

# Laser Cutting News

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# ORCA

## From the editor...

In this second issue of the Laser Cutting newsletter, we'd like to put the spotlight on the business side of Laser Cutting technology. In this issue, we'll talk about how Laser Cutting can bring real, measurable bottom-line benefits to *your* business.

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## Orca Wins New Orders for Application-Specific Laser Cutting Systems

Orca Photonics has recently received orders for several new Laser Cutting Systems that represent major steps forward in the capabilities and applications that customers can expect from Laser Cutting systems.

### *About Application-Specific Systems*

Orca's hallmark is delivery of Laser Cutting Systems that are tailored to each customer application. Systems are built from a set of modular, scalable design elements, allowing Orca to provide custom-system capabilities at standard-system prices.

The two systems described here represent just a sampling of what Orca's systems can do for your production. If these capabilities, or others, would be an asset to your business, please contact us at Orca for an evaluation of your application.

### *"Database to Dock" Laser Cutting*

We live in a world in which the customer expects products shaped to their specific needs and wants. Simple repetitive mass production will be less and less relevant as time moves on. Instead, the market now demands products that are manufactured directly from the customer's description, and built on the fly by a capital infrastructure that treats every item as an individual. The challenge is to provide this flexibility without compromising speed and cost-effectiveness. Laser cutting and processing is one tool for meeting this challenge.

One recent system order is specifically aimed at "order to loading dock" production. Over time, and in close collaboration with this and other customers, we are extending laser cutters to directly integrate laser and non-laser production tools on a common platform. We are also developing modular software components that will support hands-off transfer of order specifications from industry-standard business systems directly to the laser cutting work flow.

### *High-Speed Pattern Cutter*

A U.S. customer has ordered the first of a new Orca design that delivers very fast cutting of repetitive small-scale patterns, but over very large areas.

These machines use a unique hybrid architecture that combines the large-area coverage of Orca's X-Y machines with the extreme agility and spatial resolution of galvo-based laser etching machines. The result is a machine that can cut patterns with sub-millimeter feature sizes, while processing material widths in excess of 6 feet, and nearly unlimited lengths.



*Photo of a section of a repetitive perforation pattern in aluminized mylar, typical of what can be done with the High-speed Pattern Cutter.*

In addition to the unique hybrid architecture, another key to the success of the Pattern Cutter product line is Orca's software tools. Our **Laser Assist™** software product will support this machine with the same familiar user interface and capabilities as all of Orca's laser cutting products. Our new **Laser Composer™** software products allows users to quickly and easily nest and tile simple design components into a large pattern-cutting production job.

## Orca People

**Rik Slaven,**

### **Senior Software Engineer**

Software is a critical part of the value that Orca adds to Laser Cutting systems. Rik brings more than 15 years of experience in developing software that provides user-friendly interfaces between “man and machine.”



Rik's current project is development of a new software product for Laser Cutting called **Laser Composer™**. **Laser Composer™** gives the user a rich set of tools for nesting and tiling of multiple CAD designs into a single laser cutting job file. This new product will enter beta testing in late 2005.

One of Rik's greatest strengths is his respect for *users* as he designs and builds his applications. His products have friendly, consistent user interfaces, and are built to be well-behaved when things aren't exactly as the programmer expected - in other words to function as they should in the real world.

During his nearly five years with Orca, Rik has worked on a wide range of projects including automated fiberoptic telecomm measurement, machine vision, and automated video tracking.

In his spare time Rik likes to ride his bike, take creative photographs, and torment small stuffed animals.

## Laser Cutting and Processing: The Return-On-Investment Equation

An investment in Laser Cutting technology can yield measurable payoffs in a host of ways. Of course, every application is different, and the mix of benefits will vary strongly from one application to another. As you consider Laser Technology, consider how the following benefits might apply to your particular situation:

### ***Maximize Uptime***

Orca's Laser Cutting Systems require minimal scheduled and preventive maintenance. Because there is no routine tool or die wear, customers have shown that they can achieve greater than 90% productive uptime, even for multiple shifts. A high-uptime production environment saves you money several times over. Not only do you receive the full benefit of your capital investment, but you also benefit because your staff is working on production, not on maintenance.

### ***Improve Product Quality***

Improved product quality can be realized via factors such as built-in 100% sealing of edges in synthetic fabric, and extremely accurate part geometry due to the low material distortion of “zero-touch” laser cutting. Product variability due to tool dulling and wear is a thing of the past. The payoff is in higher yield, and often in higher value for a premium product.

### ***Flexible Production***

A Laser System can produce multiple products with no tool changeover, or tool fabrication costs. Changing a product design, or shifting to a different product mix, is literally a matter of choosing a different CAD file in the computer.

### ***Eliminate Tooling Cost***

The Laser Cutting System is directly computer controlled, and produces the

final product directly from an incoming CAD file. There is no tooling to develop, buy, monitor, or replace.

### ***Improve Time-To-Market***

With laser production techniques, you can start production as soon as your product design is done. With traditional production technology, delays of months for process and tooling development are common. With Laser techniques, you can be making money tomorrow, while your competitors are waiting for tool delivery.

### ***Enhance Product Value***

The ability to personalize your products without setup or tooling time and cost gives you the opportunity to move to higher price points. Orca can provide you with the software components to completely automate this process.

### ***Save Production Labor***

Orca can equip your Laser System with labor-saving capabilities ranging from many different types of automated material handling, to machine vision for real-time material positioning or quality control.

### ***Know The Bottom-Line, Before You Buy***

Orca can work with you to provide a dollars and cents production cost and ROI analysis for your application. Our comprehensive cost analysis tool gives you a detailed, end-to-end accounting of your costs, from amortization to production staffing.

Please contact us if you would like a better understanding of the costs and benefits of Laser Cutting for *your* application. If Laser Technology is *not* the right solution for your situation, we'll tell you so. If it is, our analysis will provide you with the credible numbers you and your management need to make a sound business decision.