

Large Format Scanner

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Large format scanners are not crucial for everyday activities. A normal scanner can easily handle documents of any size which an office is likely to come across. They are really only needed for extremely large applications. They are often used, for example, in architectural offices to xerox building plans, or in historical libraries where large numbers of old documents are scanned either for storage purposes, or as a shortcut to transcribing their data by hand.

This transcription by self is an interesting property of scanners, large format or otherwise. A technology has been developed called optical character recognition, or OCR, which allows a document to be scanned into a computer, and then turned into text. The computer actually looks at the image of the document, and can see what characters are on the page and turns them into words in a text document.

OCR is still not perfect, and might not ever be. When my father first purchased a large format scanner, more than ten years ago, the text would come out garbled when he'd try to convert the image, unless it was perfectly aligned, printed on very high-quality paper, and printed in very big letters which had undergone little or no fading. The scanner still saved him time in transcribing documents, but the process of proofreading and correcting the mistakes the large format scanning software made could be almost as time-consuming as typing it in by hand. For older documents, he'd actually continue to type them in by hand!

One of the problems with turning pictures into text is that handwriting is so diverse and, although to us it looks recognizable, it actually rarely looks like the letters are supposed to. It is amazing the number of different combinations of squiggles and lines that people can recognize as the same letters. Our ability to look and see language is much greater than a computer and may remain so for some time. Solving this problem is one of the biggest challenges in the area of artificial intelligence.

One of the most interesting and promising uses for large format scanners, is in the area of historical achival and preservation. Many small countries have interesting old artworks and manuscripts, sometimes written on bark or woven fibers in fading inks. These historical crafts are costly to restore, and inevitable decay on their own. Humidity, mold, insects, or poor storage can contribute to their continued decay. Also, sometimes these countries don't have adequate places to keep these artifacts. They can even be destroyed in political upheavals.

Large format scanners, however, are big enough that even medieval tapestries can be scanned on their surface with pretty high quality resolution. They can be easily and cheaply stored electronically on a computer – much cheaper as a solution than the costly warehouses currently used to house such artifacts, which must be carefully climate controlled, to prevent decay, and patrolled constantly by security to prevent theft. Not to mention the amount of work which is required just to categorize and keep track of them.