Hunting season for dust bunnies

SilverFast scanner software featuring IR dust and scratch removal

Sometimes, it can be very useful to have a well-known software producer in your neighbourhood. This week, LaserSoft ImagingAG, known for their SilverFast scanning software, offered me the chance to have a look at the newest features of their sophisticated software.

Anyone working with image processing and editing – and that probably includes most Mac users – will almost certainly have to use a scanner sooner or later. This might be for digitising old prints or slides, archiving newspaper articles, saving historical documents for posterity, storing business documents in order to save space, recording text with OCR software, or making any other form of

printed material machine-readable. Even affordable scanners are now capable of quite challenging tasks and some provide quite astonishing performance, for example the **Canon 8800F**, tested in Mac Rewind Issue 84. This flatbed scanner with integrated film adapter unit is by far the fastest in its price range and is available online from around 160 Euro.

As well as good performance and processing, the bundled software is one of the plus points of this scanner. In addition to the original Canon driver that provides a very functional interface for most standard tasks, the 8800F comes with SilverFast SE, which opens up a fascinating range of applications, the complexity of which non-

professionals could hardly imagine.

I have already described the basic features and application of SilverFast in the Canon 8800F test report. This week, Gerhard Wolff of LaserSoft invited me to look at a very special feature of SilverFast, of which the company is pretty proud. From a certain performance class upwards, modern scanners often provide functions to detect surface dust and scratches and to filter them out. Even though you should try to make sure that slides and negatives for the scanner are as clean as possible, one hundred percent cleaning is in practice impossible and careful cleaning does not help with scratches. Rather, the valuable

originals might get even more scratched.

With the 8800F, Canon now provides a technology called FARE (Film Automatic Retouching and Enhancement) that should recognise marks on the film surface and remove them, using additional infra-red scanning of the original. In practise, this works reasonably well in some conditions, but the user cannot adjust the parameters of this process. Therefore, results are quite often worse than without this function, because either the automatic detection was too weak, or image details were eliminated along with dust and scratches.

Infra-red scanning should actually ensure that only surface marks are detected

and filtered out. However, in practice unfortunately this looks very different, because the concentration of film grain at certain (especially dark) areas means that the slide surface is slightly uneven. This is even visible to the naked eye in some light conditions. However, infra-red detection identifies this unevenness as surface marks, which might possibly be filtered out by mistake, thus losing image details.

LaserSoft Imaging® wanted to tackle these and other problems by giving the user the possibility to carry out fine adjustment of the IR function, with the help of different parameters. The first hurdle was that the FARE technology used by Canon is patented and there was no chance of licensed use. However, at least access to the infra-red detection was permitted, and so LaserSoft Imaging decided to develop its own complete software solution. The result is

called iSRD® (infrared Smart Removal of Detects) and to my knowledge is the first solution of its kind that provides the user with a wide range of options to adjust the infra-red dust and scratch removal according to need. The nice thing is that iSRD is available not only with the professional versions of SilverFast, but also now with the SE versions that are enclosed with different Canon scanners. Once the software has been installed, all that has to be done is to update it on the **LaserSoft Imaging website**, as Canon does not keep the bundled software continuously up-to-date.

Currently, iSRD® works with the appropriately equipped scanners from Canon, Nikon (only Mac), Plustek and Reflecta. Unfortunately, Nikon has since stopped its activities in the scanner market. In order to make this function available for scanners still on the market, it was necessary to

bypass the interpreter (the MAID module) used by Nikon scanners, as this will see no further development and is not supported by Mac OSX Leopard. It still seems to function with Vista, but this might not be the case with Windows 7. Then only SilverFast can help.

The buttons for the iSRD® function (see right) are only visible if transparency originals are set. As is typical for SilverFast, these buttons are quite small, which makes them more difficult to locate at the beginning, but otherwise their size simply saves space. At first, only the top button (of two) is visible. By clicking on it, it becomes coloured, indicating that this function is activated. A further click on the symbol makes another button visible below, with which the options menu of the iSRD function can be selected. The screenshot on the right shows the menu from the top-of-the-range SilverFast Ai Studio version. Some

functions are absent from the SE version, for example the option to generate different layers and masks. The upper part as far as the "Detect" slider covers the hardware-based iSRD® function, while the lower part from "dust and scratch removal" onwards controls the software-based functions that do not refer to the infra-red scanning.
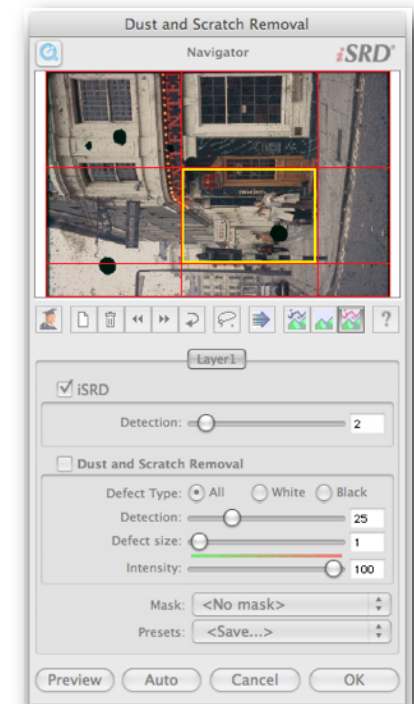
It is possible to set the strength of filtering using the slider, meaning that different cases can be handled more easily than with the normal, restrictive FARE method of Canon. Most of the time, the standard setting of 12 already gives very usable results. However, even iSRD cannot work wonders and, for example, detects the slight unevenness on the film for what it is, but overall the effect is very impressive and with practice, one can save a lot of Photoshop time. Using a scanned 35mm slide with an IT8 target for calibration, you can see the results on page 5 and 6.

The effect of iSRD® speaks for itself. However, unfortunately this function is not completely without a downside. As with all other solutions of this type, dust and scratch removal requires an extra run of the scanner. The original is in effect scanned twice, which of course takes more time. If

multiple originals are scanned at high resolution as well as using iSRD, it could take more than an hour to complete the scanning process. If the scanner was simply left to run, and it was subsequently noticed that the adjustments were not optimal, it is possible that another time-consuming run might be required. Therefore, one should make absolutely sure beforehand what adjustments are actually required for the original(s). In contrast to other solutions, iSRD in SilverFast allows fine adjustment for dust and scratch removal. With others, it can only be switched on or off, or at best the effect can be switched between strong or weak, of which often only one of the options is suitable. From this perspective, iSRD® represents a giant leap forward for demanding scanner work. And during my tests, the effects have turned out extremely well. My congratulations to LaserSoft

Imaging and their technical achievement!

By the way, SilverFast also offers some additional and highly praiseworthy features, which should delight scanner and print professionals. For example, there is an option for lovers of Kodachrome slide films, which are enormously popular with analogue photographers. The white balance of this film was optimised for slide projectors with light bulbs and lies at approximately 3200 Kelvin, in contrast to conventional films which are adjusted to a white balance close to daylight, ranging from 5000 to 5500 Kelvin.

With scanners that are already supported by SilverFast, one can find in the "Original" choice menu under Pos./Neg. a "Kodachrome" function, which allows selection of a generic ICC profile suitable for this particular type of film. An IT8 target specially for

Kodachrome is currently in preparation, which will allow scanners to be individually calibrated for this film type in the near future.

Another highlight is a module for printer calibration. This module is not particularly cheap at 99 Euro, but if you understand the complexity of developing and ascertaining a correct workflow, the price is more than justified. In particular, if the improved print quality is taken into account. However, one has to have at least SilverFast Ai IT8 in order to enjoy this option.

Before purchasing the module, it is advisable to find out whether the printer's own colour management can be switched off. This should not be assumed, might well be difficult to find in the printer driver and does not depend on the price of the printer. While the module works with some cheap printers with no problems at all, this is not true

for some more expensive models.

If this last hurdle is overcome and the additional module installed, then on the SilverFast homepage under "Documentation", a PDF titled "Printer Calibration" explains step-by-step how printer, ink and paper are combined in the most optimal way, with the help of the scanner. This is not particularly easy, and if one wants good results it will take more than just a couple of minutes, but anyone wanting to bring out the best colour fidelity, whether amateur or professional, will certainly make the necessary time. *(son)*

Guardian of image quality:

Gerhard Wolff of LaserSoft Imaging shows me the new features of SilverFast in his office.

Without iSRD®: The scan shows an IT8 target for colour calibration, scanned from a mounted 35mm colour slide. On purpose, I neither cleaned the slide beforehand nor the glass windows of the scanner itself. Lint, dust marks and other dirt are clearly visible. Also note the black edging at bottom left.

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LaserSoft Imaging

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www.SilverFast.com

Printed on Kodak Ektachrome Professional Film

With iSRD®: The scan with infra-red dust and scratch removal activated shows significantly fewer marks. Dust and lint are almost completely removed and even the large ugly "blob" in the grey gradient stripe and the black edging at bottom left are clearly reduced. Compared with the software method, infra-red dust and scratch removal is less invasive.

www.SilverFast.com

Printed on Kodak Ektachrome Professional Film

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