Reverse Logistics Association Standards Committee

Data Identifier 12N - Field Identifier Usage Examples

Every usage begins with the required header: $[)>^R{}_S06^G{}_S12N$ and ends with the required Trailer sequence: $^R{}_S{}^EO_T$

Each Data Record (except for the last one) is terminated with the unprintable character ASCII 31, known as the "unit separator" character. In the examples below, it is represented as "$^U{}_S$".

Field Identifier (FI) Codes are **bolded** for emphasis in these examples only – they are not bolded in actual use.

Every 12N usage should include the company name, Field Identifier B000.

Any line breaks in the examples were created by Word because the complete character string cannot fit on one line of this document. No line breaks should appear in the data string unless as a part of the User Data.

Examples demonstrate the following capabilities of 12N (SQRL) Codes:

1. multiple Data Records using different Field Identifiers
2. multiple User Data elements concatenated together, unencrypted
3. Flag limits Visibility to Professional readers, unencrypted
4. Flags set Visibility to Consumers and the Units used for time
5. Flag limits Visibility to Professional readers, uses built-in Table of Return Reasons
6. Environment set to use U.S. measurements
7. Private key encryption, with no information about the private key
8. Public key encryption, Environment sets language to German, currency to Euros

EXAMPLE 1: **mulitple Data Records using different Field Identifiers**

Below is an example of the above data fields:

$[)>^R{}_S06^G{}_S12N$**B000**Campbell Soup$^U{}_S$**M065**goo.gl/TxvQ2a$^U{}_S$**I061**goo.gl/DBtDzX
$^U{}_S$**I04D**11/1/17$^R{}_S{}^EO_T$

Following the DI, the data becomes a label with four fields:

1) B000   Company Name = "Campbell Soup"

2) M065   Manufacturers website = "goo.gl/TxvQ2a" (short code for actual Campbell site)

3) I061   Ingredients = "goo.gl/DBtDzX"   (short code to Infomission.com/testpage)

4) I04D   Exp. Date = "11/1/17"

EXAMPLE 2 **Multiple User Data elements concatenated together**

[)>ᴿₛ06ᴳₛ12NB000Acme CorpᵁₛS042USᵁₛS043US+DE+MX+CNᴿₛᴱOₜ

1) B000   Company Name = "Acme Corp"

2) S042   Country of Origin = "US" for United States

2) S043   Subassembly Country of Origin = "US" for United States, "DE" for Germany, "MX" for Mexico, and "CN" for China. Note that the use of the concatenation character "+" makes it possible to include multiple pieces of User Data without the need to repeat the FI for each one. Country codes are from the ISO 3166-1 alpha-2 standard.

EXAMPLE 3 **Flag limits visibility to professionals only, unencrypted**

[)>ᴿₛ06ᴳₛ12NB000Widget CorpᵁₛB001Advanced WidgetᵁₛI03Ap--ᶠₛ20140621ctmmrcᴿₛᴱOₜ

1) B000   Company Name "Widget Corp"

2) B001   Product Name "Advanced Widget"

3) I03A   Refurbished Product Number "20140621ctmmrc". The "p" after the FI is a Flag that means the information is unencrypted, but available only to professional users. If any of the Flags are used, values must be present for all three. The first "-" indicates that no Units Flag needs to be set, and the second "-" indicates that no table is needed.

EXAMPLE 4 **Flags set Visibility to Consumers and the Units used for time**

[)>ᴿₛ06ᴳₛ12NB000Acme CorpᵁₛW00BcA-ᶠₛ12ᴿₛᴱOₜ

1) B000   Company Name = "Acme Corp"

2) W00B   Length of Warranty = "12". The "c" Flag indicates that the information is for Consumers and the "A" means that the information is in months. If any of the Flags are used, values must be present for all three. The "-" indicates that no table is needed. The Consumer visibility is the default value, so Visibility typically does not need to be set to Consumer, unless earlier it was set to some other level.

EXAMPLE 5 Flag limits Visibility to Professional readers, uses built-in Table of Return Reasons

`[)>`${}^R_S$`06`${}^G_S$`12NB000Acme Corp`${}^U_S$`M073p--`${}^F_S$`U23`${}^R_S$^{E}`O`${}_T$

1)	`B000`	Company Name "Acme Corp"
2)	`M073`	Reason for return, "p" Flag means information is for professionals and not encrypted. "U23" means customer was unable to get product to work, using the built in Table of Return Reasons. If any of the Flags are used, values must be present for all three. The first "-" indicates that no Units Flag needs to be set, and the second "-" indicates that no table is needed.

EXAMPLE 6 Environment used to set units to U.S.

`[)>`${}^R_S$`06`${}^G_S$`12NB000Bluth's Original Frozen Banana`${}^U_S$`ZENVenUSDu-`
${}^U_S$`U00918005553455`${}^U_S$`S039-20`${}^R_S$^{E}`O`${}_T$

1)	`B000`	Company Name = "Bluth's Original Frozen Banana"
2)	`ZENV`	Environment FI, language is set to "en" for English (using ISO 639-1:2002), currency is the US dollar "USD" (using the ISO 4217 3 digit code), measurement system is US Standard "u", and visibility and encryption remain unchanged "–".
3)	`U009`	Phone product support = "18005553455" is the phone number
4)	`S039`	Ideal storage temperature range has a value of "–20", meaning that the temperature should not be higher than -20 degrees Fahrenheit. Because of the previous Environment FI (`ZENV`), temperature is given in degrees Fahrenheit (US measurement system), instead of the default metric system. For the temperature range, if two values are given, they are interpreted as upper and lower limits; a single value is interpreted as an upper limit.

EXAMPLE 7 Private key encryption, with no information about the private key

`[)>`${}^R_S$`06`${}^G_S$`12NB000Acme Corp`${}^U_S$`B001Anvil`${}^U_S$`I03AP--`${}^F_S$`54ADBF13442EE7465EB271EAB5E3326F`${}^R_S$^{E}`O`${}_T$

1)	`B000`	Company Name "Acme Corp"
2)	`B001`	Product Name "Anvil"
3)	`I03A`	Refurbished Product Number - the "P" after the FI means the information is available only to professional users, and encrypted using private key encryption. The refurbished serial number is "20140621ctmmrc". The example was encrypted using the Blowfish algorithm and a key of "11Ncodes", which resulted in the value "54ADBF13442EE7465EB271EAB5E3326F".

Because no information is given about the private key, the creator assumes that the reader will automatically know which private key to use.

If any of the Flags are used, values must be present for all three. The first "-" indicates that no Units Flag needs to be set, and the second "-" indicates that no table is needed.

EXAMPLE 8 **Public key encryption, Environment sets language to German, currency to Euros**

[)>^R_s06^G_s12NB000Spacely Weltraum Kettenraeder GmbH^U_sZENC4nwtl2ngjtl30a1z^U_sZENVdeEURm-^U_sI03AE^F_szjdf37jcih145nm^U_sI03BE^F_setpo94kv84kg94as^R_sE$_T$

1) B000   Company Name = "Spacely Weltraum Kettenraeder GmbH"

2) ZENC   Encryption FI, which means that the tag uses asymmetric (public key) encryption. "4nwtl2ngjtl30a1z" is the Certificate ID of the X.509 certificate containing the encryption key.

3) ZENV   Environment FI, language is set to "de" for German (using ISO 639-1:2002), currency is the Euro "EUR" (using the ISO 4217 3 digit code), measurement system is metric "m", and visibility and encryption remain unchanged "-".

4) I03A   The refurbished serial number is "20160819lbr-R", and it is stored using asymmetric (public key) Enterprise encryption, as indicated by the "E", using the key indicated earlier in the tag, so as encrypted, the data appears as "zjdf37jcih145nm"

5) I03B   The original serial number is "20140621ctmmrc", and it is stored using asymmetric (public key) Enterprise encryption, as indicated by the "E", using the key indicated earlier in the tag, so the data appears as "etpo94kv84kg94as".