Thermal versus Violet: Buying a CTP system involves more than the wavelength of the laser

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July 7, 2004 -- The Great Thermal versus Violet debate has heated up again, especially with a recent exchange in the Seybold Bulletin predicting the relegation of thermal technology for computer-to-plate to “niche” applications. This brouhaha is certainly not new, but it seems to have taken on new life after drupa. Is this something we should be concerned about? How does it affect choice of a CTP system? Should it make a difference?

As I believe this debate is principally a marketing dispute about gaining competitive advantage, it’s important to have a broader perspective in order to understand the current ruckus.

Initially virtually all computer-to-plate systems used so-called “visible light” lasers. This included Creo, as well as other vendors. In 1995 Creo introduced its first thermal device and aggressively marketed its benefits with an almost religious fervor. For the next few years, Gerber and Creo were locked in a battle for number one market share. The initial days of the computer-to-plate pressroom listserve (CTPP, now part of www.printplanet.com) were filled with an on-line battle arguing the relative benefits and advantages of thermal versus visible light lasers, and of external drum versus internal drum technology.

Thermal made significant inroads and was successful for a number of reasons. One important impetus was thermal devices met the requirements of the largest printers who were early adopters of technology. Many liked Creo’s automated approach, and Kodak’s thermal plate was also attractive to these printers who required long runs. Too, in the early days, many in the mass market associated “thermal” with processless, so the market’s “theoretial” preference for it was probably based on the perception that it was or would lead to a process free approach.

By 1997 the battle appeared all but over. Creo had hooked up with Heidelberg. And at an Imprinta news conference, Brian Eastman, then president of Gerber, famously predicted that by drupa 2000 virtually all systems sold would be thermal. (This was much like President Nixon saying we’re all Keynesians now, or Clinton claiming that the era of big government is over.) And, for the next three years it looked as if he was correct. The marketing muscle of the Creo-Heidelberg combination and the strong entry of Scitex, Screen, Fuji, Agfa, and others led to thermal dominating new sales. Perhaps equally important was the wide availability and choice of thermal plates that could be used with almost any system. Many of the previous suppliers were sold, disappeared, or relegated to second-tier status. That’s not to say that non-thermal systems disappeared. Fuji, Agfa, and others continued to have good sales. And with the large installed base of visible systems, plate sales still were divided.
So, there were technical reasons for the success of thermal, as many felt it is a superior technology. It was most appropriate for the early adopters then buying CTP. There was a wide variety of plates available for thermal systems, while choice for visible light systems was relatively limited. Those selling thermal systems just did a better job in marketing and selling them. And many of the original “non-thermal” suppliers were weak competitors, either in marketing or their ability to continue to develop competitive devices. Other companies weren’t able to develop adequate devices to compete effectively.

Then came the spring of 2000. First, Creo’s purchase of its number one competitor Scitex led to the breakup of their joint venture with Heidelberg. Then, coincidentally, Agfa introduced a violet Galileo, accompanied by a very clever marketing campaign. Their initiative was not, in my opinion, effectively answered by Creo. So, we went from a situation where thermal was king and everybody felt they needed to offer it, to one where Creo had a big bullseye on its back and now everyone attacked them. Virtually all the other manufacturers got on the violet bandwagon to try to slow down the Creo juggernaut.

**While thermal slowed it really took a while for violet to catch on.** Agfa was the only major company selling it for a number of years. And this was compounded by the slowdown in the print markets and in capital equipment buying with the North American recession. However in last few years, virtually everyone except Creo and Screen (whose violet machines are available only as OEM in North America) has moved to violet.

What has given it this impetus? Can violet offer significant benefits over thermal? Certainly the lasers are cheaper (and manufacturers promise this trend will continue). And violet systems are much easier to make. So it stands to reason that they would on average be less expensive and perhaps repairs easier. Those pushing violet also claim the systems are more reliable and, in any case, with cheaper components and simpler design, less expensive to maintain. While the argument is interesting, the main purported benefits of violet center around cost and reliability, while thermal adherents generally argue quality.

Clearly and somewhat surprisingly violet has taken on a lot of the religious fervor that had been associated with thermal, even as the thermal adherents have backed off a little. But violet was never positioned as being superior, only cheaper to buy and, more recently, more reliable and cheaper to own. Thermal equipment manufacturers dispute this; it’s not clear what the outcome is, but there are certainly thermal systems that are competitively priced with many of the violet systems on the market. And as for total cost of ownership, the plate manufacturers can partially address this by lowering the price of thermal plates. Those that manufacture both types of plates don’t, however, have much incentive to do this however.

As many new buyers are smaller printers, typically served by distribution but also much more price sensitive and more interested in smaller format devices, this discussion becomes more important. Creo, as the premier supplier of thermal, has not been as
focused on this market as Agfa and Fuji. Screen, KPG, and Presstek all have sold many systems to the small and mid-sized printer.

**Finally, there is the promise of processless.** Right now and for the foreseeable future (which means at least until 2006), chemistry-free or no–process plates are likely to remain thermal. All the new plates introduced at drupa were thermal. This doesn’t mean there won’t be other technologies, but it will be some time.

So, what’s a printer to do? If you have a CTP, one has to consider “switching“ costs. At least workflows are more interchangeable, so if you’re happy with your workflow, you probably can keep (most of) it. Then there’s the question of switching plates. People do it – sometimes on the same CTP system – so it's not unheard of. But there is a certain amount of pain and economic cost involved.

Printers looking into CTP for the first time can purchase either a violet or a thermal CTP system and rest assured that it should work. Equally important, you won’t be “orphaned”, even if you buy from a second-tier supplier. Plates will be available for a long time. (There are plenty of 8 and 10 year old systems still working fine, although it may be difficult to obtain parts for some.) Systems and offerings are different. Decide what format you want, and the level of productivity and automation that is appropriate. Explore the workflow offerings. Test different plates and decide which works best in your environment and for your applications. Do you want to buy everything from a single supplier? Do you want a choice of plates or are you willing to commit to a single vendor? What are the service and support options? Do you want to buy directly from the manufacturer or through a dealer? How will the system be financed?

Making a choice of a CTP system involves much more than the wavelength of the laser. Both technologies work and printers are using them profitably in a variety of environments. Look at the complete package: system; plates; workflow; service and support. There’s a solution that’s right for you. Some offerings are likely “better” than others, but not every system is appropriate for everyone.