

SCAN

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GS1 technologies – Just what the doctor ordered?

To err is human. But it can be very costly – and in the modern age, quite unnecessary.

Consider this comparison of error rates between people and machines. On average, a very good typist will make a mistake one in every 300 keystrokes. A point-of-sale laser scanner will make a mistake in reading a well-constructed bar code one in every 5 million scans. Such odds have, of course, driven the rapid adoption of technologies for automatic identification and data capture (AIDC) over the past two decades. With AIDC, we live in a world where fast, reliable information recording and retrieval is commonplace.

We also live in a world where human error in the handling of information seems increasing anomalous – and the costs involved, too high. In New Zealand, the Safe Medicines Committee has produced figures indicating that some 1500 Kiwi lives are lost annually because of drug administration errors. These are patients who die prematurely after receiving the wrong medication, or the wrong dose of the right medication, or the right one at the wrong time, or the right one by the wrong course (eg intramuscular vs intravenous). Clinicians do not, of course, mean to make mistakes but their work is complex and pressured – and they are human.

To emphasise the point, the official estimate of avoidable 1500 deaths in our healthcare system is three times the national road toll. Surely, a startling figure that has yet to attract the level of public concern or preventative funding the road toll receives! And there is available to the healthcare system a machine-based solution rather more straight forward than teaching whole generations of people to slow down, not drink and drive, or turn off their cellphones.

AIDC technologies have, of course, been used in food retailing for 30 years, with vast gains in data accuracy and business efficiency. It is high time they were adapted and deployed into New Zealand hospitals and other medical care settings to deliver information recording and retrieval benefits of equal, or greater, magnitude. Today, most medicines are still prescribed by handwriting – at an error rate rather higher than the keystrokes of a good typist – and dispensed and administered by humans (often with double-checking by humans). Most of the time, clinicians get it right but when they don't, the costs can be tragic.

In this SCAN, we report on major moves in the United Kingdom to introduce AIDC technologies based on GS1 standards right across the public healthcare system (page 5). We also look at important initiatives in the same sector in our part of the world. I am confident that New Zealand will move, before too much longer, to take advantage of AIDC technologies in healthcare, with the types of gains in patient safety and operational efficiency that are already evident in other countries around the world.

This will continue to be a major area of focus for GS1 New Zealand in 2007, to the benefit of members, of healthcare providers and of the public. It's worth remembering that we are all healthcare consumers at some time or another – the error rates mentioned above can become personal for all of us.



Dr Peter Stevens
CHIEF EXECUTIVE

SCAN magazine is produced quarterly for the benefit of GS1 New Zealand members. It has a circulation of approximately 5,700 readers throughout the country as well as 101 GS1 member organisations worldwide.

SCAN reaches decision-makers in a wide range of industry sectors including grocery, FMCG, healthcare, logistics, manufacturing, retailing, wholesaling and transport. Our readership includes chief executives, sales and marketing managers, account managers, brand and product managers, IT personnel, operations managers, production managers, logistics and supply chain personnel, bar coding staff and packaging coordinators.

For editorial or advertising enquiries:

Please contact Pauline Prince on 04 494 1067
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Australasian work on global healthcare standards

By Gary Hartley

We're not clinicians but healthcare is definitely becoming core business for GS1 around the world, including New Zealand. The fact has been acknowledged in recent months with the formation of an Australasian Healthcare User Group (HUG) that will help develop the GS1 standards for use in healthcare systems everywhere.

The GS1 organisations on both sides of the Tasman have drawn together representation from medical suppliers and health authorities in the 40-member regional HUG. Its purpose is to identify the critical issues affecting healthcare standards, and to feed knowledge and perspectives from this part of the world into the global process for setting these standards (through a GS1 Global Healthcare User Group).

The Australasian body is another of the industry-based working groups instigated by GS1 to ensure its standards genuinely serve the interests of people for whom they are created. Overall, it is one of the strengths of the GS1 System that standards are based firmly on users' needs, not the preferences of hardware and software suppliers. Only after such input does the Global Standards Management Process (GSMP) commence translation of users' specifications into the more technical language of GS1 standards.

This is a major opportunity for users in Australasia to help drive, even lead, the standards-setting processes in healthcare. With the trans-Tasman commonality of interests and practices, it makes sense for us to work together. Australia is relatively well advanced in some areas. In particular, its National Product Catalogue, including the important Australian Catalogue of Medicines, has been based on EANnet, the GS1-based data synchronisation network.

On this side of the Tasman, the Government has this year set up a Quality Improvement Committee to explore ways of improving public healthcare through reduction of medical errors and operational efficiencies. The committee will study the use of GS1 bar codes in public hospital and pharmacy settings.

The Australasian HUG has held two meetings so far. It has a full agenda including the design of rules for allocation of GTINS for every requirement in the healthcare system and the development of a user guide especially for the sector.



GS1 prescribed for **National Health Service**

The United Kingdom's public healthcare sector is moving to GS1 bar codes and other GS1-based technologies for auto-identification and data capture (AIDC) to improve patient safety and reduce cost. It's official!

The UK Department of Health last month came out with a strong recommendation that all areas of the National Health Service (NHS) adopt bar coding and AIDC with GS1 standards. It is recommended that the UK medicines and medical devices industry move in the same direction.

(As a whole, the NHS is the world's second biggest employer after the Chinese Army!).

The department's "Coding for Success: simple technology for safer patient care" report is a major development in the take-up of these technologies for patient safety and healthcare organisations' efficiency around the world.

The report sets out an action plan for the NHS and the industry to make progress between now and the end of 2008 with support from GS1 UK. The plan calls for all NHS organisations to become GS1 members and initiate projects for implementation of the technologies with GS1 standards.

"The case for coding is compelling but all stakeholders need to work to commonly agreed standards if the benefits are to be realised fully," the UK department says in recommending GS1 as the not-for-profit developer and owner of standards most appropriate for the healthcare sector.

NHS organisations

The take-up will not be mandatory for NHS organisations which include around 300 primary healthcare trusts and the many hospital trusts that operate the UK's 1600 public hospitals. However, "Coding for Success" sets out clearly the available evidence of potential gains from moving forward with GS1, and provides a vision for bar coding and AIDC in hospitals and outpatient settings. The department, which supervises and funds the NHS, will provide support the various organisations to implement the technologies.

The report says bar coding and AIDC will reduce the mistreatment of patients as a result of: mis-matching of particular patients with particular medications, x-rays and specimen samples; errors in communication between medical staff; and confusion in the identities of patients. It is estimated that of 8 million public hospital admissions in the UK each year, some 850,000 involve an incident of medical safety at a total cost to the NHS of £2 billion, in prolonged hospital stays.

Efficiencies

The report also says the technologies can deliver efficiencies and cost savings by: equipping medical staff at the patient's bedside with verified information on the patient and the treatment to be administered; reducing efforts in the capture of medical data; and improving stock control through more effective track and trace on medical items.

In the UK, more than 90% of medicines already have GS1 bar codes applied on the patient pack by the manufacturer (compared with just 48% in New Zealand, see SCAN issue no. 13). The UK Department of Health is calling for all medicines to have this and for the makers of medical devices to follow suit in line with recommendations initially made in 2004.

"Coding for Success" gives a vision for the use of GS1-based technologies in various areas of public healthcare. For patient identification, it suggests the use of bar codes or RFID tags on a wrist band. Bar codes would have the patient's unique NHS number in a scannable form linking that person to their electronically-stored medical records. RFID tags could be reprogrammable to ensure vital medical information is carried with the patient at every point of their hospital stay, updated for each treatment.

The report calls on clinicians to heed the benefits of bar coding and AIDC. "Link this to the theatre management system and the risk of wrong-site surgery due to misidentification of the patient is dramatically reduced. Link it to the blood transfusion process and it can verify that the right patient receives the right blood ... There is evidence that the introduction of robotic dispensing systems can reduce dispensing errors, with one study finding that a hospital pharmacy reduced its errors from 2.7% to 0.9% of prescriptions."

See "Coding for Success: simple technology for safer patient care" available at www.dh.gov.uk/PublicationsandStatistics/

Book these dates in your diary – Tuesday 21st and Wednesday 22nd August at the Waipuna Hotel & Conference Centre, 58 Waipuna Road, Mt Wellington, Auckland.

Planning is underway for another successful GS1 New Zealand conference. The forthcoming event will offer something for everyone!

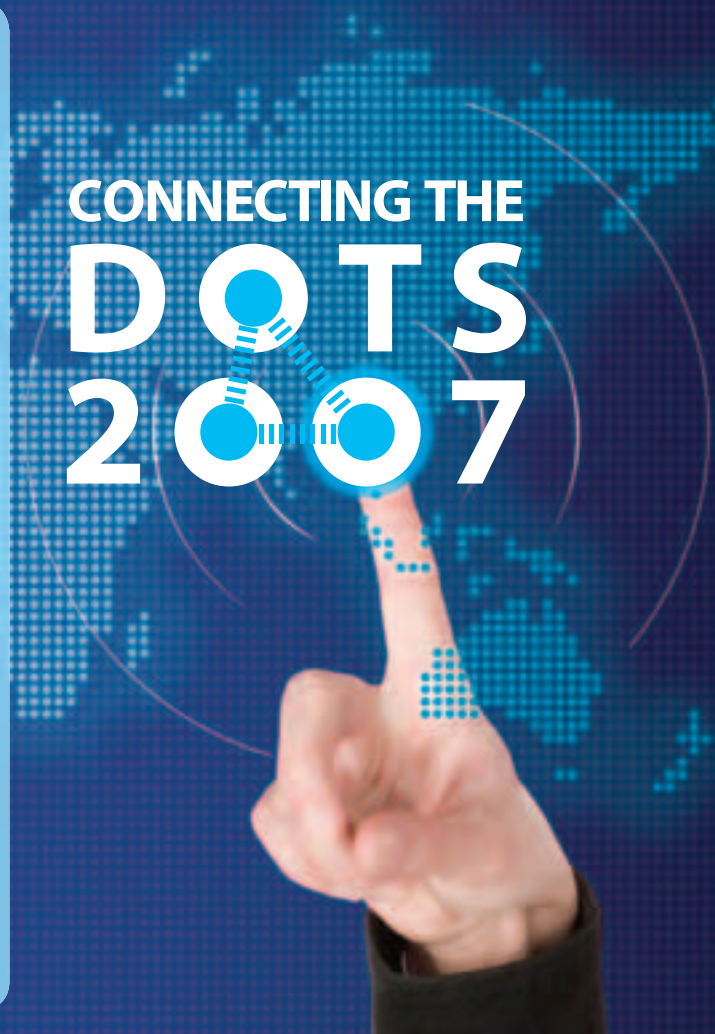
Connecting the Dots 2007 ... will have a fantastic line-up of international and national presenters; some technical and not-so-technical workshops; a trade expo; social events; and plenty of opportunity for networking among the wider GS1 user community. We may have to limit the number of people attending some workshops – we recommend early registration by people really wanting to attend.

Last year's conference was well supported by attendees from outside Auckland – and this year, we have once again secured a special accommodation package at the Waipuna Hotel. Details will be included in the conference brochure (coming soon) – or call Pauline Prince at GS1 New Zealand.

You can get so much more out of the conference by staying at the same venue (even if Auckland is your home town!).

Look soon for more information on Connecting the Dots 2007 on www.gs1nz.org and the brochure (to be mailed with the next issue of SCAN). Pauline Prince is available on tel. 04 494 1067 and pauline.prince@gs1nz.org

CONNECTING THE DOTS 2007



Seminars update

The first GS1 Bar Code Foundation and EANnet seminars for 2007 were held recently. Attendance numbers were reasonable in Auckland and Christchurch, but down in Wellington.

The **Bar Code Foundation** seminar really is a “must” for new GS1 members – it gives a thorough grounding in how bar code numbering works, and how bar codes are created and managed (plus some startling insight into the repercussions of poor quality bar coding). And of course, new members receive a complimentary voucher for this workshop (valued at \$199). The seminar is also a great refresher for people needing to re-acquaint themselves with bar coding.

Key dates for Bar Code Foundation seminars are:

Auckland - 19 June / 30 October
Wellington - 22 June / 2 November
Christchurch - 22 June

Remember, complimentary vouchers are valid for 12 months only. Don't miss out – redeem your voucher by contacting Pauline Prince (see below).

EANnet and Data Synchronisation seminars will continue through 2007. These are particularly important for suppliers to Foodstuffs, our first major user of EANnet. (EANnet is the electronic data synchronisation catalogue that gives suppliers the ability to provide instantly updated information online, including information on prices, promotions and product specifications).

Some Foodstuffs suppliers are already gaining the efficiency and cost reduction benefits of being live on EANnet.

Key dates for EANnet & Data Synchronisation seminars are:

Auckland - 26 June / 5 November
Wellington - 29 June / 9 November
Christchurch - 27 June / 7 November

Contact Pauline Prince on tel. 04 494 1067
or pauline.prince@gs1nz.org

New Zealand in standards setting pilot

It has been said that “he who holds the pen, holds the power”. When applied to global standards setting, this old adage is very true.

GS1 standards (covering identification, bar codes, data synchronisation and EPC/RFID) are the product of work by almost 5,000 individuals worldwide. Very few, however, are from New Zealand (or Australia). In GS1’s various global processes for standards setting, our voice is very faint – and in fact, most of the time only four Kiwis get involved (each a GS1 staff member).

The main reason for such limited New Zealand representation is very understandable: It requires committing significant time to committee processes, often on teleconferences scheduled for the middle of the night New Zealand-time and sometimes on travel to distant meetings.

To resolve this issue, GS1 Global is piloting a new mechanism for engagement in the Global Standards Management Process or GSMP. It is a “low bandwidth” means of enabling busy users of standards to get involved in sorting out issues that are critical for them through what GS1 calls “Change Requests” or CRs. The new mechanism is called the “GSMP Franchise Model” and it is designed to spare those interested in CRs the time and cost they would otherwise face.

We are very excited about New Zealand’s involvement in the conception of the GSMP Franchise Model and honoured to be selected as one of four pilot countries. In essence, Kiwi business people who have registered their interest will be presented once a month with a snapshot of all activities in the GSMP.

The current month’s GSMP Global Agenda is a manageable 35-line and four-column spreadsheet. Most items are information-only so that the registered GSMP Franchise Model members can have a rapid overview of all work in progress. Some CRs will involve critical decision making by GSMP committees which will use the Global Agenda, and an online survey form, to ask the wider Franchise community to vote on the key issues.

Example from the current Global Agenda

CR 07 – 000046

GTIN Allocation Rule Frozen vs Fresh, Fresh vs. Frozen: A major change to the rules of issuing GTINs: A fresh product (e.g. sausage) that is then made available on the market as a frozen product requires a new GTIN.

Questions for the GSMP franchise members to vote on:

1. Should a new consumer level GTIN be created if the product changes from Fresh to Frozen? (Part 1 of 2)
2. Should a new Standard Trade Item Grouping GTIN be created if the product changes from Fresh to Frozen? (Part 2 of 2)

New Zealand businesses need to ask themselves:

“Does this CR involve issues with a bearing on New Zealand and will we be affected by the GSMP committee’s decision?” In this example, the answer to both would definitely be “yes”.

Given that answer, GSMP Franchise members would simply vote “yes” in an online survey – simple as that! All such votes would become a key input in the committee’s decision making process.

If Franchise members overall expressed a different view to the committee’s, the latter would need to look at the issue afresh.

Where the two views are aligned, the committee would have confirmation that a sample of the global user base for that standard was in agreement on the decision.

So, why get involved with the GSMP Franchise Model? Because standards set in the GSMP do matter to New Zealand businesses, and they are affected. This is the opportunity for far more New Zealand business people to become standards setters, not simply standards takers (with all the disadvantages that can flow from the latter)!



FOR MORE INFORMATION



contact Raman Chhima, GS1 Technical Consultant on
04 494 1064, or raman.chhima@gs1nz.org

Good Food, Good Bar Coding

Food safety really matters to the world's biggest food company. And in New Zealand, Nestlé relies heavily on GS1 bar coding to support the product traceability that is so essential to food safety.

In this country, Nestlé produces a wide range of dehydrated soups, recipe mixes, stock powders and confectionery for local consumption and export to Australia and Asia. Products from its Cambria Park Factory, in Wiri, South Auckland, include time-honoured household brands like Maggi soups, gravies, sauces, recipe mixes and stock powders, and Life Savers, Allens, Black Knight and Wonka confectionery.

Worldwide the Nestlé philosophy is, "Good Food, Good Life". It reflects the 130 year-old company's dedication to making food with genuine health and enjoyment benefits to people. At Cambria Park, Factory Manager Graeme Smith says those four simple words reflect total commitment to product quality. "Consumers of

The company uses a third party logistics company to manage the distribution of its products in the New Zealand market. GS1 bar coding has become an important part of the interface between Nestlé and the distribution company.

Hundreds of pallets of product leave Cambria Park each week, all bearing GS1 logistics labels with GS1-128 bar codes that include product GTINs*, and production lot numbers and dates. The ITF-14 bar code on the carton or shipper is used to identify the product and manufacturer.

Nestlé exports around \$70 million in products produced at Cambria Park Factory to Nestlé affiliates in Australia and Japan. The bar codes applied at Cambria Park are used in the receiving markets to track products through their distribution systems.

"We see GS1 bar codes as a critical part of our food safety programme, and they are critical to managing the complexity of a factory and supply chain that involve hundreds of raw and packing materials and finished goods SKUs," says Mr Smith. "In fact, it wouldn't be possible to keep control of the materials and to keep the lot tracking systems working effectively without them."

The demand for new GS1-128 bar codes is endless, with Nestlé continuously improving and updating its product range. Each new product or product variation is identified with a new GTIN* that becomes incorporated in a new GS1-128 bar code when the product enters the distribution supply chain.

* A GTIN is a Global Trade Item Number allocated as a globally unique identifier to each product under the GS1 System.



Maggi and other Nestlé brands can be assured on the food safety aspects of what they are buying as well as consistency of quality," says Mr Smith.

"The ability to track materials right through our quality release and production processes to finished goods is an important part of our food safety management," says Mr Smith. "We apply bar codes to all lots of materials arriving at the factory. We then use these bar codes to track the material, and its quality status, as it moves through the factory. Using this system we can easily track where any particular lot of raw material has been used, and what batches of product it went into."

In the unlikely event that a problem was found with one of its products, Nestlé could quickly and easily track the batch right through the supply chain to a customer's warehouse or store.



Explore EPC/RFID in China

GS1 New Zealand's annual EPC/RFID field trip is "all go" and this year, the trip is to Hong Kong and Southern China in mid May.

This region is recognised as a centre of innovation and leadership with EPC/RFID technologies, particularly the Pan Pearl River Delta (the so-called "Pan-PRD"). Hong Kong's upstream supply chain relies on the Pan-PRD, which has over 80,000 manufacturing plants and accounts for over 40% of China's GDP. Many of the manufacturers in the Pan-PRD supply major retail chains in Europe, the United States and Australasia. In time, many products moving from these factories will probably have to be RFID-enabled.

The field trip will include an intensive three days of site visits and meetings in Hong Kong and neighbouring Dong Guan province (staying in Kong Hong three nights).

The draft programme includes:

- Site visits to two manufacturing plants in Southern China (apparel and electronics)
- Hong Kong International Airport (where passenger luggage is tagged and read with Gen2 EPC/RFID tags)
- Maersk Shipping consolidation terminal – Hong Kong
- Hong Kong Supply Chain Innovation Centre (HKSCIC) – opened in February 2007
- Networking opportunities with local RFID community

CHINA FIELD TRIP

Dates:

Monday 14 May (arrive Hong Kong) - Thursday 17 May (leave Hong Kong or begin your own time there)

Costs:

Estimate for international airfares, accommodation and some meals around \$3,900 (excluding domestic flights to Auckland)

Contact:

Gary Hartley – gary.hartley@gs1nz.org or tel. (04) 494 1063

See also page 13, RFID masterclass



newspaper



special newspaper *



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what makes you special?



GS1 for dummies -

What you need to know about the GS1 System

SCAN continues a series on the basics of the GS1 System and its use in your business.

The system is based on the allocation and widespread use of globally unique identification numbers. These numbers can be attached physically to products, traded units and so on, and incorporated in the business documentation (paper-based or electronic) that precedes or accompanies the distribution and sale of products. Bar codes are a means of representing the numbers for machine readability. Radio frequency identification tags are another means.

In this issue, SCAN explains GS1-128 bar codes, and then outlines the basics of any system of traceability that uses the GS1 System including GS1-128 bar codes.



Bar codes – some very basic stuff

All bar codes present information in a standardised visual form so that it can be read, or scanned, by a machine. There are many bar codes, or bar code symbologies, in the world. A “symbology” is simply a standard method of translating, or encoding, sets of numbers or numbers and letters (an alphanumeric combination) into the visual symbols (usually bars and spaces) that make up bar codes. Every bar code will also have some symbols that enable decoding. These function and check symbols are instructions on how the information should be re-assembled in a form that is human readable. Different bar codes’ symbologies have developed for different purposes around the world over the past 40 years. GS1 bar codes are the most widely used of all bar codes.



What are they used for?

GS1-128 bar codes enable trading partners to attach an array of information about products to the pallets or other traded units containing those products. These bar codes are only applied on traded units, not on individual products (unlike EAN-8 and EAN-13 bar codes which can be scanned at retail point of sale). GS1-128 bar codes are most often used by manufacturers, distributors and wholesalers, and in the inwards goods operations of retailers. Typically, they are used whenever it is necessary to scan use-by or best-before dates, and/or batch and serial numbers, and/or weights or other measurements on products of variable measure. The particular use will depend on the needs of trading relationships. GS1-128 bar codes are not used for scanning at retail point-of-sale.



What are they composed of?

As noted, GS1-128 bar codes add information to GTINs and SSCCs. Such information, or data, is encoded in a string of fields – and the bars and spaces are arranged in the same sequence as the data fields. A GS1-128 bar code’s width will depend on the amount of data it contains although no bar code can be wider than 165 mm (including light margins on either side). The length of data fields varies depending on the type of information – dates are always six digits but batch numbers, for example, can vary greatly in length. There are obviously limitations on the amount of information that can be contained in any particular GS1-128 bar code.

The string of data fields begins always with the GTIN of the product contained in the traded unit (or GTINs if the unit has more than one product). Each data field starts with an application identifier (“AI”) of two or more digits that signify the type of information to follow (use-by date etc). Standard AIs are found in the GS1 Specifications. The AI for a product GTIN is (02), for example, while the AI for a use-by date is (17).

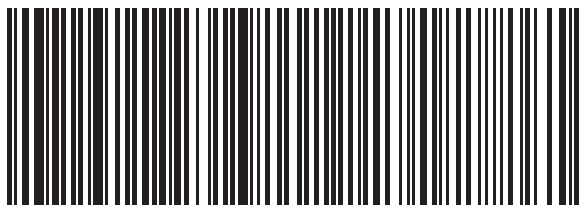
GS1-128 Bar Codes



What are they?

GS1-128 bar codes are a means of encoding GTINs*, SSCCs* and additional information altogether in one machine-readable form – additional information such as product batch numbers, weights and use-by dates. GS1-128 was previously known as EAN-128 or EAN/UCC-128. It has a special symbology for encoding the 128 letters, numbers and other characters recognised by the ASCII (American Standard Code of Information Inter-change) standard which is used in writing most computer software. GS1-128 was developed from another symbology called Code-128. The two are different in that GS1-128 has a certain structure making it open for use in most business environments.

*GTINs are Global Trade Identification Numbers that give a product, a traded unit, an organization or a location its own globally unique identifier for any commercial purpose. SSCCs are Serial Shipping Container Codes for unique identification of logistics unit (eg pallets, cases). See “GS1 for dummies”, SCAN No. 19.



(01) 95012345678903 (3102) 001275 (17) 041103

The data in this bar code provides the information that the GTIN is 95012345678903, that the product's weight is 12.75 kilograms, and that the expiry date is 3 November 2004



How do you create them?

First, agree with your trading partners the types of information your GS1-128 bar codes should contain. Second, assemble the data and encode with reference to the GS1 Basic User Guide or the GS1 Specifications (available on www.gs1.org/productssolutions/). In printing GS1-128 bar codes, size and quality are critical. There are minimum and maximum width and height restrictions, and the bars and spaces must conform to certain width specifications. The margins around the bar code characters are equally important. It is often advisable to print the data beneath the bar code in human readable form (usually with brackets around each application identifier as in the example above).

Traceability



What is it?

The standard definition is the ability to trace the history, application or location of whatever product or other item is under consideration. Accurate identification and record keeping are the core elements in any system of traceability. Usually traceability involves a flow of information through a supply chain, in parallel to the physical flow of items. Worldwide, traceability systems are most developed in

the food industry. It can be vitally important for “food safety” reasons to know what particular food products are, where they come from, how they were produced and handled, and so on. Traceability information can enable producers, suppliers, retailers, government agencies and consumers to know these things and to act on that knowledge.

The particular purposes of a traceability system will determine what information is recorded, where and when. There are three critical dimensions to traceability information – breadth, precision and depth. Breadth is simply the amount of information recorded about an item (eg weight, size, composition). Precision is the degree to which the item’s characteristics (production process, mode of storage etc) are recorded. Depth is how far forward or back along the supply chain information is recorded.

Traceability can work in two, sometimes quite different ways – tracing and tracking. Tracing is the ability to look “upstream” and get information on the composition and origins of an item, and what has happened in its movement along the supply chain. Tracking is the ability to look “downstream” at what has happened to an item after it leaves a particular point in the supply chain. Some systems work for tracing and some for tracking, and some enable both. It all depends on what trading partners want from traceability, and the arrangements they make for recording and exchanging information.



Why bother?

For some, traceability is about compliance. The law and/or their trading partners require certain information to be recorded and exchanged – and that’s their main driver. The European Union and the United States both have relatively tough laws requiring traceability for food safety. EU Regulation 178/2002, for instance, requires all food products to be traceable back to their suppliers

Jupiter

This is Jupiter. It's really BIG!

- Diameter of 142,984km (Earth = 12,756km)
- 318 times the mass of Earth.
- Twice the mass of all the other planets combined.
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Jupiter photo taken by NASA's Cassini spacecraft on December 29, 2001

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(this applies equally to New Zealand exporters of food to Europe). Mere compliance aside, there are many other reasons to bother with traceability. It can add real value to businesses!

The most obvious reason is the ability to ensure fast withdrawal from the supply chain and/or consumer market of products that are found to be faulty in some way – and the ability to limit action just to those products. That may be critical for consumer safety (on food, electrical appliances or other products). Traceability can also safeguard against tampering with products in the supply chain and counterfeiting. It can give consumers additional confidence in the authenticity and safety of products, and enhance their ability to make well informed choices. And of course, traceability can really help businesses make their supply chain management more efficient and more responsive to the demands of trading partners and, ultimately, consumers.

How do you get into traceability?

So much depends on the product, the supply chain and your role as a producer, supplier or retailer. Obviously, traceability must have a purpose in your business and in the supply chains to which you belong! There is no point in recording information for its own sake, or doing so without agreement from trading partners. That said, the importance of being able to trace and/or track using information of certain breadth, precision and depth will often be obvious.

The design of any traceability system will start with product or item identification. In the food industry, that usually means defining a batch of product – batch might be defined by ingredients, production volumes or times, use-by dates etc. A batch becomes the unit of traceability, consistent with the nature of the product and production/distribution processes and supported by commercial logic. The other starting point is agreement on

information exchange with trading partners. What does everyone really need for efficient tracing and tracking; what does the consumer want? Agreement needs to cover the way in which information is exchanged, including the labelling of items.

So, where does the GS1 System fit in?

GS1's identification tools (eg GTINs, SSCCs) are extremely useful in any traceability system – remember, traceability starts with accurate identification! In fact, the GS1 System offers the basic building blocks for traceability in most industries worldwide. That's because the system is designed for global application, as one common "language" for business anywhere.

GS1 has laid out four traceability principles to help anyone establish and develop a traceability system – unique identification, data capture and recording, links management, and data communication. Under each of the principles, there are GS1 technologies available to everyone. Unique identification applies to batches, products, traded items, locations and so on – and GTINs, SSCCs and GLNs# can be used for precisely that type of identification. Data capture and recording means exactly that – and GS1 bar codes and EPC/Rfid enable accurate and efficient capture and recording. The GS1-128 bar code is widely used for traceability information that is best attached to products and items moving through supply chains. Links management refers to the electronic processing of data – GS1 technologies make data available for this. Data communication is the exchange of traceability information between trading partners in a continuous, pre-defined way – GS1 eCom# is a global standard for exactly this purpose.

For more on the four principles and enabling technologies see www.gs1.org/productssolutions/traceability

GLNs are Global Location Numbers and eCom is a GS1 standard for fast exchange of traceability data. Both will be to be discussed in future "GS1 for Dummies" articles.



RFID MASTERCLASS

So, you know that RFID stands for radio frequency identification. You know that it's about tags talking to readers and that these tags may eventually replace bar codes. You have heard that it's a big thing for Wal-Mart and Tesco. But you're still wondering "so what"? In this case, we have just the seminar for you!

GS1 New Zealand will run the "EPC/RFID Masterclass" in August – an intensive one-day session to give you clear understanding of:

- the fundamentals of the technology and its application
- need-to-know details at a practical level – you will have first-hand experience with the hardware and software and learn, for example, why tag placement and orientation on products is critical
- relevant global standards, particularly Generation 2 – you will learn, for example, why Gen2 has such a positive impact on read performance, on global inter-operability between tags and readers, and on EPC equipment prices
- the key features of the EPC Network and how it enables real-time supply chain visibility – you will learn, in particular, about the EPC Information Service (EPCIS) and how RFID read events can be linked to your existing IT systems to make business operations more efficient

Overall, the Masterclass will focus on business processes that are best enabled by EPC/RFID such as traceability and improved inventory accuracy. You will see examples of how companies derive competitive advantages today by using the technology.

The presenters:

- **Erik Sundermann** of GS1 New Zealand, senior consultant and RFID expert
- **Ian Robertson** of EPCglobal Inc, Global Industry Development Director / Asia Regional Director
- **Craig Asher**, Project Manager, IBM who also holds positions as co-chair EPC global EPCIS Software Action Group and co-chair of the EPC global Data Exchange Joint Requirements.

MASTERCLASS DETAILS

Date: Tuesday, 20 August 2007

Time: 9.00am – 5.00pm (lunch provided)

Where: Waipuna Hotel, Mt Wellington, Auckland

Cost: \$399.00 plus gst per person

Contact: pauline.prince@gs1nz.org or (04) 494 1050



New Name – for New Bar Code

The Reduced Space Symbology (RSS) bar code officially has a new name – GS1 DataBar. The bar code will be launched in January 2010.

For the next year, we will refer to the new bar code as "GS1 DataBar (RSS)" to minimise the risk of confusion among people who are already been keenly awaiting RSS.

Announcing the new name at the GS1 Global Forum in Brussels recently, GS1 Bar Codes Manager Scott Gray said the name "RSS" on its own could cause confusion. It is already, for example, an acronym for a web search tool used for locating news items (ie RSS Data Feed). Clearly, a bar code should not be confused with a web engine!

What is more, RSS bar codes might not be "reduced space" at all in many cases. A GS1 DataBar (RSS) symbol containing just a GTIN will certainly be smaller than an EAN-13 bar code. But if supplementary information such as batch and date are included it may end up the same size, or even bigger.

Scott Gray told the conference that everyone anticipating use of DataBar (RSS) should bear in mind this general principle: "The same data in less space or more data in the same space".

DemoSCANZ for all

GS1 New Zealand has created DemoSCANZ, software for demonstrating key elements of the GS1 System.

Initially designed for GS1 staff to use, DemoSCANZ is now also available to members in a down-loadable form for their own demonstrations and training. The software was praised by other GS1 organisations at the recent GS1 Global Forum in Brussels – and in fact, 55 countries requested the use of DemoSCANZ!

Delivered as a double-clickable Java application capable of running without additional software on any major operating system, DemoSCANZ comes with a suite of sample “products”. These are products, logistics labels, GS1 DataBar (RSS) stickers, patient wrist bands and doctor’s ID cards.

DemoSCANZ can be run with the samples pre-prepared, or end users can customise the built-in product database



and Global Service Register Number (GRSN) databases for their own products. Network aware, DemoSCANZ also talks to the Global Electronic Information Party Register (GEPIR) which is like the ‘white pages’ of the GS1 world, providing near real time information back on brand owners, their Global Location Numbers and physical contact details (see picture above).

To download DemoSCANZ, point your browser to www.gs1nz.org.

Keep your business moving.

MHL 2007 11 - 12 July 2007

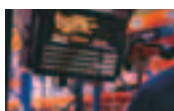
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GS1 Certificate

Jayne Marshall, Process Systems Administrator at the Alliance Group, is the latest person to attain the GS1 Certificate in Automatic Data Capture Standards. Ms Marshall’s responsibilities encompass bar code production and quality throughout the Invercargill-based Alliance Group.

GS1 congratulates Ms Marshall and is delighted to see the certificate go to a person in such a key position.

FOR MORE INFORMATION



of the Certificate course, contact Owen Dance at
owen.dance@gs1nz.org or tel. 04 494 1064.

Staff Profile



Erik Sundermann

Senior Consultant

Dr Erik Sundermann joined GS1 New Zealand in January 2007 as a senior consultant in our Auckland office. Erik is an international expert on EPC/RFID, having previously worked in Europe for EPCGlobal as an adviser to GS1

organisations worldwide. He and his family are from Belgium, and Erik reports that they are settling in to their new home very well.

Erik and wife Miranda had their first taste of New Zealand in 1998. Indeed, that was a big year for the Sundermanns – they married, had their first son, Milan, and Erik received his Phd in Computer Science from the University of Ghent. “It was also the year I applied for and got my first ‘real’ job. To recover from all that, Miranda and I went on a two-month holiday with our little baby, to a far-away country called New Zealand,” explains Erik. “That last event in the magic year 1998 went on to live a life of its own...”

“Fast forward to fall 2006. In the course of those eight years, Milan got two brothers, Yaro (7) and Luka (4) and I worked in research and development (at Barco), consulting (at PwC and IBM) and standards development (at GS1/EPCglobal). But we kept dreaming of those two wonderful months in New Zealand. So when the opportunity arose to go live there and work on RFID for GS1 New Zealand, we didn’t have to think very long about it.”

The Sundermanns arrived just before Christmas and have settled in Titirangi, West Auckland. Erik says the boys have started school, and their English is improving by the day. “We have already learned to barbecue at least six days a week. We wear jandals or go barefoot. Each day, we are discovering a bit more of New Zealand - and enjoying every second of it. If only you people would play football instead, or make good chocolate!”

Erik is looking forward to discussing EPC and RFID with more GS1 members.



Esther Hamilton

Membership Services Administrator

Esther Hamilton joined GS1 New Zealand in December 2006, having recently returned from Austria where she worked as a television presenter for Jam Television (the

company had produced the TV series, “Intrepid Journeys”). Esther says the highlight of her time with Jam was presenting the 2006 “NZ Singing Olympics” in Europe. She graduated in 2005 from the Wellington Institute of Technology with a visual arts degree, with a double major in photography and video.

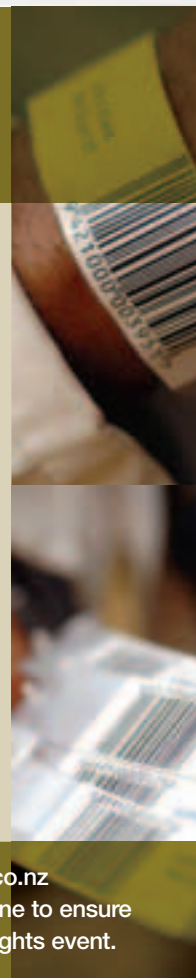
Esther’s other work experiences include running art workshops and being an assistant at Top Shelf Productions, a Wellington-based documentary company. She comes originally from Paekakariki, north of Wellington, and outside of work, Esther enjoys nature and socialising. As something of an adventure seeker, she once found herself taking a vertical bungee dive into a herd of highland cattle and narrowly escaping their horns in the process!

HEALTH INDUSTRY INSIGHTS

Duxton Hotel, Wellington - 18 April

IDC New Zealand and Bright*Star Conferences are proud to announce their inaugural Health Industry Insights event. This will be a high-level, one-day showcase of leading case studies and solutions in healthcare information technology. The emphasis will be on strategic technical and operational decision making. Key technology areas will be covered during the day with healthcare technology professionals able to learn from the leading solutions providers. At the end of the day, participants are invited to a networking social event.

More information on www.brightstar.co.nz or www.idcresearch.co.nz. Book online to ensure your place at this Health Industry Insights event.



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Global Competitive Advantage With Product Traceability

"In today's global business environment it is important to be aware of emerging technologies that can assist in increasing competitive advantage both locally and internationally providing significant business improvements" says Neville Mercer, who leads the Walker Datavision solutions team, "and we see technology that provides full product traceability as one of those key initiatives."

With organisations such as Walmart and Metro AG leading the charge internationally with RFID implementations, the New Zealand market is evolving and there is a growing need for traceability systems that live up to international expectations. "Product traceability through the entire supply chain is now essential for businesses to compete in today's global business environment" comments Neville. "With global initiatives around "chain of custody" and "product traceability" there is a requirement to address these compliance issues". Automatic identification technologies such as barcode, RFID and mobile computing can provide product traceability along with significantly improved business processes and inventory accuracy.

Walker Datavision, a member of the international SATO group, has extensive experience in providing practical solutions for supply chain integration, and, having recognized the value GS1 offers in driving global supply chain standards, was the first company to become a GS1 Premium Alliance Partner in New Zealand.

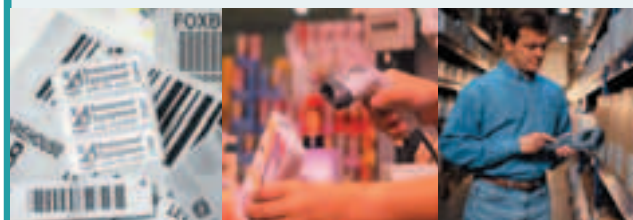
Walker Datavision today offers fully EAN compliant labeling solutions to address specific company requirements. In fact, as early as 2003, they were already providing a labeling solution that drove the effective distribution and traceability of Mainland products within Fonterra. The giant dairy group required an efficient labeling and tracking solution for packaged consumer products shipped out from nine of its plants around the country and selected Walker Datavision to implement this.

The Walker Datavision Label & Track solution has been specifically developed for the manufacturing and logistics environments in New Zealand and offers companies full product traceability throughout the supply chain.

Neville Mercer has spent over 20 years working both locally and internationally providing effective solutions primarily in the manufacturing and distribution industries. Today, Neville leads the Walker Datavision Solutions Team which has a wealth of practical experience in applying automated data capture technologies to provide competitive business advantage.



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