



Pellikaan Working on Next Step in BIM with Solibri **EFFICIENT AND ACCURATE CHECKING AND COMMUNICATING**

The international main contractor Pellikaan favors an integrated approach for its construction projects. They execute Design & Build projects, using their experience in Maintenance and Operations to optimize results. The collaboration and liaison that are considered to be pillars of BIM fit perfectly in this holistic approach, so in 2009 Pellikaan started working with BIM. Pellikaan joined the Dutch BIM workgroup “Virtual Building, just do it” organized by the Dutch association of construction-companies (BouwendNL), focused on stimulating national developments in BIM methodology. Since then, the BIM concept is being used in all facets of the construction process, during the development phase of a project, during the preparation phase and at the implementation phase.

Thus, for the new sports complex in Nieuwehorne, Pellikaan contacted a number of parties in the supply industry where the different aspect models were compared based on OpenBIM.

BASED design & engineering from the city of Tilburg, as the independent BIM manager was asked to deploy Solibri Model Checker to optimize the preparation process. It was recognized that better control and more effective communications deliver time savings and increase the quality of the project.

Design & Build: Construction Company in the Lead

Managing director Roy Pellikaan likes to speak about the role of the contractor as a director: *“In our design & build projects Pellikaan feels like a fish in the water when it comes to directing*

the construction process. Building is something you don’t do alone, but with the right partners around you. Bringing in the expertise of your partners should be done at the right time, in the right way. The ability to direct a project using the BIM methodology demands a certain level of knowledge on this subject by your partners. Collaborating on a BIM project therefore requires all parties’ patience, confidence and a positive attitude when it comes to knowledge sharing. With the right partners you increase the level of knowledge of the BIM team. Together you can explore new possibilities of BIM for a smooth workflow. “

Getting Confident with Working in a BIM

Collaboration on a BIM project is not obvious from one day to another. You

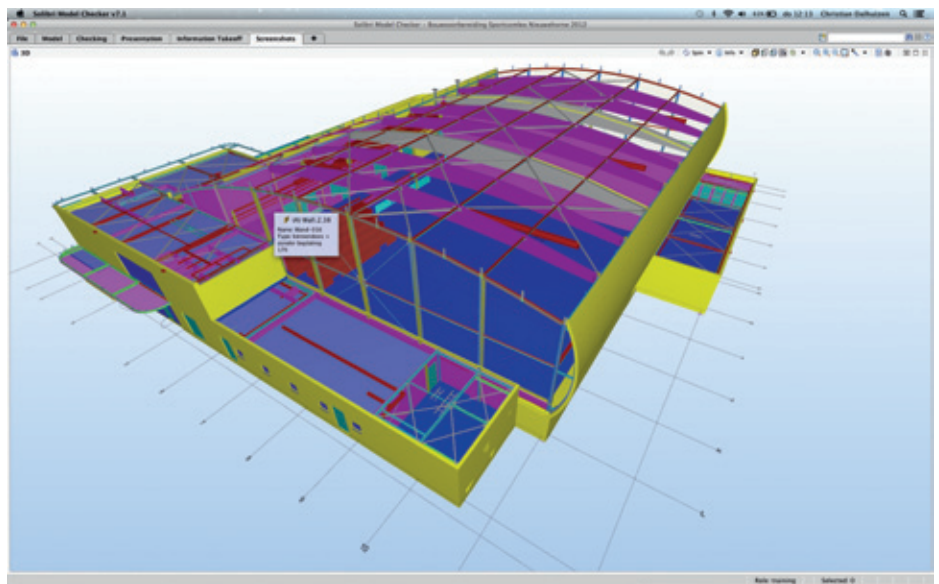
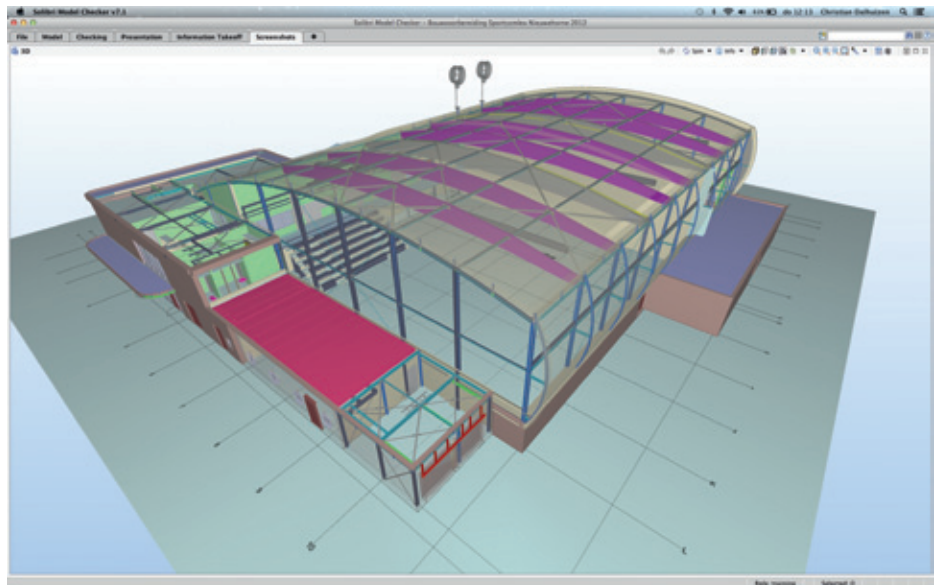
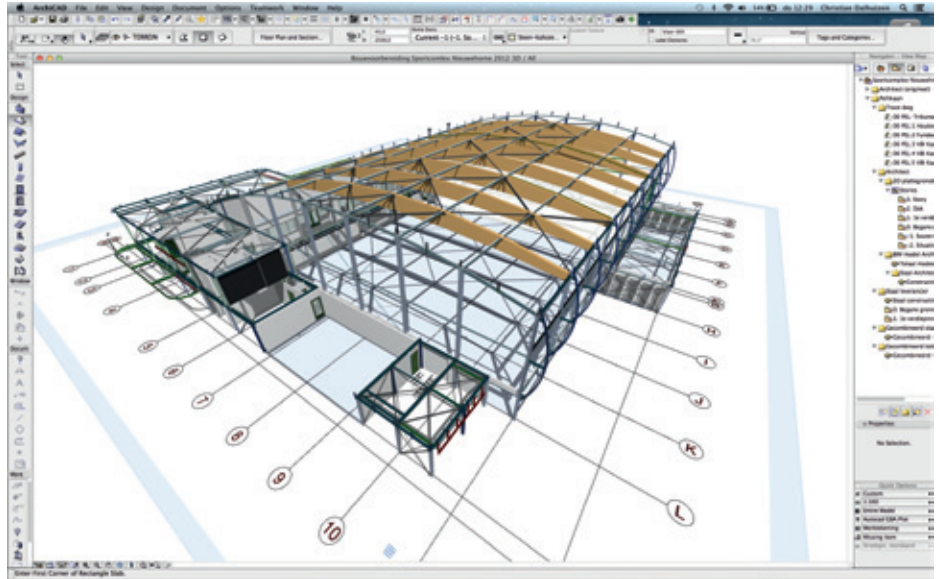
must be familiar with working in this new environment. Within Pellikaan they do this by taking small steps. Realistic goals are set for each activity. The accomplished successes provide an ever-increasing enthusiasm for working with BIM, making this method slowly but surely embedded into the organization. This approach is shown in the project Nieuwehorne. Due to the growing enthusiasm in the workplace early in in the process, soon it was decided to search for BIM partners in the supply industry in addition to the three major disciplines (architecture, construction and equipment).

These partners were found for the steel construction and system floors, two major components of the project. For this project Nieuwehorne partners like Strategy Architects (ArchiCAD), Engineering Verhoeven Leenders (Revit), Construction Company Hulleman vof (Tekla) and VBI teamed up. By exchanging information through IFC, sub models were compared visually with each other very quickly.

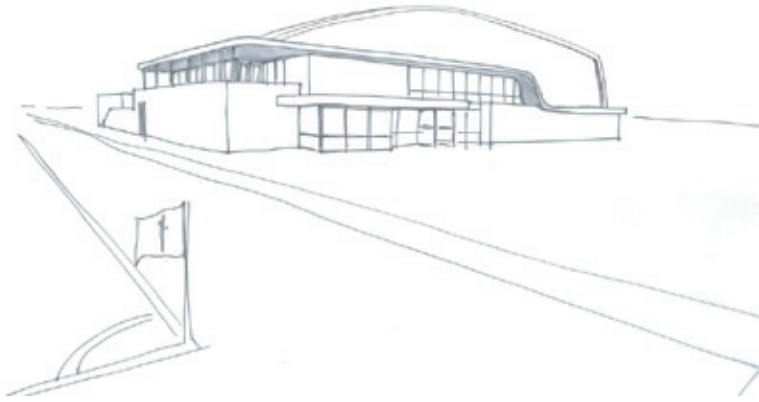
Solibri as a Comprehensive Tool

Checking visually and finding ‘issues’ between several models can be a difficult and a time consuming task. Pellikaan explains: *“At first the check was done by generating many sections of the 3D model. In fact this method is going back to the old familiar 2D methodology. And also, not all problems were found this way, as it turned out later when we started to use the Solibri Model Checker.”*

In order to optimize the control process, Pellikaan asked their BIM partner, BASED Design & Engineering, to compare the models again, now with deployment of Solibri Model Checker. Marcel van Bavel, owner of BASED, explains: *“We are familiar with the way of working within Pellikaan. Therefore we were able to deploy Solibri fast and efficiently. With the use of the BIM Validation Check we first checked the quality of the different sub-models. With different Solibri Model Checker Rulesets, we compared the models. The ‘issues’ of these checks were compared with the findings of the manual controls, performed by Pellikaan’s internal BIM Coordinator. It*



View of the sports complex in ArchiCAD and Solibri Model Checker.

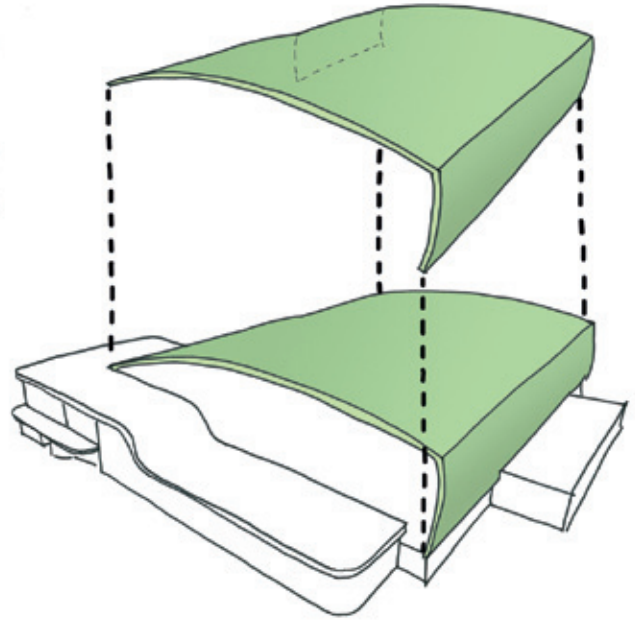


was good to see that they corresponded with each other. “

The 100% confidence in Solibri was established. Solibri Model checker additionally found more bottlenecks, which were visually almost impossible to find. Soon it became clear that checking with Solibri is much more accurate than the visual check in 3D, and much less time consuming. Another very powerful feature of Solibri is the ability to report the found issues quickly and clearly to all parties involved. Thus the discussions were effective and efficient. Solibri not only became a control tool but also a communication tool during concurrent engineering sessions with all designing building partners.

Better Results by Better Preparation

The time savings obtained by an efficient control of models is directly used to improve other aspects of the preparatory process. A higher quality of preparation results in fewer errors during execution and makes it possible to achieve a better end product, in less time and for a sharper budget. The



people in the organization are working hard to improve the preparation process with optimal use of Solibri.

Continuous Process Improvement

“Together with *BASED Design & Engineering*, we explored how ‘quantity takeoff’ and ‘classification’ can be used to support our calculation department. Again we set small goals resulting in achieving continuous small successes.”

Pellikaan is convinced that Solibri can be deployed in more areas within the organization. Roy Pellikaan concludes: “The way Solibri checks, visualizes and communicates increases the enthusiasm for BIM in the workplace. This enthusiasm is now being brought to the building site where the builders and planners use Solibri Model Viewer in their communications with the construction partners. “ ○

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