



## Instrument Technology doubles profits with VISUAL DBR

*“We’re finding VISUAL® DBR to be light years ahead of standard scheduling. It is a much simpler management process. Within a couple weeks of implementation, we were already seeing results because we had more visibility into our production.”*

JEFF CARIIGNAN, VICE PRESIDENT, MANUFACTURING, ITI

### About the company

Instrument Technology, Inc. (ITI) designs, develops, and manufactures products for industrial, medical, veterinarian, law enforcement, aerospace, and military markets. Founded in 1967 and located in Westfield, Massachusetts, ITI has produced the most advanced remote viewing instruments and systems available, including borescopes, fiberscopes, and videoscopes for observing or inspecting inaccessible or hostile environments. To learn more, visit [www.scopes.com](http://www.scopes.com).

Company: **Instrument Technology, Inc.**

Address: **33 Airport Road, Westfield, MA 01086**

Website: **[www.scopes.com](http://www.scopes.com)**

Number of Employees: **52**

Products & Services: **Borescopes, fiberscopes, and videoscopes for remote viewing**

### Challenges

As an engineering firm and manufacturer of high quality scopes for the industrial, medical, and law enforcement industries, ITI turned to VISUAL DBR and the Theory of Constraints (TOC) manufacturing management strategy to improve productivity and increase throughput on the shop floor.

Results have been impressive. On-time deliveries are at 95%, while lead-times have been reduced from 12 weeks to 5. Inventory is down by 20%, while throughput productivity has increased by 43%.

### Overview

As a premier U.S. engineering-based firm, Instrument Technology, Inc. (ITI) specializes in the design, development, and manufacture of high quality Borescopes, Fiberscopes, and Videoscopes used for the inspection or observation of hostile environments or inaccessible areas. Founded in 1967 and located in Westfield, Massachusetts, ITI delivers advanced remote viewing instruments and systems to companies in the industrial, medical, veterinarian, and law enforcement sectors.

Two years ago, Jeff Carignan moved from working in Administration and Sales at ITI to presiding over the company's manufacturing operations. One of his first tasks as Vice President of Manufacturing was to improve the company's long delivery times and late shipments.

“I wanted to eliminate the headaches associated with late delivery, so I started looking for better management techniques,” says Carignan. “Years ago, I had read *The Goal* by Eli Goldratt and became interested in Theory of Constraints. The more I researched TOC, the more the strategy made sense. I decided we would create a TOC environment at the company using the database structure in VISUAL®. ITI has been a VISUAL customer for ten years. We got results: on-time delivery shot up from 70% to 90% and our lead-time decreased from 12 weeks to 6 weeks. All these improvements happened in a short three to six month period.”

ITI prides itself on delivering the highest quality products and service available. With continuous improvement in mind, the company set out to achieve even shorter lead-times and 100% on-time delivery.

## Implementing a Solution

During Lilly Software's annual User Conference in 2002, Carignan was introduced to Lilly's new TOC consulting and business strategy solution. Lilly Software was developing tools to help companies stay lean and protected from unexpected events that can negatively affect their profitability and productivity. Lilly also sent Carignan a copy of Goldratt's book, Necessary But Not Sufficient.

**“The company was getting good results, but I thought, if we're doing this good on our own, what could we accomplish with professional help?”**

Then, in January 2003, Carignan was invited to a one-day training seminar hosted by Lilly Software and the Constraints Management Group (CMG). At the seminar, he learned about VISUAL DBR, software based on TOC and the production scheduling techniques of Drum-Buffer-Rope. VISUAL DBR helps companies “pull” material through the shop and uses time buffers to secure schedules. Carignan's interest was peaked as to how he could further improve upon the strategy he had been using on his own.

“The company was getting good results, but I thought, if we're doing this good on our own, what could we accomplish with professional help?” says Carignan. Finally in October 2003, Lilly Software and ITI came together again. Since ITI had a comprehensive background in TOC, the consultants from Lilly did not spend much time training. The company updated its VISUAL database and went live with VISUAL DBR on October 20th.

## The Results

By December 2003, ITI was running the scheduler and checking the buffers on orders daily. “Lilly Software has been very responsive to our needs.” stated Carignan at the time. “We're finding VISUAL DBR to be light years ahead of standard scheduling. It is a much simpler management

process. Within a couple weeks of implementation, we were already seeing results because we had more visibility into our production. The learning curve for this tool is not steep after you have the background in TOC.”

The employees at ITI now have a better understanding about the jobs they need to work on. Production controllers review the buffer status for every order using the software and can immediately recognize and address jobs that must take priority. Within the first month of using DBR, ITI received a sales call with a request to ship an order in an incredibly short time frame. Normally, this request would send the managers scrambling to see if they could fulfill it, but something different happened this time.

“We simply used the DBR planning windows, examined the schedule, and then said, „Yes, we can do this,‘ and we shipped the order out on-time,” says Carignan. “VISUAL DBR allows us to make more informed decisions about our production.”

Three years after implementing VISUAL DBR, ITI is still enjoying the benefits of that implementation. “On-time deliveries are at 95% and lead-times are now under 4 to 5 weeks,” states Carignan. “Overall inventory is down by 20%. For one product line that represents 70% of our business, inventory is down 70%. Overall, our throughput productivity has increased by 43%.

**“VISUAL DBR allows us to make more informed decisions about our production.... On-time deliveries are at 95% and lead-times are now under 4 to 5 weeks.”**

The employees and management of ITI work as a team to deliver quality products to their customers. Enhancing the company's management strategy is just another way they're successful in their mission to improve business and guarantee every customer's satisfaction.