IMPORTANT QUESTIONS

YOU NEED ANSWERED BEFORE YOU PURCHASE A FILM OR FICHE SCANNER

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Scanning Technology Working For You

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With multiple solutions available on the market today, it is important to understand ALL features and factors needed for your application, and how best to evaluate offerings from any manufacturer. Innovation is key… Not only is hardware important… software capability, real throughput, image quality and support should all be key considerations, as they will contribute to your overall satisfaction and translate directly to your return on investment.

The film and fiche scanner business is fiercely competitive and specifications range from overly optimistic to fiction.

The key is to know what questions to ask, what to watch for, and have a full understanding of your application requirements.

nextScan would like to provide you the best information to assist in selecting the right solution for your specific application, so we feature here some hot topics for different types of readers, all of whom are involved in the selection process.

Marketing Hype vs. Reality

HOT TOPICS

LINE-OF-BUSINESS MANAGEMENT AND PURCHASING AGENTS

• Is Your Vendor a Technology Innovator or Just a Follower?

Make sure that the vendor that you are considering has an in-house development team so that you can be assured that the products will be enhanced and innovation will be incorporated into your products as technology evolves. Some vendors lack technical staff in-house to maintain their products. Some rely on overseas contractors to develop and maintain their software. Having an in-house development team allows your vendor not only to incorporate technology innovations quickly but also to make software customizations that may be needed from time-to-time. Perhaps more important is the response time that a vendor with in-house engineers can give you to address software enhancements and/or bugs that need attention. Going with a technology developer and innovator is really critical to secure a good ROI.

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• Your Return on Investment

nextScan designs and builds film and fiche scanners, as well as processing software that work to minimize labor costs. This is backed by feedback on benefits our users have experienced in the field. As you will discover once your film and fiche scanning project moves along, the cost of the scanner and software ends up being the least cost in the total conversion process. It is the labor and time costs which include operation of the scanner(s) as well as Image Review, QC, and if desired, OCR. We design systems that will work fast, accurately and give you the highest image quality possible with the least amount of time and people.

• Service and Support

Support and service are key to your success. Don't be afraid to ask what a manufacturer provides as a value-add with its scanners as this can vary from company to company. Installation, training, support and consulting programs should be part the manufacturer's product offerings, as is the case with nextScan. Understand the differences in programs and associated prices – if the scanner goes down, does it have to be shipped back to the manufacturer or can a technician log on and access your machine remotely for troubleshooting? Does the manufacturer provide on-site support as an option?

• Is Your Vendor Going to Be Your Competitor?

Believe it or not, there are companies in the market that not only manufacture and sell film and fiche scanners, but also employ those same scanners in a service bureau environment, scanning film and fiche for end users. If you are a service bureau, determine if the scanner vendor you are considering may actually compete against you for your next scanning job.

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IT MANAGER

• Double Speed

Interpolating lines – "double speed". This method of scanning increases a scanner's capture speed, but does so at the cost of image quality. Some will tell you that an image scanned at 300 dpi x 100 dpi will have about the same quality of a scan at 200 dpi x 200 dpi. This is just not true. Your images will look like an old, low resolution FAX. Does the scanner vendor you are considering use compression or interpolated lines to make up for slow scanner performance? Scanners using this "double speed" approach degrade the image quality and OCR accuracy as they have to compress the data and interpolate the resolution. Moreover, images manipulated by this "double speed" approach take the risk of being challenged in some legal applications.

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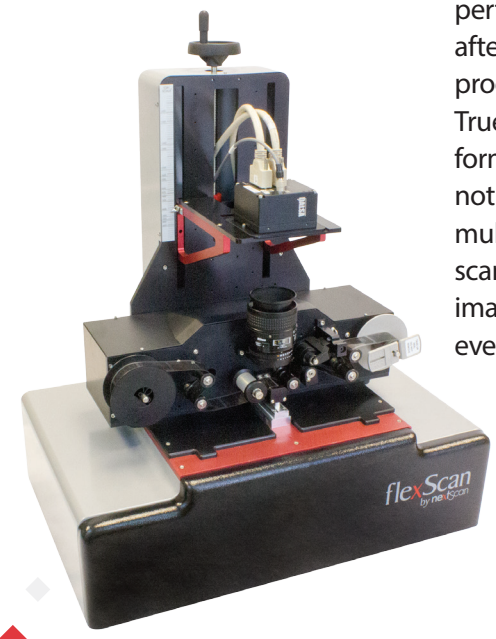
• True Optical Resolution

True Optical Resolution is the ability to have one pixel on your camera for each pixel on your source image. This is attained by optically adjusting the focal length of the Lens and Camera to capture at true image resolution, not digitally scaling the image to achieve the desired resolution. Scaling an image creates artifacts that are not desirable, and can be very detrimental to image quality while affecting the OCR ability. Some scanner manufacturers state that they have True Optical Resolution, when they in fact have no ability to adjust the optical path for different reduction ratios and DPI requirements. All they have is one fixed setting. Have you ever noticed that if your LCD monitor is not driven at its native resolution, the image quality is very poor? That is because the image must be scaled to fit the monitor's native resolution and pixels are dropped or added where needed. Scanners with fixed optical paths can only accomplish different resolutions by scaling or interpolating, which really means to add or remove pixels from the original image. The addition/removal of pixels not only can erode significantly the image quality and the OCR precision but also constitutes a manipulation of the original image that could be challenged in some legal applications.

• Ribbon vs Strip Scanning

True Ribbon Scanning captures an entire roll of film or microfiche from end-to-end and top-to-bottom in raw, uncompressed, lossless grayscale and stores it as a single image. This ensures no frames are ever missed by poor detection setup or poor image quality on the film/fiche. Strip scanning saves the image in a lossy, compressed image, which is not accurate to the original. Additionally, any needed image processing has already been performed on these lossy images at scan time, so no changes in image quality can be made after your scan is complete. Are you going to be in trial and error mode getting your image processing parameters adjusted for each roll? Do you really want to do all that rescanning? True Ribbon Scanning requires True Ribbon Files which are composed of data in RAW format, grayscale and uncompressed. Anything compressed is NOT a ribbon file and will not give you the benefits of Ribbon Scanning. True Ribbon Scanning allows you to conduct multiple image enhancements without ever needing to re-scan any image. Not so with strip scanning where the files produced are compressed from inception (hence eroded in their image quality and limiting the scope of enhancement), and if you need to enhance quality even further, then you would need to re-scan those images.



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• Production Throughput

What is your REAL speed to scan, process, QA and then output? Not just how fast a scanner can theoretically capture a roll of film? Strip scanning software (vs. True Ribbon Scanning software) can only Scan or Output, but not both at the same time. This dramatically affects your system throughput. Scanning and processing cannot be done at full rated speed without the addition of a high performance storage system. Will your scanner vendor provide this? Remember that a key component to accurately secure that a conversion project is completed within time and under budget is the Production Throughput and NOT the theoretical scanning speed stated in the data sheets. The strip scanners have a production bottleneck in the image processing step and not in the image scanning. Image processing can take up to twice as long as it takes for the image scanning, therefore, strip scanners theoretical scanning speeds do not really measure the true speed of a scanner. You want to verify – what is the speed to complete the 4 basic steps in your process? a) Image Scanning, b) Image Processing, c) QC , d) Output. Furthermore, you not only want to verify that you have the best Production Throughput in the market, but also the best Image Quality produced with RAW, uncompressed data captured with true optical resolution (without interpolation or scaling).

• Image Quality

Does the scanning solution that you are considering include a camera capable of 14 bits internal and a real 12 bits of captured data, a high quality Schneider lens, a strobed LED- based illumination source such as LuminTec and/ or various automatic processing options such as crop, deskew, rotate, mirror, user adjustable gamma correction and auto thresholding for variable density film to achieve the best possible image? Can it scan an entire roll as uncompressed grayscale at a high quality True Optical DPI? Does the vendor that you are considering still use old-school dedicated hardware to do image processing, or are the image processing features software – based, enabling flexibility and an avenue for future upgrades/developments? Remember that image quality and OCR precision can be severely affected by the illumination system. The strobed LuminTec approach homogenizes light distribution while diminishing any potential linear image distortions, delivering a pristine image quality while keeping the file size small. True optical resolution is only achieved through optical means and not through interpolation or scaling, and the processing of data using RAW files guarantees the maximum fidelity of an image. Strip scanner vendors cannot deliver those characteristics.

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