



ITL: Type 98 Information Assurance Record



Disadvantages of ITL files without IA

- ▶ Digital Signatures have no standard location, hindering interoperability
- ▶ Similar standards have assurance blocks (CBEFF)
- ▶ No integrity check for individual logical records
- ▶ ITL files can contain many distinct logical records that are unprotected
- ▶ No integrity check for aggregation of logical records (within a given ITL file, are the logical records received the same as what was sent?)



High-Level overview of Type 98 Record



Mnemonic	Cond code*	Field number	Character Type	Field name	Occur count	
					Min	Max
	M	98.001		Record Header	1	1
IDC	M	98.002	N	Image Designation Character	1	1
RSV		98.003		Reserved For Future Definition		
SRC	M	98.004	AN	Source Agency/Origin	1	1
DCD	M	98.005	N	IA Data Creation Date	1	1
DFO	M	98.006	AN	IADB Format Owner	1	1
DFT	M	98.007	AN	IADB Format Type	1	1
RSV		98.008-98.199		Reserved For Future Definition		
UDF		98.200-98.900		User-Defined Fields		
DATA		98.999	B	IA Data Block	0	1



Field 98.001-003

- ▶ 98.001 : Record Header
 - Content is dependant on encoding, typically length of entire record or record type-number

- ▶ 98.002 : Image Designation Character
 - Mandatory for completion of CNT (file content) Field in Type 1 Record
 - Numbering should start at 500

- ▶ 98.003
 - Reserved For Future Use

Field 98.004: Source Agency/Origin



- ▶ Mandatory field
- ▶ Identifies the Agency/Entity that wrote the record into the ITL instance.

Field 98.005: Data Creation Date



- ▶ Mandatory field

- ▶ Contain the date and time that IA data was created
 - **YYYY** characters represent the year,
 - **MM** characters represent tens and units values of the month,
 - **DD** characters shall be the tens and units values of the day in the month,
 - **hh** characters shall be the tens and units values of the hour of the day in 24-hour format,
 - **mm** characters shall be the tens and units values of the minute within the hour,
 - **ss** characters shall be the tens and units values of the second of the minute.

Field 98.006: IADB Format Owner



- ▶ Mandatory field
- ▶ Used to denote the vendor, standards body, working group, or industry consortium that has defined the format of the information assurance data (in the IADB).
- ▶ IADB Format Owner and Format Type, should uniquely identify the specific format of the IADB content.
- ▶ IADB format definition may be published (public) or unpublished (non-public).

Field 98.007: IADB Format Type



- ▶ Mandatory field
- ▶ Used to identify the value assigned by the format owner to represent the specific IADB Format (as specified by the format owner).
- ▶ May be a nonstandard, unpublished data format
- ▶ May be a data format that has been standardized by an industry group, consortium or standards body.



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Field 98.200-900: User-Defined Fields



- ▶ Size and content shall be defined by the user and be in accordance with the receiving agency.
- ▶ If present, contains ASCII textual information.

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Field 98.999: IA Data Block

- ▶ Populated with Binary Data (e.g. Digital Signature, HMAC, etc...)
- ▶ Actual contents MAY be defined by the Data Format Owner



Errata

- ▶ The Binary 98.999 Field is NOT mandatory
- ▶ There can be multiple Type 98 records in an ITL file to support multiple domains
- ▶ Type 98 protections apply only to logical records that are **NOT Type 98 records**
- ▶ Image Designation Character should begin counting at 500



QUESTIONS?