

TYPE3-CAA™ / FREQUENTLY ASKED QUESTIONS

General Topics

Add-on for CATIA® V5 & 3DEXPERIENCE

TYPE3-CAA™ is an add-on Software Solution to CATIA® V5 & 3DEXPERIENCE platforms, edited by GRAVOTECH MARKING S.A.S., the Worldwide leader in Engraving Software Solutions and permanent markings with more than 60.000 Users installed.

Developed in partnership with Dassault Systèmes since 2003, TYPE3-CAA™ offers Designers and Construction Engineers a unique access to a wide range of professional tools, enhancing industrial parts communications with serial numbers, accurate text, logos, legal information, specs... directly within the PLM process offered by CATIA® V5 / 3DEXPERIENCE.

TYPE3-CAA™ is by extension fully Parametric and Associative with all features of CATIA®.

1. What are the CATIA® levels and OS Prerequisites?

Windows OS: 64 bits
Windows Versions: According to CATIA's release

CATIA® V5 Prerequisites: R18 SP5 and upper
Minimum configuration : MD1 / MD2

CATIA® 3DEXPERIENCE Prerequisites : 2015X
FD1616 and upper
Minimum configuration : MES / KDI



2. What is the requirement for Hardware?

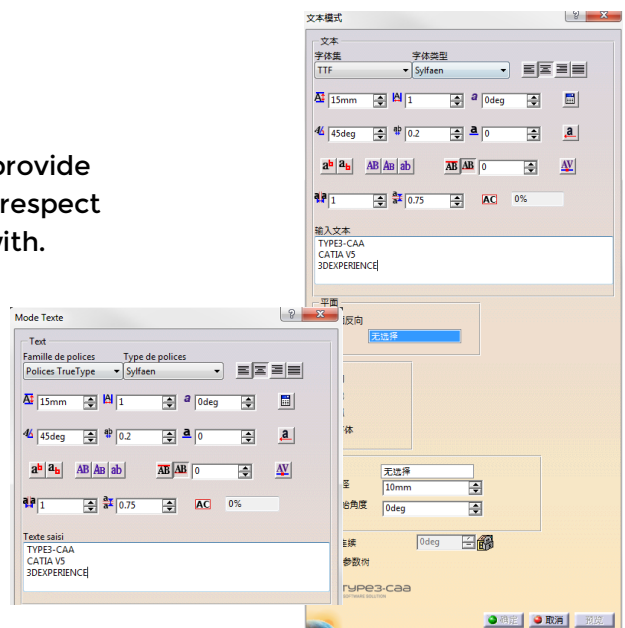
According to your release of CATIA, Dassault Système provide a list of PC machines which are compatible with. If you respect the specifications, then our addon will be compatible with.

3. Is TYPE3-CAA available in different languages?

Yes, TYPE3-CAA™ for CATIA® V5 and 3DEXPERIENCE are available in 6 languages: English, French, German, Chinese and Japanese, as well as Italian for CATIA® V5 and 3DEXPERIENCE.

4. What are the licensing management options?

TYPE3-CAA™ uses the FlexNet Publisher licensing management technology. Nodelock licenses or Server licenses are available.



5. Can I use three-server redundancy, VIRTUAL MACHINES (VM), Triad's configuration of server?

Yes, the FlexNet Publisher licensing management can set up such configurations. Redundancy also works as well as Virtual Machine managements.



6. Is TYPE3-CAA™ can be installed as “Served Code”.

Yes, the add-on installation can be customized thanks to its specific environment and run from a server license for CATIA© and other in-house setup.



7. Is TYPE3-CAA™ can be installed in a configuration with internal “Launcher”.

Yes, the environment of the add-on can be added with specific environment and therefor can be “launch” inside and interface without using the default environment.

8. Can TYPE3-CAA™ be installed in “Silent mode”?

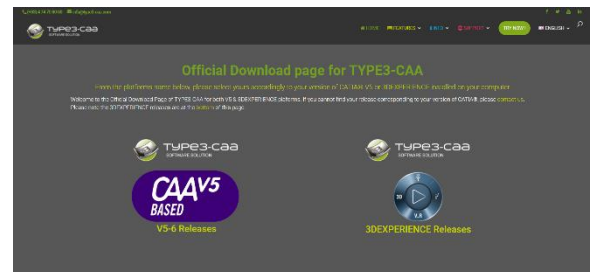
Yes, the install-shield used allows the installation of TYPE3-CAA™ step-by-step or in silent mode with the known command lines to ease group deployments.



9. Where can I find the latest version of TYPE3-CAA™?

Latest versions of TYPE3-CAA™ can be directly downloaded from:
<https://type3-caa.com/official-download-page/>

For further information, contact your nearest CATIA© reseller or contact info@type3-caa.com



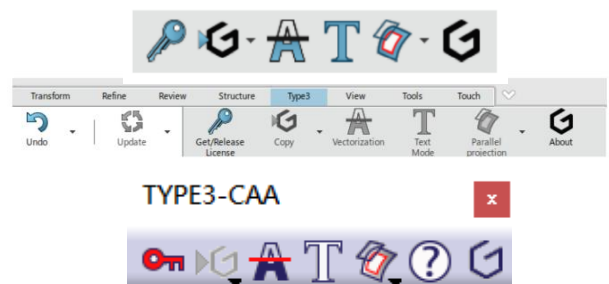
10. How can I be trained on TYPE3-CAA™?

Videos are available on the website and via the TYPE3-CAA™ YouTube channel and can also be provided on request. Online training can be organized as well at your convenience (as an optional service). Thanks to a very clear user-interface, training does not exceed 2 hours most of the time.



11. Where is the TYPE3-CAA™ toolbar located?

By default, the TYPE3-CAA™ toolbar can be found in the Part Design Workbench. Alternatively, it can also be displayed in the Generative Shape Design toolbar by setting up the tools there.



12. Can I use CATIA® with other Gravotech Solutions, like TYPE EDIT (2D, 2.5D and 3D CAD-CAM software for engraving and bas relief / texture creation)?

Yes, with the TYPE3™ Gateway package, you can copy/paste 2D Artworks from/to TYPE EDIT™ or CATIA®. Text, drawings, dials, rulers... are automatically converted into curves and display in your CATIA® environment.



13. What are the Typical Applications & Segments, where TYPE3-CAA™ excels?

The range of Applications is extremely wide. TYPE3-CAA™ can be used either for Manufacturing, Simulation or for Marketing needs such as product presentation and visualisation of brands.

- **AUTOMOTIVE:** Transportation and Mobility
OEM Suppliers, moulded parts, casting...
- **AEROSPACE & DEFENSE:**
Panels, signage, moulded/casted parts...
- **CONSUMER GOODS:**
Moulded parts, product presentations, panels, ...
- **ELECTRONIC / ELECTRIC:**
Moulded parts, product visualisation, labels...

TEXT/LOGO/SYMBOLS/SERIALIZATION:
Identifications are needed as part of a seamless Design to Manufacturing process, including perfect traceability.



14. Will TYPE3-CAA™ be compatible with the next CATIA® releases?

Yes, as a Dassault Systèmes Solutions Partner, Gravotech will ensure that TYPE3-CAA™ supports future CATIA® V5 and 3DEXPERIENCE releases.



15. What about the support or bug correction of the add-on?

As our add-on depends directly on the release of CATIA, all technical support is available on Supported CATIA® releases from Dassault Systems



Text Mode

(included in « Graphic» and « Graphic & Wrap » Packages)

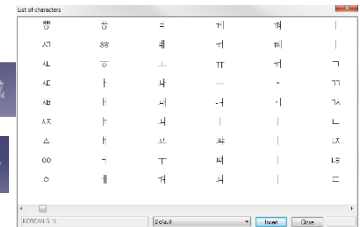
1. Can I use True Type (TTF), Open Type Font (OTF) and/or Single Line Fonts?

Yes, both. TYPE3-CAA™ allows the use of True & Open Type and Single Line Fonts installed on your computer, as well as all VN fonts (single/stroke line fonts) and the complete library of Fonts of Gravotech.



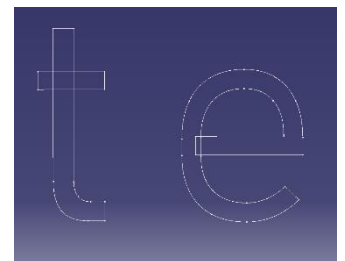
2. Can I work with Asian and Arabic TTF Fonts?

Yes, you can work with Asian, Russian or Arabic TTF as long as you install CATIA© on a non-US or non-European Windows Environment. All you need to do is retrieve the Foreign Windows Fonts and work with them directly from your keyboard.



3. When using some police, I do have some issue in Pad function, why?

During the creation of each character, if the owner is not respecting rule creation like no intersection, then with the PAD function you will have message error.

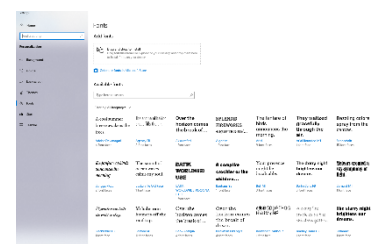


4. How can I retrieve CATIA© default Fonts in TYPE3-CAA™?

By installing and using the Fonts interface located under the Operating System (OS) Fonts Directory of Windows.

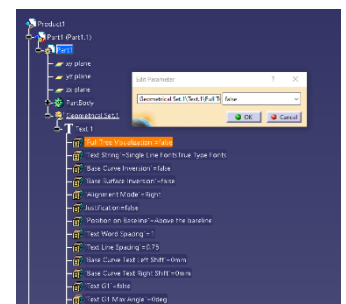
5. When I create text and logos with TYPE3-CAA™, what kind of entities do I build in CATIA© V5 & 3DEXPERIENCE?

A feature text within CATIA's tree is created. It can be modified by accessing any of the parameters individually or by editing the feature text.



6. When can I use Stroke Line Fonts (VNF for instance)?

Single line or Stroke fonts are usually used to save time during the machining process ("Following profile" toolpath) offering an alternative to pocketing.



FAQ

7. Are all Fonts G1 type?

By default, all TTF or OTF Fonts are not G1, but with TYPE3-CAA™ it is possible to convert Fonts into G1 type from a single click.

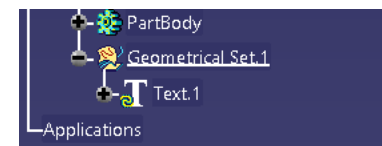
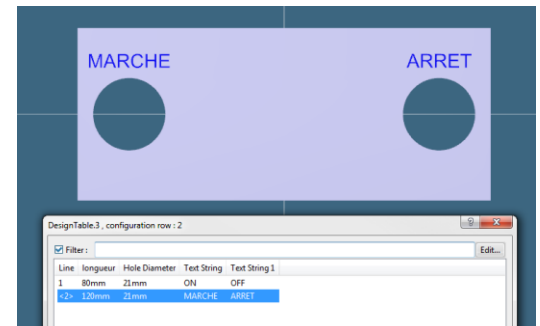


8. What is the advantage of using the associative text features from TYPE3-CAA™ (compared to DXF imports for example)?

The benefits are gigantic while dealing with texts. You save a huge amount of time! Productivity gains are very significant with advanced texts.

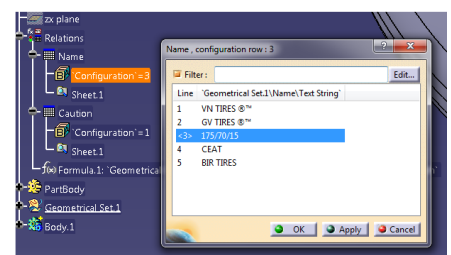
For example:

- Any changes to the attributes of the TEXT are directly shown in your CATPART.
- CATPART FILE size can be downsized to 40% or more depending on text length and type of fonts. Curves are not segmented as during importation.
- Text is Fully Parametric and Associative with all features of CATIA© V5 & 3DEXPERIENCE.
- No loss in precision due to a bad quality of DXF import/exports. The quality of curves is as defined during the creation of fonts.
- Saving archives with all design components is completely Associative and can be recomputed.
- Q-checker, Power-copy and UDF fully compatible.



9. Can I use Design Table / FORMULAS?

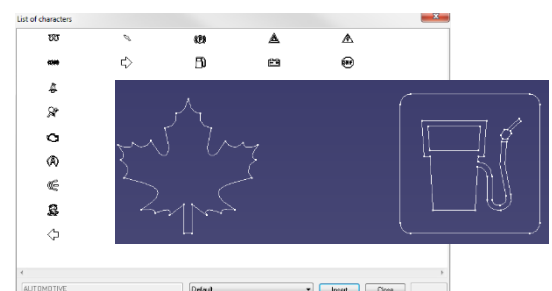
Yes, since all text parameters are published, design table and formulas can be created to manipulate them. This is incredibly beneficial while working with models with multiple languages stated from Excel files or when arithmetic operation is required.



10. Can I use SYMBOLS , Pictograms, Special Characters?

Yes. Any symbol used from the included “Special Character” list can be manipulated like a font.

It can also be extended using your own symbols (conversion service available in option, please ask us).



11. Can I use my own Company Font in TYPE3- CAA™?

Yes, if the Font is already a TTF or OTF it can be directly used in TYPE3-CAA™. Specific Software and Services such as converting a special Company Font into a VNF Font format can be provided. Then, it can be used unlimitedly in TYPE3-CAA™. Please contact info@type3-cao.com for a quotation on the Software solution available or on the additional service.



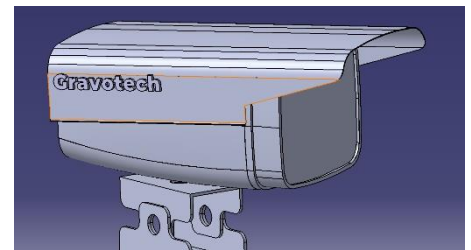
12. Can I get additional Single Line fonts?

Yes, 2 single-line font packages are available as 2 additional options. Each package includes 10 single-line fonts. You can choose the Western pack and/or the MEA pack to add to your Font Libraries.



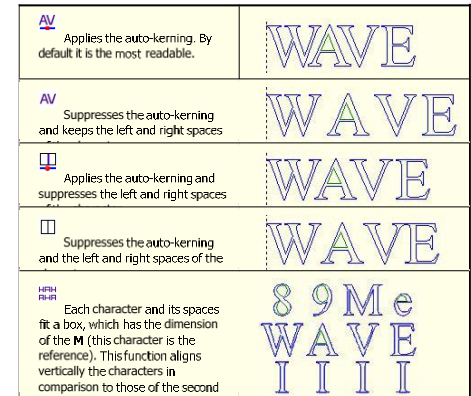
13. Can I control the position of the text on the support curve?

Yes, there are several possibilities to accurately position characters. You can set text according to the Align Left / Centre / Right / Justify options. It is also possible to define an extra distance from the beginning or the end of the curve or from a point.



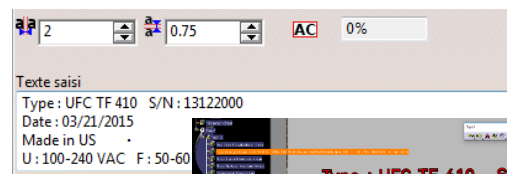
14. Can I use surface edges as a text support?

Yes, edges, vertices or planar surfaces can be used as text-based supports.



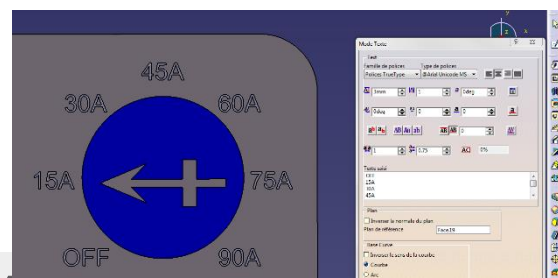
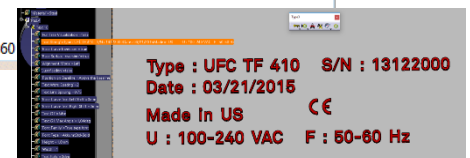
15. What about KERNING for characters spacing?

TYPE3-CAA™ gives the possibility to adjust all KERNING parameters of a font from a specific menu. It allows meeting Graphic rules or to adjust designs to specific Shapes.



16. Can I write a multiline text?

Yes, it is possible to write multiline text with TYPE3-CAA™. A single point can be used as a reference to start typing your text(s).





Questions About Projection / Mapping

(included in « Graphic & Wrap » Package)

Thanks to the PROJECTION and MAPPING features, TYPE3-CAA™ Users can apply text, logos, symbols, numbers ... on any 3D shapes, simple or complex one.

1. What is a “PROJECTION”?

A projection projects 2D curves on the surface according to Z axis direction. Curves become 3D and follow the surface. For example, a curve can be projected on the surface following the “Z” direction, while the X and Y coordinates remain unchanged.

There are 2 types of projections available in TYPE3-CAA™:

- Parallel projection: according to the Z direction
- Local projection: each contour is projected one by one onto the surface using multiple local reference.

The “local projection” is often used when curves to project can be spitted like a text (character by character) and the 3D shape contains intense variations, for example a projection on a sphere. This approach avoid deformation.

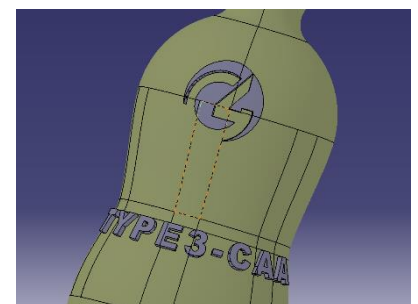
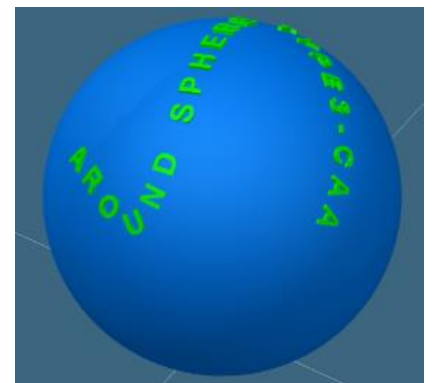
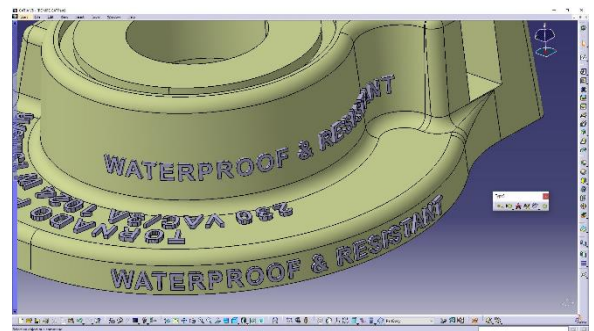
What is a Mapping?

A Mapping is a process allowing 2D curves to be mapped on a 3D advanced surfaces like revolution surface, spheres, etc. Thanks to axis system reference, you can design on any plan and use the mapping

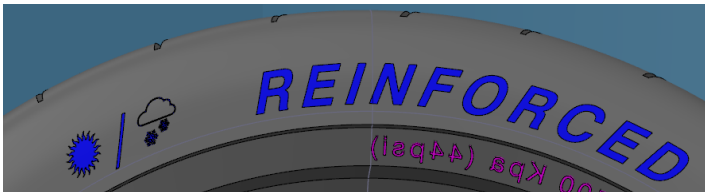
2. Which Mapping Strategies can I use in TYPE3-CAA™?

There are 3 Mapping strategies available: Basic, Cylindrical and Conical.

- **Basic Mapping:** it is used on a single patch surface; it follows the U/V direction and is very useful for bottle Glass mould industry.

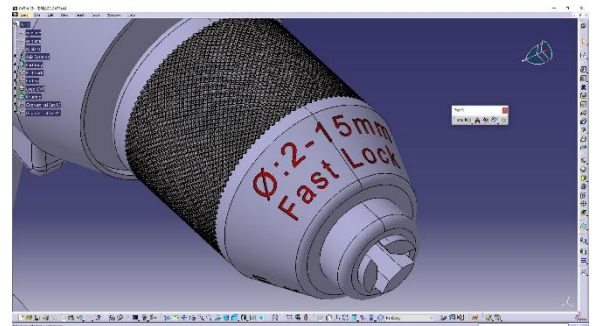


- **Cylindrical Mapping:** it is used when the surface shape is close to a revolution surface. Surfaces can be multi-patch surfaces.
- **Conical Mapping:** it is used when the surface shape is like a cone-like form. Surfaces can be multi-patch surfaces.



3. Why are there so many different Projection and Mapping possibilities?

The 5 different strategies will fit basically any shape. Our long length experience in the Engraving World has taught us that when it comes to applying 2D Artworks on 3D Surfaces, all these strategies are required to reduce deformation, fit aesthetically, manufacturing, or respect graphic chart. TYPE3-CAA™ is the only solution on the market offering such an easy way to select curves and Project or Map them on any surface with a limit deformation result.



4. If I create a text in TYPE3-CAA™, then project or map it on a 3D Surface. Can I change afterwards the position of the text(s) or any of its parameters?

Yes, of course! TYPE3-CAA™ is fully integrated into CATIA© and allows any 2D text created prior to the projection/mapping operation to be edited unlimitedly. You can also adjust the support and/or the text, and select one or more of its features (font, size, kerning, position ...) to get the full modification of your model. Any operation on the result of projection/mapping, such as split, thick surface will also be updated.



5. What kind of entities are built in CATIA© when I create Text and Logo with TYPE3-CAA™, and project/map them on a 3D Surface?

A feature text is created in CATIA's construction tree. It can be modified by accessing any parameters individually without having to edit the feature text.

A vectorised logo is by default converted into a CATIA curve object. The result of a projection or a mapping are CATIA's curves. You can then use various features such as: Split, Extrude, Thick surface,

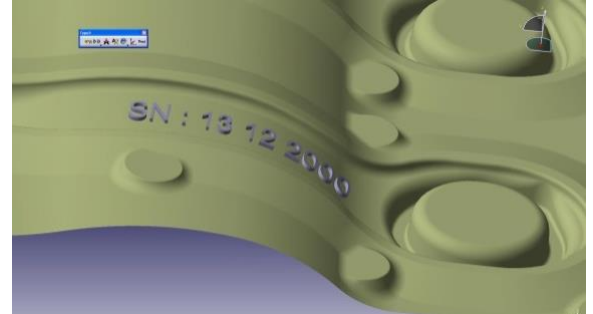


6. How can I adjust and control positions of my curves to be projected or mapped on a surface?

You can control the final position of the 3D curves on the surface by defining local reference (axis system or reference point) for the surface and the curve.

The benefits are:

- Precision in controlling the positioning.
- Any changes made to the 3D model are automatically applied to the machining through the parametric construction and the associativity created.





Vectorization

(included in « Graphic » and « Graphic & Wrap » Packages)

TYPE3-CAA™ allows vectorizing Raster pictures directly inside CATIA© V5 & 3DEXPERIENCE. The vectorization (also referred to as “image tracing” or “Raster to Vector”) is the creation of vectors from raster graphics. It is used on a regular basis for logo creations. It is very useful when only one image for artwork is available, and no DXF or EPS file were made.

1. Which formats can I vectorize directly with?

TYPE3-CAA™ recognizes any picture file with the following extensions: BMP, PNG, JPG and TIFF. Black & White images as well as colour images can be vectorized.

2. What about the quality of the original artwork?

The higher the resolution in DPI (above 300) and the size of image, the better the result will be. In the case colour image, there should be a good and clear colour transition to insure smooth evolution. Therefore a grey level or graduate colour picture is not suitable to extract curve from image.

3. What are the “vectorization parameters” available?

There is an extensive menu available allowing to control the precision of the vectorization, the smoothing, the automatic cleaning of “noise” pixels, as well as the possibility to do “centerline” vectorization.

The “Allowance” will control how accurate your vector will remain to the original image.

The “Noise filtering”: approximately follows the main positions of the pixels located on the edges of the vectorised area.

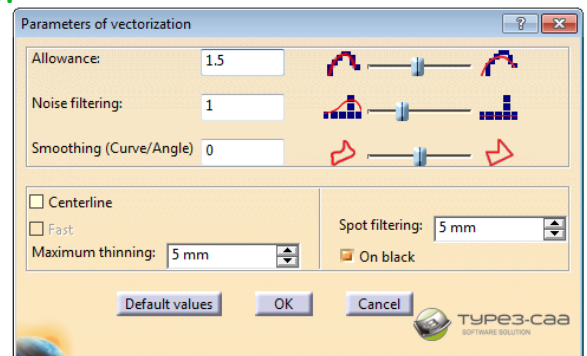
The “Smoothing” generates a rounded or jagged vector spline.

4. Do I get CATIA© curves after the vectorization process?

Yes, CATIA© curves are created from the outlines of the vectorised image. You can then use any features such as: pad, scale, change plane, projection/mapping...



- *.BMP
- *.PNG
- *.JPEG
- *.TIFF

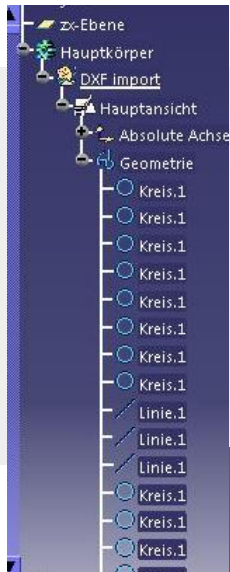
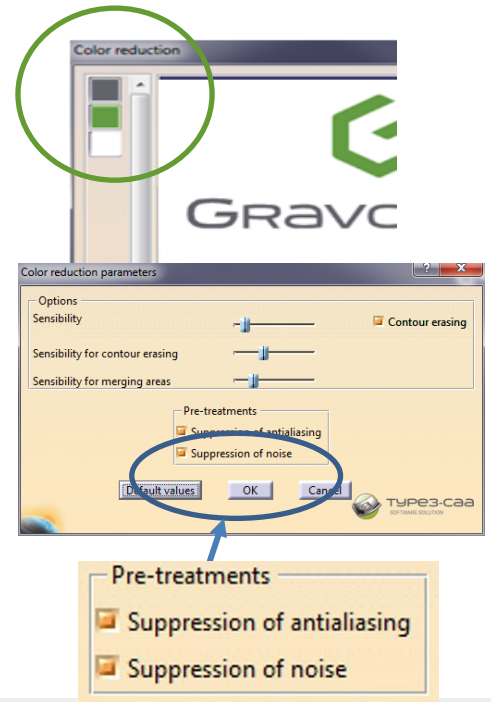


5. When handling colour bitmaps, why should I use a “Colour reduction”?

All colours are automatically detected and listed by the feature. You have the possibility to merge colours or select the relevant ones for vectorization.

You have the option of merging nearby or totally different colours thus reducing the original number of colours and therefor reduce number of curves in CATIA’s tree. Sharpness of angles in contours between 2 colours can be defined or ignored thanks to the “noise filtering” option.

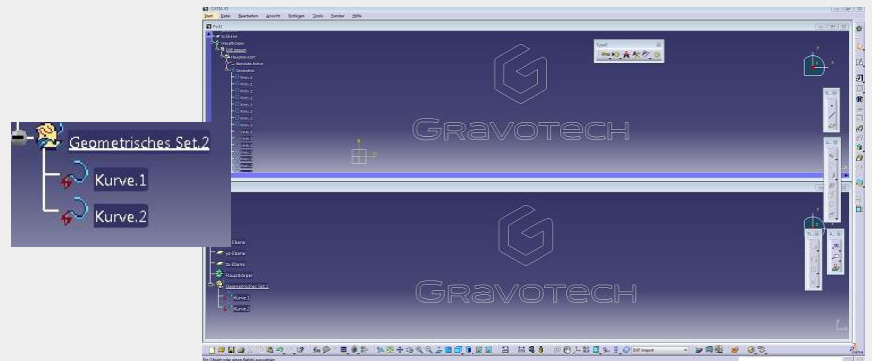
NOTE: For additional graphic requirements such as accurate node editing, please check our other Software Solution: [TYPE EDIT](#). Combined with the “Gateway” package, it extends the 2D graphic capabilities and allows to copy/paste to/from TYPE EDIT and CATIA® V5 & 3DEXPERIENCE.



For same Artwork:

Left: DXF import, showing dozens of lines.

Right: creation with TYPE3-CAA: just the 2 required curves!



More questions in head? Do not hesitate to contact us for accurate videos, trial procedure, for a quotation, or to get an invitation to our next webinar! Please join us at info@type3-cao.com.