September 2009

Latest News

- The **new Scia Engineer Scaffolding Solutions** brochure is available and can be downloaded.

- All **Nemetschek Engineering User Contest Prizes** have been handed over. We invite you to have a look at all prize giving pictures.
- Nemetschek Scia became member of the British Precast Concrete Federation
- **Scia Engineer**, first software certified conform to the Eurocode 3 (EN1993-1-1) by the CTICM

Events

- Nemetschek Scia invites you to the Deltares geotechnical software presentation day on September 17th 2009.
- Nemetschek Scia will be present at Staalbouwdag 2009 Luxembourg on October 2th.

New Software Updates

- Customers can download the **latest service packs** in our secured download section.
  - **Scia Engineer 2009.0.325**
  - **Scia Steel 2009 SP2**
  - **Allplan 2009 HF1**
  - **Allplan Precast 2008.2a1**
    (see also What's New)
- Get an automatic notify through RSS when a **new Scia Engineer Service Pack** is available.

Training

- Visit our **Free** interactive eLearning tool!

- We offer group trainings for **Scia Engineer**, **Scia Geotechnics**, **Allplan**, …
  Please consult our training agenda and register online …
- Interested in an individual customized training at your offices? Please contact Mrs. K. Verhille.
- Online training calendar 2009. Subscribe online...

- Any questions? Put it on the **Scia Forum**! Register...

Topics of this month:

Nemetschek Scia continues internationalisation

The Nemetschek Engineering User contest has shown the increased globalisation of engineering services by our clients. The published 122 engineering design projects concerned structures built in 16 countries, from Australia over Turkey up to Finland. The company Nemetschek Scia should be present where its clients are active, therefore **we are pleased to announce three new representations**:

- In **Sao Paulo (Brazil)** a partnership is signed with **Arl Vasconcellos** (Gestao Empresarial na Construcao am Aco); Mr Vasconcellos is a recognised specialist for steel structures. Currently he is teaching a course "New perspectives on design and fabrication of steel structures with Scia Engineer" at the ABCEM (Association for Steel Structures in Brazil)
- In **Madrid (Spain)** a new Scia agency is opened under the management of **eng. Miguel Angel de Mingo**. Spain has an unseen residential construction crisis, yet is still growing in the infrastructure segment
- In partnership with **Nemetschek North America (producer of Vectorworks)** a new Scia division is set up in **Columbus, Maryland (USA, close to Washington DC)**. This division is targeting on the US market, principally the segment of engineering consultants active in public constructions (infrastructure, energy plants, health and education).

The integrated (one software platform) approach of Scia for modelling, analysis and design of a broad range of structures is appealing to a wide audience. Instead of using different programs for every structural type - which is common practice at many consultants - efficiency and quality of design documentation (reports and drawings) greatly increase with the Scia Engineer solution.

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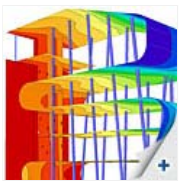
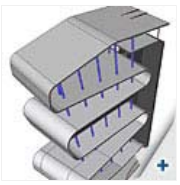
Office building `Facelift Umicore' (BE) by Ney & Partners (BE)

About Ney & Partners
Ney & Partners is a structural engineer consultancy; it has its seat in Brussels. From the foundation in 1997, the office has worked with an active view on the art of engineering through the integration of the different civil works disciplines. This integration and optimization of structural elements aim to overcome the traditional, hierarchic assembly of constructive solutions. Innovative bridges, roof structures and works of art developed by the office, express most clearly this vision.

About the project
With this project the Belgian company Ney & Partners has won the `Nemetschek Engineering User Contest 2009' in the category 2: CAE Houses and Buildings.

This spectacular office building consists of a reinforced concrete shell that slowly 'climbs' to the roof of an existing building. The three spaces that are embraced by this shell, which has a thickness of only 30 cm, are not aligned but they slightly rotate one above another. The nine-storied building, with a footprint of only 15 m by 30 m, is structurally independent from the existing building and gets its stiffness from the co-operation between the shell, the 11 inclined columns and the eccentrically placed core. The foundation of the building is made from 36 screw piles with an average length of 11 m which reach to a lower stiff clay layer but also get their strength from the friction along the shaft of the piles.

The use of Scia Engineer
Scia Engineer was used to quickly and efficiently model and analyse several solutions. So from the early designing phases on, important decisions could be made and this resulted in an aesthetic, structural and economical justified solution. Scia software made it also possible to analyse the initial and final deformations in function of the real geometry, the age of the concrete and the necessary theoretical reinforcement. Sophisticated 3D-modelling was necessary to be able to assess the horizontal distortions on both long-term and short-term. A lot of attention was also paid to the introduction of construction stages for the removal of the formwork and to intermediate strength effects.

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Allplan Engineering: How to create a freeform lofted solid?

Tips &Tricks

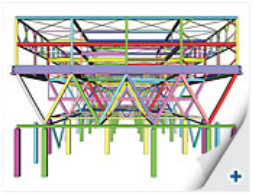
A **lofted solid** is a shape created by **connecting a series of cross sections**. In Allplan, there are two basic functions that can create a lofted solid: "tessellated solid" and "ruled solid", but these are restricted to parallel sections. So how can you create a solid based on a **number of sections along a free path**? We **think out of the box** and use the "**bridge/civil engineering component**" …

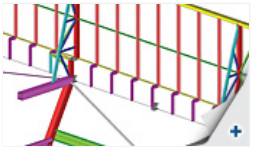
For this, we need (at least) two sections and a path, the procedure goes as follows:

1. In 2D, draw **two sections** (one for the bottom, one for the top) and save them as symbol.

Software Gallery

► **User Contest Nominee Cat 2.**
Ingenieursbureau Stendess N.V. (B)
Office buildings for Drisag (B)

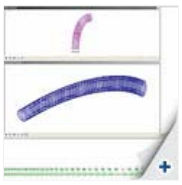




2. Design your **freeform path**:
- draw a spline and polygonize it (use “convert 2d entities to 3d”and “hidden line image”, then copy-paste the result in your drawing file)
- create a "composite elemen"t from the poligonized spline and export it with “file interface”

3. Create the **lofted shape** with the “bridge/civil engineering component”:
- “import route”: choose the path you have just exported as a composite element
- insert your cross sections: one at the top and one at the bottom
- "export route" to create the shape

4. To edit this element, it has to be **converted to a 3D solid**: use “convert elements” and choose “bridge/civil engineering component”.



The **lofted shape** can now be handled as a **general 3D solid**.

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