Heather, Here's another attempt to get you some more information on CTS. If you don't get this, I've likely thrown my laptop out the window. Hopefully I don't repeat too much from our previous conversation.

As I mentioned when we talked, everyone, EVERYONE, was against the I-Jet. Now you would have the fight of your life if you tried to take it away from us. I'll start with the art department.

In the "old days", art was created just as it is now. The differences are what happens after the art is created. When using film, the artist would send their files to the selected printer, an Epson 7600. During busy season, printing the film would take hours. We used roll film, which did help. One issue with roll film though, is the tension of the film feeding through the roller changes as the weight of the roll decreases as it is used. If you find a problem with a piece of film that was done early in the roll, chances of reprinting and having it register are slim. This means running the entire job over. You might also be able to fix the bad piece if you want to spend the time doing that. (Wasted film). After all the film was run, it had to be separated by job. Our printer did automatically cut, but there was still trimming to do. Each job was then checked by an artist other than the one that created it. Film was stacked on a light table to assure registration. Touch ups may have been done at this time also. This is another area where there is a human factor. IF everything looks good at this point (a short check list was done) the film was filed in an envelope or bag. It was labeled with the customer information. If the order was to be printed soon, it was set in a "new" area. Otherwise it was filed with the other files. Right now, as a point of reference, we have almost 3000 digital folders in our electronic archive. Each of these would have been a file folder that had to be filed and retrieved as needed. These files are all from just the last year and a half. We basically had to restart the entire system after the floods.

So that was how we did it with film. Now with DTS, art is created the same way. Once it is finished, another artist will do the checks looking at the design on computer screen. Once everything is good, the design is assigned a number (we simply use stickers with bar codes that are printed out for the art department) The file is moved to the "I-Jet Archive" which is on its own server in the network. Bam, the art department is done with it. If there are any changes that need to be made, the artist simply grabs the original file (saved off site), makes the changes, and replaces it. No more reprinting every piece of film because of a small change. Every single design has its own folder, every color way, every size. Since it is all digital files, storage will never be a problem. In the old days, we had to try to keep designs on different colors and different sizes organized in some sensible fashion. Imagine we have a design called Gobi for the Toledo Mud Hens. This design could go on virtually any color and size garment. Imagine if you had a separate folder or bag for each size and color way. Or if it was all in one file, how long it would take just to find what you need. Now, it doesn't matter, it has its own digital file. Every file is stored in the "Archive" where it can be viewed by various people. The only people that can actually modify the digital file is the art department. The production manager has access, but can only modify the name of the folder if needed. The person working pre press can access the file to load it into the I-Jet.

When the pre press person works off an order, all the need to know is the file name (number). They simply access the archive and retrieve the folder. This will open with all the digital separations inside. There is a thumb nail view on the screen, and information the person needs to image is also available. We simply have a line on the screen that identifies the ink color and the mesh to be used. The correct screen is loaded into the machine and the start button pushed. The screen is now being imaged. The queue will hold as many files as you wish. Some people might just load order by order, while others may queue up the entire days work.

When we used film, we also had (as we do now) a pre registration system. Everyone should. Depending on the brand or type you have made, there are usually carrier sheets used to attach the film positives to. These are aligned using some type of grid that matches your press. The carrier sheets have pre punched holes in them that line up with a pin bar attached to the vacuum table. This often limits you to exposing one screen at a time. (I modified my system so I could do four screens at a time and had good results) The time it takes to use the carrier sheets really adds up. You also have the human factor here. Garbage in, garbage out. This may be the most critical part of pre press, as it directly carries over to press set up. Once the film and screen are loaded on the vacuum table, the lid is closed and the vacuum started. The draw down time will vary from shop to shop, but 30 seconds is a reasonable assumption. Once complete draw down is reached, the exposure can begin.

After the screen is imaged with CTS, we simply hang them on a wall opposite our light source. The wall is painted black to reduce light scatter. The screens are hung on 2x4s attached to the wall. Since the image is directly on the emulsion, intimate contact   is assured. By not having glass or film, the exposure times   will be reduced be 40-60%.

We work a day ahead. The screens being made today are for tomorrows print schedule. One thing I like about the I-Jet is that it uses wax rather than a water based or dye based UV blocker. I know the image will be perfect even if it sits for days. I don't know if this is the case with the other systems. Usually the pre press person will start the day by coating screens and imaging simultaneously. We have the luxury of having a screen coating machine. One person can _easily_ image screens and coat at the same time. When the coating is finished, the person starts to expose, develop, and tape up screens. We try to keep production in a loop, and every area of production having its own loop.

There are some tiny savings that can add up over the year, and some that aren't so tiny. Since we have the I-Jet integrated with the M&R Tri-Loc Pre Registration System, set ups are faster. An eight color job might only need one or two micros and be good to go. This is a huge savings (boost?) for us as we do 10 jobs per press per day.

Depending on how far you want to go, you can save electricity and the life of your lamp. For example, you have two screens to expose. One has an exposure time of 65 light units. The other has a time of 105 light units. We will put both on the wall and expose for the shorter of the two times, 65 light units. That screen is removed and the remaining screen

will get an additional 40 light units, bringing the total exposure to 105 light units. This may seem petty, but this just relieved 40 light units from the bulb, extending its life. Also, less electricity is used.

Since we are using an integrated pre registration system, we don't bother with registration marks. That's two or three pieces of tape we don't use on every screen, all day, all year. We use one piece of tape on the print side to cover the information box.

Pinholes? Virtually non-existent. Since you can't have dirty glass or film, you won't have any pinholes. Perhaps you'll see some, but that should lead you to look at reclaim.

All in all, I can't imagine not having direct to screen. I don't believe anyone in our company can imagine it anymore. (Remember at the beginning?….NOBODY wanted it) It has made our art department stronger. It has steam lined so many areas of our production. And I never even got into print quality being improved. I think if you are even thinking about CTS, you should start looking into it. Start doing your research. Be ready to do some serious, down and dirty ROIs. The variety of machines are increasing and the costs are coming down. Now is the time to start looking