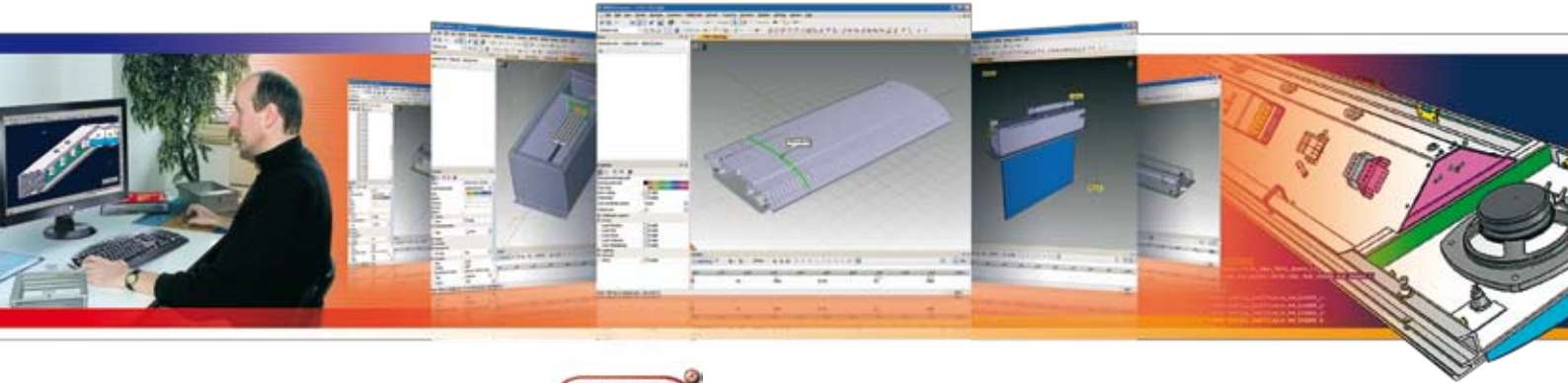


# SEC Lighting

Improving design and documentation quality with DS PLM including 3DVIA Composer



## Overview

### ■ Challenge

*SEC Lighting needed to quickly respond to requests from customers for customized products and provide its sales force with attractive sales documentation*

### ■ Solution

*The company chose CATIA for lighting design, ENOVIA SmarTeam for data management and 3DVIA Composer for its documentation needs*

### ■ Benefits

*SEC Lighting saves valuable design time thanks to CATIA's in-context design capabilities, avoids costly production errors thanks to ENOVIA SmarTeam and creates easy-to-understand product documentation with 3DVIA Composer*



### Producer of high quality lighting

Slovakia-based SEC Lighting manufactures light fixtures for indoor and outdoor use. Its products range from emergency and industrial lighting to customized lighting for the interior of public transportation vehicles and lights that act as signs. Dedicated to producing the highest quality products, SEC is one of the few lighting manufacturers certified ISO 9001 for design, development, production, marketing and services. All of SEC Lighting's products are designed in-house, which is why it has its own development facilities for both its mechanical and electrical engineering activities.

### Fast response time for customized solutions

SEC Lighting needs to be flexible to quickly respond to customer requests. It also has to use the latest, most modern technology in order to be able to rapidly design and manufacture customized lighting products for the public transportation sector. For the

design and development of mechanical parts, SEC Lighting uses CATIA. CATIA allows its engineers to create innovative designs and to simulate the lighting fixtures in their virtual surroundings for the best positioning. "Very often we receive rough design ideas from our customers with all the associated technical specifications or sometimes the detailed 3D virtual data itself," said Roman Vachal, an engineer at SEC Lighting. For example, the customer provides the design of the inside of a bus. This design includes everything except the lighting, which SEC designs and positions inside the bus using CATIA according to the customer's specifications.

SEC also performs advanced interference checking and analysis of the digital mock-up using CATIA's DMU Space Analysis. "This helps us inspect all possible collisions in a virtual environment," said Vachal. "We create several shape and color variants, which we then send to our customer so that they can choose the desired lighting. We then produce



"Thanks to 3DVIA Composer, our customers have a visually pleasing and easy to understand 3D document."

Roman Vachal, Engineer  
SEC Lighting



a physical prototype, which is tested for shock and vibrations as well as for resistance to fire and smoke." SEC engineers also measure real lighting parameters, such as lighting fixture efficiency before proceeding with series production.

### Access to the right data at all times

SEC Lighting uses ENOVIA SmarTeam to store and manage all product-related data. In this way, all engineers can share the same up-to-date data and retrieve this data very quickly. ENOVIA SmarTeam makes sure that all new information created in CATIA is linked to a project, a customer and a product no matter how small the part is. "This avoids accessing out-of-date data, which often leads to problems in manufacturing," said Vachal. Sales teams can also find the right data and cost information thereby reducing the time it takes to build a proposal for a prospect or customer.

### Easy to understand and intuitive documentation

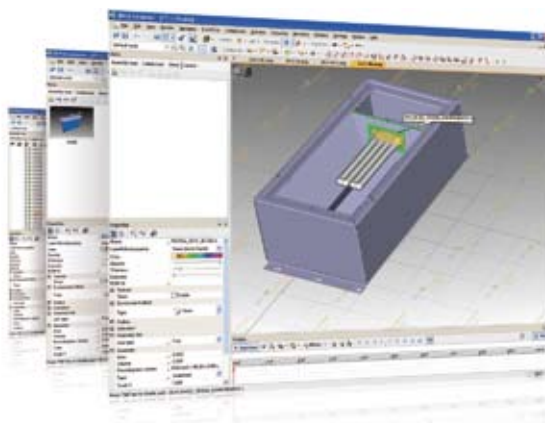
SEC Lighting uses 3DVIA Composer to create marketing and production documentation. This solution enables its sales force, for example, to create sales documentation using real CATIA data. In very little time, employees, even those with few technical skills, can

upload the 3D CATIA models developed by designers to 3DVIA Composer and create their documents.

Employees in production also have access to the 3D data, which eliminates the often tedious task of reading 2D drawings. "With 3DVIA Composer's animation capabilities, our production engineers are able to see how the lighting is assembled in 3D, which helps avoid time-consuming errors," said Vachal. Some lighting products contain up to 400 components; it is therefore easier and faster to see how these components are assembled by viewing the actual 3D model. It also helps prospects and customers to better understand SEC's design solution. "Thanks to 3DVIA Composer, our customers have a visually pleasing and easy to understand document," said Vachal.

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