

## Designed with Dlubal Software...

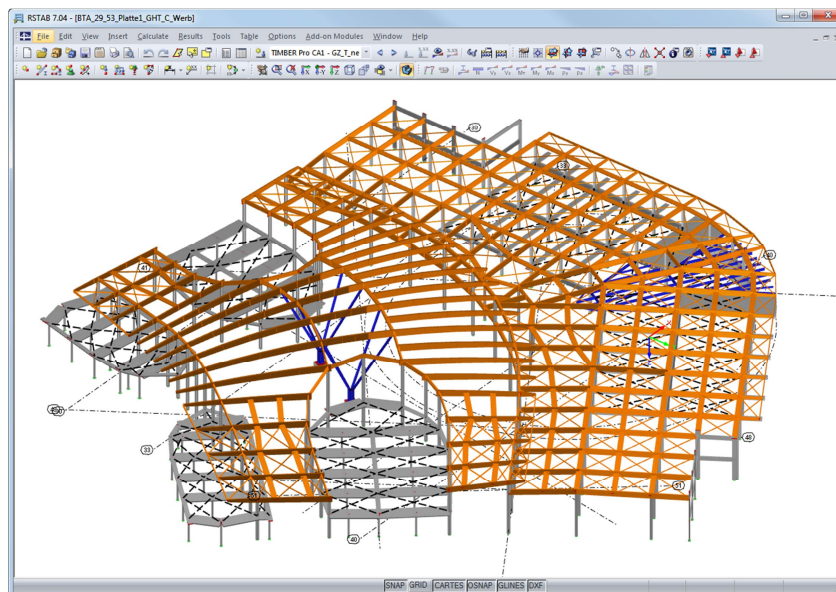
### G3 Shopping Resort in Gerasdorf, Austria

In Gerasdorf, a municipality in the north of Vienna, the G3 Shopping Resort is currently being built. It represents the largest construction project that has ever been announced for cross laminated timber, being the biggest construction site for timber in Europe. More than 8,000 m<sup>3</sup> of cross laminated timber and approx. 3,500 m<sup>3</sup> of glued-laminated beams were used for the construction work. Both the architecturally sophisticated design and the complex structural calculation are penned by the Austrian Dlubal customer ATP Architekten und Ingenieure from Vienna. The structural analysis was created under the leadership of Gustav Trefil.

The building is Austria's largest shopping center that has ever been built in one building phase. Its opening is planned for summer 2012.

### Giant Wave Made of Timber

The project's architectural as well as structural highlight is the huge timber roof rolling across an area of 60,000 m<sup>2</sup>, spanning the building like a giant wave. It has been designed by the Austrian company Graf-Holztechnik. The primary construction consisting of heavy glulam beams is based on steel and reinforced concrete columns with a height of up to 20 m. The structure supports the record amount of approximately 8,000 m<sup>3</sup> of cross-laminated timber slabs. The three- and five-layer panels have a



Part of the structure designed in RSTAB (screen shot: Dlubal)

thickness of 12 to 24 cm and a span length of up to 10 m. Designers have calculated the thickness for each slab in order to dimension the construction as slender and efficient as possible.

### Environment-Friendly and Visually Appealing

The project's energy balance is really impressive. Due to the use of timber as construction material, more than 23,000 t of CO<sub>2</sub> has been saved. Because of the high roof level (up to 20 m) the timber structure was installed and "ground in industry quality" in order to obtain the ideal balance between costs and visual appearance. The timber construction is largely visible, making a significant contribution to the desired feel and comfort

factor of the Shopping Resort.

Companies participating in construction:

#### Building owner

HY Immobilien Ypsilon GmbH, Vienna, Austria (subsidiary of BAI Bauträger Austria Immobilien GmbH)

#### Main contractor

Leyrer + Graf Baugesellschaft mbH  
[www.leyrer-graf.at](http://www.leyrer-graf.at)

#### Timber construction

Graf-Holztechnik GmbH  
[www.graf-holztechnik.at](http://www.graf-holztechnik.at)

#### Planning

ATP Architekten und Ingenieure  
[www.atp.ag](http://www.atp.ag)

#### Software

Dlubal Engineering Software  
[www.dlubal.com](http://www.dlubal.com)



Aerial view of Shopping Resort Gerasdorf during construction



Interior view of roof construction consisting of timber (photos: ATP)