

Generative Sheetmetal Design

V5R17

Agenda

- **Wall On edge**
- **Corner relief**
- **Mirror**
- **Bridge**
- **Local fold/unfold**
- **Recognize**

Generative Sheetmetal Design

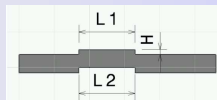
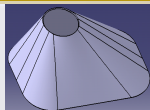
Better process coverage with local fold/unfold feature (selective die simulation possible with methodology).

Design complex shapes with Hopper improvements.

Productivity increased with mirror feature and half pierce.

Manufacturability ensured with Check overlapping function.

Empowered cutout to support coining and split.



V5R14

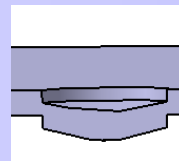
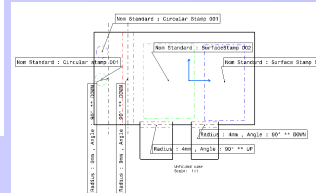
Productivity increased with a new “closed bend” extremity and dowel feature.

Data exchange empowered with stamping and bending information in the drawing.

Design complex shapes with Surface stamp improvements.

Design entirely with GSMD thanks to new types of holes.

Better flat pattern control for flanged holes

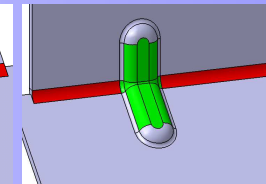
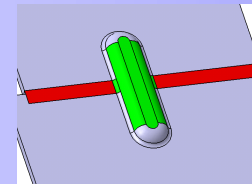
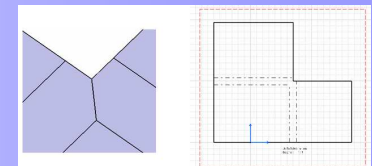
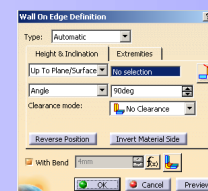
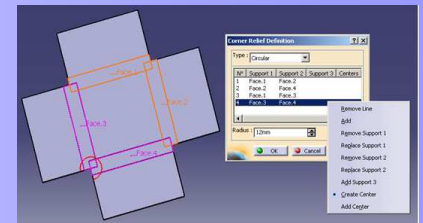


V5R15/V5R16

Big productivity gains with :

- Internal symmetry (mirror of whole part body)
- corner relief automatic selection
- Powerfull wall on edge
- Relieves integration in bridges

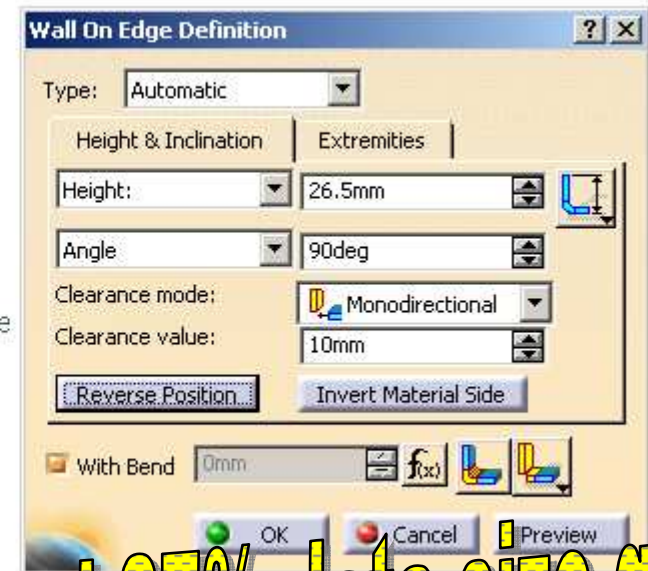
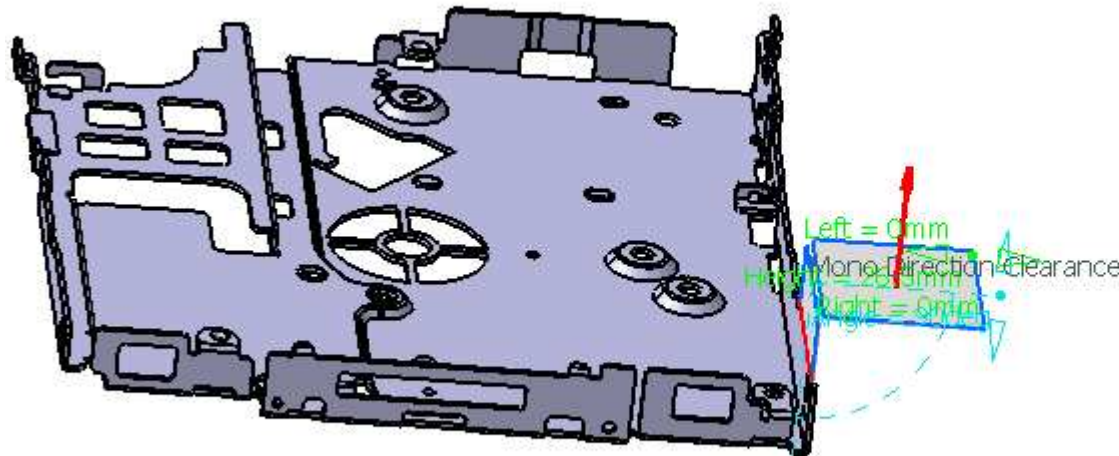
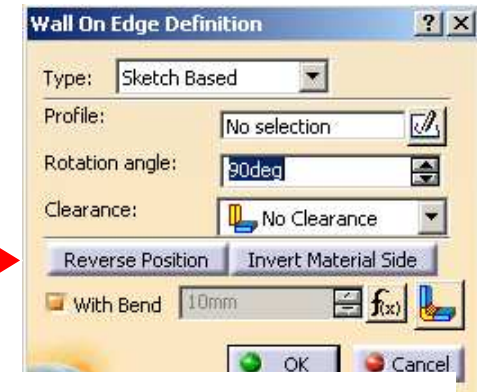
Better process coverage with local fold/unfold improvements
Ergonomics improvements



V5R17

Wall On Edge improvements

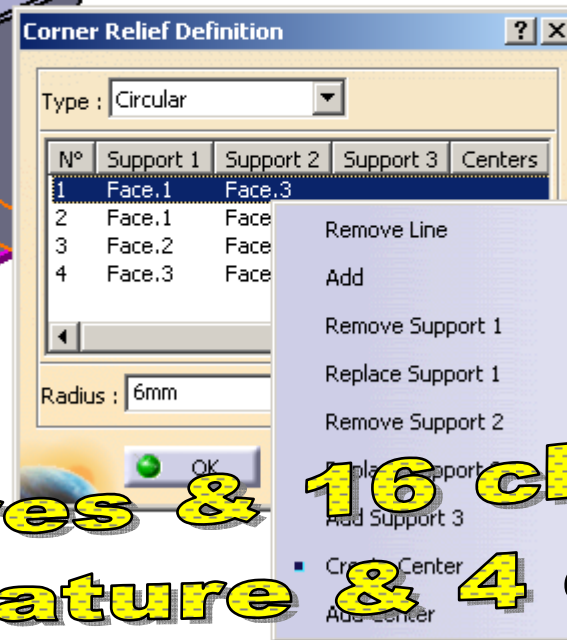
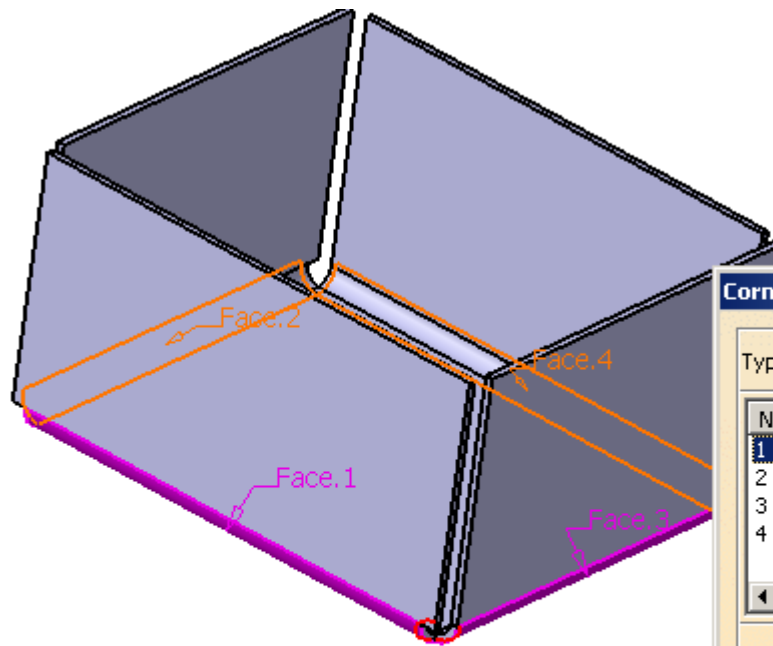
- New ergonomic allowing to define most of the options in the 3D.
- Full design in context capability.
- All bending options available inside.
- Tangent wall capability inside.
- One advanced mode allowing sketch customization. →
- 180 ° allowed and automatic support extrapolation .



35% time saving at update and 27% data size gain

Corner relief

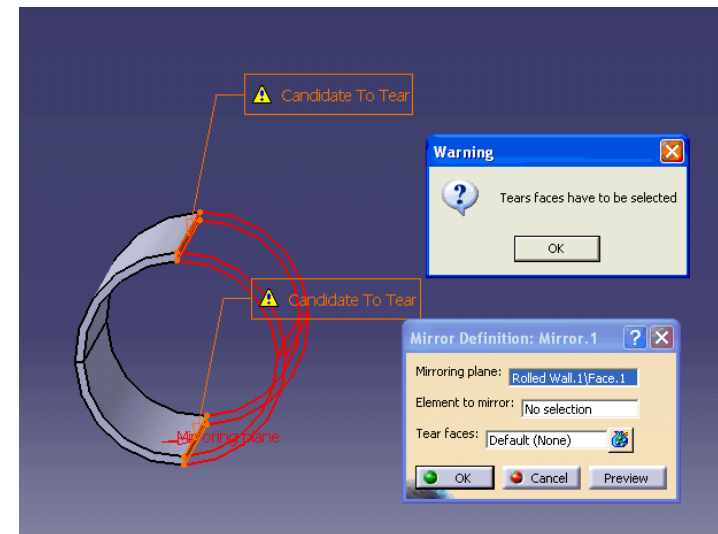
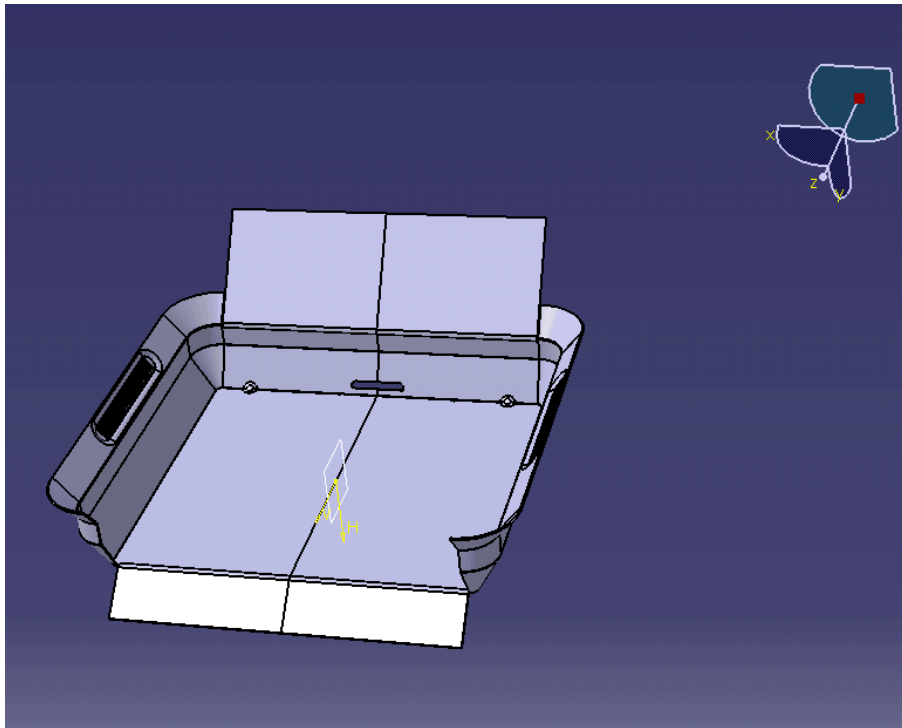
- New ergonomic allowing to create several corner relief one one shot.
- Capability to create corner relief in folded view (flat view can be deactivated).
- Automatic detection of all bends candidates for corner relief.
- New square corner relief type.



R16 : 4 features & 16 clicks
R17 : only 1 feature & 4 clicks

Mirror

- Capability to design symmetrical parts quickly.
- Automatic detection of tear areas.

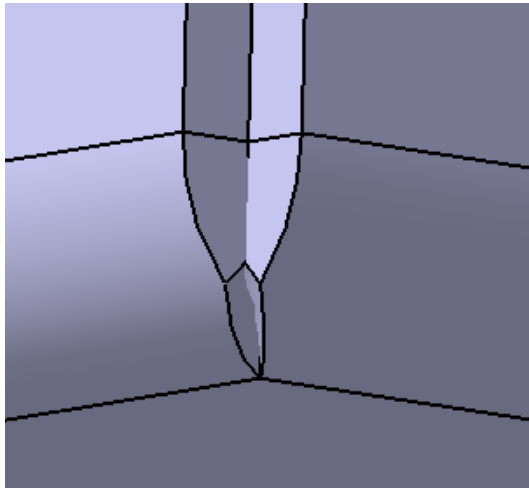


Design time and number of features divided by two

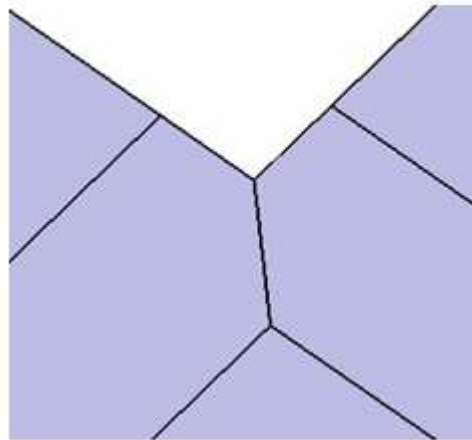
Bend extremity for closed boxes



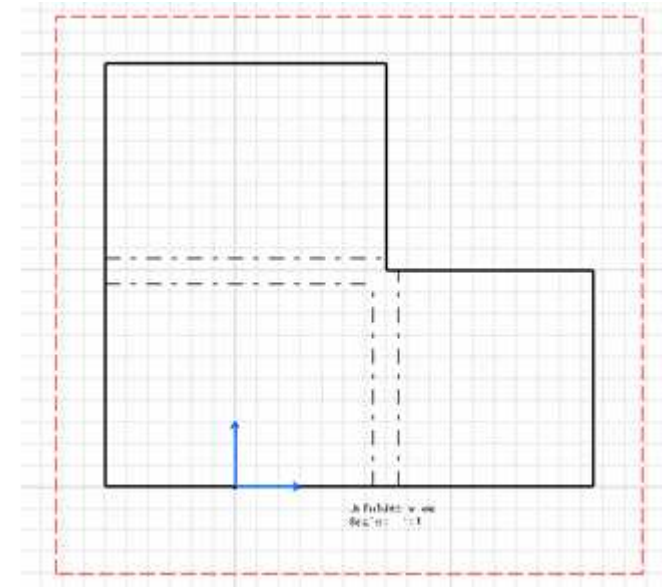
- New bend extremity needed for laser welding:



*Folded
view*



*Flat
view*

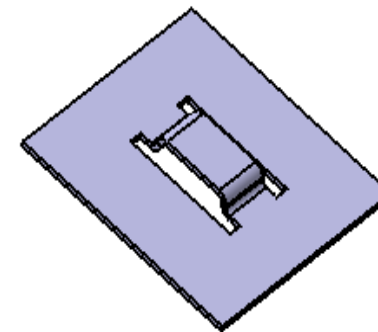
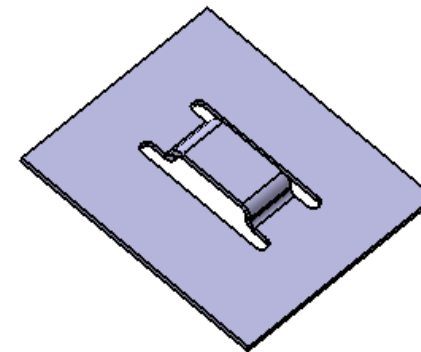
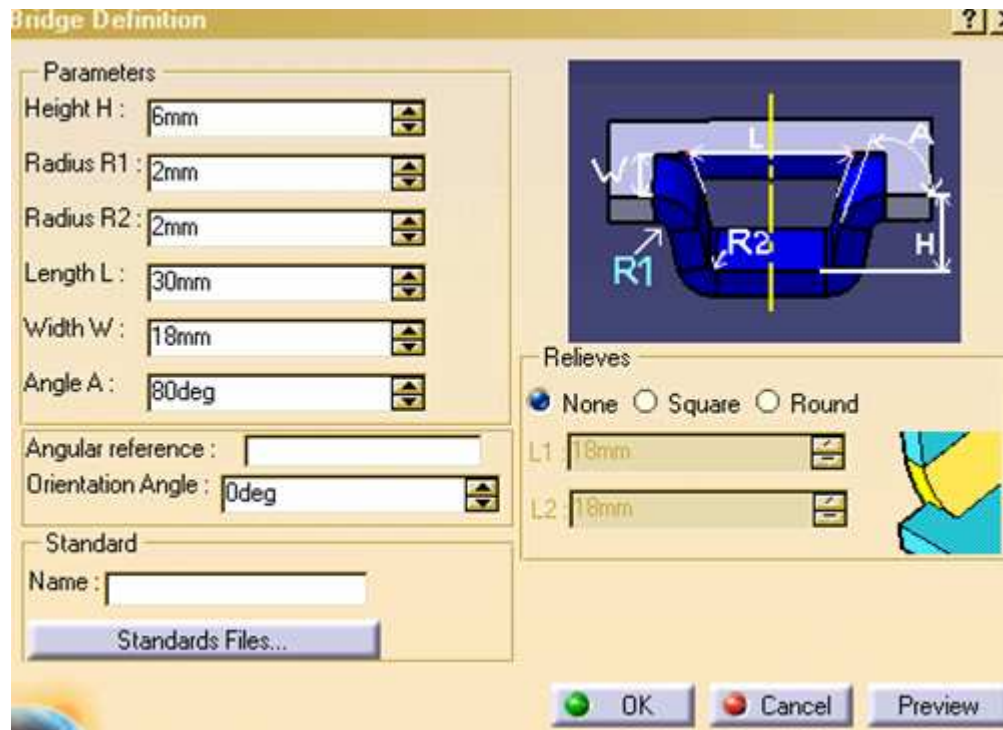


Drawing

Process coverage

Bridge improvement

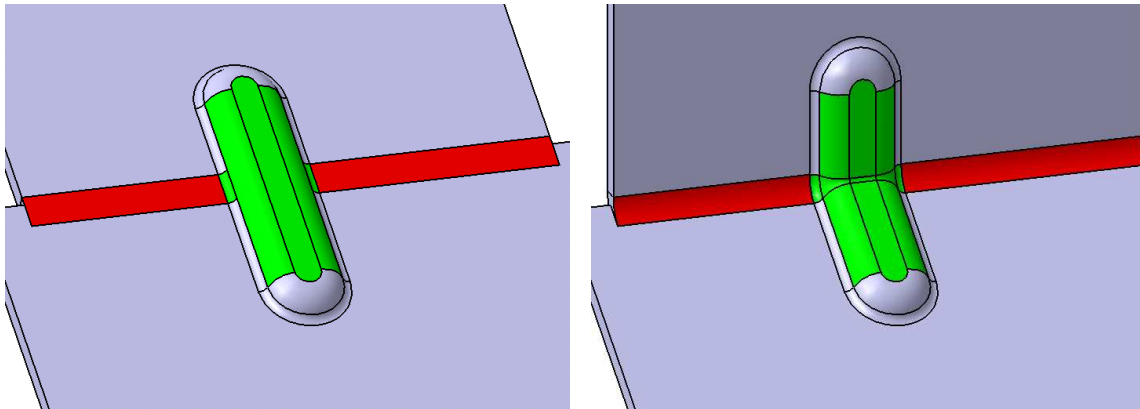
- A new dedicated function directly inside bridge



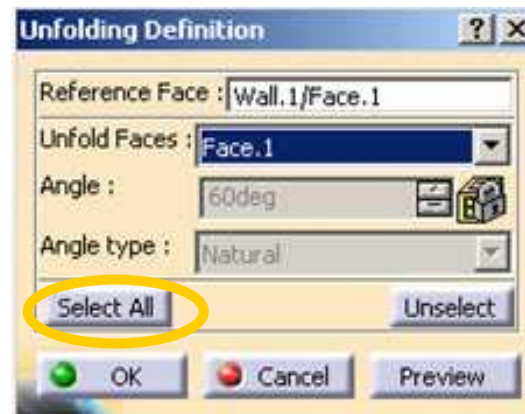
R16 : 2 features 27 clicks
R17 : 1feature 4 clicks

Local fold/unfold improvement

- Capability to fold/unfold locally deformed bend .



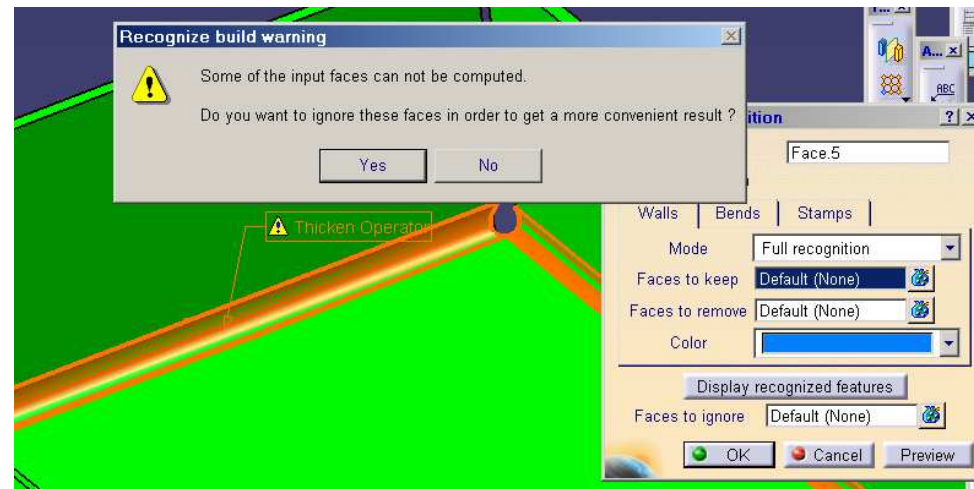
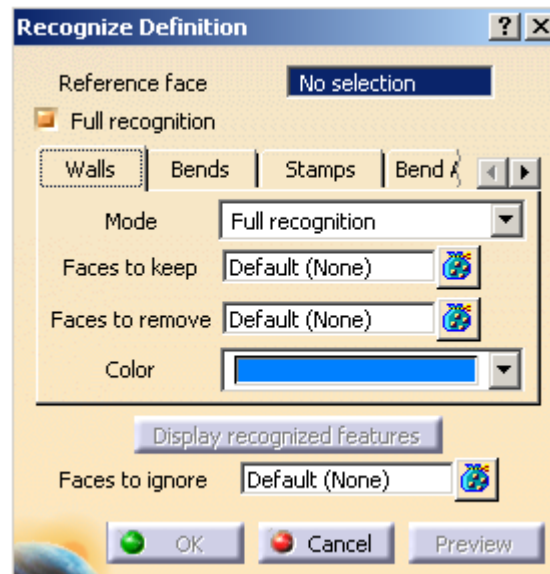
- Automatic detection of all bends.



Process coverage

Recognize ergonomic

- **New ergonomic allowing better control of the recognition**
 - Force feature recognition
 - Ignore some area during the recognition
 - Previsualisation of all recognized entities.
- **Better error management.**
- **KFactor management**



Generative Sheetmetal Design

V5R18

Agenda

- **Multi connected wall**
- **Extrusion**
- **Double curvature hopper**
- **Transformation feature**

Generative Sheetmetal Design

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Data exchange empowered with stamping and bending information in the drawing.

Design complex shapes with Surface stamp improvements.

Design entirely with GSMD thanks to new types of holes.

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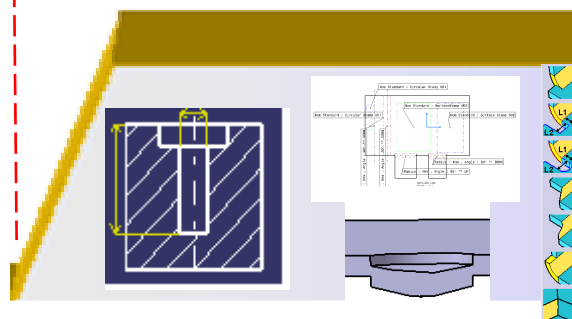
Ergonomics improvements

Big productivity gains with powerfull extrusion

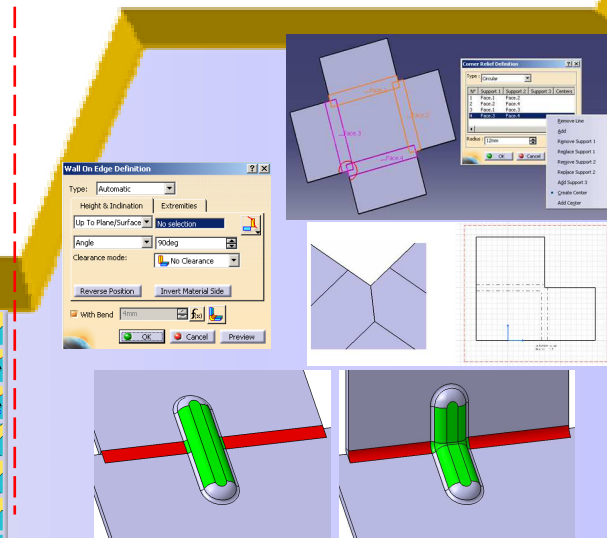
Design entirely with GSMD thanks to transformation features

Design complex shapes with double curvature hopper

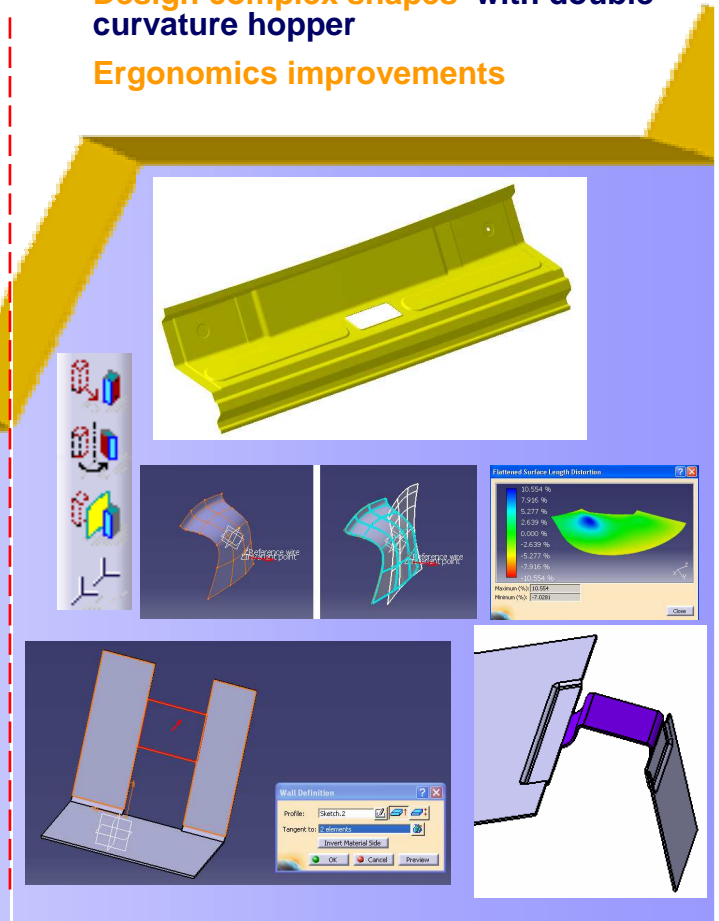
Ergonomics improvements



V5R15/V5R16



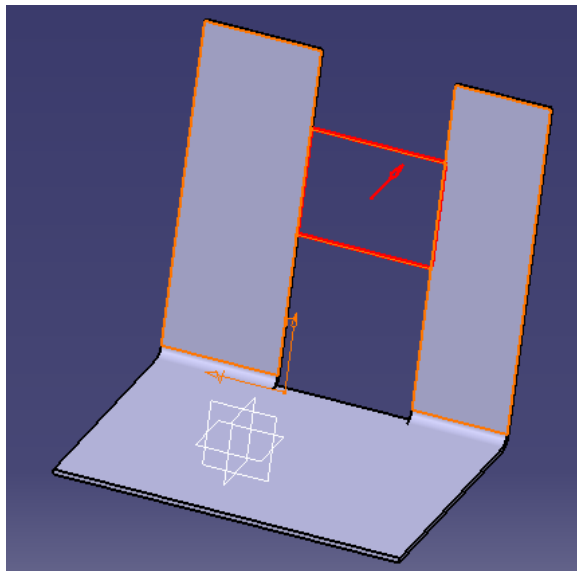
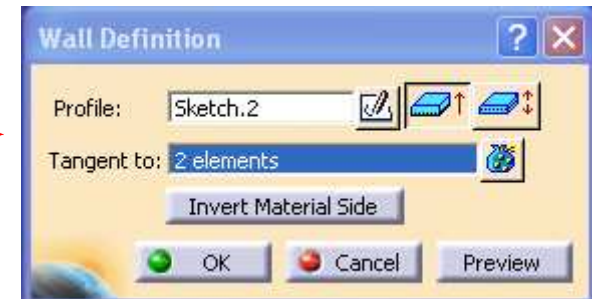
V5R17



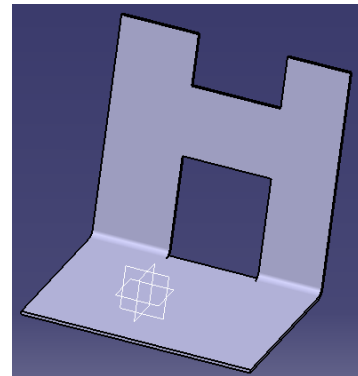
V5R18

Multi connected wall

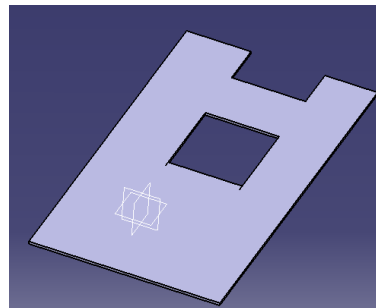
- New ergonomic allowing to define the wall sketch at the middle of the thickness.
- Capability to connect a wall to several faces or features



Folded view

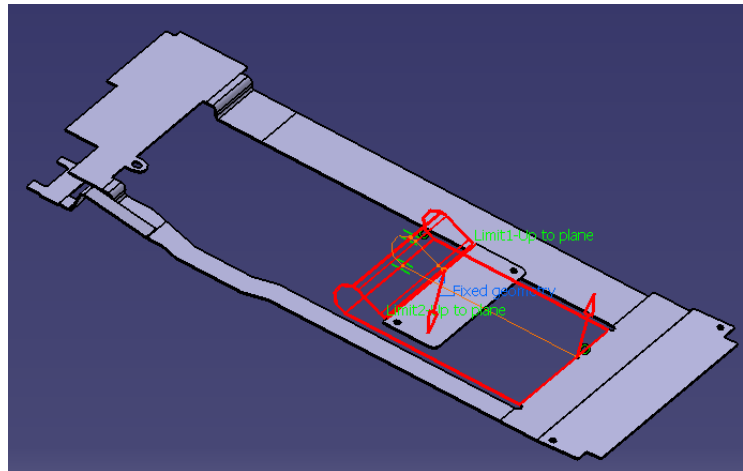
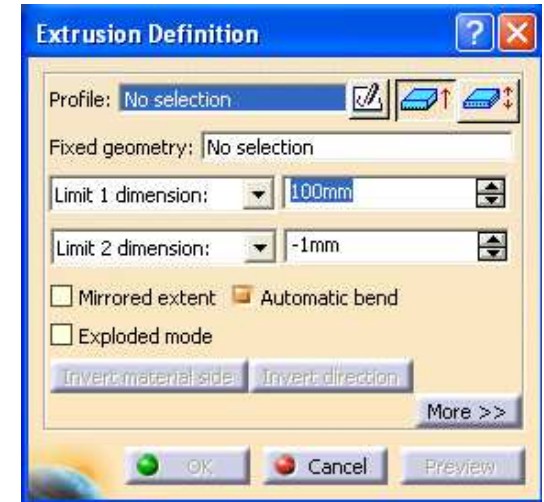


Unfolded view



Extrusion

- New ergonomic allowing to define most of the options in the 3D.
- Explode mode.
- Capability to select a profile containing any kind of geometry
- Capability to specify the fixed area
- Automatic Bend
- Automatic connection to the Sheet metal part
- Tears selection
- KFactor management

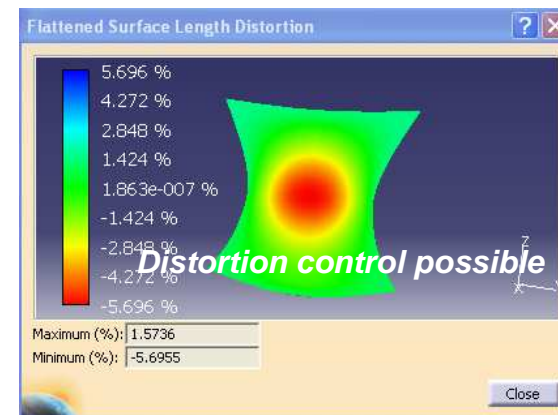
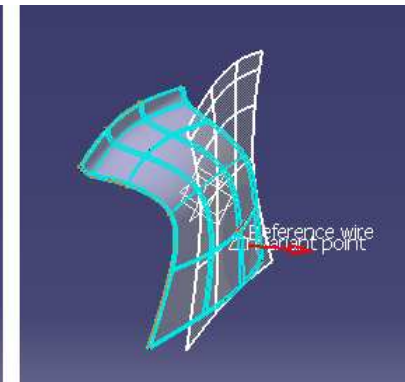
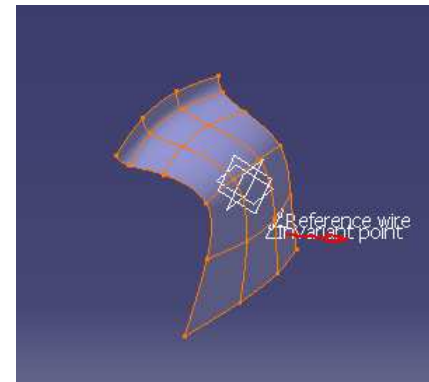


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Double curvature hopper

- Unfold of complex surfaces (based on DL1) **increasing dramatically the number of parts that can be designed with GSMD**
- Automatic valuation of invariant point and reference wire.
- **Display distortions management when surface is not ruled.**

P2 ONLY →



Transformation feature

- Transformation feature specialized for sheetmetal to support full design within sheetmetal

- Translation
- Rotation
- Symetry
- Axis To Axis

