Release notes Detail version 9

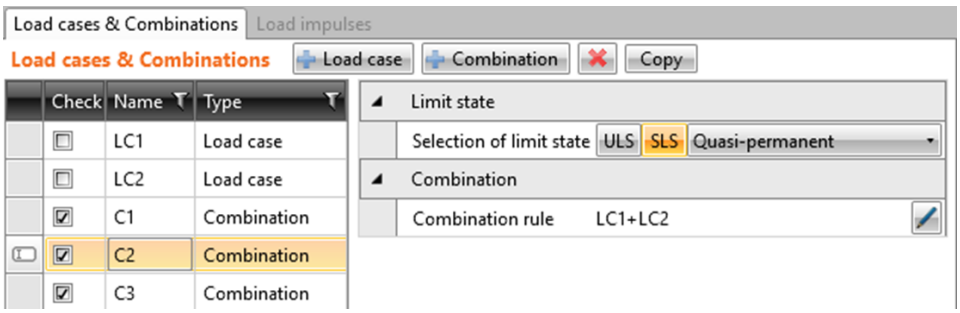
Highlights

For years, we have been researching new ways how to reinforce and code-check concrete details of all topologies and loading. In 2016, we partnered up with one of the top technical university worldwide – ETH Zurich – to create IDEA StatiCa Detail. This release brings second version of this revolutionary tool and demonstrates our work on a unique solver, material models, GUI and output report.

Calculate yesterday's estimates with IDEA StatiCa!

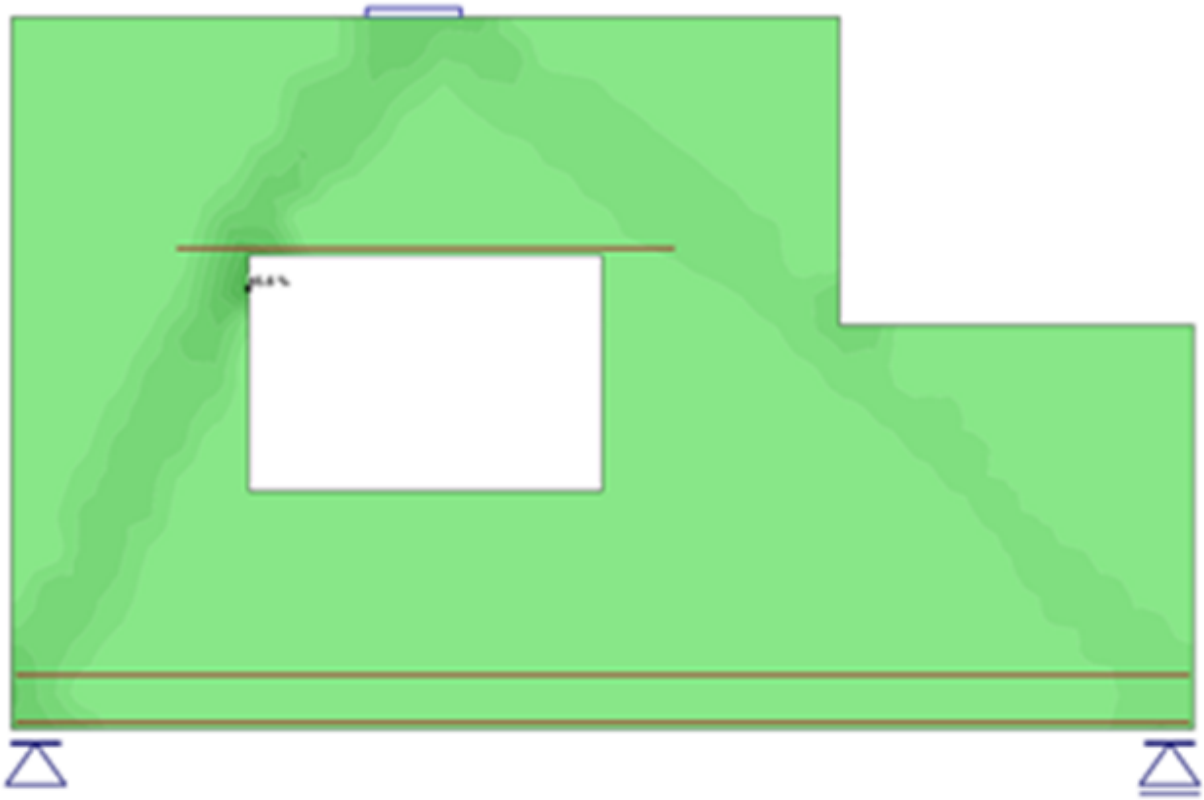
Serviceability limit state (SLS) checks

Serviceability limit state (SLS) checks are now implemented to allow a full code-check for standard and non-standard beam details, walls, frame joints etc. The very first step into SLS in Detail application is in the definition of Loads. There are new switch buttons in the definition of combinations with a combo box for proper selection of SLS combination type. Partial factors are available in the same way as for ULS combinations under pen icon.



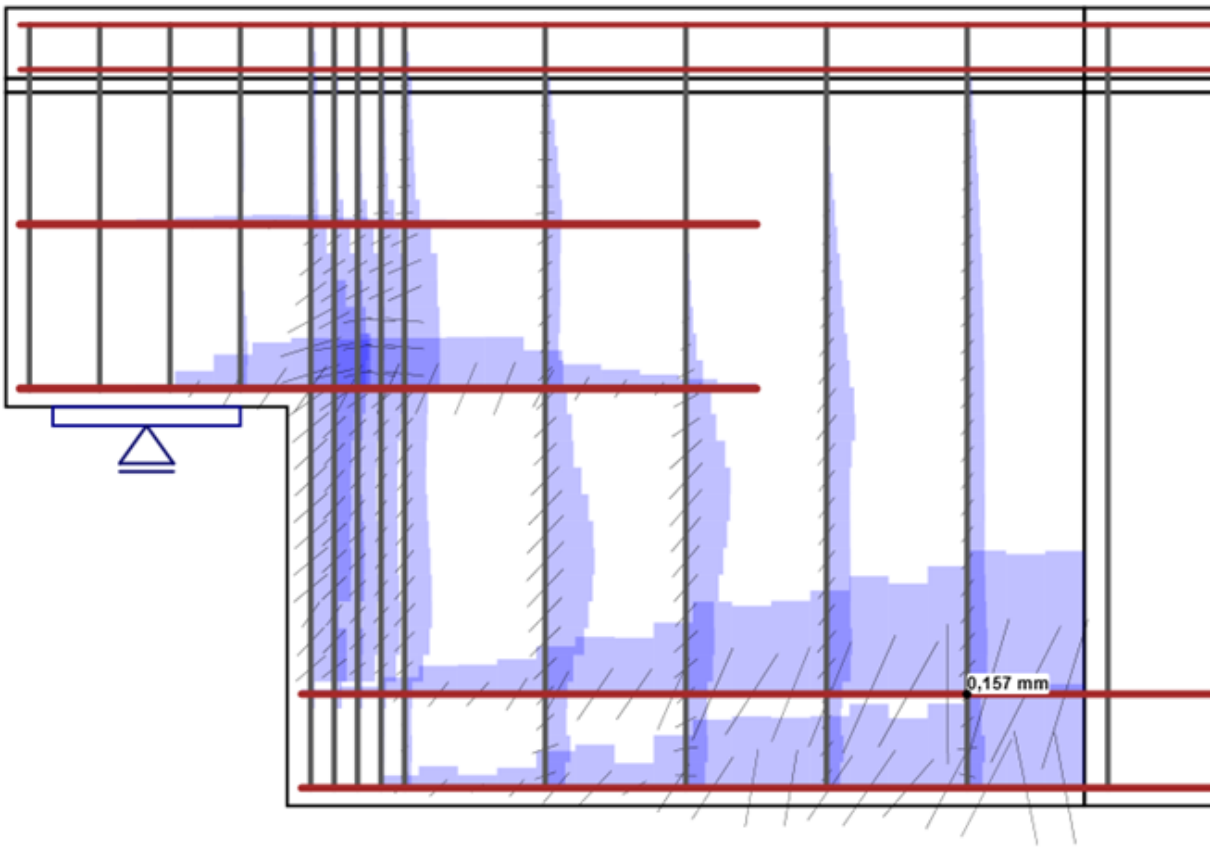
Stress limitation

Stress limitation check for SLS is performed for both characteristic and quasi-permanent combination with the respect to limit values for concrete stress and the stress in reinforcement. The difference between ULS and SLS stress limitation check is in considered combination and its load intensity.



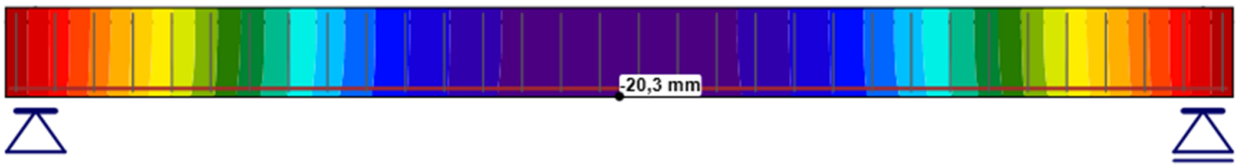
Crack width

Crack width has a major impact on the durability of the design. There are two models hidden in the background of IDEA StatiCa Detail to cover both short-term and long-term conditions with the respect to creep coefficient displayed always as ST/LT suffixes.

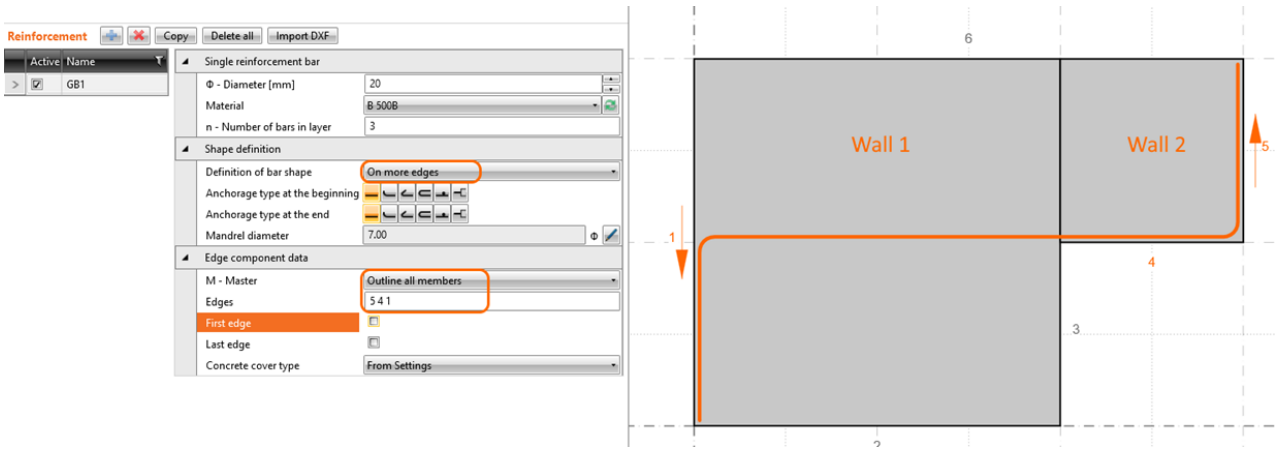


Deflection

Deflection check uses the same approach as we explained in paragraph for crack width. Two models are used to cover short-term and long-term deflections. The only limit in current version is the impossibility to show the deflected shape once we deal with a trimmed end in the model (typically 1D member details).

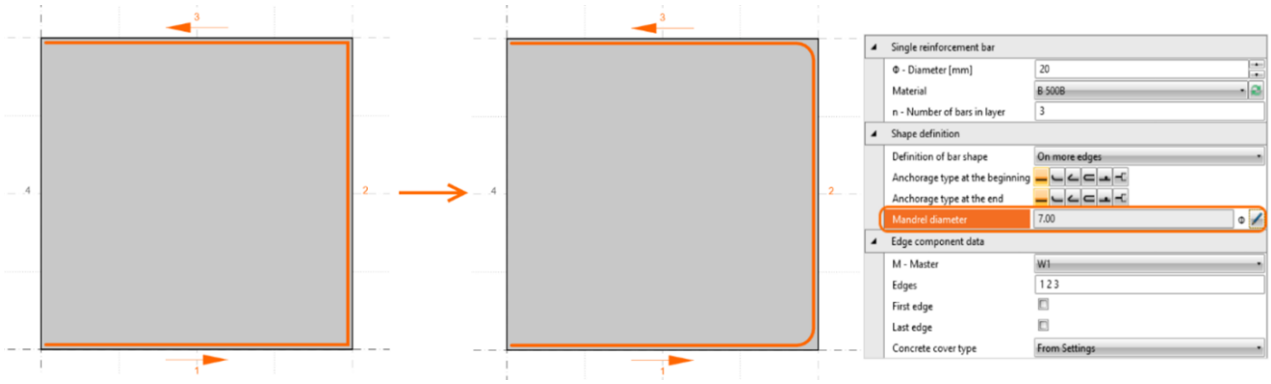


Reinforcement in more members



As we want to make the reinforcement process as simple as possible, we added a new possibility to define the group of bars on the outline of all members in the model. Once you select this option, you should see the edge numbers in the scene to ease your input of correct numbers.

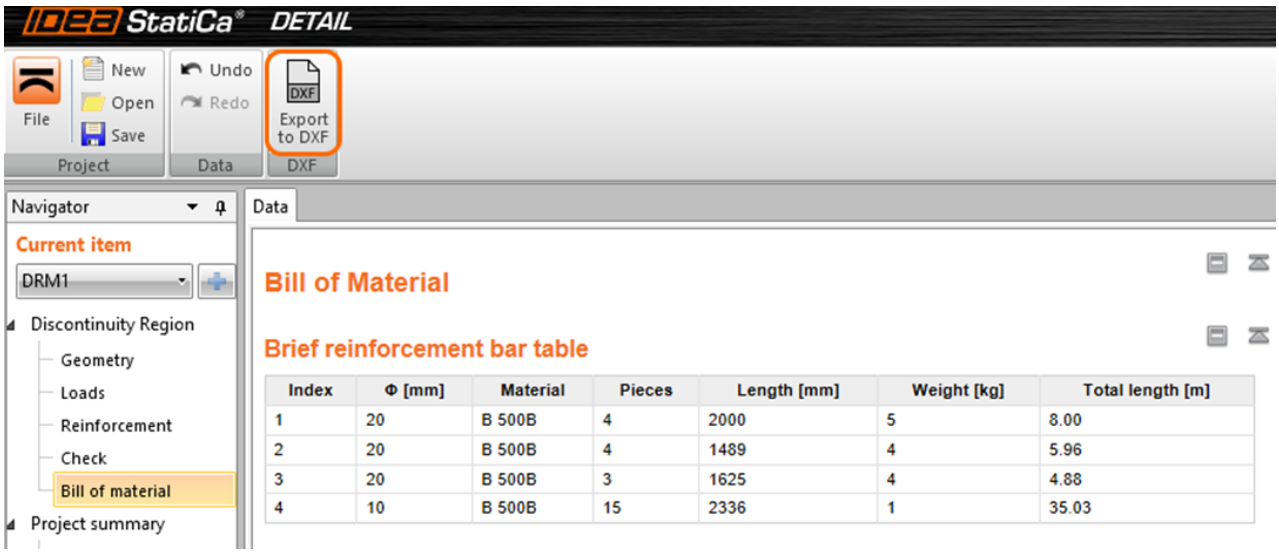
Mandrels in reinforcement



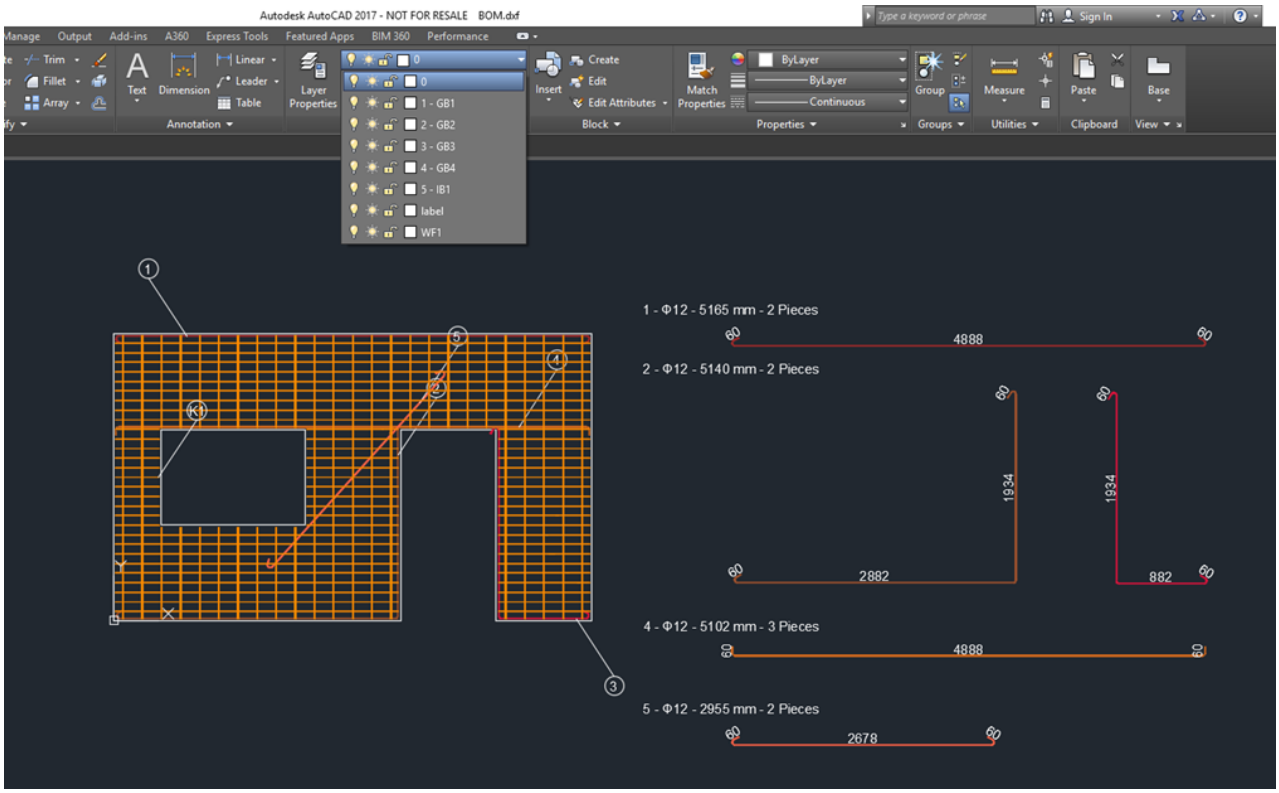
The definition of a group of bars as a polyline or on more edges now makes mandrels at the corners. The default setting is based on code provision (4 profiles diameter under or exactly 16 mm and 7 profiles for diameters above 16 mm) or can be set manually by pen icon.

Bill of Material - 2D DXF export

There is a new option to export the bill of material into 2D DXF file placed in the ribbon in Bill of material tab.

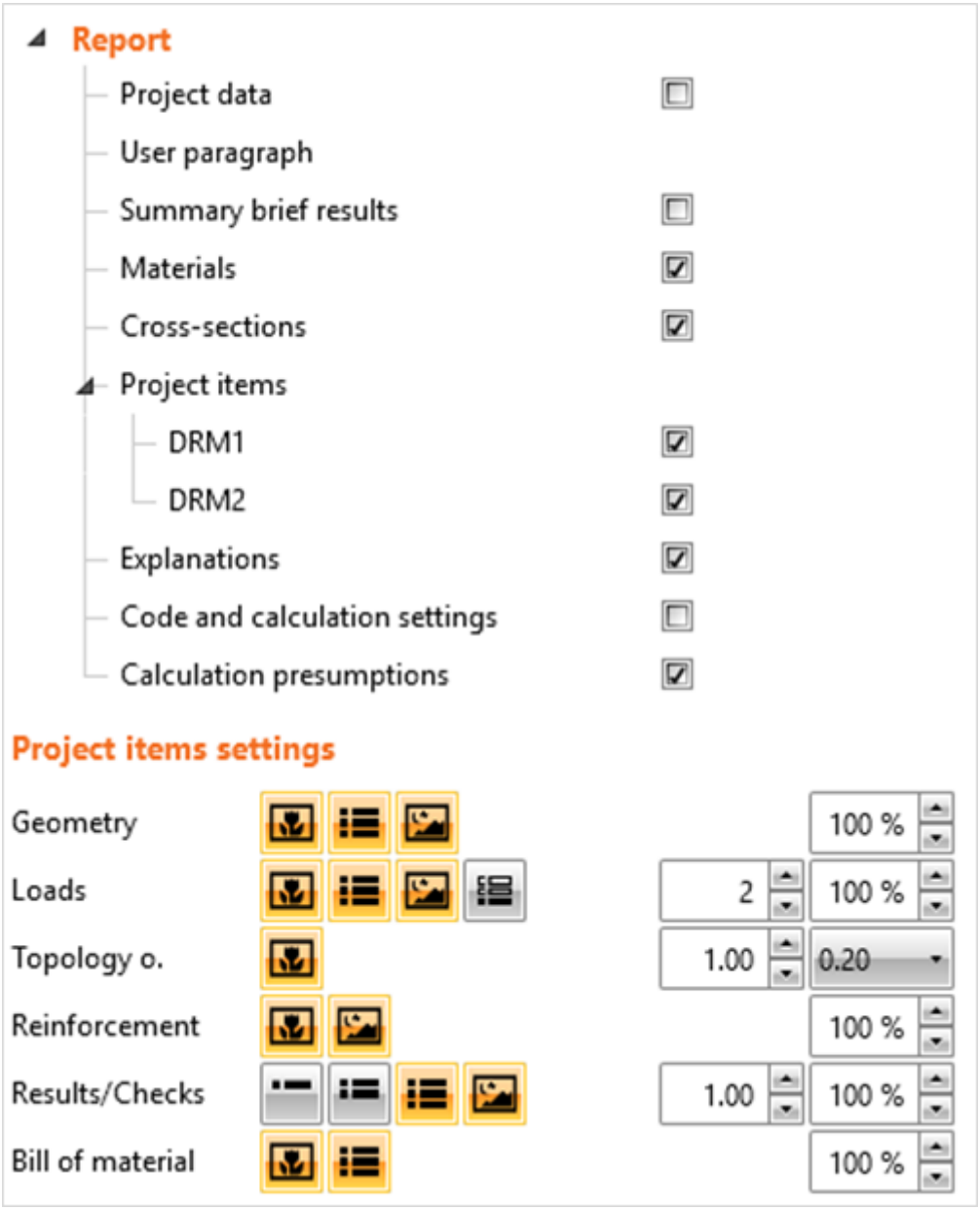


Once we export and open the file, we can see the shape of detail and reinforcement items sorted into basic layers.



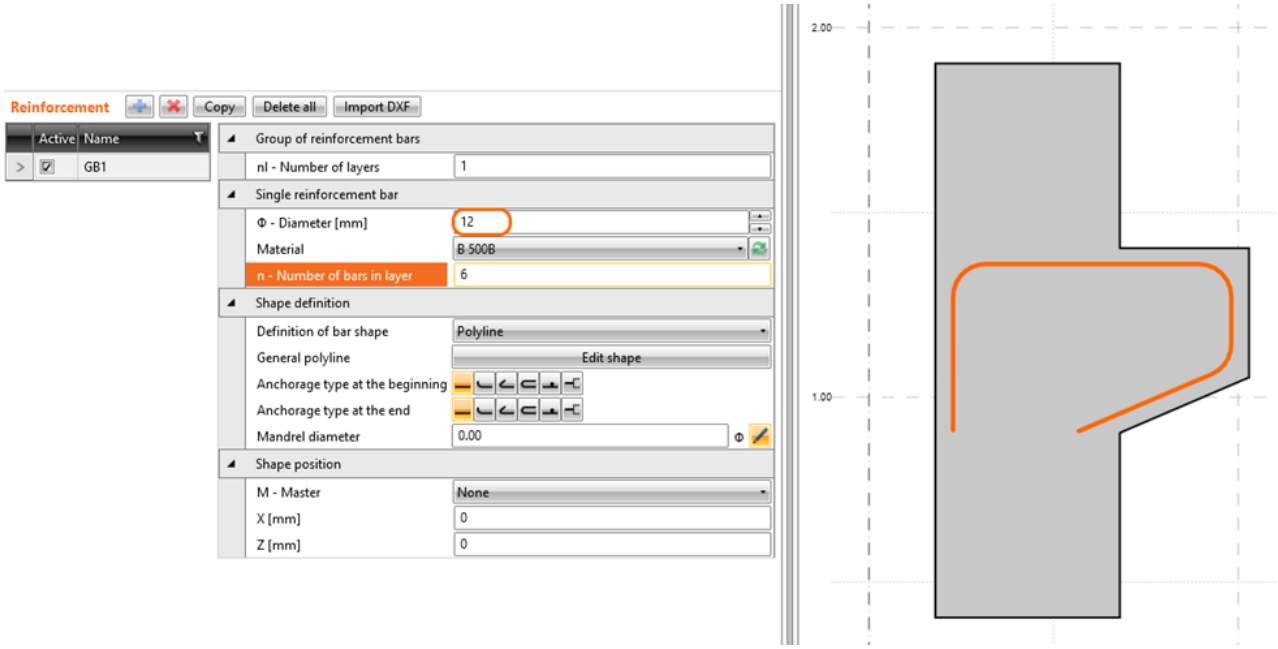
Report

A new controller for report settings has been adopted from other IDEA StatiCa applications, with whole drag&drop functions, custom report chapters (available in project data or discontinuity region tabs under pen icon) and other personalization of the final product. These settings can be saved once they are made and re-used in any other project by the buttons on the ribbon.



DXF import improvements

DXF import now reads and applies the thickness from the global width set to the polyline in DXF file. As IDEA StatiCa Detail reads also arc segments of the polyline, they are discretized in the background and there is default mandrel diameter set to 0. If we import orthogonal shapes and want to round the corners, we can always specify mandrel diameter and IDEA will do the rest.



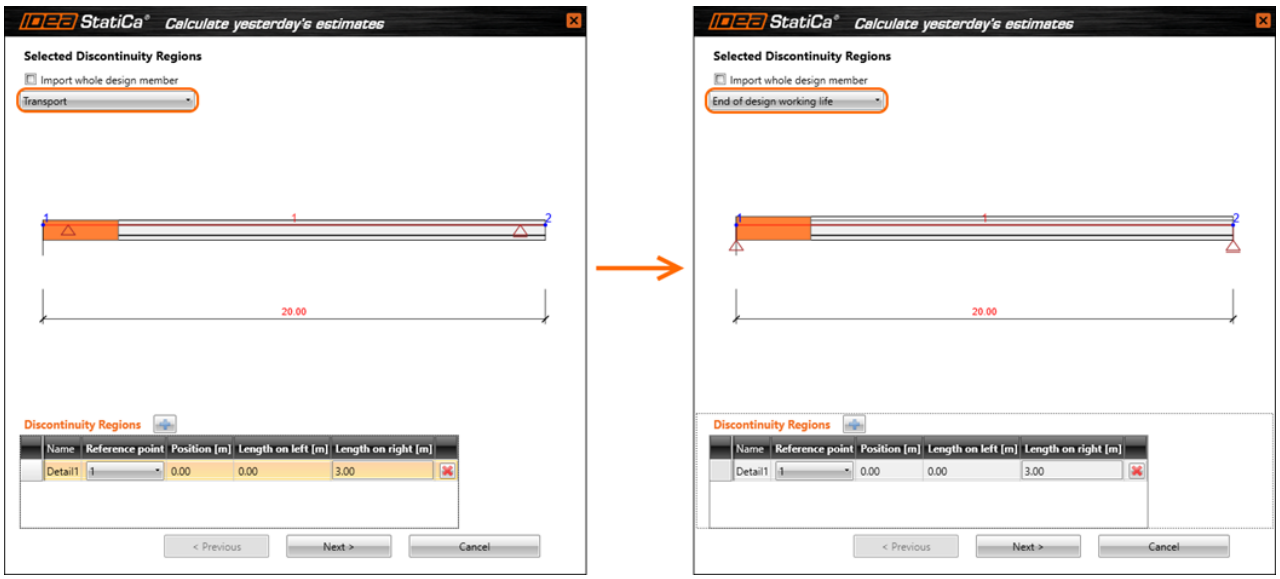
BIM workflows with Detail

IDEA StatiCa Detail works as a standalone application where you can define the topology from scratch. Of course, it is much easier to leverage on a model created in other application. IDEA StatiCa Detail is still a young application and majority of BIM links are still yet to come. What we have in version 9.0 is the link with IDEA StatiCa Beam and IDEA StatiCa BIM.

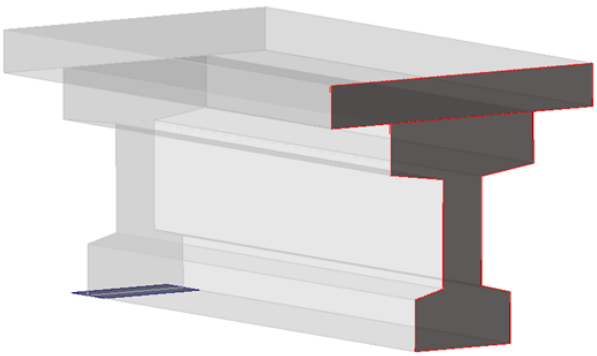
Link with IDEA StatiCa Beam

- Construction Stages

The wizard is now able to export the beams with the respect to the construction stages. The wizard contains new combo box for selection of desired construction stage and selects corresponding combinations for export. Effects of prestressing are imported as point loads, but the tendons themselves are not to be found in the model. They will be represented by the effects of internal forces.



- Composite cross sections



Composite concrete-concrete sections are now included in export to IDEA StatiCa Detail. Parts exported into IDEA StatiCa Detail application are governed by the construction stage you select in the previously mentioned combo box. If the composite slab exist in selected CS, it will appear in Detail model.

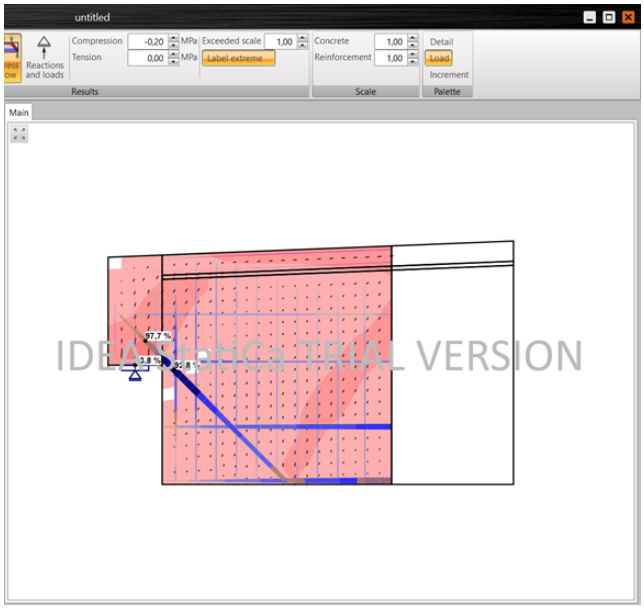
Miscellaneous

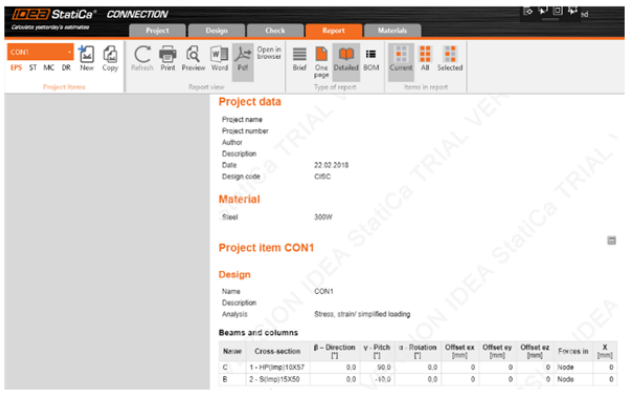
Framework for trial and academic version

- Trial version

A new approach for the trial version was implemented. 14-day trial codes will be sent out to each prospect after filling out a web form. Prospects can activate **only one trial on one particular PC or laptop**. The background of the report and various scenes of the

software will be watermarked. A new expiration countdown is placed on the top of the main window.

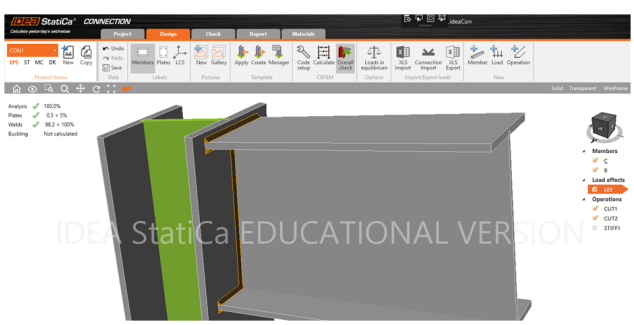


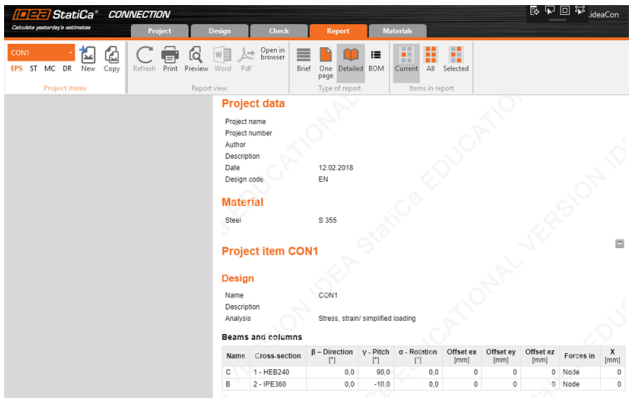


- Educational version

A new approach for the educational version was implemented. 365-day trial codes will be sent out to each prospect after filling out a web form. The background of the report and various scenes of the software will be watermarked. Only PDF printout with watermark is possible.

Projects from **Educational** version can be opened/used in the **commercial** version (but, they will be permanently “marked” and limited).

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Description
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