

SCAN

IDENTIFICATION • AUTOMATION • INFORMATION • COMMUNICATION • INTEGRATION

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NZ's biggest retail supply chain: How does The Warehouse manage?

Verification: All you need to know about verifying your products

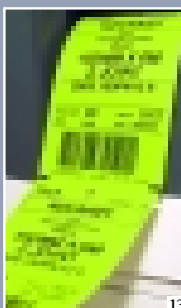
E-Commerce: Breaking down barriers



EAN 
NEW ZEALAND



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from the Chief Executive's Desk

As the year draws to a close, I want to take this opportunity to thank all those people who supported EAN New Zealand throughout the year.

I would like to say a special thanks to:

- the retailers Foodstuffs and Progressive, who have consistently given their time to speak at our seminars for members
- our sponsors throughout the year, who have helped to keep the cost of the seminars affordable
- others sponsors such as Kiwi Labels, who have helped with the production our new size gauges, and the verification suppliers who have sponsored new equipment.

A full list of our 2002 sponsors will be published on our website, and we hope you will give them your support.

We have just begun some membership research. The qualitative sessions have been completed, and already we been able to resolve some of your concerns.

Some participants commented that their free seminar vouchers had expired before they were able to use them. Please be assured we will accept expired seminar vouchers: we want as many members as possible to attend training seminars so that everyone has the basic information they need to get their bar codes right.

There was also a comment that suppliers would like to be told by retailers about failing bar codes. We are organising now to get this feedback and post the information on our website.

The qualitative research is being followed up with a quantitative survey via e-mail. If you haven't received this survey, please contact Andrew Fletcher Consulting (michelle@fletcher.co.nz) and request a copy. We want as many of our members as possible to have their say.

It is pleasing to see that EAN-128 barcodes are making increasing inroads in New Zealand, extending the use of the EAN system further along the supply chain. Recently two articles came across my desk that clearly demonstrated how EAN-128 can help cut costs.

- In October, Wampler Foods in the USA recalled over 12 million kilos of cooked sandwich meat because a strain of listeria had been found at a production plant. This was the largest meat recall in US history.
- Some days later in New Zealand, Nobilo's recalled 26,000 bottles of wine due to glass being found in two bottles.

As consumers become more aware of food safety issues, we can only expect more issues resulting in recalls. Using EAN-128 bar codes enables suppliers to trace and track by batch numbers or dates – often reducing the amount of product recalled in such circumstances, and giving consumers greater assurance about quality and safety.

Our consultant Glenn Powell (021 711 070 or glenn.powell@ean.co.nz) can help you with the implementation of EAN-128 for traceability.

This has been a very busy year for EAN New Zealand, and I know my colleagues here are looking forward to the Christmas break. Our offices will be closed from 24 of December 2002 to 3 January 2003.

We would like to pass on to all our members our best wishes for a profitable festive season that is filled with good cheer. We look forward to working with you in the New Year.

Margaret Fitzgerald
Chief Executive



Your chance to help lead the world

The EAN-UCC system is constantly updated to support new business practices across the whole supply chain – and you can help.

"EAN International is going to a lot of trouble to ensure that its new and revised standards are relevant all around the world, and reflect best practice," says EAN New Zealand's Raman Chhima, who co-ordinates New Zealand input into the process.

"This will lead to better standards and overcome the perception that EAN standards sometimes appear without warning or reflect business needs in the Northern Hemisphere," Raman says.

By participating in a Business Requirements Group organised by EAN International, you will:

- promote your company's needs and point of view globally
- help to establish the global business standards of the future
- be constantly informed about new standards and practices relevant to your business.

Business requirements groups are working now to ensure that all of the following processes can be completed in an integrated electronic system without the expense and errors of data re-entry:

Plan: meeting the planning requirements of all participants in the supply chain

Align: establishing what data must be synchronised in order to be used as a source reference by everyone in the supply chain

Order: ensuring that data is aligned so that buyers and sellers can complete all aspects of the order electronically

Deliver: ensuring that data and systems enable despatch, transport and receiving to be completed electronically

Pay: ensuring that invoices can be raised and payments made as part of a unified electronic system

Asset tracking: enabling assets to be tracked automatically regardless of changes in location or custodial responsibility.

You don't need to be an expert in the EAN system in order to participate. You should have an in-depth knowledge of one of the above business functions and a working knowledge of the relevant technology enablers.



For more information about changes to EAN standards, or to join a Business Requirements Group, contact Raman Chhima (04 801 2895 or raman.chhima@ean.co.nz).

STOP PRESS

The Uniform Code Council of America, ECC Canada and EAN International have arrived at a point of historic and major significance for the themselves and for users world-wide.

At a special General Assembly held in Brussels in November, it was unanimously agreed to create one worldwide EAN.UCC organisation.

Joining the current board of the expanded international organisation will be:

- William Grize, President and CEO of Arhold USA, Inc.
- R. Kerry Clark, Vice Chairman of the Board and President of Global Market Development and Business Operations, The Procter & Gamble Company
- C.R. Herkert, Senior Vice President and COO, Wal-mart International
- Thomas Rittenhouse, President & CEO – Uniform Code Council, Inc.

Matthew Sheehy

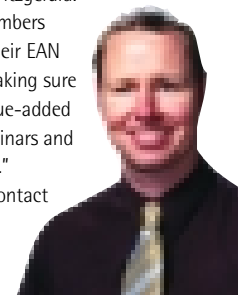
EAN New Zealand has recently welcomed Matthew Sheehy as Territory Manager based in Wellington.

Matt will be responsible for building relationships with EAN members in the lower North Island and throughout the South Island.

Matt comes from a background in electrical engineering and business communication. Most recently he was Area Manager for a large New Zealand cable firm.

"I have been most impressed by Matthew's energy and focus on meeting the needs of our members," says EAN New Zealand Chief Executive Margaret Fitzgerald. "He'll be helping members make the most of their EAN membership, and making sure they're aware of value-added services like our seminars and consultancy services."

EAN members can contact Matt Sheehy on (04) 801 0833 or (021) 661 919.



new staff

when barcodes go bad

The following real-life stories – with the identities of the firms and products concealed – are told in the interests of better bar codes.

Missing bars...

A designer recently submitted an EAN-13 that at first sight appeared like a good bar code. But on attempting to verify it, EAN New Zealand technician Raman Chhima found that the bar code would not scan at all.

This meant that the verifier could provide no information at all on the fault – so the bar code had to be analysed by Raman's keen eye. He managed to identify that the last bar was completely missing.

Printing of the labels, and distribution of this product, had to be delayed while the problem was corrected. The delay could have been avoided by taking advantage of EAN's artwork verification service. Experience shows that having the artwork verified at an early stage makes final verification much more likely.

...and crooked bars

A large manufacturer recently sent us a sample from their line as they were having problems in scanning. The company had tried a couple of times to resolve the problem in-house, but without the use of the EAN New Zealand's verification service several issues would have been missed and further cost incurred.

First attempt

Looking at the sample, our technicians could see that there was a problem with the print quality (see picture below). But testing the sample revealed a number of other issues:

- The print quality problem was due to faulty print heads, leading to a number of places in the bar code where the lines had not printed.

- The carton had not been held still during printing, so the lines were not straight.
- The bar code numbers should have been printed below the symbol to cover any occurrence of problems with hardware – for example, if a scanner is broken and the number has to be manually keyed in.
- Bearer bars are required. These are horizontal lines that touch the ends of all the bars, and are important as they prevent partial scans. (Bearer bars also help when printing directly onto corrugated card by a plate process, as it equalises pressure across the bar code as it is printed).
- For general distribution, the bars should cover the distance between 32mm and 64mm from the base. As this tray was less than 64mm tall, the bars should touch the top edge of the tray and extend at least 32mm down the side (as recommended by the Australian and New Zealand Grocery Guidelines).

Second attempt

When faulty bar codes have already been printed on a container, it is common to print the new bar code onto a label and paste this over the noncompliant bar code. Luckily, this manufacturer sent the new label for verification before doing this, because not all the problems had been resolved:

- Although the print quality was much improved, the bars were too wide.
- There were still no human-readable numbers present.
- There were still no bearer bars.

It is also recommended that labels include a product description, to help ensure the label is applied to the correct container.

We strongly suggest that you attend one of our seminars to improve your company's production of bar codes. Contact EAN New Zealand on (04) 801 0833.

EANnet

can improve health of pharmaceutical industry

The pharmaceutical industry will be the first in New Zealand to undertake a pilot programme to assess the advantages of EANnet, the data synchronisation catalogue for Australia and New Zealand.

EANnet is a secure central repository that creates data integrity among trading partners, thus providing the basis for efficient electronic trading. Chief advantages of EANnet include:

- eliminating the need for a Universal Buying Form (UBF)
- removing the need for multiple entry of data
- reducing the need to correct errors on invoices
- giving buyers one central site to obtain product details from multiple suppliers.

In New Zealand, Auckland's PSM healthcare (an EAN-accredited company) has taken the lead by sponsoring a recent EAN seminar for the New Zealand pharmaceutical industry and by being an early volunteer for a New Zealand-based pilot.

PSM sees a number of gains from joining EANnet, according to Paul O'Brien, PSM's General Manager Sales and Marketing.

The first of these is that PSM's major Australian customers – Woolworths and Coles – are trying to do away with paper-based UBFs. "They only want to deal with electronic UBFs, not a piece of paper filled out in scribbles by a sales manager," Paul says.

"Inaccurate UBFs cause a lot of problems, and it's so easy to get them right," he says. "Paper UBFs are a relic from the past."

Participants in the Auckland health-sector meeting agreed that the pharmaceutical industry would benefit from a single electronic catalogue available to all suppliers and buyers. They also agreed that a single catalogue should be available to both the grocery and pharmaceutical industries, and in both New Zealand

and Australia, since many companies supply to both industries in both countries.

A number of companies at the meeting expressed interest in joining a New Zealand pharmaceutical industry pilot programme for EANnet. The first meeting of this group will take place within the next few weeks, and the pilot will begin in early 2003.

Paul notes that the grocery industry embraces bar codes and the rest of the EAN system wholeheartedly, but that New Zealand pharmacies and hospitals do not. EANnet may be the catalyst that pulls those parts of the health industry into the EAN system so that "they can enjoy the benefits that the grocery sector has had for years," Paul believes.

"Australia will in time force this change on New Zealand," he says. "At PSM we relish change like this and embrace it. We believe this is in the interests of our customers – it is actually of more benefit to them than to us."

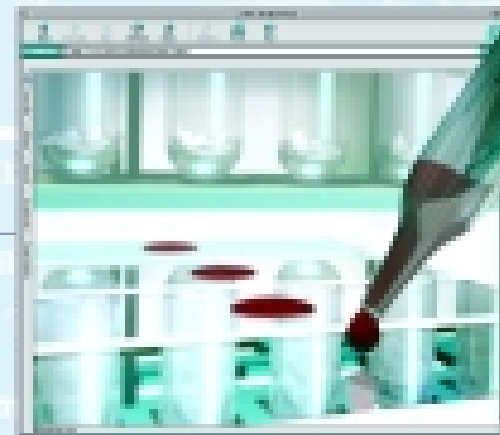
Meanwhile, EANnet has been chosen by the Medicines Coding Council of Australia as the central repository for data about pharmaceuticals in that country, according to Neale Austen, General Manager eCatalogue Services for EAN Australia.

A recent pilot project among seven Australian pharmaceutical companies and three of their trading partners demonstrated that EANnet can fulfil the requirements of that industry, Neale told the Auckland seminar. The repository will be used by everyone in the industry, including wholesalers, the government and researchers — and as the basis for prescribing and dispensing software.

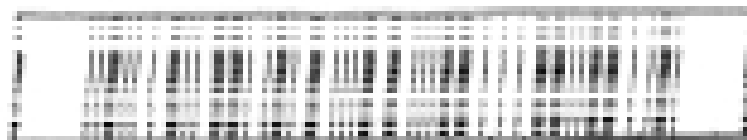
EANnet could equally be used as a central repository for the New Zealand pharmaceutical industry, Neale suggests, possibly leading to a trans-Tasman repository.

"At PSM we relish change like this and embrace it."

PAUL O'BRIEN, PSM'S GENERAL MANAGER SALES AND MARKETING.



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Inventive actress held RFID key

"Any girl can be glamorous," film star Hedy Lamarr once said. "All you have to do is stand still and look stupid."

Yet Lamarr wasn't stupid. She is famous for the first nude scene in the history of cinema (in *EXTASY*, 1933), but her greatest impact was an invention for which she received no royalties and which only came into its own 50 years after she patented it.

In 1942, Lamarr (under her real name Hedy Keisler Markety) and composer George Antheil patented a "Secret Communications System" designed to guide torpedoes to their targets without interference from radio jamming by the enemy.

At its core of their invention was "frequency-hopping", now known as spread-spectrum radio systems. The technology is today a key component in wireless data systems, including radio frequency identification (RFID) systems, cell phones, wireless networking and satellite technology.

Lamarr had first conceived the idea in the 1930s, when she was married to a German arms manufacturer. When Hitler came to power, Hedy left her husband, escaped to London, and became a committed anti-Nazi.

She and Antheil then patented a system that enabled the frequencies of radio control devices to be changed quickly to avoid jamming. The device was never put into use in torpedoes, but in the 1960s (shortly after the patent expired) the US military began using the concept. Frequency-hopping came into its own in the 1990s, when computer processing power made it more feasible to employ the concept.

Today, spread-spectrum systems are crucial to enabling many devices (cell phones and RFID tags, for example) to operate in the same frequency range without interfering with each other.

In 1997 Lamarr and Antheil were given a special award from the Electronic Frontier Foundation to acknowledge their contribution to modern communications.

Frequently asked questions

I don't understand why I have to get verification reports on bar codes that I already know will work. We check them with a scanner. Why isn't that enough?

SCAN replies

The only reliable way to predict how well a bar code will scan in "the real world" is to test the quality and technical correctness of the bar code itself using the correct type of verification equipment in conjunction with a visual inspection.

There are several reasons why scanners are unreliable indicators of how well a bar code will scan in the various environments in which they are used. Scanners are all ages and conditions, with different aperture sizes and focal lengths. They operate in differing physical situations – for example, different levels of ambient light can influence the print contrast as seen by the scanner. As well, differing decoding algorithms written into decoding software may or may not be able to tolerate errors in the width of printed bars.

Only the official verification test ensures full compliance with the EAN International General specifications, which are designed to make sure bar codes scan "first time, every time" (and everywhere) they are used.

I have been receiving verification reports that give my bar code passing grades, but with a warning that they won't pass a new ISO test. Should I be worried about this?

SCAN replies

Traditional verification was used as the testing method for bar codes until 2000, when EAN adopted a new ISO standard based on a new, superior test.

Traditional testing examined the accuracy of the dimensions of the printed bars, and calculated a value called Print Contrast Signal (PCS) to assess how clearly a scanner might be able to see the bar code. It was the best testing method known at the time, but it had two limitations: it was not internationally standardised, and it was not a thoroughly reliable indicator of likely scanning performance in real conditions.

The ISO standard specifies a method called Reflectance Profile Analysis which, in effect, tests the behaviour of the light reflected from the bar code, rather than the bar code itself. The ISO method is a far superior predictor of future scanning performance and is internationally standardised.

Beginning January 2003, the only standard used to determine passes or failures on EAN verification tests in New Zealand will be the ISO one.



NZ's biggest retail supply chain: how does The Warehouse manage?

Supply-chain management has been a key tool as, over the last 20 years, the Warehouse has changed the face of New Zealand retailing. Automated supply – plus intelligent use of the human factor – is a key to the efficiency of 82 The Warehouse stores, 36 Warehouse Stationery stores and 7000 staff.

The Warehouse's distribution centre in Wiri, Auckland, can be described in superlatives without fear of exaggeration. It's the tallest, biggest and fastest distribution centre in New Zealand, and is in Australasia's top three.

It covers the size of seven football fields under one roof. It can handle more than 1600 inbound pallets a day, with 65% of the goods being cross-docked – that is, moved directly to dispatch without being stored in the distribution centre. The cross-docking operation moves goods from container to dispatch in as little as eight minutes.

Automation through bar codes

All incoming cartons are given a bar-coded sticker and all picking, stacking and moving is done through scanning this barcode. The only human intervention occurs when inwards containers are opened and people check that the correct product has been sent and that it

is consistent with the barcode labels that have been prepared for it.

An outstanding feature of the distribution centre is the automated conveyor system that moves product from the carton-pick and cross-dock areas through a central 'spaghetti junction' and onto dispatch for one of the 82 shops. Its electronic sorting and flow-control capabilities create an efficient system that operates at an impressive speed.

If the goods are not cross-docked, full pallets are put away using reach-trucks. The seven stories of racks are 10.5 metres high, and reach-trucks are pre-set precisely to reach each level.

The system can track a pallet or carton anywhere and any time in the building through radio frequency (RF) scanning systems.

People are the key

"Sophisticated technology is important," says Scott Kerr, logistics manager for The Warehouse, "but a successful supply chain is not so much about how many conveyors and how much technology you have as the detail and the smart people who make it work."

"The way The Warehouse manages people and gets them involved in the business is key to our success."

An example of this philosophy is how The Warehouse deals with the busy period from October to the end of January, when the company earns 60% of its revenue.



Supply chain expert joins EAN Board

SCOTT KERR

The logistics manager of The Warehouse, Scott Kerr, has joined the Board of Directors of EAN New Zealand.

"Scott brings great skills and some fresh perspectives to the Board," says EAN Chairman Bruce Boock.

"The Warehouse is unique in New Zealand because of its size, and also because of its huge number of relationships with suppliers around the world," Bruce says.

John Albertson, Chief Executive of the New Zealand Retailers Association and an EAN Board member, also welcomed Scott to the Board. "The Warehouse is one of a number of large retailers outside the grocery sector who are making increasing use of the EAN system to manage their supply chains," John says.

"It will be valuable for the Board to have additional input from this sector, especially since there is a growing 'blurring of the lines' among the various traditional sectors within retail," he says.

Scott Kerr is the General Manager Logistics for The Warehouse, which takes a broad and holistic view of supply-chain management (see accompanying article).

"The grocery industry is well down the track in making full use of bar codes," Scott acknowledges. "Those of us in the hard-goods sector haven't achieved the same consistency.

"And organisations like The Warehouse have very different supply chains from the grocery sector. We have many different suppliers from many different countries.

"We buy goods from manufacturers with a wide range of technologies, and a few of our suppliers have no bar code capability at all.

"Together with EAN New Zealand we can promote global standards in those parts of the world, and expand their use in this country as well," Scott says.

Scott has specialised in managing complicated processes throughout his career – co-ordinating the operations of the multinational peacekeeping force in Egypt, for example. He has also been the Human Resource Manager for the New Zealand Army, managed a complex manufacturing operation, and run the Auckland operations of a major courier company.



"We are geared for Christmas, with Halloween and Guy Fawkes also coming in this peak time," Scott says. "The planning for this peak is an all-year process.

"The philosophy is that the whole business takes accountability for the supply chain. Any screw-up in any area is a responsibility of the whole business.

"Internally, we take a tri-partisan approach. We engage the 'buy', 'move' and 'sell' functions [the merchandisers, the logisticians, and the in-store operators] and involve them in a unified planning process outside their individual silos.

"As a business we look at what we need to buy, when we buy it, how we are going to move it and what it will look like in the store. So we agree, universally, on the plan we will work with."

The buyers prepare the initial plan, Scott explains. "When I see it, I think about volumes of containers, shipping, when it's going to arrive, minimising storage if it has to be stored, when it's going to move through the domestic freight network to the stores, the sell-through rates and what this means to the supply chain.

"As an executive group we consider how we can get best sell-through without markdown, and how we can have the right amount of stock to make best use of the sales opportunities so we are not over- or under-stocked."

The three functional areas — buy, move and sell — have unified ownership of the whole process and the business outcome. "This collective responsibility is part of the 'People First' philosophy that is the backbone of the company. It's The Warehouse way to be people-focussed."

The Warehouse handles its own shipping, and has tight relationships with its manufacturers. It tells them the dates

and the ships that it wants goods loaded on, in order to ensure that the flow of stock is relevant to the flow of sales. Typically, the Warehouse doesn't bring in an order all at one time, but staggers the arrival of containers to meet predicted demand.

Supply chain: more than logistics

Kerr explains that the company's "cradle-to-the-grave approach" to the supply chain goes way beyond getting goods to the stores. "It is about the integration of the whole supply-chain cycle with our sustainable business philosophy.

"Logistically, we are embarking on a programme with suppliers that includes such things as taking care of the environment. Minimising potential waste at the beginning of the supply chain and recycling at the end of it is part of the programme. This means working with the suppliers to reduce the waste that comes with the product by reducing packaging.

"At the other end of the chain we have, in three years, almost achieved our aim of zero waste to landfill. That goal means that stores no longer have a skip on site, and that everything is recycled or goes back to a recycling depot in one of the three main centres.

"The sustainable business philosophy is also about purchasing product from suppliers that are ethically and morally of a standard we can accept in New Zealand. It includes reducing fossil fuel emissions. For example, this year we are working closely with Tranz Rail so that we can use trains and not trucks, where possible."

Automation is consistent with good environmental practices, because it means less waste. The Warehouse has a

paperless system though its distribution network using two different bar codes: the POS codes and distribution codes.

The manufacturers supply goods with EAN-13 bar codes on each individual item for point-of-sale use. A few of The Warehouse's overseas suppliers are unfamiliar with the EAN system, so in these instances The Warehouse has the stickers printed in New Zealand and sends them to the supplier to put on the goods.

The Warehouse uses a non-EAN bar code to keep track of each carton until it's opened in the store. This is a pre-printed proprietary label and barcode applied to each carton at the distribution centre as it enters the sorting system.

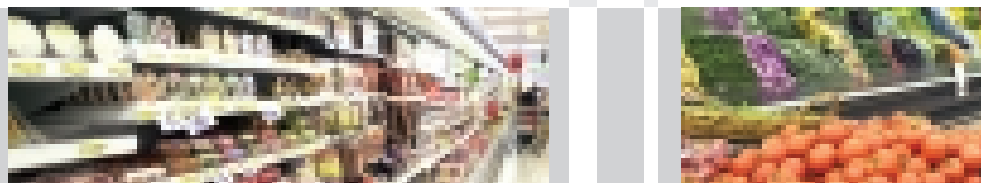
"Applying this label is the only point of human intervention in the system," says Scott. He looks forward to the day when The Warehouse can improve its system even more by taking advantage of the internationally standard EAN-128 bar codes on cartons.

"This will require some modification to our infrastructure," he says. "For instance, we will need bigger induction leads into the conveyors and will change from our top-down scanner to a multi-directional scanner.

"It's a big change, but we see it as the way ahead. EAN bar code standards offer a seamless distribution system that will reduce human intervention at the distribution centre and increase data integrity and stock accountability."

Scott says that the next frontier is radio frequency identification (RFID) using GTAG™, the global EAN standard for RFID. He sees potential to GTAG™ in logistics, such as tracking products, pallets and containers in the supply chain — and says The Warehouse is keen to start trialling GTAG™ with EAN.

Breaking down e-commerce barriers



Are you concerned that your business is falling behind with e-commerce? You're not alone. EAN New Zealand's Glenn Powell explains how EAN tools can help break through some of the barriers.

Everyone knows that e-commerce enables basic business transactions to be accomplished electronically – which means quickly and accurately. Excellent.

So why do so many companies still raise purchase orders and invoices and send them in the post or by fax?

If e-commerce is the ladder to tomorrow's world, what stops so many firms from climbing it?

The perceived costs and complexity of adopting e-commerce boil down to two main shortfalls in trading relationships:

- data integrity
- data synchronisation.

If we could guarantee the integrity of data that is being sent electronically (simply, that all the data is accurate) and that this data is synchronised with all trading partners (that is, everyone describes all products and functions the same way), the need for costly and complex interfaces and integration tools would be eliminated.

This would result in seamless data interchanges

between organisations and improve efficiency. It would also overcome the pessimism that some people have about the ability of their own businesses to adopt e-commerce tools.

EAN's global tools and standards can make it relatively simple to get your firm's data to a high level of accuracy, and then get your trading partners' systems synchronised with yours.

And in this part of the world, EAN Australia and EAN New Zealand have invested in EANnet — a data synchronisation and cataloguing tool for use by all our members.

Data is 'entered once, used by many'

EANnet is a multi-industry electronic catalogue and data alignment service that is accessible via the Internet. It is the essential foundation for trading partners to exchange standard information about product, price, promotion and place.

EANnet provides a central place where manufacturers, importers or distributors enter their product information. About 250 different product fields are available, including images, dimensions, specification sheets, verification reports, pallet configurations, prices and promotional information, to name a few.

The logic is simple: the owner of the information (the supplier) enters the data once. The supplier grants access to trading partners to download the data, and EANnet provides it in the correct format to populate their business systems.

All of this results in a single, co-ordinated, industry-wide set of information that everyone in the supply chain can use without further data entry.

EANnet objectives

EANnet provides data integrity as the basis for a wide set of electronic commerce transactions. EANnet's objectives are:

- to provide a central point for all supply chain product information for all industries
- to facilitate total data alignment among trading partners
- deliver the integrity of information essential for electronic commerce transactions
- remove unnecessary costs and inefficiencies from the supply chain.

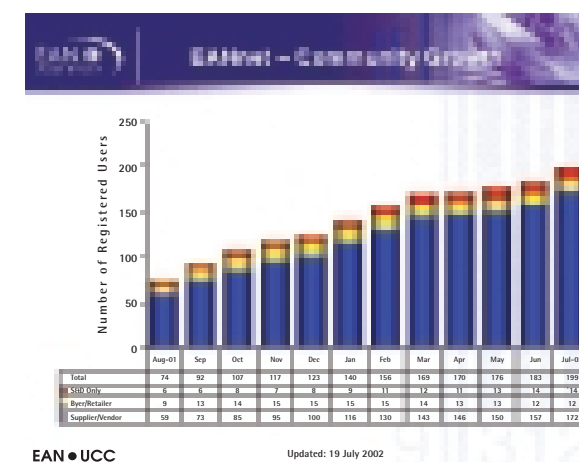


Progress to date

Over 200 companies in Australia are already implementing EANnet. At a recent seminar in Auckland, Neale Austen of EAN Australia outlined the experience of three large Australian firms – General Mills, Metcash and Colgate-Palmolive – with the following key points:

- Over 70,000 GTINs representing more than 35,000 SKUs are already on EANnet.
- The biggest challenge for most of the firms has been ensuring the integrity of their own data before they upload it to EANnet. But this is a transitional phase that most firms have accomplished on existing internal resources and without capital expenditure.
- It is proving relatively inexpensive to use EANnet compared with the benefits.

To date the Australian FMCG market has taken the lead in implementing EANnet. The EANnet community in that country has tripled over the last 12 months:



Progress in Australia has been so great that some of the major retailers in Australia will soon request that all UBF information be accessible from EANnet, rather than in paper form. When this becomes mandatory, will New Zealand manufacturers be ready?

In New Zealand, the health sector is making an early move on adopting EANnet (see article on page 5).

In the next few issues of SCAN, we will keep you up to date with the progress of the Health Sector Pilot and the continued community growth of EANnet in Australia.

For more information about EANnet and its potential implementation in your organisation, please contact Glenn Powell (021 711 070 or glenn.powell@ean.co.nz).

RFID keeps EMI ahead of the beat

Music-maker EMI is helping to forge new radio frequency identification (RFID) standards by putting radio tags on CDs — so they can be tracked right through the supply chain.

EMI and British music retailer ASDA Stores are taking part in a pilot scheme called CD.id and managed by e.centre (the trading name of EAN UK). The scheme is based on GTAG™ (the international standard for RFID developed by EAN International and the UCC), and is a global first in piloting open supply-chain standards for RFID.



EMI's CDs will be fitted with the electronic tags so that they can be uniquely identified and tracked throughout the supply chain to the consumer. The tag technology will also be used to track and analyse returns from consumers back to the point of manufacture.

The GTAGs will potentially be able to differentiate between genuine and counterfeit merchandise, as well as recognise shrinkage and improve supply-chain efficiency.

Combating theft

The CD.id scheme is part of the British Home Office-sponsored Chipping of Goods Initiative, which is using sophisticated technology to radically improve the tracking of goods in the retail supply chain and help prevent theft and counterfeiting.

The pilot is also expected to point up other key benefits for music suppliers, distributors and retailers. As the volume of returned goods runs into tens of millions of units each year for the phonographic industry, RFID tags could markedly improve the accuracy and simplify the process of handling and administering those returns.

What's more, ASDA Stores are considering replacing Electronic Article Surveillance (EAS) tags with RFID tags, as these can be used both for anti-theft and supply chain purposes. This would have the added advantage of making shopping for music a more user-friendly experience, as it would speed up the purchasing process.

New certificate shows your EAN proficiency



As an employer, do you want to improve your staff's ability to deal with bar codes and to take full advantage of all the possibilities of the EAN system?

As an individual, wouldn't it be great to demonstrate on your CV just how much you know about the international EAN standards and how the latest applications can improve supply chain management?

EAN New Zealand is launching a course of study enabling individuals to earn the Certificate of Proficiency in EAN.UCC Identification and Bar Codes.

The Certificate has international status, as it includes modules developed by EAN International.

A total of eight modules cover the whole EAN.UCC system, plus print and design, verification and accreditation. They include modules on new technologies such as reduced-space symbology (RSS) and GTAG™, EAN's global standard for radio frequency identification (RFID).

"The course provides individuals a way to enhance their knowledge of the EAN system, and then earn a Certificate that proves what they know," says EAN New Zealand Chief Executive Margaret Fitzgerald. "It is similar in that way to the Accreditation Programme that has proven so popular with companies."

"Many people know about ITFs on cartons or bar codes at retail," Margaret says. "But the EAN system goes far beyond those tools. Earning the Certificate of Proficiency enables individuals to learn about every aspect of the EAN system and how to apply it throughout the supply chain."

"That is valuable knowledge for individuals and for the companies that employ them."

Individuals can complete the course and take away a personal qualification that they can add to their CV to show the skills they offer to a potential employer," Margaret says.

You don't have to be working full-time in logistics or supply-chain management to benefit, she adds. The course is also aimed at designers, printers, packaging technologists, marketers and anyone else whose work brings them into contact with issues of automatic identification in the supply chain.

It will also be useful to people who provide equipment and software used in labelling and elsewhere in logistics. "Often our members call us with relatively simple questions about EAN identification or bar codes that their suppliers really should be able to answer," Margaret comments.

"A label or software company whose staff have completed this course will have a major competitive advantage because they'll be able to help clients with the whole EAN system, not just the basic operation of the equipment or software they supply."

Designers will benefit through preventing faulty bar codes. Margaret says that manufacturers often have to bear the difficulty and cost of correcting faults in the size, colour, height or location of bar codes because the designer was unaware of the requirements.

The course is due for release in February 2003. It uses written material provided by EAN New Zealand and a web-based course administered by EAN International in Brussels. Students will complete self-administered tests on the web site and on the hard-copy material distributed from Wellington.

The course is completed entirely by correspondence or on-line, and is likely to take around 40 hours to complete. Fees will be discounted for staff of companies undertaking EAN accreditation, and group rates will be negotiated for groups of intending students from any company.

For more information contact Owen Dance
(04 801 2894 or owen.dance@ean.co.nz).

EAN Accreditation and praise for Goodman Fielder

Goodman Fielder New Zealand Limited has won praise for its outstanding achievement in getting such a large, multi site business so quickly accredited to verify its own bar codes.

As one of the largest New Zealand companies so far to undertake the EAN Accreditation Programme (ACERT), Goodman Fielder had a large and complex programme to implement according to EAN CEO Margaret Fitzgerald.

"The company did this with real drive, focus and teamwork and its team worked closely with our accreditation consultants to ensure the technical training was delivered rapidly and effectively," Ms Fitzgerald says.

"Goodman Fielder implemented the accreditation requirements across all its sites in record time."

By receiving official approval to verify its own bar codes Goodman Fielder can ensure a faster and more effective flow of goods from supplier to customers. The company has now implemented systems and quality standards to minimise errors in bar code number allocation, design, printing and manufacturing.

"We have made a significant investment to undertake the programme as we believe it is important we take all viable steps to optimise the effectiveness of the supply chain and we hope other suppliers will follow our lead and join the programme," says Goodman Fielder New Zealand Limited managing director, Ron Vela.

As an Accredited manufacturer testing can be done in house thereby avoiding significant costs and time penalties. The increased focus and knowledge developed through the Accreditation process means the company now has greater control over its bar code accuracy and quality well back in the design process.

One of the main driving forces behind Goodman Fielder's decision to apply for accreditation was the opportunity to link in with labelling changes required as part of the new joint Food Standards Code for Australia and New Zealand which comes into effect next month (December 1).



Goodman
 **Fielder**

Goodman Fielder New Zealand Limited
Managing Director Ron Vela (left) receives
his official EAN certification from EAN NZ
Chief Executive Margaret Fitzgerald.

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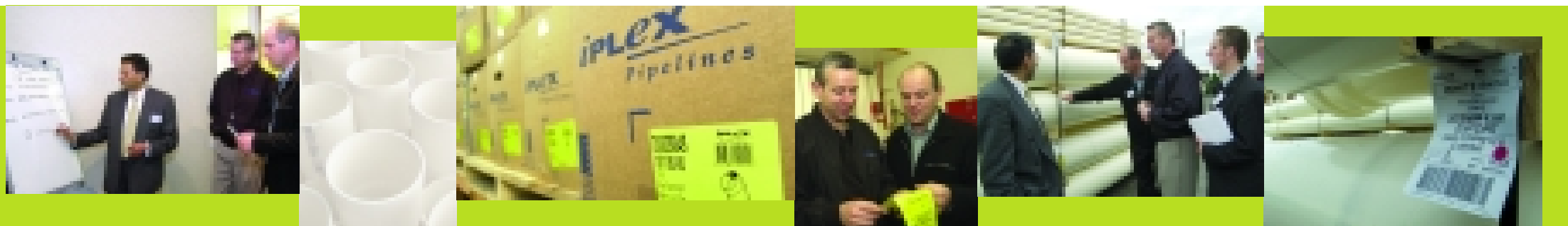
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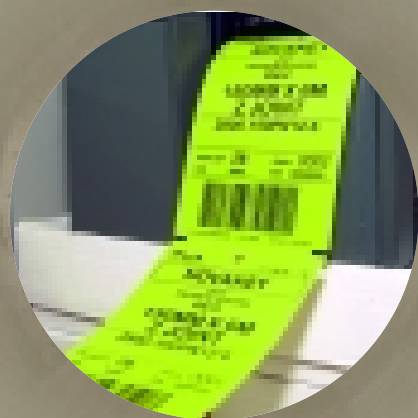
Sign up between 1 December 2002 and 1 February 2003 for the EAN New Zealand Accreditation Programme and save \$700 on our normal price. For this short period, it will only cost \$2,500 instead of the normal \$3,200.

- The Accreditation Programme includes a full day training course plus audit of quality control documentation.
- Training must be undertaken in December 2001/January 2002.
- The normal annual accreditation licensing fee still applies.
- This offer is subject to availability - first in, first served.



Efficiency gains in the pipeline

The use of EAN-128 bar codes is nothing new to the grocery industry, but now a Palmerston North plastics firm is realising that EAN-128s can give it a competitive edge. EAN New Zealand's Rob Turner outlines the challenge and our recommendations after the EAN Consultancy Service was called to assist Iplex Pipelines.



An innovative Palmerston North firm is showing that you don't have to be in the grocery trade to take full advantage of the EAN system – and that the benefits extend well beyond the retail counter.

Iplex Pipelines, which manufactures and imports a range of plastic pipes and fittings, is using the EAN system to enhance its inventory management.

Iplex sees good customer service – including efficient ordering, distribution and stock management – as a key advantage in a very competitive industry.

"We don't just manufacture and distribute from Palmerston North, but also from Auckland and Christchurch," says Graeme Spiers, Iplex Pipeline's customer services manager. "We also import some finished goods.

"Our current system for tracking customer orders is very tidy, but we would like it to be more automated and require less manual intervention," Graeme says. "We need to go to the next level."

Iplex Pipelines already puts bar codes on some of its products, and has recently brought in a new inventory management system. Using this system, it expects to cut costs by reducing stock levels and also link its stock information better into production planning.

Bar coding: the next level

At the moment, some goods are delivered in cartons to the warehouse and carry bar codes from their original suppliers. Plastic pipes and coils are stored outside, and the company prints its own bar codes for these.

Earlier this year, Graeme sent samples of the new bar codes to EAN New Zealand for verification. These passed all the requirements of the EAN.UCC general specifications, but Graeme still suspected that the company wasn't using bar codes to their full potential.

He called in EAN's consultancy service to help. We visited the company to gain an understanding of its business and how the different items are processed, stored, moved and tracked.



The solution: using EAN-128 bar codes

For Iplex Pipelines to manage its inventory effectively and provide a prompt tracking service for customers, it needs to monitor all stock movements very closely. It can achieve this by identifying all the different units being moved as well as all the different locations.

To identify locations, we have suggested allocating Global Location Numbers (GLNs) to each stock position. For example, in the warehouse, bar codes containing these numbers could be printed on tickets and attached to the shelving, where forklift drivers can easily scan them.

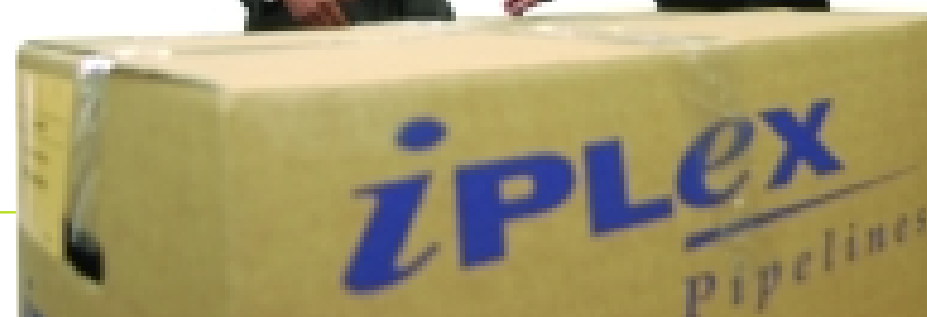
In the yard, these bar codes will need to be more robust to stand up to the weather. One solution may be to use ceramic tiles with bar codes on them.

As for units, the company handles four different types: pipes, coils, cartons and pallets. To identify units, we have recommended the specific application identifiers (AIs) appropriate for using EAN-128 with each item.

"It is going to be a big project, but we think the outcome will be a winner for Iplex," Graeme says. "We've finished the first phase of implementing EAN's recommendations, and Phase Two is planned for early in the new year. We expect to be receiving all of the benefits before the end of 2003.

"We'll have more accurate inventory control. When someone orders something, we'll be absolutely certain where it is in the production process," he says. "The time between receipt of an order and despatch will be shortened, and the process will be more automated.

"Our level of customer service is already good, but we expect our customers to notice an improvement in overall efficiency."



For further information on EAN Consultancy Services, contact Glenn Powell (021 711 070 or glenn.powell@ean.co.nz) or Rob Turner (04 801 0833 or robert.turner@ean.co.nz).

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Latest news on bar code verification

Bar code requirements

In early November a second meeting was held among major retailers, grocery suppliers and EAN New Zealand to discuss the latest on verification and accreditation issues.

Highlights:

- The industry is setting up a process to identify and rectify bar codes that persistently perform badly. In many instances these are bar codes that passed verification, but where the quality has not been maintained.

- Inkjet printed barcodes on shippers are a major concern. These barcodes will be required to undergo verification where scanning difficulties continue.

- As per the ECR Australian and New Zealand Grocery guidelines, 'best before' dates need to be applied to all products with a shelf life of less than 90 days. The 'best before' dates should be encoded in the bar code in order to assist the retailer to rotate stock. Retailers will not accept responsibility for tracking product by date or batch where this information was not provided in the barcode on the shipper or pallet.

- Pallets for Progressive and Foodstuffs should not contain product with varying dates. This is a departure from the Australian standard, which allows a mixture of dates with the earliest date encoded.

- Suppliers must quote the Verification Report number or their Accreditation number on the UBF. Manufacturers cannot quote the Accreditation number of another company (such as an accredited printer).

- Retailers are targeting suppliers of products without bar codes to get bar codes applied. Much of this is overseas product.

- Barcodes on individual units need to be obscured when packaged into larger quantities, such as a 4-bottle multi-pack of beer. This is currently the cause of a number of scanning problems.

Test Standard Changes

Bar codes that have been passing the 'traditional' verification test but not the newer ISO-based test will be failed in EAN verification testing from January 2003.

Currently, the relevant verification reports are endorsed with the comment: "The contrast (of this bar code) meets the requirements of the traditional method. It is anticipated that the ISO testing method will soon be applied. This bar code would fail the ISO test and therefore this should be addressed as soon as possible."

Most of the affected bar codes are on flexible packaging items such as plastic bags, but members using other materials should also check their recent verification reports to see whether they are affected. (See also our FAQ section on page 6 of this edition.)

Grocery Industry Guidelines

The table below summarises how the Grocery Industry Guidelines are applied in New Zealand and Australia.

Requirements	New Zealand	Australia
Bar codes on inners, etc.	Bar code all levels of packaging.	Bar code all levels of packaging.
Dates (on shipper)	If the shelf life of the product is 90 days or less, it must be expressed in EAN-128 on the shipper; if any date appears on the retail item the preference of retailers is that the date is expressed in EAN-128 on the shipper.*	If the shelf life of the product is 90 days or less, it must be expressed in EAN-128 on the shipper.
Batch/Serial etc (on shipper)	Not mandatory on shipper but recommended.*	Not mandatory on shipper but recommended.
Pallet (or logistic unit)	Serial Shipping Container Code and GTIN of product required.	Serial Shipping Container Code and GTIN of product required.
Dates (on pallet)	Any date applicable to product is required on pallet. Mixed dates not permitted.	Any date applicable to product is required on pallet. If mixed dates, use the one that falls due earliest.
Batch/Serial (on pallet)	If used on product, required on pallet. If mixed, do not use in bar code.	If used on product, required on pallet. If mixed, do not use in bar code.
Date to comply	Immediately – exceptions may be agreed by request; suppliers are invited to discuss timings with retailers if concerned.	As agreed between the parties.
Mixed product on same pallet	Not generally permitted – consult trading partners to discuss. If/when permitted use SSCC only, send related details by other means	Use SSCC only, send related details by other means

* Retailers will not accept responsibility for tracking product by date/batch/serial etc. where this information was not provided in machine-readable form on the units containing the product.

Brand owner responsible

The brand owner remains responsible for obtaining the EAN verification report – even when the bar code has been approved by an accredited label or packaging supplier.

This is because the bar code on *its final packaging* must be verified, not just the bar code itself. Common problems include:

- *the colour of the product showing through and upsetting the contrast between bars and background*
- *the bar code curving around the corner of packaging*
- *bar codes that become illegible due to shrink-wrapping*

Also, only manufacturers can ensure that a unique number has been allocated to each item.

The four-step verification service

Here are the four simple steps for getting your bar code verified by EAN New Zealand.

STEP 1

Complete the form on the website:

http://www.ean.co.nz/services/verification_appform.pdf

STEP 2

Send the form and sample of the barcode to:

Verification Service
EAN New Zealand
Level 2, Mainzeal House
181 Vivian Street
Wellington

Samples should be in their final form – that is, exactly how they will be presented at retail. This allows more accurate testing.

We recommend that you send your products by courier.

STEP 3

The results will be available within two working days and a report will be e-mailed. Product is not normally returned.

STEP 4

A written report is provided, detailing the results and highlighting any inadequacies and potential problem areas.

See http://www.ean.co.nz/services/verification_f.html for more information.

Brainstorm on broadband

EAN New Zealand took part in a "brainstorm on broadband" in November at the invitation of the Telecommunications Users Association of New Zealand (TUANZ).

Glenn Powell represented EAN and its members in the core group of industry leaders at this pioneering conference to spark innovative ideas for broadband applications.

Broadband, or high-speed Internet access, has been identified as a key enabler of New Zealand's economic and social growth. The search is now on for inspirational ways in which retailers and other sectors can benefit from its use.

Ideas ranged from the practical to the highly creative to the wacky. The "killer application" that makes broadband attractive for retailers might be something as simple as video conferencing: imagine having a virtual helper to assist with a complex DIY job at home, for example.

The conference was the first stage of the National Broadband Applications Project. It is supported by the Ministry of Economic Development and Industry New Zealand, as well as private-sector groups. Conference proceedings will be published in a book next year.



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Aiopac Industries Limited	I Am Products	One Earth Nutrition			
Amvia (NZ) Ltd	Icing New Zealand Marketing	Orangeworks Ltd			
Apex Technologies Ltd	Indac Ltd	Peacock Bros NZ Ltd			
Aquifer Spring Water Company	International Wire & Cable Co Ltd	Piesse Botanicals Limited			
Autoquip Marketing Ltd	Iwik International Ltd	Pilgrims Progress Ltd			
Awatere River Ltd	J & P Biotech Co. Ltd	Pro-Soma Distributors			
BEP Marine	JC Nuts	R L Clapperton			
Birchwood and Vine Ltd	Just Health Nature INT Food	Rebeco Salmon 2002 Ltd			
Bite Me Fruit Company Ltd	K 9 Pet Foods Ltd	Rio Dolores Ltd			
Blueberries New Zealand Inc.	Kids Kanteen	Roshni Enterprise Ltd			
Boards 'N' Beyond Concepts	Kiwi Chestnuts Cooperative	Roti Man Food Limited			
Brezel Mania Ltd	Kiwi Wool International Ltd	Rugby Trivia International Ltd			
C K Wines	Korromatt	Rurtec Ltd			
Caledonia Foods Ltd	Label Express Ltd	Sabato Ltd			
Chai Ltd	Lanowool	Shetty Corporation Ltd			
Chailoka Limited	Le Vai Ltd	Smart Maps			
Christmas Clips Ltd	Levin Sawmakers (1996)	Sophisticake Limited			
Cleopatra International T/A Lavage	Little Karoo Limited	South Coast Productions			
Commsoft Group Ltd	Logan Print Ltd	Southern Colour Print Limited			
Cutting Room Ltd	Lunchrapz	Straightedge Ltd			
Danaflex Packaging Corporations Limited	LWR Manufacturing	SYL New Zealand Limited			
David Kinch Calendars	Macadamia Holdings NZ Ltd	Taipac Packaging NZ Ltd			
Dayspring Ltd	Magazine Associates Group Ltd	Talaforad Sea Products			
Digital Logistics Group Limited	Mainland China Enterprises Ltd	Tappoo Limited			
Dry Rock Olives Trust	MAORI-PINAY New Zealand	Tasman Energy Products Ltd			
Dynamic Speakers NZ Ltd		Telegraph Hill Olive Estate			
Edify Limited	Marlow St Pie Kitchen (1995)	Terrace Wine Company Ltd			
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Gourock	Nitco Investments Ltd	West Coast Fresh Limited			
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Green World Group Ltd	NZ Health Naturally Ltd	Wrights Wines			
Hardie Fasteners Limited	NZ Original Pork Crackle Ltd				
Hauraki Brewing Co Ltd	Oceania Interlink Limited				
Hortspec Waikato Ltd	Omron Electronics Ltd				

Wine meets bar code challenge

New labelling and bar code requirements have been putting the squeeze on the wine industry – but forward planning and working with a good print supplier can help to get the vintage out on time.

Like many others in the food and beverage industry, winemakers face tight deadlines at bottling time, and no-one can afford bar-code problems to slow down production.

Part of the pressure has come from the fact that supermarkets are a growing outlet for local winemakers. Wine is now the highest-value category in supermarkets, with total wine sales through supermarkets of \$360 million for the year to May.

The mandatory verification changes that came into effect this year (SCAN magazine, April and August 2002) means that winemakers must issue each new vintage with a new bar code – and each bar code in turn has to be verified by EAN New Zealand before it can be used.

The wine industry is also being affected by new labelling rules for this country, some driven by Food Standards Australia New Zealand (formerly ANZFA). From December 2002, beverage labels must contain more information about a product's ingredients and nutritional value, and also state its potential for causing allergic or other reactions, an expiry date and a local street address for the supplier.

Not just bar codes

A New Zealand label manufacturer who does a lot of work for the beverage industry also notes that wine labelling is going through changes such as labelling laws in specific export markets, for example.

All the new requirements, together with the high-quality branding that wine companies are renowned for, are putting pressure on wine makers for label landscape area and supply timelines.

“Virtually every individual item of information on a

wine label is either a legal or regulatory requirement,” this label manufacturer says. “So it's important that winemakers use an excellent print supplier to ensure the right clarity, contrast and label parameters.”

But he says that bar coding requirements shouldn't cause delays.

“The wine industry is generally very well organised, and most winemakers will normally only have one or two vintages a year, encompassing approximately 10 to 15 bottling production runs,” he says.

“The wine companies that we look after typically give us a minimum of six weeks' notice, with many companies ordering the total year's requirements at once. The only items of information that come in at the last minute are the alcohol content, from which we calculate the number of standard drinks.

“We have all facets of the labels pre-planned and verified with a provisional proof approved by our customers. From here it is a very simple step to finalise the label based on the alcohol levels.

“We encourage winemakers to use a label printer that is capable of excellent quality control, and that has the technology and expertise in-house to manage verification of all label parameters at artwork, film-work, plate stages and finally print.

“That ensures it's a seamless process, there are no surprises, and timelines are managed instead of being at the behest of a third party.”

Fast-track verification

Working with an EAN-accredited printer can also be of special benefit to winemakers. To help speed up approvals, EAN New Zealand has been trialing a fast-track verification system for wine bar codes that can shave several days off the process.

Under this system, wine labels must first achieve a positive artwork verification report

from EAN. If that label is printed without changes and then verified by an accredited printer, EAN will issue a final verification report without having to inspect the product directly.

Winemakers can also speed up the process by becoming EAN accredited themselves, which licenses them to verify their own bar codes without reference to EAN.

Raman Chhima from EAN Customer Services says that the wine trial is running pretty smoothly so far. “The only issues coming up are that some wineries reduce the height of the bar codes, and they then have a problem with the verification report.” Truncation can cause items not to scan at checkout, especially with the omni-directional scanners common in supermarkets.

Meanwhile, winemakers in general seem to be producing high-quality bar codes despite the time pressures. The executive director of the National Association of Retail Grocers of New Zealand, Jackie Russell-Green, says she is not aware of members having problems with scanning wine bar codes.



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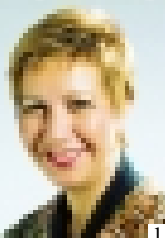
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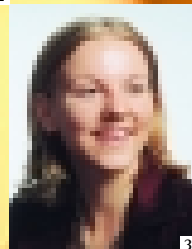
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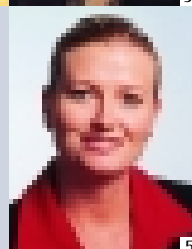
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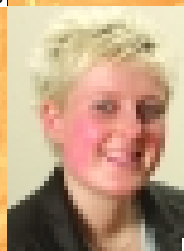
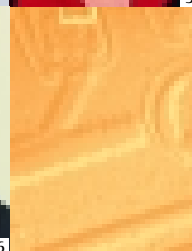
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