

# TECH

EDITED BY ADRIAN WECKLER e-mail: [adrian@sbpost.ie](mailto:adrian@sbpost.ie)

## Software to soften the edges

Airbrushing is no longer confined to the publishing industry with the advent of new software that enables anyone to beautify pictures of themselves, writes **Adrian Weckler**

W e've all corrected pesky red eyes with our digital camera software. But what if you could 'correct' other unwanted facial features? Smooth out those lines? Inject some body into those lips? Thin out those jowls?

Until now, this was the preserve of the tabloid picture editor. But new software packages are changing that, as do-it-yourself airbrushing enters the mainstream.

Last month, a British-based software company called Anthropics launched a new product, MyPerfectPicture ([myperfectpicture.com](http://myperfectpicture.com)). Also released as Portrait Professional (portraitprofessional.com), it identifies a face on a digital picture and then zooms in on it. It then allows you to 'adjust' individual features of your face, from the eyebrows, mouth, chin, nose and forehead to cheeks, neck and even hairline.

Dragging a computer mouse across these facial features slightly alters their angle, depth or prominence. A glum-looking mouth can be upturned to create a bright one. A skin around a mouth, eyes or neck can be softened and laughter lines erased. And it takes about two minutes on a home computer.

The software has been trained in all aspects of beauty, said Simon Beech of Anthropics. "It allows you to choose how much to enhance the lighting, the skin texture and how many wrinkles to remove. It allows you to subtly sculpt your face to make your photograph look as good as a professional."

The software works with digital photos or scanned-in pictures from any digital camera. It is currently limited to female faces, though a patch for male faces is to be added soon.

"We have taken hundreds and hundreds of pictures, loaded them into a database that has analysed them all, and the computer has come up with an aggregate of what the ideal face looks like," said Beech. "The software works by very, very gently morphing the subject's face towards that."

Beech predicts that people's fundamental desire to see an idealised version of themselves, together with the explosion in digital photography, will create enough demand for such packages to be a mainstream feature of our digital photo packages.

Digital photography has rocketed over the last few years, and there are more people out there sharing and storing more digital images than ever before," he said. "As people enjoy sharing pictures online more and more, the opportunity to enhance them will become more and more popular."

Beech said the company had tested out before and after versions of the same picture on HotOrNot.com, a website where the public rates submitted photographs to internet dating agencies.

"Independent testing has found that even with subtle use of the software, people could increase the perceived hotness of a photo by very significant amounts," he said. "The company offers two different versions of the software for download. The personal consumer edition costs \$30 (£24), while a professional edition, aimed at photographers and picture editors, is available for \$80 (£64)."

"MyPerfectPicture recognises no artistic skill," said Beech. "All you have to do is identify some points on the photo, such as the corners of the eyes and the edges of the lips. The software then calculates how to make you look your absolute best."

So how does such image correction technology work? According to Tommer Leyvand, a consumer editor at Tel Aviv University who is creating a different consumer airbrushing package, it comes down to creating a "beauty function" that the software recognises.

Last year, his research team analysed thousands of photographs of people taken according to their attractiveness. His software then analysed all of the facial images and collated them with what people said they liked or disliked.

Leyvand's software came up with algorithms based on the distances between facial features, such as the thickness of a face's eyebrows or facial width at eye and mouth level.

From this set of analyses, the software came up with its own so-called "beauty function," which purportedly calculates whether a face can be made attractive or not.

"The main challenge is to achieve this goal while introducing only minute, subtle modifications to the original image, such that the resulting beautiful face maintains a strong, unmistakable similarity to the original," said Leyvand.

Leyvand then took 40 more facial images, applied his software to them and did another survey, asking people what they thought of the chosen faces before and after they had been "corrected." 80 per cent of respondents thought the touched-up faces were more attractive.

Airbrushing used to be the preserve of tabloid picture editors, but new software is changing this



Myperfectpicture.com and portraitprofessional.com: allow you to adjust individual facial features

images and collated them with what people said they liked or disliked.

Leyvand's software came up with algorithms based on the distances between facial features, such as the thickness of a face's eyebrows or facial width at eye and mouth level.

From this set of analyses, the software came up with its own so-called "beauty function," which purportedly calculates whether a face can be made attractive or not.

"The main challenge is to achieve this goal while introducing only minute, subtle modifications to the original image, such that the resulting beautiful face maintains a strong, unmistakable similarity to the original," said Leyvand.

Leyvand then took 40 more facial images, applied his software to them and did another survey, asking people what they thought of the chosen faces before and after they had been "corrected." 80 per cent of respondents thought the touched-up faces were more attractive.

Leyvand believes that this is just another manifestation of image-conscious consumers following their fashion idols.

"Professional photographers have been retouching and debauching their subjects ever since the invention of photography," said Leyvand.

"It may be safely assumed that any model we encounter on a magazine cover today has been digitally manipulated by a skilled, talented retouching artist."

Leyvand made a presentation of his work at this year's technology-orientated Siggraph conference.

But is this a new depth of narcissism to be resisted? Are we in danger of trying to airbrush all traces of reality out of our appearance?

"It's just human nature," said Olaf Curran, a fashion stylist for British women's magazines. "People, especially women, want to look perfect in their pictures."

Curran said the growth in cameralenses has created new levels of neurosis about one's self-image. "How many times do you see girls in shopping centres looking over each others' cameraphones and screaming 'delete that', 'delete that'?"

"And how many times do you see people making a fuss about their passport photos? They want to look like movie stars. A product like this would seem to be very smart if it's marketed in the right way," said Curran.

So far, the touch-up packages are only available for download from [myperfectpicture.com](http://myperfectpicture.com) or [portraitprofessional.com](http://portraitprofessional.com). However, it will not be long before they are available on mainstream digital photo editing packages, says Tommer Leyvand.

"Since the human face is arguably the most frequently photographed object on earth, a tool such as ours would be a useful and welcome addition to the growing arsenal of image enhancement and retouching tools available in digital image editing packages," he said.

The potential of such a tool for motion picture special effects and advertising is also quite obvious. Other uses, such as submitting pictures for online dating, also present themselves as an obvious application for the technology.

Leyvand said that beauty has fascinated human beings from the "dawn of mankind." "Several psychological studies indicate that facial attractiveness is a universal notion, transcending the boundaries between different cultures," he said. "There is a high cross-cultural agreement in facial attractiveness ratings among raters from different ethnicities, socio-economic classes, ages and genders."

On a practical level, Leyvand said that temporary blemishes such as acne, rashes or bad skin can be done away with for the purposes of long-term representations, such as passport photos. The era of the "bad photo," he said, could soon be at an end.

Other uses, such as submitting pictures for online dating, also present themselves as an obvious application for the technology.

Leyvand said that beauty has fascinated human beings from the "dawn of mankind." "Several psychological studies indicate that facial attractiveness is a universal notion, transcending the boundaries between different cultures," he said. "There is a high cross-cultural agreement in facial attractiveness ratings among raters from different ethnicities, socio-economic classes, ages and genders."

On a practical level, Leyvand said that temporary blemishes such as acne, rashes or bad skin can be done away with for the purposes of long-term representations, such as passport photos. The era of the "bad photo," he said, could soon be at an end.

Other uses, such as submitting pictures for online dating, also present themselves as an obvious application for the technology.

Leyvand said that beauty has fascinated human beings from the "dawn of mankind." "Several psychological studies indicate that facial attractiveness is a universal notion, transcending the boundaries between different cultures," he said. "There is a high cross-cultural agreement in facial attractiveness ratings among raters from different ethnicities, socio-economic classes, ages and genders."

On a practical level, Leyvand said that temporary blemishes such as acne, rashes or bad skin can be done away with for the purposes of long-term representations, such as passport photos. The era of the "bad photo," he said, could soon be at an end.

Other uses, such as submitting pictures for online dating, also present themselves as an obvious application for the technology.

Leyvand said that beauty has fascinated human beings from the "dawn of mankind." "Several psychological studies indicate that facial attractiveness is a universal notion, transcending the boundaries between different cultures," he said. "There is a high cross-cultural agreement in facial attractiveness ratings among raters from different ethnicities, socio-economic classes, ages and genders."

On a practical level, Leyvand said that temporary blemishes such as acne, rashes or bad skin can be done away with for the purposes of long-term representations, such as passport photos. The era of the "bad photo," he said, could soon be at an end.

Other uses, such as submitting pictures for online dating, also present themselves as an obvious application for the technology.

Leyvand said that beauty has fascinated human beings from the "dawn of mankind." "Several psychological studies indicate that facial attractiveness is a universal notion, transcending the boundaries between different cultures," he said. "There is a high cross-cultural agreement in facial attractiveness ratings among raters from different ethnicities, socio-economic classes, ages and genders."

## realityBYTES

Adrian Weckler

## Second-hand could be good first choice

Some time ago, Belfast-based newspaper *The Irish News* purchased Microsoft Office for 80 of its in-house computers. However, it did not fork out big money for the latest version, Office 2003. Instead, it bought second-hand licences for an older version, Office 2000, in doing so, it saved about €13,000, or €160 per computer.

Its rationale was simple: why buy a Porsche when a Volkswagen will do? While Office 2003 has a host of tricks and shortcuts that make daily PC tasks harder, its extra features are not essential.

The Irish News is not alone. Yes Telco, a British mobile phone supplier, chose to buy the 2002 version of Windows XP rather than the latest edition, for hundreds of its PCs. This decision saved it more than €15,000.

Both firms are taking advantage of an emerging trend among businesses that have decided they do not need all of the bells and whistles of the latest operating systems.

In the same way as the latest dual core PC with more than a gigabyte of RAM may not be crucial to getting orders in and out, small business directors are wondering whether the extra €150 for the premium edition products are justifiable.

Their pondering is borne out of the reality that more than 90 per cent of most small businesses' operations are based on a small number of standardised procedures. Not upgrading to the very latest technology is unlikely to affect them in the short term.

Specialist resellers are springing up to take advantage of this. One such firm, Discount-Licensing.com, claims that discounts for older software licences typically range between 30 to 60 per cent.

"New and improved features are evident when you compare against later versions of any Microsoft product," said Noel Unwin, a director of the company.

"However, the question that businesses are now asking themselves is whether the average PC user firstly understands what these features are and, more importantly, whether they are actually being adopted."

Because of its dominance in PC penetration and office applications, Microsoft represents one of the most important of the prime areas of opportunity for companies like Discount-Licensing.com.

"In some cases, international purchases of older 2000, pre-2000 and 2002 component version licences have achieved net savings in excess of 50 per cent on single purchases of more than €50,000," he said.

So is this a disaster for Microsoft? Will its business customers all flock to cheaper, but fully functional, versions of Windows and Office? Not so far, as:

the vast majority of Microsoft purchases are still for new editions

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

He said that about 15 per cent of enquiries received by Discount-Licensing.com have been from existing Microsoft resellers. But the vast majority of Microsoft software purchases are still for new editions.

Unwin said some of the industry's concerns that the price for the newer versions would collapse had also turned out to be wrong.

## GADGET of the week

### Motorola H700 Bluetooth headset

It may make you look like a bit of a geek when walking down a street, but the Bluetooth headset is a Godsend when driving. This is especially so with the ongoing dissatisfaction caused by car kits, which may or may not work with the ever-increasing number of next-generation mobiles.

The trick to a Bluetooth headset is that it works with any mobile which has Bluetooth onboard. Nowadays, that means almost all mid to higher-end models. It's relatively easy to set up and it charges off its own power supply in the same way as a mobile phone does.

There are three or four main brands in the area, but Motorola has been coming up with some nice gear over the past year or so. The H700 is a mid-range model that gives good, clear sound, a respectable six hours of talktime on a single charge and doesn't weigh one's ear down.

The usual Bluetooth range of ten metres applies, while its

noise-reduction technology makes an audible difference to older models. And it won't land you in trouble with the Garda Síochána.

Rating: 4/5  
Price: €80



## Where to buy PERFUME online

It's the same old story: your girlfriend will only wear Baby Doll by Yves Saint Laurent, but the shop is out of it. When it comes back in, it will cost €40 for a 25-millilitre bottle. Surely there has to be a better way? There is, thanks to the internet.

[www.perfumeireland.com](http://www.perfumeireland.com)

This Irish site has a massive range of perfumes, most of which are the saint laurent or a little cheaper than their equivalent shop prices. From Lancôme to Bosc to Estée Lauder, it's loaded with classics and is well worth a look.

Cost: Baby Doll eau de toilette spray by Yves Saint Laurent (100ml) - €57  
Delivery: free

[www.fragrances.com](http://www.fragrances.com)

This US site is definitely one of the



Paris Hilton with her Just Me perfume

cheapest places to buy premium branded perfumes - compare its prices to, say,

perfumeireland.com (which itself has reasonable prices. If you're stocking up on perfumes for any reason (such as gifts), this is a must-visit website.

Cost: Baby Doll eau de toilette spray by Yves Saint Laurent (100ml) - €31.50  
Delivery: €11.50 plus 77c per item

[www.perfume.ie](http://www.perfume.ie)

This is not the definitive Irish perfume site, but rather the address of a small niche Irish perfume-maker, who was obviously quick off the mark with the dedicated dot.ie domain name. The manufacturer does a small handful of men's and ladies' fragrances, mostly under its Iris brand.

Cost: Iris cologne spray (50ml) - €26.50  
Delivery: €4 for orders between €15 and €30; €64 for orders exceeding €30