



The Need

Optex Co., Ltd had previously introduced electronic design tools on the basis of each sales department, and used them for circuit design. The design efficiency was raised by mastering the use of the design tools.

However, there is the aspect of not always being able to say that the design efficiency has improved. This is because the electronic design tools were implemented separately for each sales department.

“ Altium Designer was the one that satisfied the specification demands of the electronic system CAD when standardizing the respective business flows of electronic design, mechanical design, and software development. ”

Mr. Toru Kamimura Executive Officer, Divisional General Manager, Research & Development Div. OPTEX.CO., LTD.

With different design tools, problems arise in the difficulty of reusing the circuit diagram data among the sales departments. Notwithstanding the design of similar circuits, circuit diagrams are not reused and design processes involve extra man-hours. Even if optimized separately, the entirety is not optimized. This sort of situation could no longer be ignored. Moreover, at present, so as to be represented in dealing with legislation that embarks on going lead-free, the percentage of operations outside of design is such that it is not possible for the design department to ignore. It is inefficient to deal with the legislation on the basis of each sales department.

Furthermore, the electronic design tools was used separately, and linking up with the mechanical CAD and product data management (PDM) tool became an important step in making things efficient. During this time, the mixture of varied types of electronics design tools and mechanical CAD system makes it very troublesome and complicated to link up the tools.

So Optex built an enterprise-wide information system by consolidating the then separate CAD tools, and raised

the efficiency of operations such as that of design and manufacturing. The target is to “improve the design efficiency twofold.”

The Challenge

There is no shortcut for building an enterprise-wide information system. First of all, the standardization of the software development environment, electronics design tool and mechanical CAD system that made up the platform of the information system was tackled. The one chosen as the enterprise-wide standard electrical system CAD is Altium Designer.

For the standard electronics design solution, a circuit diagram editor as well as functionality for circuit pattern design and parts list output were provided, and the uniformity in the output of these three items was required. In addition, it was considered important to have the interface with PDM tool to be provided as standard with easy implementation to place of design and the ability to exchange data with production factories in and outside the country. The one that completely satisfied these requirements was Altium Designer.

The attention on Altium Designer should be on the provision of interface with the database as standard. For an electronics design tool equipped with this function as standard, Altium Designer was the only one among the CAD tools chosen by Optex as candidates.

The Solution

Optex introduced Altium Designer as the standard electronics design solution for the entire company in March 2007. Linked to the introduction of Altium Designer was the standardization of design tasks. It is necessary to standardize the design tasks. Then Optex went on to tackle the creation of standardized rules. These are for the method of creating circuit diagram frame, the display method for the electrode of parts, and the method of extracting from the database of parts list. At the same time, it proceeded to build the parts library.

Now, the standardized rules for using Altium Designer have been finalized, the environment that enables the reuse of circuit diagram data between sales divisions is in place, and all new designs use Altium Designer.

CUSTOMER SUCCESS STORY



The Results

Following the standardization of the design department, the talk now is on linking up the design department with other departments. In linking up with the production department, the design personnel had previously provided support at production factories until mass production was up and running.

In future, with the implementation of Altium Designer at the production factories, the transfer of circuit diagram data and parts list between the design department and production factories does not go through the receiving stage, and therefore, the support scope of design personnel will be narrowed and they will tackle the design of the next product type at an early stage. The efficiency is raised by dividing up with the stages up to test production prior to mass production falling within the scope of responsibilities of the design personnel, and the staff of the production factories being responsible thereafter.

At present, Altium Designer is implemented at the domestic factory of one partnering company. Based on the results of accomplishments there, it is expected to be rolled out to other production factories too. Furthermore, the idea of linking up the design department with the purchasing department is in the midst of being refined.

Product Information

The new business fields of Optex Co., Ltd are “environmental monitoring” and “traffic-related business.” These are fields that can be expected to have high growth moving forward. The representative product for the “environmental monitoring” field is the sensor that measures water clarity. It is actively used in the monitoring of the water quality of the likes of lakes and ponds, rivers, and sewers. Since the head office of Optex is set up in the vicinity of Lake Biwa, a system was developed to automatically measure the clarity of Lake Biwa, and the clarity is announced daily to the residents of the area.

The representative product for the “traffic-related business” field is the “Drive Trainer” that records the view seen from the driver’s seat of a vehicle. It automatically records the view of the 15 seconds immediately prior to collision and that of the following 5 seconds. In addition, it is equipped with the function to accumulate daily driving history.

About Optex Co.

Optex Co., Ltd is a technology-intensive cutting-edge enterprise focused on infrared technology and image-processing technology. Before that, infrared technology was mainly found in the medical and military fields. Optex was established in 1979 in order to expand the fields of infrared technology application into the civilian sphere.

Presently, it develops and supplies the most advanced products in the five fields of security, automatic door, industrial device, environmental monitoring, and traffic-related product. The security field contributes to about half of the sales figure with the main product being infrared sensors for crime prevention use. Next, the automatic door field makes up approximately 20% of the sales with the main product being the infrared sensor for door use. Recently, high-grade sensor solution that incorporates sensor technology and image-processing technology is also being developed. The industrial device field is just short of 20% of sales with the main product being sensors employed on production lines in factories.

ABOUT ALTIUM

Altium Limited (ASX:ALU) creates electronics design software. Altium’s unified electronics design environment links all aspects of electronics product design in a single application that is priced as affordable as possible. This enables electronics designers to innovate, harness the latest devices and technologies, manage their projects across broad design ‘ecosystems’, and create connected, intelligent designs.

Founded in 1985, Altium has offices in San Diego, Sydney, Karlsruhe, Shanghai, Tokyo, Kiev, with value added resellers worldwide. For more information, visit www.altium.com. You can also follow and engage with Altium via [Facebook](#), [Twitter](#) and [YouTube](#).