



Computer Graphics Metafiles for Technical Authors & Illustrators

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Abstract-No: **A#43**

Introduction

The challenge

- **Technical Authors are challenged to create illustrations**

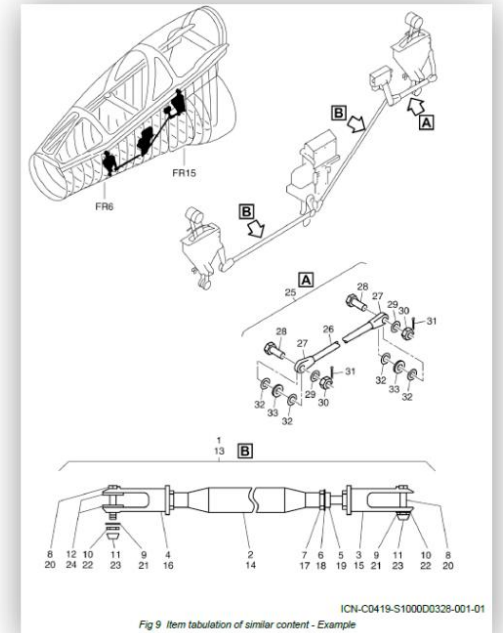
Usually creating CGM illustrations is a full time job

- **The separation of Tech Writer and Tech Illustrator changed to the „Tech Allrounder“**

Textual content

Graphical content (illustrations, CGM)

It needs the right solutions to enable allrounders to work with illustrations



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Fig 9 Item tabulation of similar content - Example

Illustration creation and usage process

Illustration creation and usage process

- **Situation before**

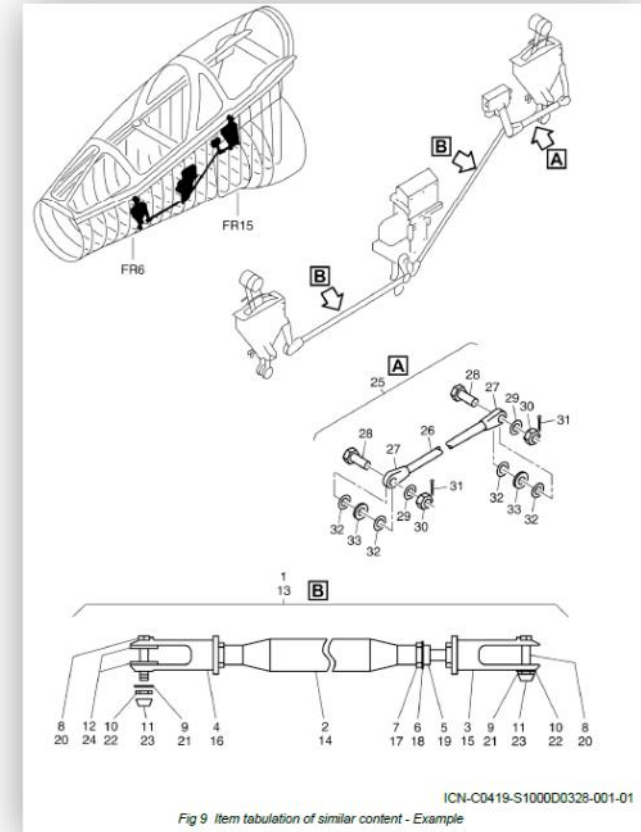
Classic separation of author and illustrator

- **Author creates text**
- **Illustrator creates illustrations**

- **Situation today**

The „allrounder“ does it all

- **Textual authoring**
- **Illustration authoring**



Tech writers are often challenged to create Tech Illustrations from scratch

Illustration creation and usage process

Illustration creation and usage process

- **Use existing archives**

Low hanging fruit:

The illustration already exists as a subset

- **Open in CGM editor, tweak, export, use**

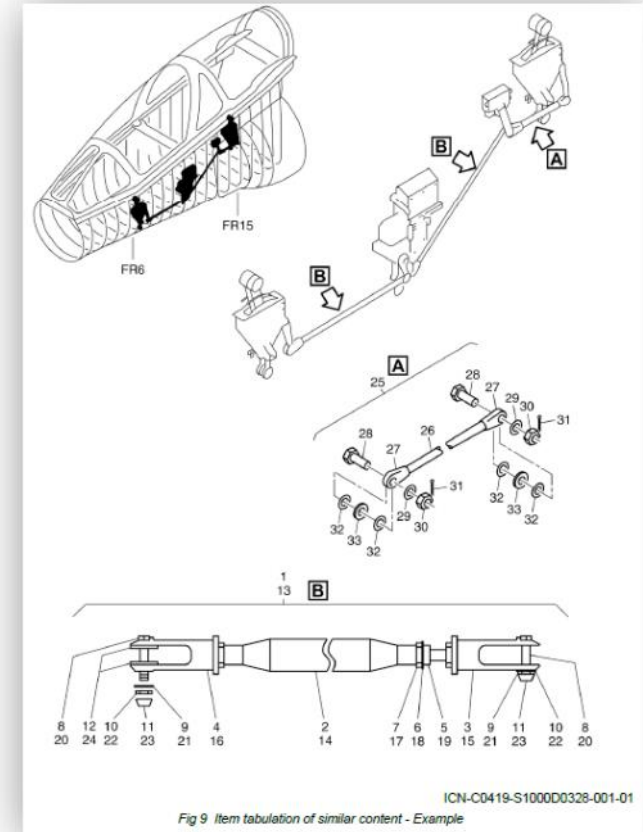
- **Create new**

Various options

- **Derrive from CAD (3D)**

- **Create new (2D)**

- **Combination of both**



Tech writers are often challenged to create Tech Illustrations from scratch

Use CAD Data – Do not reinvent the wheel

Using CAD Data is the easiest way to get illustrations.

■ **PRO - Covered with CAD**

Converting from CAD

- Existing geometry
- Isometric
- Color, Line Weights, ... depends on CAD system capabilities

■ **CONS – NOT covered with CAD**

Usually not covered by CAD *(Capabilities depend on CAD System)*

- Professional CGM 4 export
- Editing existing CGMS / Illustrations, Raster editor
- Object Data
- Hotspots, Region

Illustration rules

All info in the illustration chapter in the spec

- Illustrations in the S1000D environment**

Chapter 3.9.2. „Authoring - Illustration rules and multimedia”

- Line weight use**

Thick / thin, Leader lines etc.

- Line type**

Solid, Dash, Dot etc.

- Annotations**

Dimensions, Callouts etc.

- Color**

Color definitions (Red, Yellow, Blue etc.)

- Many settings ...**

Table 3 Lines - Their primary use and weights

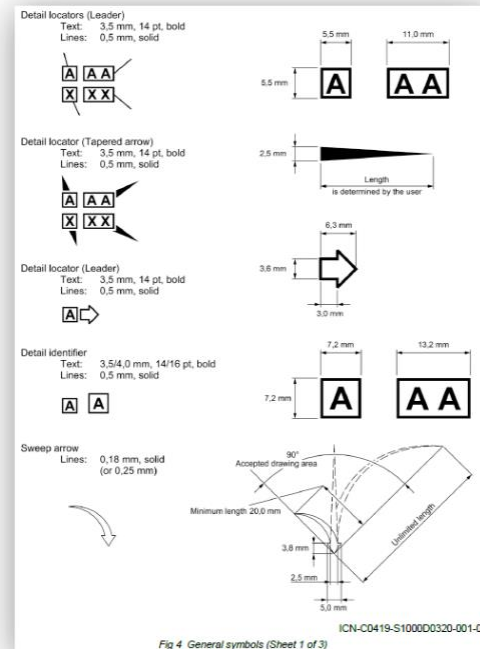
Line weight use	Line weight	Remark	Line type
Illustration of items	0,18 mm/0,35 mm ²	Represents the primary objects.	Type 1
Reference structure/items	0,18 mm (or 0,25 mm)	Represents objects on the illustration which are reference to primary objects.	Type 1
Center/Projection lines	0,18 mm		

Table 4 Line type definition

Line type	Definition
Type 1 - Solid	Solid
Type 2 - Dash	A segment = 1,0 mm. 3 On - 1 Off.
Type 3 - Dot	A segment = 0,5 mm. 2 On - 1 Off.

Table 2 The S1000D standard color palette

Color	RGB value	Pantone value ¹	CMYK value ¹
Red	R255	Red 032	C 0% M 100% Y 100% K 0%
Yellow	R255 G255	Yellow	C 0% M 0% Y 100% K 0%
Blue	B255	300	C 100% M 43% Y 0% K 0%
Green	G255	375	C 0% M 0% Y 0% K 0%
Orange ²	R255 G102		



The Toolbox You Need

What areas are important

- **Object data, Region, Hotspot on callouts**

You get the info you must attach

Region can be either rectangle (1), ellipse (2), polygon (3), continuous polybezier (4)

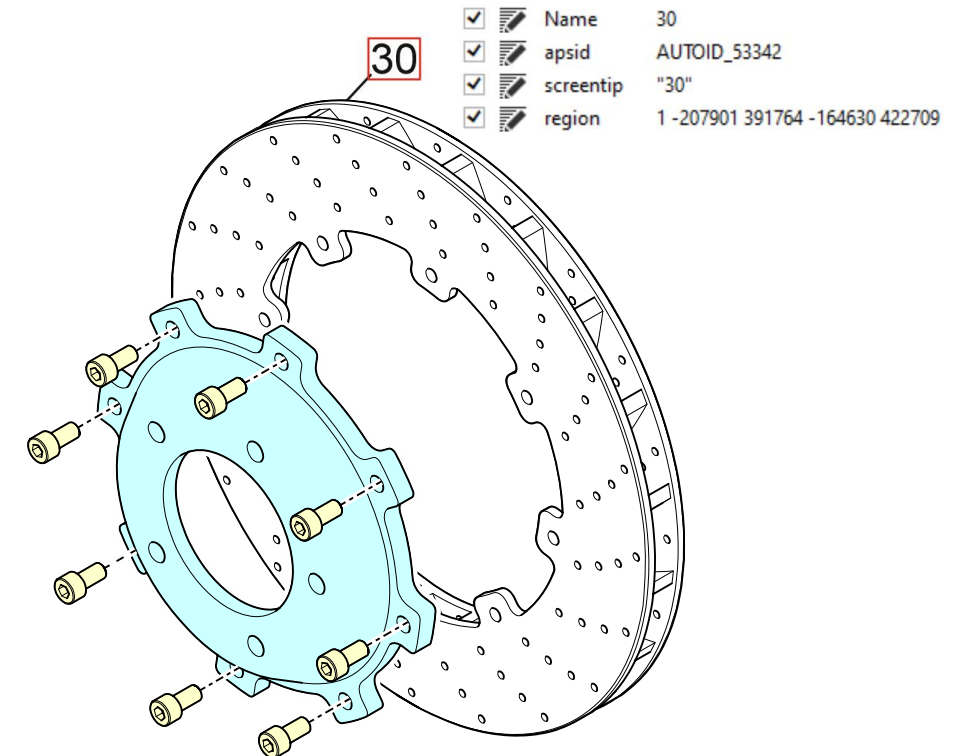
- **Line weights and style, color**

The spec delivers all info.

Use a tool that supports fix settings for this instead of entering values each time.

- **Supportive tools**

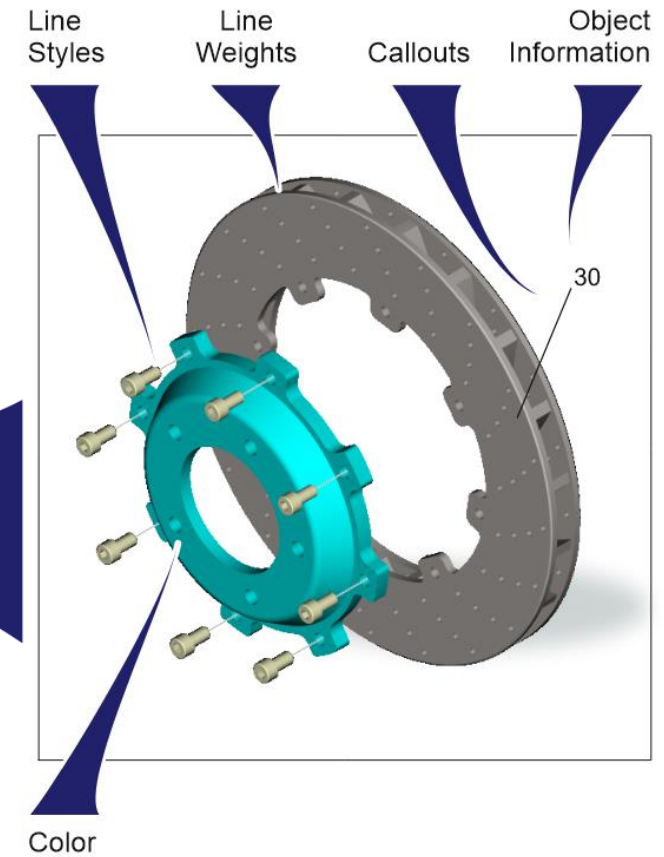
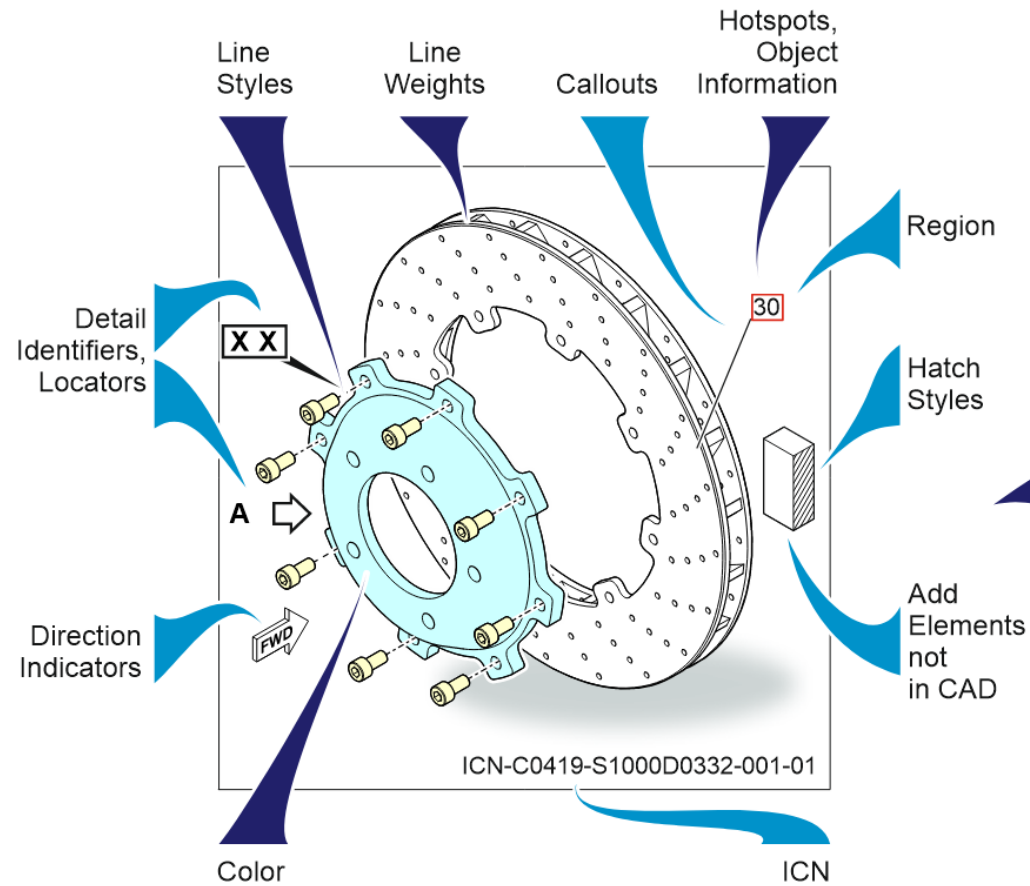
Preset callouts, line formats, parallel perspective



Use the tools of an Illustration Authoring System

Illustration Authoring System

CAD System / CAD Data



Summing Up

For illustration creation you need a solution that easily solves the tasks for you

- **Standard functionality**

- **CGM 4 export, all needed profiles, XML companion files**
- **Tools for callouts, object data, regions / hotspots, line weights and styles, hotspot indicators**
- **Symbol libraries for all types of locators, identifiers, bolts, nuts, ...**
- **Color- paragraph- and style-formats**
- **CAD import**
- **Thick / thin line support**
- **Parallel perspective**
- **Illustration tools**
- **Editing capabilities for existing assets, illustrations / CGMs including raster editor**

Summing Up

Last but not least

- **Customizing with macros etc.**

Automate tasks

- **Automatically add hotspots, ICN, frames, layers, ...**
- **Connect to external systems**
- **Quality control**
- **And much more**



Thank You
for your attention!
Questions?



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