



Manufacturing from 4 Days to 30 Seconds

The Situation

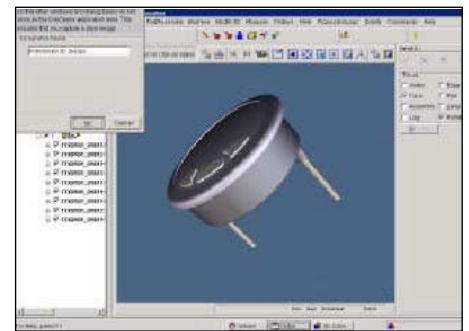
"I can't imagine developing a product the old-fashioned way with faxes and emails. We're now ahead of the planned re-launch schedule. The best part is, we can apply this awesome product concept to most of our future products."

Patrick Mills, Senior Mechanical Engineer, Teleflex



Teleflex Electrical Profile

Teleflex Electrical provides products and services for the automotive, marine, industrial, medical, and aerospace markets.



The Challenges

Teleflex Electrical considered abandoning their Ski Speedo product due to issues like

- Defect rates due to leaks: 50%
- Assembly time: 4 days
- Scrap rates for defective units: 100%

The Solution

- CoCreate's OneSpace Collaboration software
- APTEC's iSystem

The Results

- Defect rates due to leaks: 0%
- Assembly time: 30 seconds
- Scrap rates for defective units: virtually 0%
- **Total cost savings: \$100,000 per year**

They employ more than 16,000 people in over 80 operating units throughout the world.

Their Marine Group is a leading supplier to the pleasure marine industry. They design and manufacture mechanical and hydraulic steering systems; engine throttle and shift controls; electrical gauges and instrumentation; electronic location, communication, and navigation systems.

Teleflex is committed to delivering innovative and unique products and services.



The **Ski Speedo** had been on the market for a year. But the competition watercraft speedometer/tachometer had problems. So many problems, in fact, that the manufacturer, **Teleflex Electrical**, considered discontinuing the gauge.

For one thing, Ski Speedos took a long time to manufacture. Sealing the gauge required special adhesives, ultrasonic welding, and a number of other steps. All together, Teleflex spent 4 days on each unit.

But despite all that careful assembly, too often water still seeped into the Ski Speedo's seams. Customers returned units for warranty repairs in high numbers, and the product logged a defect rate as high as 50%!

To make matters worse, the gauge was not designed to be serviceable. When a unit turned out to be defective, Teleflex couldn't evaluate the problem. They simply scrapped the gauge.

Clearly, the product could have been more profitable.

But before the Sarasota, FL, company abandoned the gauge, they called their product development partner, **APTEC**, to see if a redesign might save the Ski Speedo.

APTEC suggested

- The **iSystem**, a product development process available only at APTEC
- **CoCreate's OneSpace Collaboration**, a software technology that lets designers and others "meet" over the Internet to view, manipulate, and annotate 2D and 3D data and models.

With OneSpace Collaboration, APTEC brought together a team of experts to evaluate the Ski Speedo's sealing technology and assembly.

Meetings included Teleflex in Sarasota, APTEC in Daytona Beach, plus an inlay supplier in Boston, a molder in Kissimmee, Florida, and a resin distributor also in Florida. Although the team worked from different geographies, together they modified an existing tool, developed a new lens and gasket tool, chose a specially formulated UV-stabilized polycarbonate resin, and designed a unit that snapped together, rather than requiring adhesives and welds.

The result? Assembly time went from 4 days to 30 seconds. And the defect rate due to leaks dropped from 50% to 0%. Now Teleflex Electrical makes more units with a fraction of the resources.

Impressive results - because APTEC was able to bring innovative and knowledgeable people together using CoCreate's OneSpace Collaboration.

"I can't imagine developing a product the old-fashioned way with faxes and emails," says Patrick Mills, Senior Mechanical Engineer for Teleflex Electrical. "We're now ahead of the planned re-launch schedule. The best part is, we can apply this awesome product concept to most of our future products."

For more information, please contact us directly or visit www.cocreate.com.

Europe
Phone: (49) 7031-951-2222

USA
Phone: (1) 970-267-8000

Japan
Phone: (81) 42-352-5654

Taiwan
Phone: (8862) 2759 5505

Korea
Phone: (82) 2 559 0711

Singapore
Phone: (65) 550 9665

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