNUM1	Page/Part Number	5	A/N	Alphanumeric	C
TPP1	Total Pages/Parts	3	N	001-999	C
.....					
SECTITLEnn	Section Title	40	A/N	Alphanumeric	C
PPNUMnn	Page/Part Number	5	A/N	Alphanumeric	C
TPPnn	Total Pages/Parts	3	N	001-999	C
REQORGREP	REQORG Repetitions	2	N	00-99	R
REQORG1	Requesting Organization	64	A/N	Alphanumeric	C
.....					

REQORGnn	Requesting Organization	64	A/N	Alphanumeric	C
KEYWORDREP	KEYWORD Repetitions	2	N	00-99	R
KEYWORD1	Keyword String 1	255	A/N	Alphanumeric	C
.....					
KEYWORDnn	Keyword String nn	255	A/N	Alphanumeric	C
ASSRPTREP	ASSRPT Repetitions	2	N	00-99	R
ASSRPT1	Associated Report 1	20	A/N	Alphanumeric	C
.....					
ASSRPTnn	Associated Report nn	20	A/N	Alphanumeric	C
ATEXTREP	ATEXT Repetitions	2	N	00-99	R
ATEXT1	Associated Text 1	255	A/N	Alphanumeric	C
.....					
ATEXTnn	Associated Text nn	255	A/N	Alphanumeric	C

Table 6 Description of PIAPRC Data Fields

Field	Value Definitions and Constraints
ACCESSID	Contains an archive unique identifier. This could be the product filename, a record identifier, a reference number, the product id, or any other means to access the product from the archive.
FM CONTROL	Identifies foreign material associated with the product.
SUBDET	Indicates a subjective rating of useful detail available in the product.
PRODCODE	Identifies the category of product data stored in the archive.
PRODUCERSE	Identifies the element within the producing organization that created the product.
PRODIDNO	Identifies a product stored in the archive with a producer assigned number.
PRODSNME	Identifies the abbreviated name of a product stored in the archive.
PRODUCERCD	Identifies the organization responsible for creating or modifying the product.
PRODCRTIME	Identifies the date or the date and time that the product was created or last modified.
MAPID	Identifies a map associated with the product.
SECTITLEREP	Identifies the number of times the SECTITLE, PPNUM, and TPP fields repeat per extension instance.
SECTITLE1	Identifies the first user defined title of a section of a multi-section product.
PPNUM1	Identifies the first page/part number of the section identified in SECTITLE1.
TPP1	Identifies the total number of pages or parts associated with SECTITLE1 and PPNUM1.
SECTITLEnn	Identifies the nnth user defined title of a section of a multi-section product.
PPNUMnn	Identifies the nnth page/part number of the section identified in SECTITLEnn.
TPPnn	Identifies the tnnth number of pages or parts associated with SECTITLEnn and PPNUMnn.

REQORGREP	Identifies the number of times the REQORG field repeats per extension instance.
REQORG1	Identifies the first organization requesting that an image be placed in an archive. This is the first field represented based on the value of REQORGREP.
REQORGnn	Identifies the nnth organization requesting that an image be placed in an archive. The number of REQORGs between the previous field and this is represented in the REQORGREP field.
KEYWORDREP	Identifies the number of times the KEYWORD field repeats per extension instance.
KEYWORD1	Provides the first block of a freeform text description of the product.
KEYWORDnn	Provides the nnth block of a freeform text description of the product. The number of KEYWORDSs between the previous field and this is represented in the KEYWORDREP field.
ASSRPTREP	Identifies the number of times the ASSRPTREP field repeats per extension instance.
ASSRPT1	First field for the entry of another known report associated with the product.
ASSRPTnn	Provides the nnth field of other known reports associated with the product. The number of ASSRPTs between the previous field and this is represented in the ASSRPTREP field.
ATEXTREP	Identifies the number of times the ATEXTREP field repeats per extension instance.
ATEXT1	Provides the first text block further describing the imagery product.
ATEXTnn	Provides the nnth text block further describing the imagery product. The number of ATEXTs between the previous field and this is represented in the ATEXTREP field.

3.0 Profile for Imagery Archives Target Support Extension

The Target Extension is designed to accommodate more than just the essential target data. It contains descriptive data about the targets. This extension shall be present once for each target identified in the image. There may be up to 250 of these extensions for each data type in an NITF file. When present, these extension(s) shall be contained within the appropriate data type (image, symbol, label or text) extended subheader data field of the data type subheader or within an overflow DES if there is insufficient room to place the entire extension(s) within the data type extended subheader data field.

Table 7 Profile for Imagery Archives Target (PIATGA)

Field	Name	Size	Value Range	Type
CETAG	Unique extension type ID	6	PIATGA	R
CEEL	Length of PIATGA extension	5	00096	R
CEDATA	User-defined data	96	See Table 8 below	R

Table 8 PIATGA Data and Ranges

Field	Name	Size	Fmt	Value Range	Type
TGTUTM	Target UTM	15	A/N	XXXNNnnnnnnnnnn	O
PIATGAID	Target Identification	15	A/N	6 character Area Target ID 10 Character BE, or 15 character BE + suffix	O
PIACTRY	Country Code	2	A/N	FIPS 10-3	O
PIACAT	Category Code	5	N	DIAM 65-3-1	O
TGTGEO	Target Geographic Coordinates	15	A/N	ddmmssXdddmmssY	O
DATUM	Target Coordinate Datum	3	A/N	In accordance with Appendix B, Attachment 10, XI-DBDD-08 93 Aug 93.	O
TGTNAME	Target Name	38	A/N	Alphaumeric target names	O
PERCOVER	Percentage of Coverage	3	N	000-100	O

Table 9 Description of PIATGA Data Fields

Field	Value Definitions and Constraints
TGTUTM	Identifies the Universal Transverse Mercator (UTM) grid coordinates that equate to the geographic coordinates of the target element.
PIATGAID	Identifies a point or area target (DSA, LOC or BAS)
PIACTRY	Identifies the country in which the geographic coordinates of the target element reside.
PIACAT	Classifies a target element by its product or the type of activity in which it can engage.
TGTGEO	Specifies a point target's geographic location in latitude and longitude.
DATUM	Identifies the datum of the map used to derive the target coordinates (UTM or GEO).
TGTNAME	Identifies the official name of the target element based on the MIIDS/IDB name.
PERCOVER	Percentage of the target covered by the image.

4.0 Profile for Imagery Archives Person Identification Extension

The Person Extension is designed to identify information contained in the Imagery Archive that is directly related to a person(s) contained in a data type (image, symbol, label, text). This extension shall be present for each person identified in a data type. There may be up to 500 occurrences of this extension for each data type in an NITF file. When present, these extension(s) shall be contained within the appropriate data type (image, symbol, label or text) extended subheader data field of the data type subheader or within an overflow DES if there is insufficient room to place the entire extension(s) within the data type extended subheader data field.

Table 10 Profile for Imagery Archives Person (PIAPEA)

Field	Name	Size	Value Range	Type
CETAG	Unique extension type ID	6	PIAPEA	R
CEL	Length of PIAPEA extension	5	00092	R
CEEDATA	User-defined data	92	See Table 11 below	R

Table 11 PIAPEA Data and Ranges

Field	Name	Size	Fmt	Value Range	Type
LASTNME	Last Name	28	A/N	Alphanumeric	O
FIRSTNME	First Name	28	A/N	Alphanumeric	O
MIDNME	Middle Name	28	A/N	Alphanumeric	O
DOB	Birth Date	6	A/N	MMDDYY	O
ASSOCTRY	Associated Country	2	A/N	Per FIPS 10-3	O

Table 12 Description of PIAPEA Data Fields

Field	Value Definitions and Constraints
LASTNME	Identifies the surname of individual captured in an image.
FIRSTNME	Identifies the first name of individual captured in an image.
MIDNME	Identifies the middle name of individual captured in an image.
DOB	Identifies the birth date of the individual captured in the image.
ASSOCTRY	Identifies the country the person captured in the image is/are associated with.

5.0 Profile for Imagery Archives Event Extension

The Event Extension is designed to provide an area for specific information about an event or events that are identified on an image. This extension shall be present for each event identified in an image. There may be up to 100 of these extensions present for each data type in an NITF file. When present, these extension(s) shall be contained within the appropriate data type (image, symbol, label or text) extended subheader data field of the data type subheader or within an overflow DES if there is insufficient room to place the entire extension(s) within the data type extended subheader data field.

Table 13 Profile for Imagery Archives Event (PIAEVA)

Field	Name	Size	Value Range	Type
CETAG	Unique extension type ID	6	PIAEVA	R
CEL	Length of PIAEVA extension	5	00046	R
CEDATA	User-defined data	46	See Table 14 below	R

Table 14 PIAEVA Data and Ranges

Field	Name	Size	Fmt	Value Range	Type
EVENTNAME	Event Name	38	A/N	Alphanumeric	O
EVENTTYPE	Event Type	8	A/N	POL, DIS, COMMO, MILEX, ECON, NUC, SPACE, MILMOV, CIVIL	O

Table 15 Description of PIAEVA Data Fields

Field	Value Definitions and Constraints
EVENTNAME	The recognized name of the event.
EVENTTYPE	Indicates the generic type of event associated with the product.

6.0 Profile for Imagery Archives Equipment Extension

The Equipment Extension was created to provide space in the NITF file for data contained in the archive that is specifically related to equipment that is contained in an image. This extension shall be present for each instance of equipment identified in an image. There may be up to 250 occurrences of this extension for each data type in an NITF file. When present, these extension(s) shall be contained within the appropriate data type (image, symbol, label or text) extended subheader data field of the data type subheader or within an overflow DES if there is insufficient room to place the entire extension(s) within the data type extended subheader data field.

Table 16 Profile for Imagery Archives Equipment (PIAEQA)

Field	Name	Size	Value Range	Type
CETAG	Unique extension type ID	6	PIAEQA	R
CEL	Length of PIAEQA	5	00130	R
CEDATA	User-defined data	130	See Table 17 below	R

Table 17 PIAEQA Data and Ranges

Field	Name	Size	Fmt	Value Range	Type
EQPCODE	Equipment Code	7	A/N	NGIC Foreign Equipment Guide	O
EQPNOMEN	Equipment Nomenclature	45	A/N	NGIC Foreign Equipment Guide	O
EQPMAN	Equipment Manufacturer	64	A/N	Alphanumeric	O
OBTYPE	OB Type	1	A/N	MIIDS/IDB	O
ORDBAT	Type Order of Battle	3	A/N	EARS 1.1	O
CTRYPROD	Country Produced	2	A/N	FIPS 10-3	O
CTRYDSN	Country Code Designed	2	A/N	FIPS 10-3	O
OBJVIEW	Object View	6	A/N	Right, Left, Top, Bottom, Front, Rear	O

Table 18 Description of PIAEQA Data Fields

Field	Value Definitions and Constraints
EQPCODE	A unique designated equipment code identifying a category of equipment.
EQPNOMEN	Nomenclature used to identify a piece of equipment.
EQPMAN	Identifies the manufacturer of a piece of equipment.
OBTYPE	Indicates the type of order of battle according to MIIDS/IDB
ORDBAT	Indicates the type of order of battle according to EARS 1.1
CTRYPROD	Identifies the country that produced the object
CTRYDSN	Identifies the country that designed the original object
OBJVIEW	View of the object.

Appendix A SPIA Data Element Mapping to NITFS

The following table maps all SPIA data elements to their proper location in an NITFS file when transmitting imagery data and associated metadata.

SPIA Element	NITF Element	NITF Location
ABPP (N2)	ABPP	IMAGE SUBHEADER
ACCESSID (A/N64)	ACCESSID	PIAPRC
ANGLETONORTH (N3)	ANGLE_TO_NORTH	USE26A
ASSOCTRY (A2)	ASSOCTRY	PIAPEA
ASSRPT (A/N20)	ASSRPT	PIAPRC
ATEXT (A/N255)	ATEXT	PIAPRC
AUTHORITY (A/N20)	FSCAUT	HEADER
CAMSPECS (A/N 32)	CAMSPECS	PIAIMB
CAT (N5)	PIACAT	PIATGA
CLASS (A1)	FSCLAS	HEADER
CLEVEL (N2)	CLEVEL	HEADER
CLOUDCVR (N3)	CLOUDCVR	PIAIMB
CODEWORDS (A/N40)	FSCODE	HEADER
COMGEN (N2)	COMGEN	PIAIMB
CONTROL (A/N40)	FSCTLH	HEADER
CTRYCD (A2)	PIACTRY	PIATGA
CTRYDSN (A2)	CTRYDSN	PIAEQA
CTRYPROD (A2)	CTRYPROD	PIAEQA
DATUM (A3)	DATUM	PIATGA
DOB(A/N6)	DOB	PIAPEA
DWNG (A/N6)	FSDDVT	HEADER
DWNGEVT (A/N40)	FSDEVT	HEADER
EQPCODE (A/N7)	EQPCODE	PIAEQA
EQPMAN (A64)	EQPMAN	PIAEQA
EQPNOMEN (A/N45)	EQPNOMEN	PIAEQA
ESD (A1)	ESD	PIAIMB
EVENTNAME (A/N38)	EVENTNAME	PIAEVA

SPIA Element		NITF Element	NITF Location
EVENTTYPE (A8)		EVENTTYPE	PIAEVA
FIRSTNME (A/N 28)		FIRSTNME	PIAPEA
FMCONTROL(A/N32)		FMCONTROL	PIAPRC
GENERATION(N1)		GENERATION	PIAIMB
ICAT(A8)		ICAT	IMAGE SUBHEADER
ICORDS (A1)		ICORDS	IMAGE SUBHEADER
IGEOL (A/N60)		IGEOL	IMAGE SUBHEADER
IMAGEID (A/N40)		ITITLE	IMAGE SUBHEADER
IREP (A8)		IREP	IMAGE SUBHEADER
KEYWORD (A/N 255)		KEYWORD	PIAPRC
LASTNME (A/N28)		LASTNME	PIAPEA
MAPID (A/N40)		MAPID	PIAPRC
MEANGSD (N5)		MEAN_GSD	USE26A
MIDNME (A/N28)		MIDNME	PIAPEA
MISSION (A/N7)		PIAMSNUM	PIAIMB
NBANDS (N1)		NBANDS	IMAGE SUBHEADER
NCOLS (N8)		NCOLS	IMAGE SUBHEADER
NIIRS (N3)		NIIRS	USE26A
NROWS (N8)		NROWS	IMAGE SUBHEADER
OBJVIEW (A6)		OBJVIEW	PIAEQA
OBLANGLE (N5)		OBL_ANG	USE26A
OBTYPE (A1)		OBTYPE	PIAEQA
ORDBAT(A/N3)		ORDBAT	PIAEQA
OTHERCOND (A2)		OTHERCOND	PIAIMB
PERCOVER (N3)		PERCOVER	PIATGA
PPNUM (A/N4)		PPNUM	PIAPRC
PRODCODE (A2)		PRODCODE	PIAPRC
PRODCRTIME (A/N14)		PRODCRTIME	PIAPRC
PRODFMT(A9)		FHDR	HEADER

SPIA Element		NITF Element	NITF Location
PRODFSIZE (N12)		FL	HEADER
PRODIDNO (A/N20)		PRODIDNO	PIAPRC
PRODSNME (A/N10)		PRODSNME	PIAPRC
PRODTITLE (A/N50)		FTITLE	HEADER
PRODUCERCD (A 2)		PRODUCERCD	PIAPRC
PRODUCERSE (A/N 6)		PRODUCERSE	PIAPRC
PROJID (A2)		PROJID	PIAIMB
RELEASE (A/N40)		FSREL	HEADER
REQORG (A/N64)		REQORG	PIAPRC
RPC (A1)		SUCCESS	RPC00A
SECTITLE (A/N40)		SECTITLE	PIAPRC
SENSMODE (A/N12)		SENSMODE	PIAIMB
SENSNAME (A/N18)		SENSNAME	PIAIMB
SOURCE (A/N255)		SOURCE	PIAIMB
SRP (A1)		SRP	PIAIMB
STEREOID (A/N40)		ST_ID	STREOA
SUBDET (A1)		SUBDET	PIAPRC
SUBQUAL (A1)		SUBQUAL	PIAIMB
SUNAZ(N3)		SUN_AZ	MPD26A
SUNELEV (N3)		SUN_EL	MPD26A
TGTGEO (A/N15)		TGTGEO	PIATGA
TGTID (A/N15)		PIATGAID	PIATGA
TGTNAME (A/N38)		TGTNAME	PIATGA
TGTUTM (A/N16)		TGTUTM	PIATGA
TIMECOLL (A/N14)		IDATIM	IMAGE SUBHEADER
TPP (N3)		TPP	PIAPRC

APPENDIX B: Extension Version Transition Plan

Purpose:

The purpose of this appendix is to define a plan to facilitate migration from legacy to target baseline versions of PIAE tags. It is intended to provide general developmental guidance to the imagery community in an effort to minimize the interoperability problems that may arise from version modifications to the PIAE standard. It is provided as planning guidance to eliminate the need for program office maintenance of software elements providing support to legacy PIAE tags beyond the specified transition period.

Scope and Effectivity:

The plan covers those PIAE versions in existence after the approval of the standard. Dated versions of PIAE tags can be identified by the last letter of the CETAG (e.g., “PIAPRC” represents version “C” of the Product tag while “PIAIMB” represents version “B” of the Image tag). The plan defines the processing requirements for legacy and target tag versions. Legacy tag versions are those that exist prior to a modification to the approved PIAE standard. Target tag versions are those resulting from approved modifications to an existing version. A target tag is a new tag version of an old tag for which a new baseline has been approved and has become the new PIAE standard. For example, if an RFC to the PIAE standard is approved (by the ISMC) that will change the PIATGA tag to a “B” version, the PIATGA tag will then be considered a “legacy” tag and the PIATGB tag will be considered the “target” tag for the transition period. After the transition period, the PIATGB tag would simply be recognized as the “baseline” tag.

The transition plan applies to the following types of modifications to PIAE tags:

- Tag placement
- Tag content (i.e., name, length, and data).

The transition plan applies to developers of Read Only (RO), Write Only (WO), and Read and Write (RW) system segments that process imagery or imagery related products. It does not apply to developers of Legacy systems who’s systems are planned for replacement within the specified transition period. Legacy systems are exempt from the requirements to support PIAE tag version revisions. The transition plan is effective for the life of the PIAE standard and all approved version revisions to it.

Placement and Content of Controlled Tag Extensions:

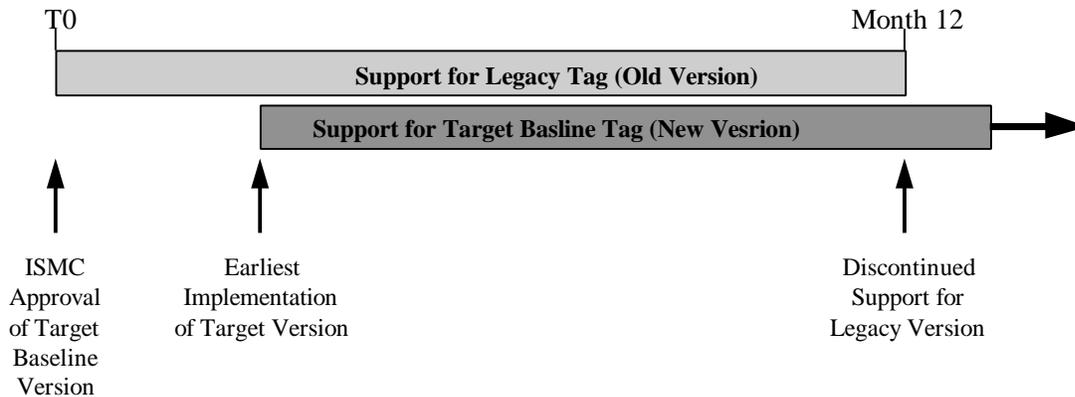
The placement and content of the PIAE tags within NITF files shall be as specified in the PIAE tag format definition. MIL-STD-2500A allows controlled tag extensions to be placed within the following major NITF file components:

- Field XHD of the NITF File Header
- Field IXSHD of the NITF Image Subheader
- Field SXSHD of the NITF Symbol Subheader
- Field LXSHD of the NITF Label Subheader
- Field TXSHD of the NITF Text Subheader

- The Data Extension Segment (DES) when overflow conditional exist.

Transition Concept:

The goal of the transition plan is to gradually eliminate the presence of old PIAE tags once new tags have been approved by the standards approval process. To accomplish this goal, product WO, RO, and WR segments are directed to adopt the newest versions of all PIAE tags at the earliest time possible and to continue support for legacy tags through the a 12 month transition period. This transition period commences with ISMC approval of tag version modifications. The following graphic provides conceptual illustration.



Read Only Segments:

A RO segment is a system element that only receives and reads NITFS 2.0 input files. A RO segment will not create NITFS 2.0 output. RO segments shall look for, find, and read controlled tag extensions where specified by the PIAE format definition and generically authorized by MIL-STD-2500A. During the specified 12 month transition period, RO segments shall incorporate the capability to read all target tag versions while maintaining read capability for all legacy tag versions. Support to legacy tag versions shall cease at the end of the transition period.

Write Only Segments:

A WO segment is a system element that only creates NITFS 2.0 files. A WO segment will not receive and read NITFS 2.0 input. WO segments shall generate, pack, and transmit controlled tag extensions where defined by the PIAE format definition. During the specified 12 month transition period, WO segments shall incorporate the capability to write all target tag versions while maintaining write capability for all legacy tag versions. Support to legacy tag versions shall cease at the end of the transition period.

Read and Write Segments:

A RW segment is a system element that receives and reads input NITFS 2.0 files and creates NITF 2.0 output files. RW segments shall perform the combined functions of RO and WO segments as specified above. In addition, if reading of the legacy version of a tag does not provide sufficient input to fill required fields to write the target versions, ASCII blanks shall be used during the transition period to fill the fields.

RW segments that store (on-line, near-line, off-line) imagery or imagery related products, shall ensure that stored products are populated with both, legacy and target, versions of the tag under transition. Product population of both tag versions shall occur once, for every product stored within the segment, for the transition period.

Sending Systems:

Sending systems are those systems that transmit (output) imagery or imagery related NITFS products to user or archival systems. The group includes those systems that generate or format products for transmission. When employed, the PIAE tags are packaged within the NITFS file format. Sending systems employing the tags are directed to adopt the newest version of all tags employed while simultaneously discontinuing use of older versions.

Adoption of new extension versions is to be done at the earliest time permissible within interoperability and developmental budget and timeline constraints. A concession to the adoption requirement is made when interfacing receiver systems are unable to process new tag versions. In this case, sending systems are directed to package the new and the immediate predecessor version of the new tag within transmitted products.

Receiving Systems:

Receiving systems are those systems that accept (input) imagery or imagery related products from generating or archival systems. The group includes those systems that input NITFS formatted products for viewing, manipulation, or archival purposes. When employed, the PIAE tags, within products, are identified and read into the system for processing or storage. Receiving systems employing the tags are directed to retain the ability to concurrently identify, read, and process the immediate predecessor version of a new tag and the new tag itself.

Adoption of the ability to identify, read, and process version revisions of PIAE tags is to be at the earliest time permissible within interoperability and developmental budget and timeline constraints.

Final System Configuration:

No system is required to process any more than the current PIAE tag version and its immediate predecessor version. In an effort to promote community-wide interoperability, development system program offices are urged to move toward the newest PIAE tag versions as soon as possible.

Modifications to the PIAE standard will not be approved without community cost and schedule impact assessments. Proposed modifications to the standard that act to impose undue implementation difficulties upon the development community will be considered for deferral.