

# PT Tech Shifts Productivity into High Gear, Replacing SolidWorks with Pro/ENGINEER® Wildfire™

## Getting More Work Done Without Increasing Engineering Headcount

### Power Transmission Technology, Inc., Sharon Center, Ohio

Power Transmission Technology (PT Tech) specializes in developing solutions for a wide array of difficult drive system problems, including crushing, mining, tunneling, road working, recycling, shredding, and steel manufacturing. The company manufactures custom industrial clutches, brakes, friction-type torque limiters, and power take-offs for diesel engines, enclosed wet brakes, and overrunning clutch couplings.

### The Challenge: Product Development Schedules Not Being Met

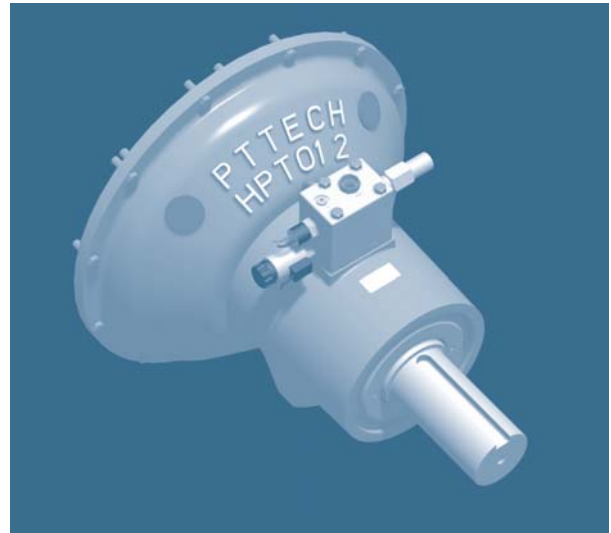
After using Pro/ENGINEER® for several years, PT Tech decided to try SolidWorks®. However, it soon became apparent that SolidWorks wasn't meeting PT Tech's requirements; file access times slowed to a crawl and the system couldn't handle large assemblies with the ease of Pro/ENGINEER. As well, SolidWorks's software support couldn't meet PT Tech's needs, and as a result, engineers were unable to get their work done. All of these issues caused new product development projects to fall behind schedule.

### The Solution: Replace SolidWorks with Pro/ENGINEER Wildfire

Because PT Tech is heavily dependent on revenue from new products, their engineers needed the best possible product development technology. Once it became clear that SolidWorks was not the product development solution PT Tech required, they contacted their PTC representative and decided to install Pro/ENGINEER Wildfire.

### The Result: Drafting Process Shortened by 50%

Since implementing Pro/ENGINEER Wildfire, PT Tech is once again meeting project schedules and growing rapidly. File access times are no longer an issue. For instance, a file that once took 20 minutes to download with SolidWorks can now be opened in seconds with Pro/ENGINEER Wildfire. Engineers are now focusing on product development instead of wrestling with software tools. PT Tech revenues have nearly doubled since 2002, with much of that growth attributed to revenue from new products developed with Pro/ENGINEER Wildfire. Better still, this dramatic growth and productivity gain was achieved without adding any new headcount in design engineering.



Microprocessor Controlled Hydraulic clutch. The hydraulic design of the HPTO12 eliminates the need for adjustments throughout its wear life.

“It was taking 20 minutes to open some large assemblies when we were using SolidWorks. Now, with Pro/ENGINEER Wildfire, we can open them in 20 seconds or less. It’s a simple concept—more productivity, more focus, plus happy engineers equals more dollars.”

—Greg Cullings,  
Sales and Engineering Manager,  
PT Tech

## Heavy Duty Products Require Heavy Duty CAD

Industrial machines that are used to cut through solid rock require heavy duty clutches and brakes—the kind of products designed and produced by Power Transmission Technology, Inc. Makers of these powerful machines have learned to rely on PT Tech for power transmission equipment that can perform over the long haul, under the most demanding conditions.

Similarly, PT Tech engineers have learned to rely on Pro/ENGINEER Wildfire 3D computer-aided design tools for their demanding product development needs. They have also learned the hard way that SolidWorks was unable to provide the performance or the capabilities they required.

“We had been using Pro/ENGINEER for several years, and when it came time to upgrade and add licenses, we were approached by a SolidWorks reseller, and the decision was made to change,” said Greg Cullings, PT Tech’s Sales and Engineering Manager.

“We have a small number of engineers that we depend on to get product out the door, and it [SolidWorks] was holding up the whole company. Engineers were complaining that they couldn’t get their work done,” says Jim Chester, PT Tech’s Information Technology Manager, “SolidWorks created a high bandwidth issue. And even though we are using high-end Dell systems with Intel Xenon processors, we weren’t getting the return on investment we expected.”

The situation was not much better on the shop floor. According to Chester, when an assembly technician needed detail on a drawing that had to be pulled in from SolidWorks, they sometimes had to wait as much as 20 minutes just to get a drawing up on the screen. “We have large assemblies, use a lot of cross section views, and have issues with file complexity and size. SolidWorks wasn’t really able to address this.”

### Better Solution, Better Support

When PT Tech engineers started using Pro/ENGINEER again, they were able to pick up right where they left off, without a hitch. “The engineers say the software works the same way as it always has, and they no longer have any issues with file access delays,” according to Cullings.

Today, PT Tech is using Pro/ENGINEER Wildfire for product design and design reviews, along with product documentation, including the development of manufacturing drawings for the shop floor. “The shop floor people will take output from designers and review a new product before they select suppliers to build it, which improves communications,” said Cullings. “It’s also easy to create images for presentations.”

PT Tech engineers are more productive these days with Pro/ENGINEER Wildfire, according to Chester. “With SolidWorks, engineers were frustrated, both by the product’s performance and product support.”

The contrast between PTC and SolidWorks product support was dramatic. When Chester contacted the SolidWorks reseller about the file access delays, “We always got canned answers like ‘upgrade your machine or increase your RAM.’” No such upgrades or increases were needed to achieve the fast performance Pro/ENGINEER Wildfire delivered for PT Tech engineers.

Today, Chester reports that when he needs support, he gets immediate and appropriate service from expert PTC engineers, 24/7. “For example, I had to rebuild a server one night and I needed help reinstalling Pro/ENGINEER, so I called the 800 number and the support guy was very tech savvy. In a matter of a half hour, the issue was resolved and the system was ready to go when the engineers came in the next morning.”

### Productivity + Happy Engineers = \$\$\$

Pro/ENGINEER Wildfire’s impact is being felt in many ways at PT Tech, not the least of which is the morale of its key engineers. “We try to give them all the space they need to work and all the tools and resources they need. The last thing you want to do is hold them back,” says Cullings. “It was taking 20 minutes to open some large assemblies when we were using SolidWorks. Now, with Pro/ENGINEER Wildfire, we can open them in 20 seconds or less.”

Chester believes that engineering productivity has increased dramatically since PT Tech began using Pro/ENGINEER Wildfire. “Our engineers can get as much done in 8 hours using Pro/ENGINEER as they could in 12 hours with SolidWorks.”

PT Tech contracts with a number of suppliers who manufacture parts and components, and then assembles products at its Sharon Center (OH) facility. “And as important as are the suppliers that make our components, we have to have software suppliers that we have confidence in,” Cullings said. “We didn’t have that confidence with SolidWorks, but now that we have moved back to Pro/ENGINEER, we’re much more comfortable having PTC as a supplier.”

The software is also making life considerably easier for the IT department. “I was almost afraid to walk into the engineering department during the SolidWorks era,” Chester says. “Today, the biggest issue they have is having to go back and access a design that was done in SolidWorks. They just dread it.”

From a company-wide standpoint, Pro/ENGINEER Wildfire has had a profound impact. “We rely on new products to grow our business, and in the last two years we’ve grown from \$8 million in sales to \$15 million in sales without adding any engineers. We couldn’t have done this without Pro/ENGINEER.”