

## High-security printing technology proves a hit with drugs maker

**Brand Protection Technology and Authentication Systems (BTAS) will commercialise its Hidden Image Technology (HIT) with a European pharmaceutical customer within weeks.**

**The German- and Austrian-owned company, based in Austria, has been running tests of the technology in Europe for over a year.**

**BTAS managing director Gerhard Welley says the company considers the technology a finished**

**product now, though the company will make upgrades to keep ahead of counterfeiters. He says the technology will be used commercially with the unnamed pharmaceutical customer within weeks.**

**Welley says he cannot go into detail about how HIT works, or even what it consists of, but he says the technology is part of the prepress stage, and it can be used with all kinds of printing methods. At the core of the HIT system are markings invisible to the**

**naked eye, but revealed by a specific viewer or filter, which can be customised.**

**The Australian research organisation, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), has developed the technology and BTAS owns the rights to market it in Europe.**

**Welley says BTAS will work with end-users, governments and high-security printing houses,**

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## Ultra Dots secure clothes from shrinkage

**N**anotechnology company Ultra Dots is working with a clothing brand owner to develop a solution that will fight shrinkage.

The company is developing a non-toxic nano-sized taggant for the unnamed clothing company in order to help it distinguish between batches of clothing.

The clothing manufacturer suspects that a third-party logistics company distributing their clothing is diverting clothing back to the wholesaler and charging it twice for shipping the same clothes.

Ultra Dots believes that the brand owner can apply a covert

mark somewhere on the clothing or on the tags and labels on the clothing. The brand owner will then be able to authenticate this dye with a special reader, also developed by Ultra Dots.

Ultra Dots believes that its taggants will help the brand owner keep better track of its goods.

The taggants are photoluminescent nanomaterials, also known as quantum dots, and they emit light in a unique way. The company feels there is a strong future for these materials, as long as they're non-toxic. For that reason, they are developing non-cadmium, non-lead materials.

The company's vice president of business development Dan Green says he can't go into detail about what the taggants are made from but he says the company is confident that the materials will pass toxicity tests.

Green also says he doesn't yet know when the nanomaterials will be commercialised.

Green says he hopes to conduct toxicity tests and submit the results to the US FDA. He also hopes to submit the materials for European approval. But he says he cannot disclose when the toxicity tests will take place.



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## Alltec Videojet provides lasers to mark sensors

**G**erman company Alltec Videojet is supplying an automotive parts manufacturer with lasers to write codes on sensors for cars.

The sensors are installed within a car's computer system and they tell a driver when he or she is getting too close to a car when parking, or when someone is dangerously close at speed, for example. The sensors are generally installed in high-end cars.

Alltec Videojet has supplied the manufacturer of these sensors with a laser so the company can authenticate a part and differentiate between genuine and imitation parts. The unnamed manufacturer started

using the lasers about two months ago.

The laser is being used to write an industry-standard code, which contains the product's name, the manufacturer, the product type and a machine-readable barcode.

Alltec Videojet director of marketing Dr Volker Pfeufer says the manufacturer wanted to use lasers because laser markings are superior to other markings in terms of their durability. 'The laser is used to make it permanent,' he explains.

Pfeufer says Alltec Videojet is seeing an increasing demand for lasers from automotive parts manufacturers and consumer electronic

goods manufacturers.

Pfeufer believes that what's attractive about the lasers is their durability, the expense of the equipment needed, which deters counterfeiters, and the precision of the codes. He says you can mark products with lasers every day for six months without worrying about an unreadable code – something that can't be said about other kinds of marking.

Alltec Videojet is a leading manufacturer of laser systems for the marking and coding systems industry and is part of the Videojet Technologies Inc. group of companies.

**The company works directly with end-users.**

## French cosmetics brand uses Crown for protection

**C**rown Specialty Packaging is helping a French cosmetics brand fight counterfeiting with a holographic package.

The unnamed cosmetic company's first products with the Crown package hit retailers' shelves for the first time several weeks ago.

Crown Specialty Packaging sales and marketing director for Europe Didier Sourisseau says the French brand has discovered lots counterfeits of its products in the Middle East.

The cosmetics' house believes the Crown package will deter counterfeiters. The technology used is similar to what Crown used when designing a container for Nicolas Feuillatte brand champagne, which was launched in June 2005.

Crown created the three-piece champagne container using Protact holographic polymer-coated steel from Corus Packaging Plus. Working with this material, Crown developed a proprietary method of printing directly on holographic sheet.

Crown says the holographic container was designed to help leading brand Nicolas Feuillatte maximise point-of-sale impact and reinforce the company's

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such as state printing houses, which will pay a licensing fee. Depending

on the volume of products marked, HIT could cost less than €0.01 per item.

Welley says HIT can be marked at the

item level with the appropriate printing system, but it is more likely to be marked at the batch level.



**I**t sounds like it's in a family of covert products called watermarks. This technology has been around for a while, so this is probably an advance on the basic technique, which is to hide an image within the artwork by modifying the dot position within the pixel space. The image can only be interpreted by a highly specific filter. Dutch company Joh. Enschedé

developed something along this line.

It would be important to make sure the image quality is not degraded. I've seen some applications of what sounds like a similar technology where you can detect a fuzziness. However, BTAS may have overcome that.

– Michael Chamberlain, brand protection consultant at Pira

### The Nicolas Feuillatte Champagne pack design



Source: Corus Packaging Plus

brand image. Crown designed the champagne canister to create a sense of movement on shop shelves while distinguishing Nicolas Feuillatte as a premium brand. The printed holographic packaging also serves as an anti-counterfeiting, product authentication tool.

Crown also prints a discrete Crown logo onto its packaging as another tool to deter counterfeiters. The logo is a registered logo, and counterfeiters are therefore forced to copy two trademarks, which could mean higher penalties if the counterfeiter is caught. It may force the counterfeiter to think twice before copying the product.

Sourisseau says Crown has been working on securing its own supply chain in order to give the highest level of protection to its customers.

Sourisseau also reveals that Crown Speciality Packaging is working on

new anti-counterfeiting technology. 'We hope to speak about that next year,' he says.

## DTI to manage RFID privacy issues

The UK's Department of Trade and Industry (DTI) and Information Commissioner will deal with any privacy issues that concern the use of radio frequency identification (RFID) tags on consumer goods and retail products.

Earlier this month the UK communications regulator Ofcom announced it would like to set aside the 865–868MHz band for electronic product code (ePC) RFID tags in the UK. The new proposals are open for consultation until 12th September.

However, OfCom, the independent regulator and competition authority for the UK communications industries, will not deal with any privacy issues arising from the use of these tags.

Before drawing up draft rules, Ofcom consulted with both the DTI and the Office of the Information Commissioner as to how concerns relating to RFID and privacy might best be addressed.

It was agreed that, in the first instance, any concerns relating to privacy should be addressed to the DTI or the Office of the Information Commissioner and not to Ofcom, as it does not consider itself to be the appropriate body to deal with privacy concerns.

UK Information Commissioner Richard Thomas, who heads the country's privacy office, also issued a statement clarifying his position on the use of RFID tags.

The statement says: 'RFID tags may be used in circumstances where the Data Protection Act 1998 is unlikely to apply at all – for example, in monitoring distribution of pallets of goods from warehouse to stores. Even where personal information is involved it is perfectly possible to comply with the Act.

'Where the use of such tags involves the collection, generation or disclosure of personal information then the Act will apply. In particular, this means that individuals should be aware when information about them is being collected and what it will be used for.'

For more about the DTI and RFID, [click here](#)

## IT industry should do more to tackle counterfeiting, says survey

A new study on counterfeiting argues that executives in the information technology (IT) industry should do more to keep abreast of the trends in counterfeiting in order to fight it.

The study, carried out by the Alliance for Gray Market and Counterfeit Abatement (AGMA) and accountancy firm KPMG, found that up to 10% of

### DTI



Claims about invasion of privacy through the use of retail RFID tags are largely exaggerated. The tags are likely to be removed or deactivated at the check-out. Also, there are few areas where the RFID tag will be integrated into the product itself, so the tag will be thrown away with the label or package.

Even in the area of personal ID, where RFID

tags will be used to hold personal information, there are a lot of protocols being drawn up to prevent access to information. There might be a criminal element trying to get that information, but they're not likely to pursue hacking into the RFID tag. There are easier ways of stealing identities. – Michael Chamberlain, brand protection consultant at Pira

IT products may be fakes.

Groups of executives were interviewed for the report.

The report found that the most frequently counterfeit IT products are generally the ones with the least complex intellectual property (IP) content – often accessories to main product lines.

The groups also frequently see counterfeit products that are standards-based, for example, products for which the blueprint is easy to obtain.

The groups studied how other industries, such as the pharmaceutical industry, reacted to the problem of counterfeiting and what solutions worked best in those industries. The report says: 'Through research, we found that the most effective counter measures to counterfeiting were driven from the top down into an organisation by its senior-most executives. This suggests that, in the IT and electronics industries, it is important that the risks of counterfeiting be addressed at the highest levels of management.'

The executive director of the AGMA, Lily Mei, says a coordinated and comprehensive programme targeting the sale and distribution of counterfeit high-tech products is necessary to protect consumers from poor quality goods, as well as help secure the future of the IT industry.

Mei says that the AGMA believes that security labels are an important part of the comprehensive programme.

'We have seen security technology used for some time. The key is to have a multi-layer approach for both overt and covert, and to change with a reasonable frequency.'

She adds, 'AGMA plans to continue providing our members with the ... research needed to educate our members, industry and others on issues surrounding grey market and counterfeit prevention and the related better practices. AGMA is currently considering additional projects.'

The AGMA is a non-profit organisation established in 2001 and is made up of technology companies that wish to address the global impact of the grey marketing and counterfeiting of technology products. Founding members of the group are 3Com, Cisco Systems, Hewlett-Packard and Nortel.

### Columbia sportswear hits back at counterfeiters

US outdoor sportswear company Columbia has seized more than 80,000 counterfeit items during one month of raids in China.

Acting on a request by Columbia, Chinese officials in Yiwu City, in Zhejiang Province, staged a raid in July that resulted in the seizure of nearly 45,000 pairs of trousers. Other July raids uncovered an additional 34,000 garments, including parkas, baseball caps and fishing vests.

In a separate raid, Columbia shut down three workshops manufacturing bogus backpacks in Vietnam.

But the company reports the raids have not been restricted to Asia. Columbia found what it's calling significant importation and local distribution chains in Australia. The apparel seized in raids, which resulted in federal court proceedings against a well known Australian retail outlet, was valued at \$1 million (€823,000).

At press time, Columbia was unavailable to comment on its security technology. But it is understood the company uses an in-field authentication system that involves an inexpensive reader, which allows investigators to distinguish between fakes and the genuine article.

Columbia coordinates the programmes from its US headquarters in Portland, Oregon.

### Holograms fail to deter Chinese counterfeiters, warns investigator

An investigator who has worked in Asia Pacific for more than a decade says holograms will not protect products against counterfeiting in China.

China Business Intelligence investigator Kevyn Kennedy, who is based in Taiwan but often travels to China, says most overt brand protection devices are likely to be copied.

'Counterfeit holograms are old stuff. A good

counterfeiter can produce a fake hologram in a matter of months. The only effective method is constant monitoring of the markets – export and domestic – and solid market intelligence.'

Kennedy admits he has a vested interest in making brand owners aware of the problems in China, and taking action through investigation to prevent counterfeiting.

While holograms won't work in China, he says it is still possible to stop counterfeiting. All that is needed is the right strategy tailored for the customer.

He reveals that China Business Intelligence helped one of its clients stop counterfeiting in Taiwan by naming and shaming the people responsible.

Kennedy says the client that used to have counterfeiting problems in Taiwan, and has gone three years without a problem in that country.

'Our client list is secret, but I can tell you that ... a good client was having major counterfeiting problems in Taiwan. We responded by raiding everything in sight: retailers, which led us to warehouses, which led us to distributors, which led us to factories.'

'The raids were publicised – which worked for this client in Taiwan but might not be suitable for everyone – and three years on, there is still no more counterfeiting of this product in Taiwan.'

# Q & A

## Industry profile – Payne Security

### Poised for growth

Security label and tear-tape maker PP Payne recently completed a merger with Laminex and Morane and is now known as Payne Security. Stephen Pinchen, Payne Security's business development director, says the new company is poised to be a leading player in the security products market.

**Q Why did PP Payne merge with Laminex and Morane?**

A Like all successful businesses, we had to adapt to market changes and explore opportunities to build further on our success. We had been working with [Laminex and Morane] for two and a half years, and had seen increasing success from different parts of the group working together. This is a classic case of 'the whole being greater than the sum of its parts.' It was just fairly obvious we could pull off a much more coherent security offering together.

**Q In the past, Payne has not really sought publicity in terms of the security technology you provide. Is that going to change?**

A Payne works very closely with all its clients on ensuring

that specific details of any work remain confidential. However, we are keen to bring the reputation and pedigree of Payne Security to the attention of a much wider audience. To do this we will begin to talk more generally about our products and what we offer.

**Q How have you reacted to the changing security market?**

A I think the security market has increased in sophistication from a product and technology point of view. The good guys continue to have to work even harder to stay ahead of the bad guys. Keeping clear water between them and us requires ever-increasing investment in resources, product development and advances in technology.

**Q Will Payne develop new products, or will you work to increase the presence of your existing products in the market?**

A This year we'll be increasing our production capabilities in document security films, label and ID card production. In terms of improving our toolbox of technologies, a great deal of effort is going into RFID and

other track-and-trace features. We're also looking at new proprietary overt technologies driven by customer demand.

**Q Do you plan to pursue new end-user markets?**

A Yes, our current focus is on the tobacco and pharmaceutical markets, but we have increased our activities in market sectors which carry some form of government duty/excise, such as the drinks industry.

Document authentication is also one of our other areas of focus.

**Q What would you like the company to accomplish in the next 5–10 years?**

A Growing Payne Security to three or four times its current size is not out of the question. Growth is expected to come from organic growth. Acquisitive growth could be considered where this would add to our technology portfolio or market position.

**Q What about the long term?**

A Our long-term ambition is to become one of the leading providers of security products and systems on a global basis. Future products will most likely become more intelligent and IT-based in



Stephen Pinchen, business development director, Payne Security

Stephen has 25 years experience and success in product and business development within the consumer packaging and security industries. He will have specific responsibility for developing and growing Payne Security through further innovation, development of partnerships, mergers and acquisitions. Stephen holds a chemistry degree and a Diploma in Marketing.

nature. A holographic label in five years' time will be a very different animal. It will be more complex and technically advanced, perhaps carrying a track-and-trace feature, as standard, that will link to various databases using mobile communications.

## IPMS says security tags help convict counterfeiters

**A**n investigator working for clothing companies Von Dutch, Henri Lloyd and Paul Shark Yachting in the UK says security labels are helping its clients bring counterfeiters to court.

Glasgow-based Intellectual Property Management Services (IPMS) director George Clyde says that in the 20 years he has investigated counterfeits, there has been a marked improvement in their quality, making it harder to tell them apart from the real thing.

'I have noticed that counterfeits have got better, probably because technology has improved, making it difficult for us to distinguish between real and fake goods.'

Clyde says security tags, especially if they are covert, can help investigators authenticate goods. 'They certainly make life easier,' he says.

Clyde says IPMS cannot reveal who supplies IPMS clients with security devices. But he says that several clients use serialised codes and others use covert marks.

He says IPMS will never reveal, even to the courts, where security devices are situated on a garment, in order to prevent counterfeiters from getting hold of that information. Instead, he will simply

report that the counterfeit goods did not have the devices or tags that should have been there.

'We tend not to broadcast where the device was supposed to be. We can just categorically deny that it's there.'

If a brand owner uses security devices on all its products, a categorical denial of a security tag's presence is often enough to prove to a judge that the goods are fake. This in turn will help a brand owner's legal team bring counterfeiters to court.

### PrintCity to explore RFID

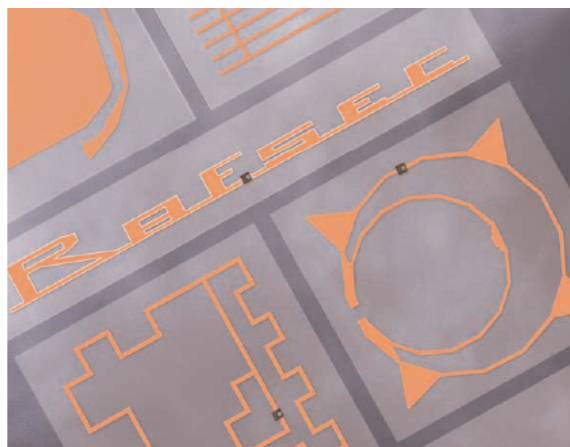
PrintCity will demonstrate radio frequency identification (RFID) capability in 2006.

The group has a security printing activity section with expertise in security prepress and software solutions, security inks and papers, and proprietary overt effects, among other things. A new working group within the activity group will look at RFID.

PrintCity's remit is to promote innovation and integration, and to ensure that its members supply profit from the exchange of information and the best practice of the PrintCity network. The network is a strategic alliance that connects printing expertise from over 40 independent companies.

PrintCity members working in the security printing

### The new OneTenna from Rafsec



Source: Rafsec

industry are the Bobst Group, Sun Chemical and M-Real, among others.

The security printing activity group will meet in September to discuss the best way to present RFID to the industry. The group will develop their ideas in the autumn and present them in early 2006.

One of the PrintCity members, Finnish paper company UPM, works closely with Rafsec, leading producers of RFID tags, so it is likely the group will source their tags from Rafsec.

PrintCity President John Dangelmaier says that RFID is of growing interest to the companies that PrintCity supplies. Dangelmaier says pharmaceutical companies in particular can benefit from RFID technology.

For more about Rafsec RFID tags, [click here](#)

The 40 companies involved in PrintCity are active in over 180 countries and with a total turnover in excess of €30 billion.

### Advance Nanotech to continue investments in south-east Asia

A company, set up to commercialise nanotechnology in different applications, plans on making more investments in nanotechnology ventures in south-east Asia.

Advance Nanotech recently made the first of what it hopes will be several investments in south-east Asia, with the acquisition of 10% of Singaporean security technology company Singular ID, which has developed a security technology.

The organisation recently set aside \$3.5 million (€2.8 million) for funding in south-east Asia. It

is scouting for another company with which to work in the region.

This is Advance Nanotech's first investment in an anti-counterfeiting technology. The organisation has invested in 18 other companies, in areas such as electronics, pharmaceutical and materials technology.

The organisation provides a range of services and support for the companies they invest in, including financing, leadership, assets and counsel on intellectual property, licensing and regulatory issues.

Advance Nanotech chief executive officer Magnus Gittins says the company looked at several types of anti-counterfeiting technology, before choosing to invest in Singular ID.

Gittins says he thinks Singular ID's technology has a lot of market potential. '10% of global medicines are thought to be counterfeit. This technology has the potential to go on an individual pill. And it's at a price point that is very attractive.'

Gittins expects that even though Advance Nanotech will provide infrastructure for Singular ID, the company will remain in Singapore. But he says there will likely be a business development team in the US making contacts with brand owners there.

Singular ID has developed a magnetic marking system using nanotechnology. Singular ID magnetic fingerprints consist of micro- or nanoscale magnets embedded within a non-magnetic material,

such as paper or plastic. Each fingerprint produces its own unique signal and even Singular ID is unable to reproduce a fingerprint. The company has worked with Singaporean researchers to develop software for mobile phones that can read these fingerprints. It means the product with the fingerprints can be read and authenticated anywhere.

Advance Nanotech's senior vice president of business development Stephanie Interbartolo will sit on Singular ID's board of directors. Interbartolo is already meeting with Singular ID's team of scientists, Doctors Adrian Burden and Peter Moran, on a regular basis.

The Advance Nanotech investment is expected to speed the process of the technology's commercialisation.

### Xeikon works to improve security label printing

Digital printing manufacturer Xeikon is developing a heat- and pressure-resistant ultraviolet (UV) toner for the security printing market.

Xeikon has recently made improvements to their digital printing machine, the X-800. It has been upgraded to make it easier for label makers to print serialised codes, variable 2-D matrix barcodes and other kinds of variable information.

Since each label can be printed to bear a unique code, the machine can print labels for

track-and-trace. And if the labels are printed with a special UV toner, which will glow when exposed to UV light, the labels can be used for authentication as well, adding another level of security.

Xeikon's business development manager labels Filip Weymans says the variable information feature of the machine is likely to be used by label-makers working for the pharmaceutical industry. He says this is because the law in some countries, such as Belgium and Italy, demand that prescribed drugs require a unique code to identify their path in the supply chain.

The Xeikon machine can already print with a proprietary yellow security UV toner, but Weymans points out that Xeikon hasn't yet developed a toner that is resistant to heat and pressure.

Weymans believes designing a durable toner is the next logical step.

'It will be a unique solution that today is not available elsewhere in the market,' Weymans says.

#### The Xeikon X-800



Source: Xeikon

### Magnetic fibres provide thorough paper protection

Researchers at the University of Karlstad in Sweden have developed magnetic fibres for brand protection that can be applied to three levels of paper packaging.

The researchers hope to integrate magnetic fibres in the paper substrate, in the paper's coating and in inks printed on the package.

The magnetic fibres will be machine-readable.

Professor Luciano Beghello, who manages the project at the university's paper coating and converting laboratory, says the group should have the results of the tests checking the applicability of the fibre system by the fourth quarter of 2005.

The security features could be commercialised by the first quarter of 2006.

The project is part of SustainPack, a European Union-funded sixth framework programme. The researchers at Karlstad University are working with several others to develop the magnetic fibres, including STFI-Packforsk of Sweden.

Beghello says Swedish company Imago is one of the companies helping them to develop machines that will read the magnetic marks.

The magnetic fibres are just one of several areas of brand protection technology the group is looking at. Beghello says the group wants to develop several security features, including a system that uses fibres whose geometric structures change when exposed to microwaves.

He says they are also looking to develop machine-readable

laser marks for packaging.

Beghello admits that some of the technology they're testing is similar to what's already on the market, such as Verification Security Corporation's MagDots and Creo's taggants. But he thinks that will be an advantage because end-users will be more interested in something that big brands are already using.

Beghello says the group's overarching goal is to find a way to integrate the security of a banknote into a package. 'Some banknotes have 40–50 security features. In the future, that might be needed on packaging.'

Beghello used to work for a banknote security company and he says he can use what he learnt in that industry to develop effective solutions.

## Pira to host security and brand protection summit

Brand owners and brand protection suppliers can benefit from a Pira International security technology summit, which will run from the 2nd to 3rd November in Chicago, with a special convocation day for the pharmaceutical industry on 4th November.

Running for the first time, but amalgamating Pira's flagship brand protection and secure document conferences, Security Summit 2005 will draw upon a wide pool of resources.

Pira senior conference producer Anthony Parker says: 'This conference will be a real talking shop where different industry sectors and government departments can come together and swap ideas, strategies and technological approaches. There is nothing on the market quite like this, so it should be a great event.'

The pharmaceutical industry will be able to take part in a special convocation day on the 4th November. The day will allow

pharmaceutical companies, who are at the forefront of the fight against counterfeiting, and their potential suppliers to meet face-to-face to discuss problems and their possible solutions.

The fight against counterfeiting and grey market diversion is ongoing. Every year, there are fresher and better ways to keep ahead of the crooks. Unfortunately, because of advances in information gathering and technology, the crooks are never far behind. That's why Pira believes it's so important that brands keep abreast of the latest trends.

This year, Pira has invited distinguished guests who will speak about all aspects of the fight against counterfeiting. Global brand protection manager for Procter & Gamble in Germany Jim Kennedy will present on designing a successful global solution for brand protection. In addition, the head of enforcement at the UK's patent office Phil Lewis

will talk about taking the counter-offensive to combat intellectual property (IP) crime. There will also be many presenters talking about the latest innovations in brand protection technology.

Parker says conference attendees will be able to benefit from the conference's format. 'Brand owners and suppliers alike can hear how anti-counterfeiting strategies have been implemented successfully and how challenges have been overcome to stay one step ahead of the fraudster.'

'Suppliers can gain a unique insight into the wants and needs of some of the world's most successful brand owners and government agencies, while keeping an eye on their competitors' activities.'

'At the same time brand owners will get a better understanding of what the market trends are and how to get the best from new and emerging technologies.'

'Some banknotes have 40–50 security features. In the future, that might be needed on packaging.'

Professor Luciano Beghell



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