

CTS and Your Bottom Line



In recent years, many articles have been written about “computer-to-screen” (CTS). In general, they almost always focus on the purely technical aspects of the equipment; the fact that CTS replaces film and the specific type of CTS system that the article is referencing. The articles have been educational in nature, dwelling on “what it is” and “how it is used.” CTS systems have been produced for more than 15 years and the companies that have adopted the technology will never go back to using film.

In these tough economic times, it is time to address two very real and important questions: What can CTS do to sustain or regain lost profit and can CTS provide your company with a real platform for future growth? With close examination of your screen making operation, from your art or engineering design room to press, many of you will be able to save your company money. CTS can do this without increasing sales at all and, at the same time, add to your screen making capacity so your company can handle the new business that comes your way.

1. Film cost vs. CTS imaging costs.

This is pretty easy to calculate. Let’s say that you produce 50 screens a day, not a huge number. What would

be your film bill for those 50 screens? Be certain to account for 100 percent of the film used to make each screen, including waste. Your film is always larger than your image size and the economy of sheet film, compared to roll film, also is a factor when film waste is considered. Another factor is remakes when the screen or image isn’t just right. How much film is left on the floor?

CTS imaging costs will vary from one type of CTS to another. At the end of the day, you will have to choose the CTS system which best fits your company:

- o LDS (Laser Direct Systems) or DMD (Digital Micro-mirror Devices) technology creates no consumable cost because the image is produced by light, which hardens the non-image area of the emulsion.

- o Inkjet CTS systems vary in the cost of ink that is imaged onto the emulsion. Wax-based ink will cost around \$.40 per square foot for solid corner-to-corner coverage as with spot color and around \$.15 per square foot for halftone or type images. Water-based ink will cost from 15–20 cents per square foot for corner-

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By Hugh Neville, CEO, Richmond Graphic Products

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to-corner coverage and 4–5 cents per square foot for halftones or type copy.

o Thermal imaging uses a thermal transfer tape process with an approximate cost of \$1 per square foot for either halftone/type or spot color imaging.

2. Labor savings. The actual hours saved in direct factory labor are dramatic. The cost reduction comes from all of the steps that are associated with preparing film for exposure, handling, alignment of the film image on each screen, film storage and the ultimate inaccuracy of the film process in systems management. The average savings in labor per year runs from 1.2 to 3.4 FTE (full time employees). Calculate your own costs at 1.5 employees x 40 hours on a single shift basis - that is the minimum amount of money you will conservatively save on labor in one week on one shift. If you run two or three shifts and your calculated hours saved are higher - the savings become very large indeed.

3. Press setup time. Savings are generated through the repeat accuracy of CTS imaging. The placement of the image from screen to screen in a multiple screen imaging process is +/- 1/100th of a millimeter of accuracy (.01 mm). The image alignment on the screen as well as the screen to screen accuracy lets you get to press faster — one third the time, on average. It also allows you to turn more jobs per shift or per day in your plant, produce shorter runs more profitably and provide more press time for expansion and growth without the need to purchase more equipment.

4. CTS equipment costs. The CTS system you choose will have to satisfy both your production needs and your resolution requirements. You also must consider the robust strength of the system and how it is built to stand up to your production requirements.

For your preliminary calculations, you can use these figures to approximate your costs. The variables are in the type of CTS system that you require and the format size that you will need to image your screens. In other words, not every comparison is “apples to apples.” You will need to speak to different manufacturers of different CTS systems.

To illustrate costs, here are some starters. Inkjet systems for textiles and T-shirt

production will run from approximately \$55,000 to \$120,000, and thermal transfer around \$50,000. Inkjet with higher resolution and speed, and in larger formats for glass, posters, etc., will range from \$90,000 to more than \$200,000 for screen sizes in the 6–8 feet times 12 feet or more. Laser and DMD systems start at around \$300,000 and can cost more than \$500,000. The range is broad, but it is not confusing. All that you have to do is tell a distributor or manufacturer what you print, the size of your largest screen, the number of screens that you produce a day and what resolution you print now, or would like to print in the future. You will get some fast answers and know pretty quickly if the CTS they produce fits your needs.

For the past 15 years, I have seen CTS systems in every type of screen printing operation, produce products from huge banners and posters, membrane switch and overlay applications, glass and electronics printing to textile and T-shirt production. Given what I have witnessed, I am confident that direct-to-screen imaging will produce significant benefits while creating efficiencies and cost-saving solutions throughout the screen printing/screen making process. These words are a guarantee. CTS is a giant step forward that puts the adopting printer well ahead of the pack.

Hugh Neville is the CEO of Richmond Graphic Products, and a manufacturer and distributor to the graphics marketplace for more than 45 years. His daughter, Wendy Neville Kraunelis, is currently the company President.

hugh.neville@richmond-graphic.com