Lamson Paragon
GROUP OF COMPANIES

Issue 2 - May 2008

MESSAGE FROM OUR MD

Welcome to the second issue of the Lamson Group newsletter. We have included some very interesting articles on RFID technology as well as some great cost and environmental arguments for the continued usage of continuous forms and Dot Matrix Printers.

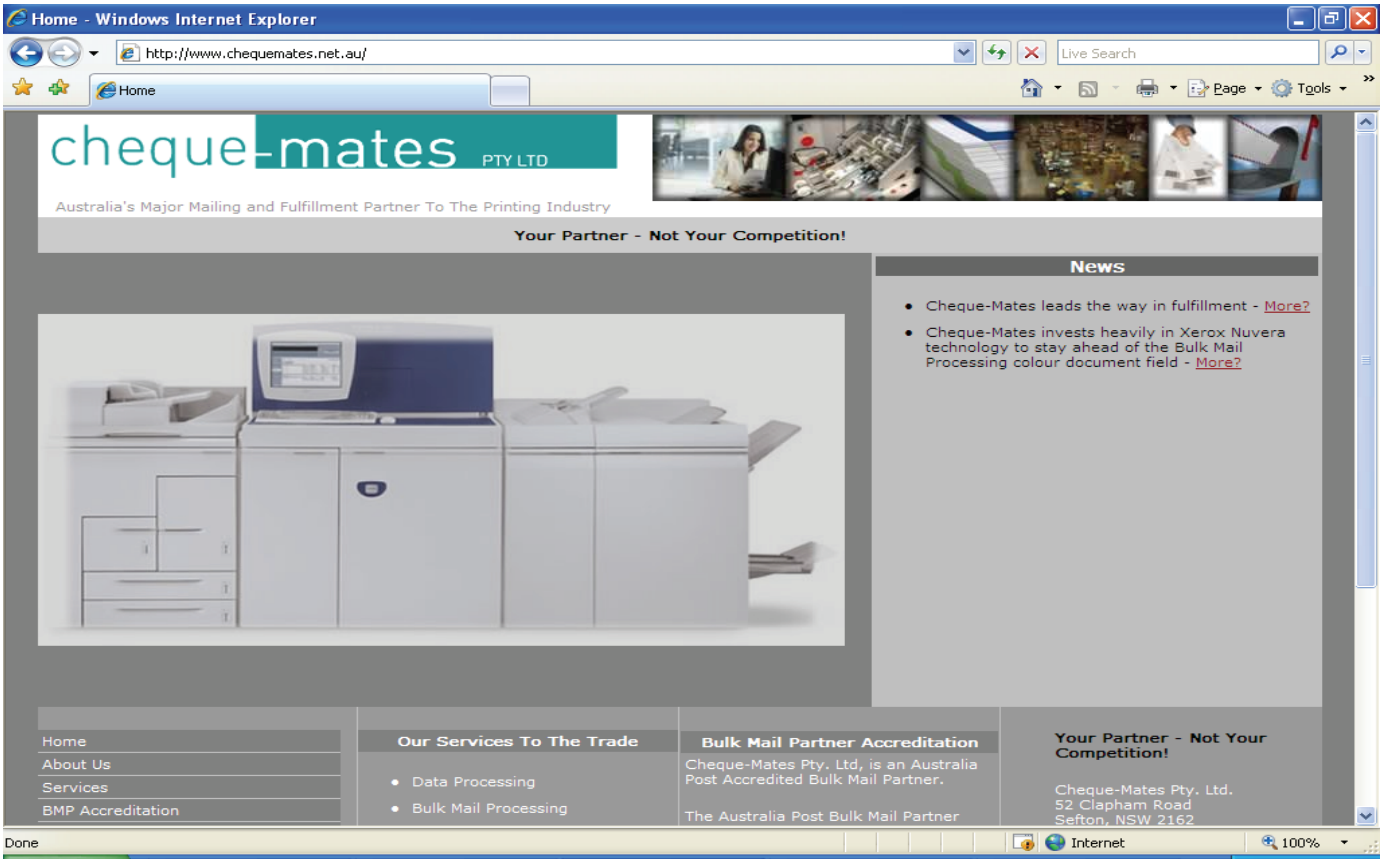
The newsletter is here to provide our partners with the most current and thorough information relating to our industry so you can confidently advise your clients. If there are any subjects of information that you would like us to research for future issues of this newsletter please let us know, we are always happy to receive your help.

Also please remember to visit the Cheque-Mates and Docuspace websites and let us know what you think.

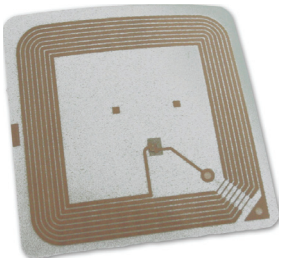
Regards
Arthur

CHEQUE-MATES LAUNCH WEBSITE

Cheque-Mates have now launched their new website. We hope it delivers everything you as our partner need to help deliver to your customers a complete mailing and fulfilment solution.
With the website we aim to keep you up to date on news of new equipment and technology that will expand our current mailing, fulfilment, printing and digital solutions.
Cheque-Mates are continually looking for new and improved services so we are able to offer our partners the most comprehensive solutions the market has to offer. Visit the Cheque-Mates website at www.chequemates.com.au. We would love to hear any feedback you may have.



An introduction to Radio Frequency Identification



Radio Frequency Identification (RFID) is a technology that connects objects and people in the real world with the internet. Put simply, a tag is attached to an object or person, and when the tag is interrogated by a reader the information from the tag is passed to the reader and transferred to a database that is accessible via the internet.

That means if I read a tag in Sefton, New South Wales the information is accessible in a matter of milliseconds from anywhere in the world via an internet connection.

The data from the tag is transported to the reader via radio waves and the tag itself has a unique identifier. The reader and the tag form the two end points in the RF transmission. Once the data is received it can be passed to the database by a number of methods, commonly via, but not limited to, Ethernet networks using internet protocol (IP).

Why is everybody talking about RFID? After all, it doesn't do much more than a barcode. does it? Well, the first and most compelling difference is that line of sight is not necessary to read the tag.

In trials conducted by British retailer Marks and Spencer the company realised an 83 per cent reduction in data recording times by using RFID instead of barcodes. The trial was based on data capture from 25 trays per dolly and 36 dollies per vehicle, and traditional barcode scanning took 17.4 minutes per vehicle compared with just three minutes using a RFID portal.

Why isn't everybody already using RFID? Although it has been around for some time, RFID hasn't enjoyed widespread adoption in the supply chain, where it has significant potential to minimise data capture times.

This is partly to do with how RFID is applied and the cost of the tags. High Frequency (13.56 MHz) identification systems have been implemented on a scale whereby HF tags now outsell UHF tags. HF tags have a much shorter read range than UHF but are far more reliable.

RFID systems can be active or passive. Active RFID requires a battery and delivers far longer read ranges. However, because active systems require a battery, it eliminates their use in many applications.

In item level tracking in the supply chain, for example, the battery is too bulky to be practicable. Furthermore, they are comparatively expensive. Passive RFID, on the other hand, relies on the power from the reader to activate and read the tag, and so it is much cheaper.

Also, while UHF tags are cheaper to manufacture than HF tags, there are still barriers to adoption if the cost of the tag doesn't appear to offset both the real and perceived benefits derived from using the technology.

Currently, passive UHF RFID systems in Australia must comply with legislation that limits their power to one watt. This produces dead spots in the read area and, consequently, makes it unreliable for use in logistics at present.

Four watt systems can be used, but only under a Scientific Licence approved by GS1. Trials of 4 watt readers have been under way at Monash University for some time now, and it's expected that commercial licences will be granted for the use of 4 watt UHF systems later this year

For more information on these developments please visit http://www.gs1au.org/products/epcglobal/4watt/

Supply chain management is only one area where RFID can make significant improvements in automatic data capture times and accuracy. For example, RFID systems have been used for some time to track and trace personnel and livestock, race timing, field service inspection, asset and document management to name just a few.

Further to this, non contact "tap and go" payment systems have been successfully trialled by the Commonwealth Bank and, in the future, are likely to be as commonplace as today's POS swipe systems.

According to technology analysts Gartner, RFID tags are one of the 10 key technologies ready for broader market adoption over the next 18 to 36 months, and Gartner suggest that by 2012 "most enterprises will be forced to redesign their value chain processes as a result of RFID changing the storage, collection, and use of data concerning goods in the supply chain".

DocuTrack3000
Intelligent document tracking

DocuTrack3000 Hosted Edition

Following the lead by major software companies to offer Software as a Service (SaaS), Docuspace, with our Singapore partner Intensecomp, is now offering DocuTrack3000 as a hosted solution.

DocuTrack3000 is a unique document management system that not only tracks electronic documents, but also printed documents and files using RFID. This accomplished using the groundbreaking RFID Web Server from Intensecomp.

The hosted edition is a 'lite' version of DocuTrack3000 Enterprise Edition that has the functionality to close gaps in the document life cycle in a securely controlled environment.

This makes it ideal for any organisation with employees that telecommute, as well as companies with field service technicians and different locations. Documents can be created, shared and approved—all in a secure environment and they can be linked to websites for public access; thereby ensuring only the most up to date version is accessible.

It's also an ideal solution in educational environments, particularly where remote project groups collaborate as assignments can be posted on-line. Incoming mail can be scanned and automatically uploaded to the recipient's folder, with original files stored in a central repository with an RFID tag until they are needed as evidence. In addition, print output can be controlled so that only authorised personnel are permitted to print specific documents.

The hosted edition of DocuTrack3000 is offered free for up to five users with 100 Megabytes storage space. For pricing details go to http://210.193.59.210/docutrack/public/price.aspx

For more information contact info@docuspace.com.au or call Peter Thornhill on 02 9645 4236 during business hours.

NEWS FROM DOCUSPACE

Lexmark International Australia & New Zealand appoints Docuspace as Certified solutions Partner RFID.

Lexmark Press Release, Sydney April 17 2008.

Today Lexmark announce an industry first. The Lexmark RFID option is the first device on the market to combine RFID capability with laser printing technology, bringing a flexible, affordable alternative to current RFID solutions. The option is designed to complement a customers existing Lexmark T642n or T644n Laser Printer to provide RFID printing support. The Lexmark RFID solution can speed up distribution processes and increase productivity by printing on a wide variety of different types and sizes of media and encoding RFID Class 1 Gen 2 inlays in the one simple process. The Lexmark RFID Solution has applications throughout Retail, Legal, Health, Manufacturing, and Logistics & Distribution. The direction for the solution is very positive with US Retail Wall Mart demanding all pallets be tagged with RFID. US Defence implemented their mandate as of Jan 1st 2007, that all pallets and cases be tagged with RFID.

The true value of the Lexmark solution is that our customers traditional office printers now have the ability to support RFID encoding.

Lexmark T64x printers with the RFID option installed and paired with Lexmark Document Distribution Suite (LDSS), offers an easy solution designed to help meet your demands that are also scalable and deployable across the enterprise. This solution has the added advantage of leveraging the same device for a wide variety of applications beyond RFID tags to help consolidate devices and streamline your processes to improve productivity.

Note: Due to RFID generically being a new technology the Lexmark RFID option will only be available to Lexmark Global Services engagements and via Lexmark Certified Solutions Partners (CSP's)

Current CSP on RFID:

Docuspace Pty Ltd Docuspace is a local Sydney Systems Integration specialising in RFID Technology and Industry leading Secure Document tracking.

RF paper

Working with Lexmark Australia and our partners in Singapore Docuspace is pleased to announce a new product to the Australian market.

'RF paper' is white A4 woodfree 150 GSM paper embedded with a UHF EPC Gen 2 Class 1 inlay.

The requirement for this media emerged in late 2007, but there was one problem: there wasn't a printer encoder on the Australian market that could print and encode a sheet of A4 paper in one pass.

Lexmark launched its T640 rn MFP in the US late last year. The new MFP was different to previous Lexmark offerings in that it incorporated a new module: an additional input tray that could encode UHF RFID tags.

While tag encoders have been on the market for some time, they have been limited to small format label printers like Zebra and Printronix. The Lexmark printer is the first to support A4 media.

Modifications were made to the printer to suit Australian conditions: a compatible power supply was fitted and the radio modified to meet Australian UHF radio frequency spectrum standards.

After a period testing various manufacturing processes with our Singapore partners, and a few write failures, we finally had success on March 19 at Lexmark's North Sydney office. The printer not only encodes the inlay, but also validates the write process with a mark at the foot of the page.

Bad writes are sent to a different output tray so they don't get mixed up with sheets to be collated with the encoded sheet.

This new offering from Docuspace is not limited to UHF. We can also embed LF, HF and UHF inlays. Documents such as work orders and the like can be tracked throughout the production process at the various work stations, and the inlay removed from the parent sheet at the conclusion of the process. The inlay is then attached to the item that's been manufactured to allow for future tracking and identification.

This new media can also be used to track a variety of documents simply by using the RFID enabled media as a cover sheet. We have yet to explore the variety of applications of this new media, but things that come to mind immediately are certificates, sports timing, tickets, and redeemable coupons. Indeed, anything for which proof of authenticity is required.

Lexmark T644 rn—RFID Printer Encoder

Laser Printers vs. Dot Matrix Printers
The ENVIRONMENTAL ISSUE

One of the hottest topics on the agenda at the moment is **carbon neutrality** and the environment. Impact dot matrix printers are the most environmentally friendly printing technology in today's marketplace.
Laser printers have many more consumable items - toners, developers, waster toner bottles, imaging belts and fuser units. As well they have more replaceable moving parts than dot matrix printers.
The composition of laser toner is TOXIC* the laser itself emits OZONE and waste toner is produced in the printing process. Compare this to a ribbon based technology which produces virtually no waste and only has one consumable replacement in the printing process.
It can take 160 laser toner cartridges to produce the same amount of printing from just 10 ribbon cartridges. A line matrix printer generally lasts twice as long as a laser printer. Both of these factors weigh heavily in landfill and environmental considerations.
Do your bit for the environment and make sure your customer considers a dot matrix printer when they are in need of a printing tool. Lasers work well where the information benefits from graphic enhancement BUT normal business forms don't need graphic enhancement eg purchase orders, receiving documents, invoicing, statements, remittance advices, payroll, cheques. The functional information on those forms is more substance than the look good needs of proposals, quotation, memos and analytical reports.

Think about it!

Laser Printers vs. Dot Matrix Printers
The COST ISSUE

The spreadsheet below contains an Impact v Laser worksheet which accurately quantifies the cost to run a dot matrix printer (ribbon) and compares it with a laser printer (toner).
The Company that released this study TallyGenicom Australia are specialists in printing solutions which include laser and dot matrix products so it is a fair assumption that they are not biased and have accurate information.
The bottom line is that the toner costs of a laser printer work out to be up to 16 times more expensive to print than the ribbon cost of a matrix printer. The benchmark matrix printer in their study is the TallyGenicom T2280 model and the laser printer a HP9050.
In their example the COST SAVING over 5 years is around **$80000** for consumables only, regardless of the reliability, integrity and user friendliness of the dot matrix printer - most lasers only have 250 or 500 sheet input whereas a box of continuous stationery would have 2000 or more sheets to allow you more uninterrupted running.
I hope you find the figures interesting and can use them to help you help your customer save money. Documents that don't benefit from graphic enhancement do not need laser printers eg invoices, purchase orders, statements, goods receiving, remittance advices, cheques etc. The information on these forms is the critical data that drives the business.

Think about it!

Impact and Laser Cost of Ownership Analysis

Manufacturer **Model**	**Tally** **T2250**	**Tally** **T2280+**	**Tally** **6312**	 **HP9050**
Change blue fields to suit your own parameters				
Technology	Dot matrix	Dot matrix	Line Matrix	Laser
Maximum speed	750 cps	1100 cps	1200 lpm	50 ppm
Consumable	ribbon	ribbon	ribbon	toner
Consumable price (ex-GST)	$22	$35	$195	$300
Yield (million characters)	5	20	250	
Estimated page coverage*				5%
Yield (number of pages)				30,000
Cost per A4 page (cents)				1.0
Ribbon price per million characters	$4.40	$1.75	$0.78	
Price relative to Tally T2280	2.5	1.0	0.4	
Average number of characters per page	1,000	1,000	1,000	
Average monthly print volumes	40,000	40,000	40,000	40,000
5 year cost of consumables	***$10,560***	***$4,200***	***$1,872***	***$72,000*** **

Number of copies if multi-part stationery used** 3

Tally cost saving (T2250dot matrix) $61,440
Tally cost saving (T2280+ dot matrix) $67,800
Tally cost saving (6306 line matrix) $70,128

Pricing current as at 1/2/2008 according to TGA research. Prices exclude GST.
* Page coverage on an A4 page is much more than the usual 5% for forms solutions - coverage could be as high as 20%.
** For multipart forms the cost advantage of the impact printers is higher as they perform one-pass printing for multiple copies.
If you would like an analysis based on specific applications, print volumes, page density or other printers not listed here please call 02-8977-2300.