



ICN Generator

**S1000D
Illustration Control Number (ICN)**

Illustration Control Number *Generator?*

S1000D User Forum

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ICN Generator

- “illustration” (S1000D term)
 - = “graphic” (DEF(AUST)5629B term)
 - = drawing, photo, chart, etc
- What is an Illustration Control Number (ICN)?
 - ◆ => It’s simply a unique identifier assigned to an illustration.
 - “icn” - generic format
 - “ICN” - S1000D-compliant format



ICN Generator

What is an ICN Generator?

=> simply, a clever bit of software that generates long numbers, no two the same.

The screenshot shows a window titled "ICN Generator" with a blue title bar. The main content area displays the generated ICN in red text: **ICN-J2-A-592-80-00-D-Z4833-00001-D-03-1**. Below this, there is a checkbox for "DAPA Number" which is unchecked. A series of input fields and dropdown menus are arranged vertically, each with a label to its right:

- Model Identification Code: J2
- System Difference Code: A
- Standard Numbering System (SNS): 592-80-00
- Responsible Partner Company Code: D
- Originator Code (NCAGE Code): Z4833
- Sequence Number: 00001
- Variant Code: D
- Issue No.: 03
- Security Classification: RESTRICTED

To the right of these fields, there is a blue text block: "The MI identifies the Project to which the data applies and is a point of reference for all applicability information. The decision on how to use the MI is a project decision and is documented in the project business rules." At the bottom of the window, there is a blue status bar that reads "The Paste Buffer contains the ICN, use Ctrl + V to Paste" and two buttons: "Minimise" and "Exit".



ICN Generator

- Catalyst for an ICN Generator?
 - ◆ A local, eternal problem
 - ☞ identifying & controlling illustrations in DAPA & DGTA Laverton
 - ◆ An opportunity
 - ☞ to introduce one small part of S1000D practice into a predominantly non-S1000D environment
 - ◆ A Defence-wide tool?



ICN Generator

- Why have an “icn”?
 - ◆ An illustration is subject to:
 - ☞ *use*, and often *multiple use*,
 - ☞ *change*, and change control (=> Tech Regs).
 - ◆ => A unique identifier gives us a handle for managing *use* and *change*
 - ◆ => We have moved to the S1000D Illustration Control Number as the standard identifier, not only for S1000D pubs, but for all tech illustrations.



ICN Generator

- Refresh ... what is an 'illustration'?
 - ◆ an *image* (of a drawing, photo, chart etc); that which is displayed and/or printed,
 - ◆ a *native file*; digital 2D or complex product model, and
 - ◆ and/or viewable *read-only file*;
 - ☞ usually a rendition of the native file, that
 - ☞ presents the *image* for display or printing and
 - ☞ is referenced ('called') by publishing software during assembly of a pub for display or printing.



ICN Generator

- ICN - how are we applying it?
 - ◆ the *image*
 - ☞ we generate a unique ICN for every illustration and version of an illustration
 - ☞ ‘paste’ it inside the lower margin of the *image workspace*
 - always visible when the image is visible
 - it is *not* the Figure Number
 - a requirement of S1000D (“ICN”)
 - optional in 5030.001 & DEF(AUST)5629B (“icn”)



ICN Generator

- ICN - we apply it to: (contd)
 - ◆ the native/viewable *files*
 - ☞ as the file name (ICN plus the file-type suffix),
 - ◆ the '*board number*' or '*boardno*'
 - ☞ ie, the unique identifier used in the publishing system's SW when it's doing something with that illustration.



ICN Generator

- Benefits?
- ◆ Illustration is set-up for life, for use in
 - ☞ the existing 5629 publication system, or
 - ☞ any S1000D compliant system, and
 - ☞ any other technical publication.
- ◆ Meets the Tech Airworthiness Regulator's requirements for *configuration control* of tech data.



ICN Generator

- Format of an S1000D Illustration Control Number?
 - ◆ Eg ICN-AE-A-040400-0-C0419-00008-A-02-1
 - ◆ It's easy! Don't be intimidated - It's all in the spec!!
 - ☞ 27-45 characters long,
 - ☞ ten elements (groups) of alpha/numeric characters
 - some values you select from *pre-set* S1000D format/values,
 - some values are assigned by *your project*.



ICN Generator

- The ICN elements:

- ☞ major parent system identifier (Model Identification), eg

- 02 - Engine MTR 390,
- JA - NH90 Helicopter
- 5Q - Laboratory, Dentistry, Field Hospital
- PO - PC3 Orion Aircraft

- *format/values*: select from registered list sponsored by S1000D controlling body (access via web)

- your project not listed? Apply via S1000D web-site!

- ☞ sub/sub system & variant codes

- *format/values*; select from list in S1000D



ICN Generator

■ ICN elements: - contd

☞ stakeholder company code

- data module owner
- illustration originator (Eg, OEM, sub-OEM, SPO, DGTA)
- *format/values*: select an NCAGE

☞ illustration sequential number

- *format/values*: assigned by *your project* (*or automatically generated by your ICN Generator!*)

☞ illustration variant

- *format*: alpha characters, A basic, B first variant,
- *values*: meaning of each alpha (except A) assigned by *your project*.



ICN Generator

- ICN elements: - contd
 - ☞ illustration issue number
 - *format/values*: set out in S1000D
 - 01 original, 02 first change etc.
 - ☞ security classification
 - *format*: numeric character, 1, 2, ...
 - *values*: assigned to the numerics off-line by your project, (ie use *your* country's convention).



ICN Generator

- NB: A slight deviation ... DGTA “ICN” or “icn”?
 - ◆ many (hundreds) of our illustrations are generic, ie,
 - ☞ no parent system, therefore no applicable MI element
 - ☞ using ‘00’ as the MI for generics, therefore not strictly an S1000D-compliant ICN.
 - *(I suspect not unusual - how do other users handle this?)*
 - *(an issue for the S1000D management groups?)*
 - ☞ remainder of ICN conforms



ICN Generator

ICN Generator

ICN-J2-A-592-80-00-D-Z4833-00001-D-03-1

DAPA Number

J2	Model Identification Code
A	System Difference Code
592-80-00	Standard Numbering System (SNS)
D	Responsible Partner Company Code
Z4833	Originator Code (NCAGE Code)
00001	Sequence Number
D	Variant Code
03	Issue No.
RESTRICTED	Security Classification

The MI identifies the Project to which the data applies and is a point of reference for all applicability information. The decision on how to use the MI is a project decision and is documented in the project business rules.

The Paste Buffer contains the ICN, use Ctrl + V to Paste

Minimise **Exit**



ICN Generator

ICN Generator

ICN-J2-A-592-80-00-D-Z4833-00001-D-03-1

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The ICN being assembled as you select values from each element pull-down list.



ICN Generator

ICN Generator

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'Help' for each ICN element.



ICN Generator

ICN Generator

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Minimise **Exit**

“The generated ICN is held in your ‘Paste’ buffer!”



ICN Generator

ICN Generator

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Clicking in here will bring up the S1000D Standard Numbering System list.....



ICN Generator

SNS Generator

SNS: 4A5-20-00 00 Sub-Sub System Find SNS 4A5-20-00

Find Text

- General Communications
 - Propulsion - general
 - Power pack - general
 - Power unit - general
 - Engine cooling system - general
 - Fuel systems - general
 - Air and exhaust systems - general
 - Air system
 - Collector**
 - Noise suppression
 - Emission control
 - Lubrication systems - general
 - Transmission - general
 - Automotive/remote piloting and digital control sys
 - Controls (drivers) - general
 - Structure - general
 - Hull/frame - general
 - Body/cab - general
 - Suspension/tracks/wheels - general
 - Turret assy - general
 - Structures and buildings - general
 - Sites - general
 - Masts - general
 - Containers - general
 - Armaments - general
 - Electrical systems - general
 - Mobile electrical systems (engine/power pack) -

General Communications
This is an SNS for general communications.

Air and exhaust systems - general
Refers to a system which supplies and filters air to the engine and collects and removes exhaust gases from the engine. It includes, for example, all filters, pipes, couplings, silencers, catalytic converters and ducting mounted externally to the power un

Collector
Refers to that portion of the system which collects exhaust gases from the engine manifold. It includes pipes, joints, gaskets, etc.

Apply/Close



ICN Generator

ICN Generator

ICN-J2-A-592-80-00-D-Z4833-00001-D-03-1

DAPA Number

Model Identification Code

System Difference Code

Standard Numbering System (SNS)

Possible Partner Company Code

Original Package Code

Sequence Number

Variant Code

Issue No.

Security Classification

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This DAPA-specific switch allows insertion of a pre-existing number (eg a Board Number) as the Standard Numbering System element in the ICN.



ICN Generator

- all good!

The screenshot shows a window titled "ICN Generator" with the following fields and values:

Field	Value	Description
<input type="checkbox"/> DAPA Number		
<input type="text"/>	J2	Model Identification Code
<input type="text"/>	A	System Difference Code
<input type="text"/>	592-80-00	Standard Numbering System (SNS)
<input type="text"/>	D	Responsible Partner Company Code
<input type="text"/>	Z4833	Originator Code (NCAGE Code)
<input type="text"/>	00001	Sequence Number
<input type="text"/>	D	Variant Code
<input type="text"/>	03	Issue No.
<input type="text"/>	RESTRICTED	Security Classification

The generated ICN is displayed at the top: **ICN-J2-A-592-80-00-D-Z4833-00001-D-03-1**

A note on the right states: "The MI identifies the Project to which the data applies and is a point of reference for all applicability information. The decision on how to use the MI is a project decision and is documented in the project business rules."

Buttons for "Minimise" and "Exit" are visible at the bottom right. A footer note says: "The Paste Buffer contains the ICN, use Ctrl + V to Paste"



ICN Generator

- Acknowledgement:
The ICN Generator is a fine work in progress by

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CSSSO, DMO.

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ICN Generator

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Minimise **Exit**



ICN Generator

- A simple, practical tool for those who have to manage illustrations and illustration identifiers.
- Defence-wide? Govt & Industry?
- Web-hosted?
- Sponsored by Standardisation Branch?
- Minimal change to your project's S1000D business rules?
- *(Export numbers used to a database?)*



ICN Generator

- that's all!

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Aircraft Maintenance Processes and Technical Standards,
Directorate General Technical Airworthiness