



TEKLA® Structures



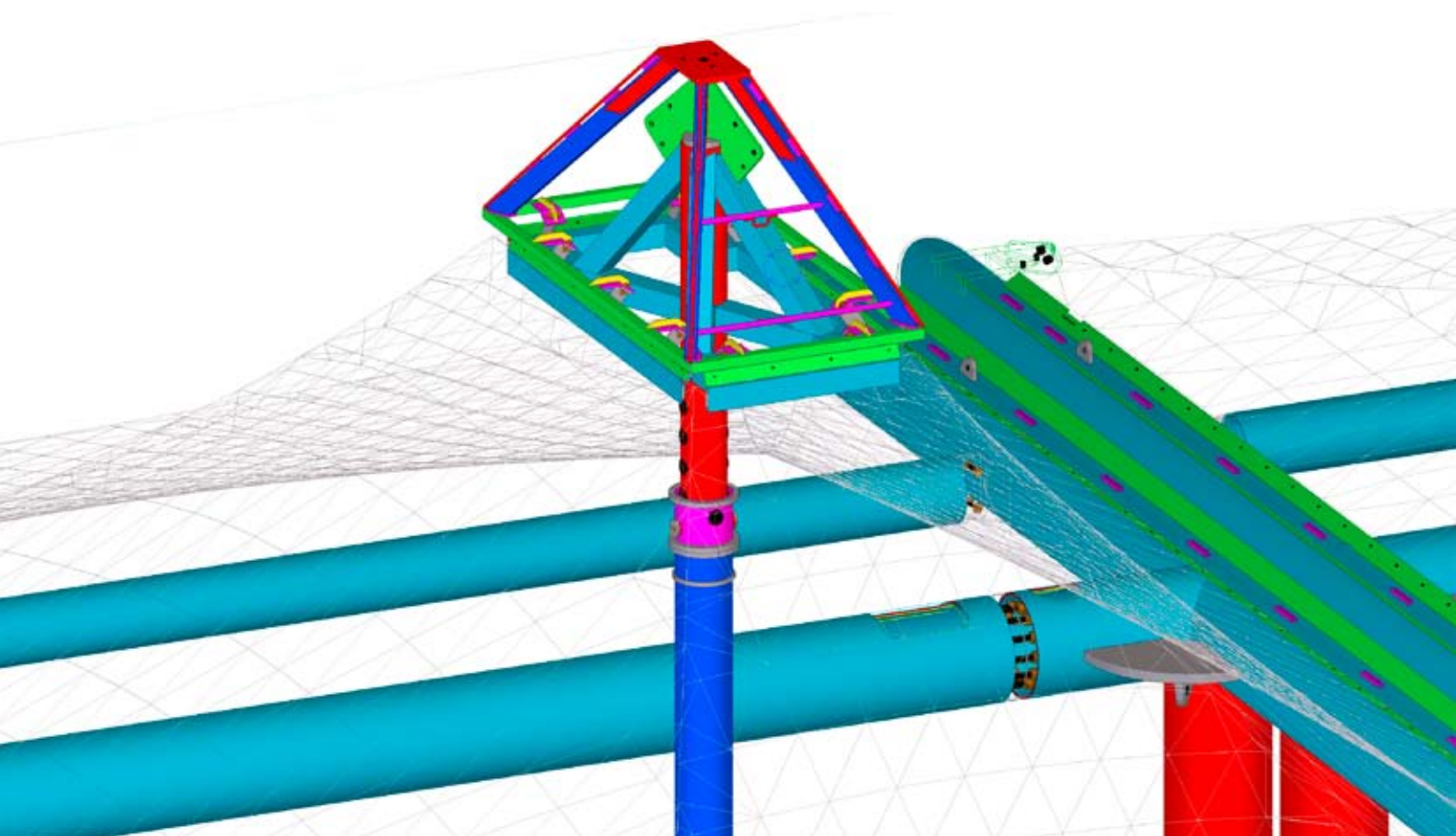
TEKLA STRUCTURES IN PRACTICE:
YAS MARINA CIRCUIT
UNITED ARAB EMIRATES



TEKLA Structures

F1 VENUE TO FINAL STRAIGHT BY MODELING

- > Organizers of the Abu Dhabi Grand Prix won their race against time not least thanks to efficient building information modeling by engineering office ICW. The Formula 1 event turned out one of the most spectacular sporting occasions of 2009, and the Yas Marina circuit is so impressive that it has been voted as the F1 Track of the Year.

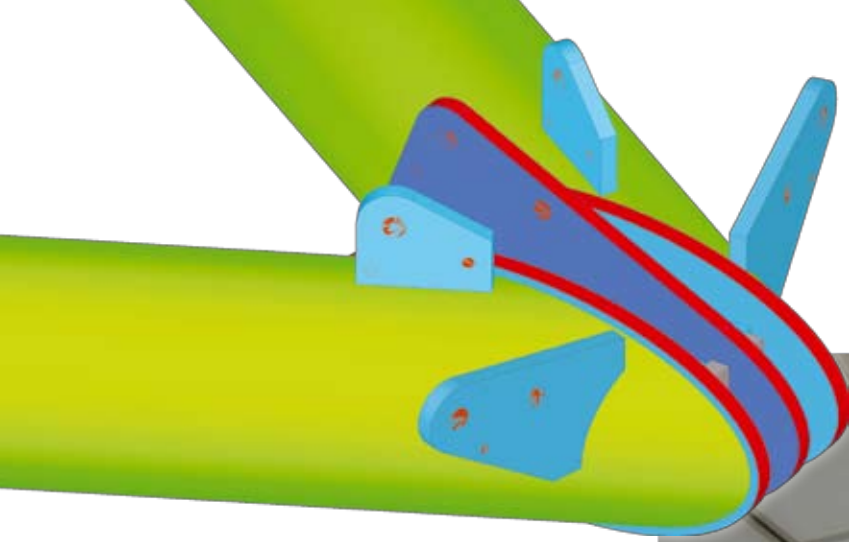




4 GRANDSTANDS AND 21 CORNERS

➤ The Yas Marina track cost a staggering £800m and is part of a massive development aimed at bringing tourism to the United Arab Emirates. Venue of the inaugural Abu Dhabi Grand Prix 2009, it was designed as an Arabian version of Monaco. Its twenty-one corners twist through the man-made island off the Abu Dhabi coast, pass by the marina, and continue through the Yas Hotel with several long straights and tight corners. The circuit has four grandstand areas, and part of its pit lane exit runs underneath the track.

The circuit was designed by Hermann Tilke, a well-known designer of F1 circuits and a racer himself. Its steel structure was fabricated in Germany by Stahlbau Queck and shipped by container ships to Abu Dhabi. Temperatures of over 40°C, the desert sand, and high humidity made the work difficult. Yas Marina is the biggest ever individual project realized in the history of Queck. Structural design was implemented by Germany-based engineering office Ingenieur-Contor Weckmann GmbH (ICW). These three companies work together in several F1 projects.



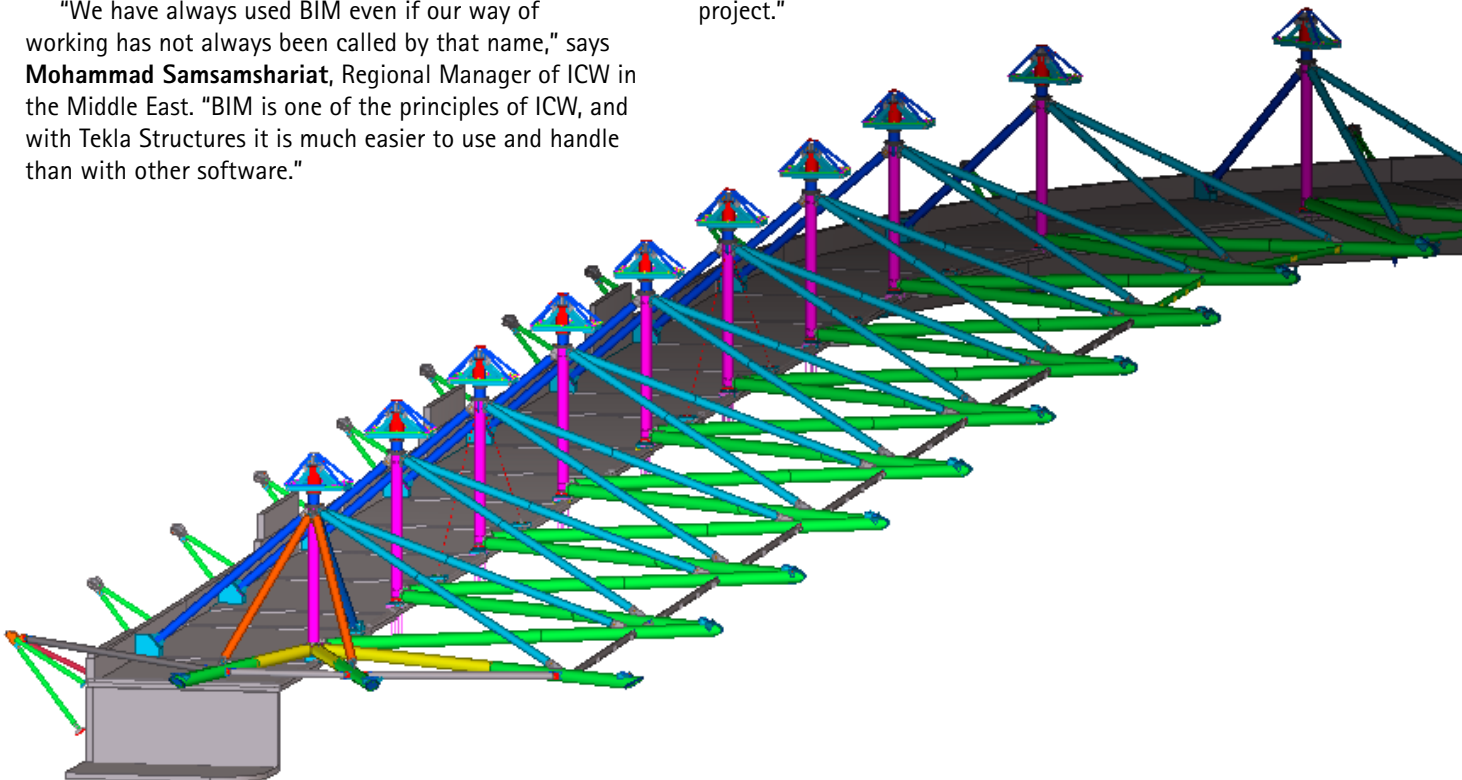
BIM MADE EASIER

> The F1 venue in Abu Dhabi was by no means the first BIM (Building Information Modeling) project by ICW. The company started piloting Tekla Structures software already in 2002 and has been using it for serious production since 2008.

"We have always used BIM even if our way of working has not always been called by that name," says **Mohammad Samsamshariat**, Regional Manager of ICW in the Middle East. "BIM is one of the principles of ICW, and with Tekla Structures it is much easier to use and handle than with other software."

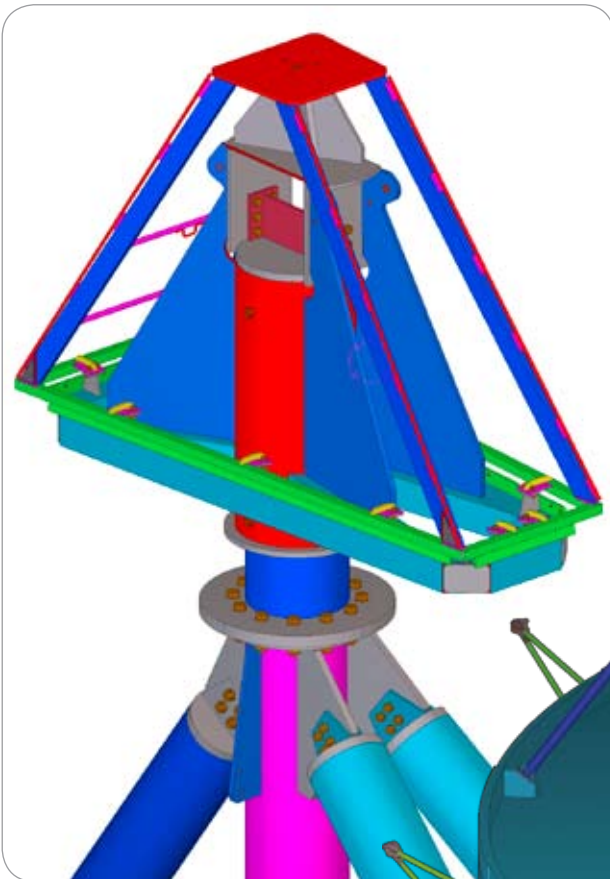
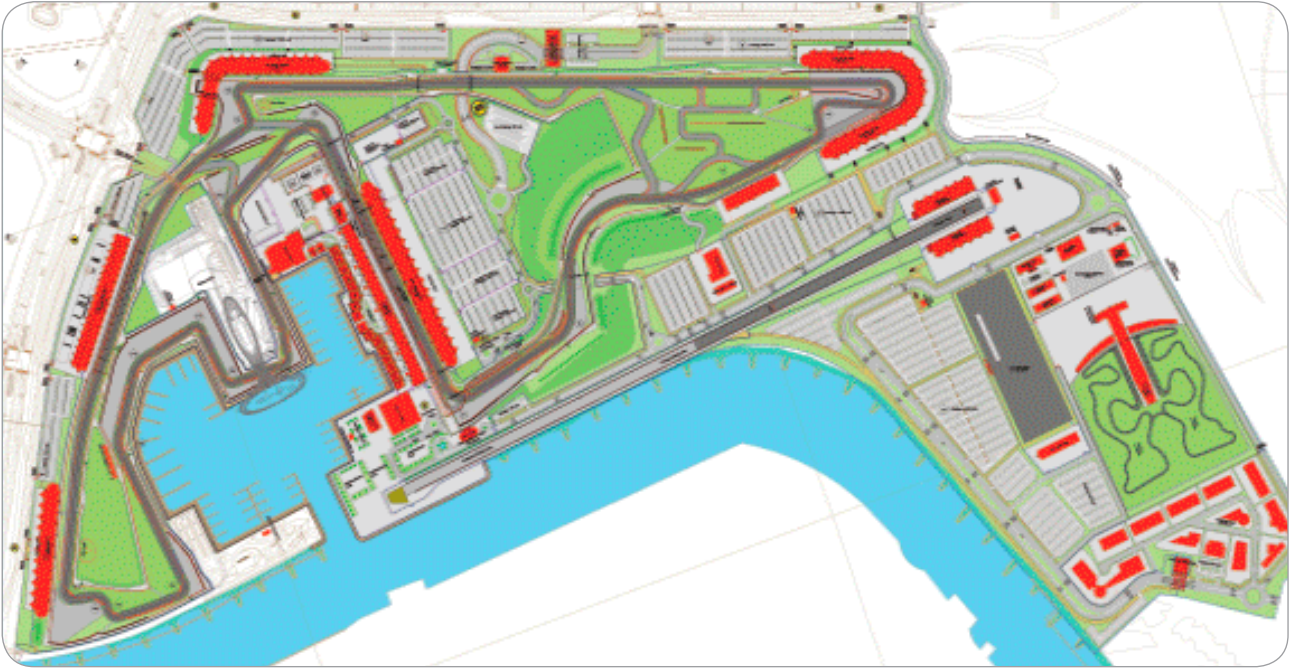
MODEL INTEGRATION

> "To improve workflow efficiency, we integrated the Tekla model with Dlubal RSTAB (for calculation), Bocad-3D, AutoCAD, and Prosteel Data. Tekla was used to clarify and observe all interfaces, coming from different project parties. Tekla Structures was the leading software in the project."



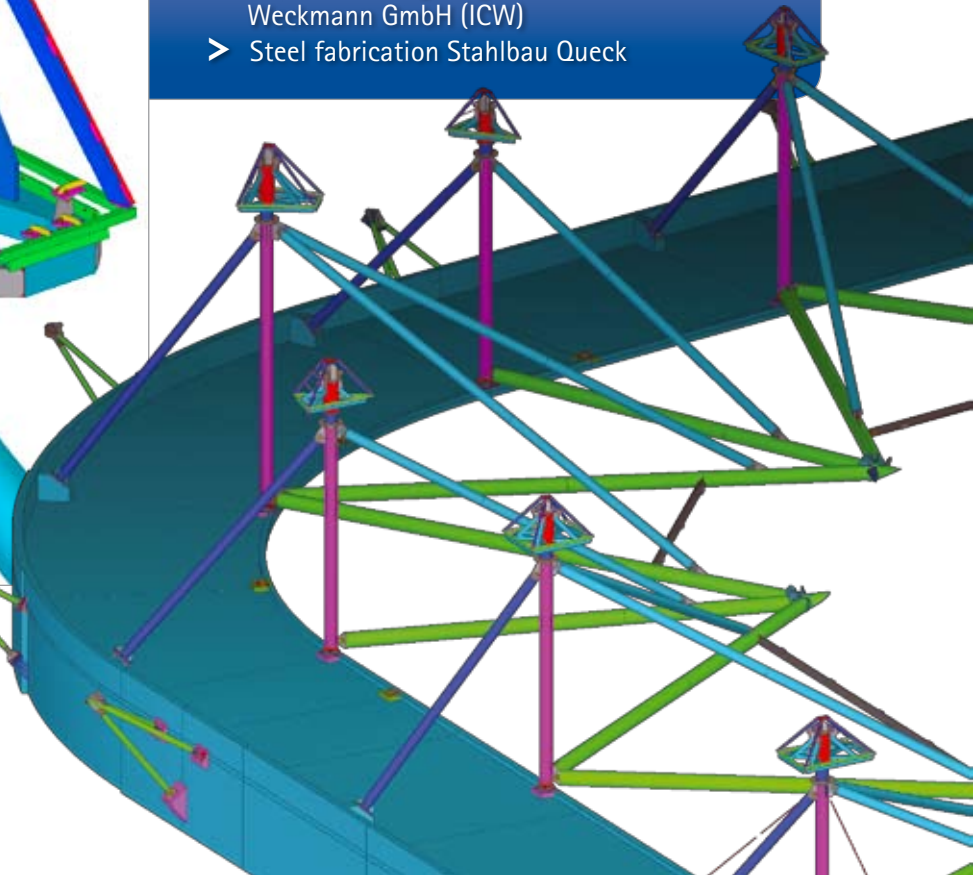
➤ *"USING TEKLA STRUCTURES
IN THE YAS MARINA PROJECT
INCREASED OUR PRODUCTIVITY
BY MORE THAN 30%."*





YAS MARINA

- > Circuit length 5.554kms
- > Circuit turns 21
- > Capacity 50,000
- > Design Hermann Tilke
- > Structural design Ingenieur-Contor Weckmann GmbH (ICW)
- > Steel fabrication Stahlbau Queck





TIME AND COST SAVINGS

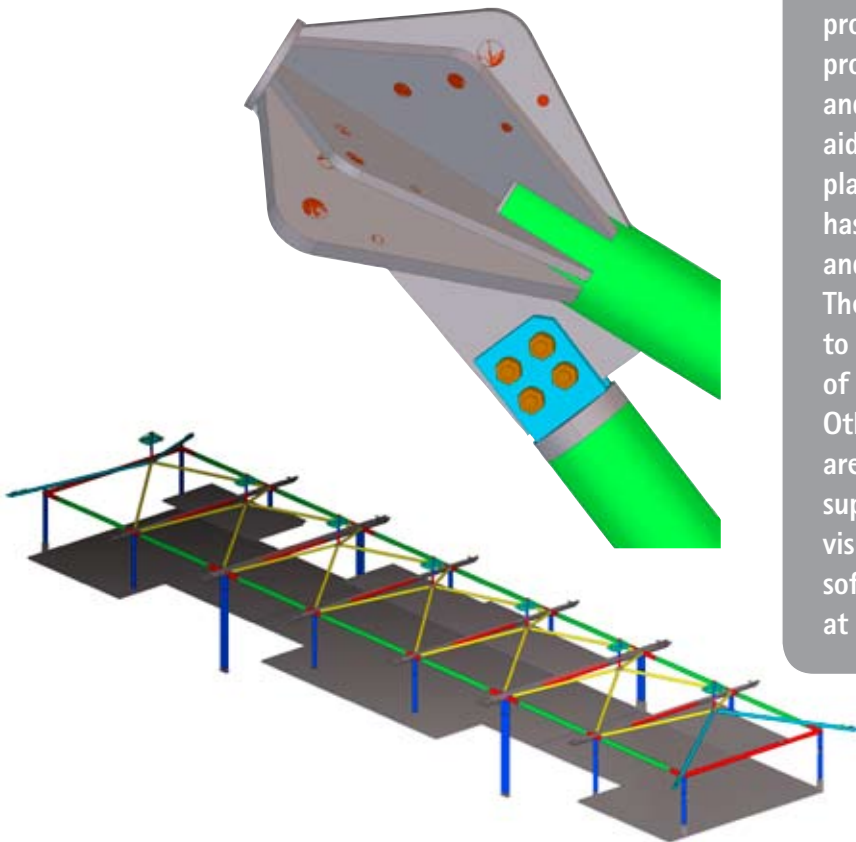
> "I would estimate that using Tekla Structures in the Yas Marina project increased our productivity by more than 30%," Samsamshariat continues. "To handle the different interfaces from all continents with different time zones, and to stay clear with our client, who didn't have Tekla Structures, we did all structural communications by exchanging web models," he explains. "To make work faster, at peak times, more than 12 detailers worked on the same server, using the software in multi-user-mode. We estimate a cost reduction of approximately 20% by using and implementing BIM in this project. The multi-user mode worked very well and saved us a lot of time and money," he concludes.



ICW

Ingenieur-Contor
Weckmann GmbH

Structural steel engineering forms the main focus of work at Ingenieur-Contor Weckmann GmbH (ICW). The activity profile in this department reaches from project engineering, structural design and static calculation to computer-aided construction and production of planning documents. Since 1989, ICW has worked on more than 1000 steel halls and industrial and special constructions. Their spectrum passes from simple ladders to complete industrial arrangements of more than 10,000 tons of steel. Other main focus areas of the company are facade planning (roof and wall) to supplement steel design, production of 3D visualizations (computer animations), and software development. More information at www.icw-gmbh.de

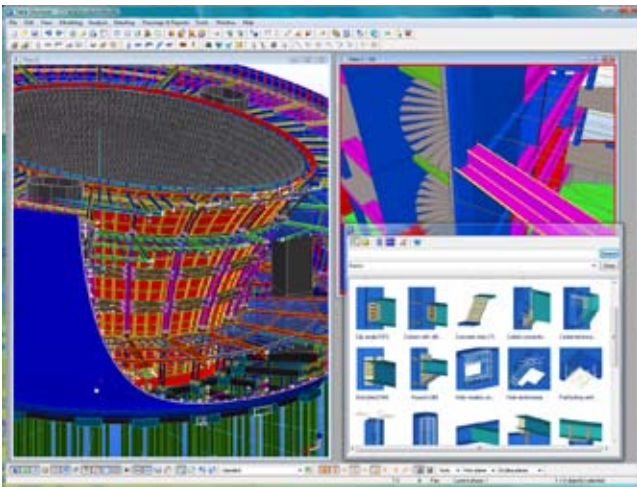


TEKLA STRUCTURES – INTELLIGENT 3D MODELING



> Tekla's model-based software products make customers' core processes more effective in building and construction and infrastructure management. Tekla Corporation has area offices and partner organisations worldwide. International operations account for approximately 80% of net sales. Founded in 1966, Tekla is one of the longest operating software companies.

> Tekla's technology creates new opportunities for the construction industry. **Tekla Structures**, the most advanced BIM (Building Information Modeling) software on the market, provides an accurate, dynamic, and data-rich 3D environment that can be shared by contractors, structural engineers, steel detailers and fabricators, as well as concrete detailers and manufacturers. The highly detailed as-built structural models created in Tekla Structures enable the highest level of constructability and production control. Centralising model and non-model based data into the model allows for more collaborative and integrated project management and delivery. This translates into increased productivity, elimination of waste, and an enhanced value for structural modeling.



Tekla is an anti-piracy member of BSA (Business Software Alliance) in the EMEA, APAC and Latin America.

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