Optimal Settings for Document Scanning
The Highest Quality is not always the best setting!

The purpose of this document is to help you get the best performance out of your document scanner. At first, this seems like a no brainer – just use the best quality settings, right? Wrong! Here we will demonstrate that the law of diminishing returns applies. High quality scans offer little improvement to the naked eye while providing a big hit to image file size and therefore performance. We will use a cost-benefit approach to this.

The Scanner

The first factor is the scanner. Using a low-end, low price scanner has hidden costs. Scans are slow. Page feeders will jam more often and scan quality will be poor. Higher end scanners can scan both sides of the page in one pass (known as duplex scanning). This can cut your scanning time in half. We find that low-end scanners provide poor contrast. Any hand printed data on forms tends to be difficult to read. To compensate you must up the resolution, which is a pitfall (more on that later). The scanner of choice here is the Fujitsu 6130

Settings – Quality vs Performance

This analysis is done using the Fujitsu 6130 scanner. This is what we use and what we recommend to our clients. The performance of other scanners may vary but the basics are the same.

Costs

As you increase the quality of your scans, you incur the costs of doing so in the following forms
- Speed. Slower to scan and slower to retrieve.
- Greater disk usage (which can be a significant issue for your backups)

Benefits

The benefits of a higher quality scan is, simply put, a better, more true-to-life image. At some point, however, you will find that the perceivable scan quality is only improves marginally with each increase in theoretical scan quality. In other words, your scans can double in file size and you will hardly be able to tell the difference.

Balance

Our goal is to strike a balance. Below are links to scans for you to compare. The file size is listed on each link. Click on the link to view the file and judge for yourself whether or not it is adequate. Keep in mind that over time you may scan hundreds of thousands of documents. A difference of even 100kb on a single page can easily translate to Gigabytes of storage and backup.

There is no doubt that the higher resolution scans are prettier, but are they more effective? Do they enhance your ability to retrieve the information you need? With this in mind, we can see that even the Black and White 200dpi scan is sufficient. In fact, high resolution scans need to be resized to fit your screen and so **any improvement is completely lost at computer screen resolutions**. Colour should be used only where necessary. Only photos need to be scanned in anything greater than 256 colours at 200dpi. **Also note how much longer the high-resolution scans take to load**.