

## ■ Keeping You Informed of the Latest Developments in Information Technologies

On the pages following, you will read about the latest developments in:

- Software and Applications
- Hardware
- Computer Systems

On this page, we have quoted 2 references from our customers and introduced 2 principals of our company to you. We have also enclosed a registration form for our 2nd Business Technology Forum for your attention. Enjoy your reading.

### **Elldex Packaging Limited Enjoys CNZ "No Problem" Service**

Elldex Packaging Limited is a premier supplier of plastic bags to New Zealand and overseas clients. Its customers include big retail names like Woolworths, Foodstuffs, The Warehouse, Farmers, KFC, BP, Mobile etc. Supporting its operation is CNZ for its information systems. Lisa Stephen, PA of its management team, wrote the following about CNZ technical service partner Hamish Fenn.

"Just want to write you to say how great Hamish has been and that nothing seems to be a problem for him. It's really a huge help to work with someone who has such enthusiasm and he makes 'everything go away'. If we need something he'll suggest, organise and find a solution - fantastic, means I don't have to run around doing stuff. Thanks again - glad to have you on-board with us."

### **Kamo High School Technician Endorses Compucon Technologies**

Allan Halvorson, computer technician at Kamo High School, is a highly satisfied Compucon customer. Here is what he has said about his experience.

"Kamo High in Whangarei is the largest school in Northland with about 1300 students, 120 teaching and support staff, and many community education tutors and students. Its computer network consists of 250 workstations that run Microsoft Windows NT4 SP6A High Encryption. It has a collapsed star topography running at 100Mbps via fibre optic backbones to classroom blocks. The network is online between 6.30am and 10.30pm. After that automated backup, virus scan and updates take place."

"Kamo High is very proud to hold a strong association with Compucon. Some of the older workhorses around the school consist of five year old Compucon computers that still have their integrity seals/warranty stickers in place and unbroken- a true test of Compucon's reliability, quality and excellence. This year saw a new suite of 30 Compucon Jasper workstations upgrading the Information Technology and Computer Studies classroom. To date, they have exceeded all expectations of performance."

"Last year saw major problems with its main File Server (non Compucon). To that end, it was upgraded to a Compucon Departmental Server. It is a super computer with Dual Tualatin, ECC memory and Dual Channel RAID-1 and 5. We think no other school in NZ has a server of such calibre and excellence! Since its inception of a year ago, this great server has delivered all its promises."

"IT within education is continuously growing and moving forward, to not only keep up with industry but to try and stay ahead of it. In that way, we promise to bring our kids into 'their' future, and not 'our' past. Hence, school networks will continue to nurture and grow with evolving technologies. Compucon is seen as that answer to deliver these promises, with technologies that also grow and evolve with pure excellence."

### **Introducing CNZ Principals in Auckland and Wellington**

Hamish Fenn is a CNZ partner for the Auckland region and has been the Director of Information Technology Consultants Ltd in Auckland since 1991. He started in 1989 as Internal Computer Support for Lion Nathan Ltd where he developed procedures and support systems as the PC was introduced along side the mainframe environment. Hamish feels strongly that grasping IT concepts is within the reach of all company owners and decision makers, and with the right explanations and options people can be empowered to control and develop their business technology, rather than be reactive and overwhelmed by it.  
Contact: hamish@cnz.co.nz

Dennis Sharman is a CNZ partner for the Wellington region. Dennis was a computer engineer with Sperry Univac, and became Southern Region Customer Services Manager for Data General in 1991. In late 1992 Dennis found Sharman Consulting Limited and continues to manage it as of today. Dennis has a good understanding of what business issues are and how technology can help business overcome these. In addition to these business skills, Dennis is proficient in implementing and supporting Microsoft platforms and has personally developed customised solutions for clients including document serving intranets. Dennis is extensively involved in helping the community. He is currently Deputy Chair of Whitireia Polytechnic and President of Hutt Valley Gymnastics Centre.  
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### Software & Applications

#### Benefit From Upgrading Windows NT 4.0 to Windows 2003 Server...

Microsoft released Windows NT 4.0 Server in 1996, then Windows 2000 Server in 2000, and has planned to release Windows 2003 Server in April this year. This latest version is marketed as more secure, more reliable, faster and easier to use than previous versions. Examples of better features are encrypted file service (for client data confidentiality), shadow-copy restore (for recovering to an earlier state of operation), open file back up (for flexibility of system back up). The editor of this newsletter has the opinion that this latest version may be the greatest, that it may be a big jump from NT 4.0 but the improvements may not be significant enough for clients to upgrade from Windows 2000 Server unless clients want to have a first hand involvement in web services that are supported by the latest version only. For example, Active Directory is a function available in Win2000 but not NT 4.0. According to Microsoft, there will be 4 editions of Windows 2003 Server. They are Database at the top, Enterprise (previously called Advanced), Standard and Web (new). The Web edition looks like a cut-down edition for web server use. Then there is the Small Business Server 2003 scheduled for September this year. For networks that are still on the 7-year old NT currently, this new release is worth considering.

#### How Far Away is Linux Suitable for the Office Desktop?

As of year 2002, Linux had proved itself to the point that it was implemented by a number of Fortune 500 companies and government agencies such as NASA in America. Commercial UNIX vendors such as SCO, HP and IBM have started providing Linux related services. It is estimated that Linux has 7% of global market-share for servers, but negligible for desktop. Why Linux performs so differently in the 2 sectors? The simplistic answer is that Linux has inherited its position from Unix for servers and does not have as many applications for desktops as Windows which is the dominant software on the desktop. The picture is not stagnant. The open source movement is gaining momentum. Efforts are being made to put Linux on the desktop. With Linux, clients have more freedom but are still required to pay for other people's effort in implementing the software, training staff in its use and supporting it. Compucon is preparing to release Linux for desktops inclusive of Office productivity applications such as word processing, spreadsheet, mail processing and web browsing by default. Once the customer support structure is in place, Linux will become a viable alternative to Windows. Timeframe is about 6 months from now.

#### Microsoft Works Suite 2003 Ideal for Home Office...

This new version includes a number of new features, like Excel compatibility and support for Palm or Pocket PC devices. It is well priced considering the software it includes. There's also a spreadsheet that isn't Excel, but will write and read Excel documents.

- \* Word 2002
- \* Works 7.0 for calendar, address book, and database
- \* Picture It ! 2003
- \* Encarta Encyclopaedia Standard 2003
- \* Money 2003 Standard

#### New Zealand AZUL Accounting and Business Operation...

It is exactly one year since we first reported about the development of AZUL. It has been tears, sweat and joy. For existing user sites, the development is progressing into Generation 2. This signals that the software is ready for use by a generic site. The software is Windows based (we will test it in Linux soon) and does not need SQL or another database to run. It is fast and robust. Generation 2 will include more customer information and knowledge base management than an average accounting software. We will hold a 30 minute demonstration of the software operation at the Business Technology Seminar in May if not earlier. It will reveal how it works, and there will not be any sales pitch.

#### Latest Versions & Service Packs as at 25 March 2003

Service packs are the means by which product updates are distributed. Service packs may contain updates for system reliability, program compatibility, security, and new features. This information is compiled by Andrew Hunt who is a CNZ partner and the managing director of Kinetics Group.

Internet Explorer 6 SP1  
Windows NT4.0 SP7  
Windows 2000 SP3  
Windows XP SP1a  
Office 2000 SP3  
Office XP SP2  
SQL 7 SP4  
SQL 2000 SP3  
Exchange 5.5 SP4  
Exchange 2000 SP3 +Hot fixes  
MDaemon v6.7.0  
MDaemon Groupware v1.0  
Netware 5.1 SP5  
Netware 6 SP2  
Groupwise v6.5  
Netware Client for Win2000 /XP v4.83+SP1



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### Hardware

#### Springdale a Quantum Leap for Desktop Performance....

A quantum leap in desktop platform technologies is expected when systems using Intel Springdale platforms appear in May or June this year. Some of the new features will be dual channel DDR-400 (up from single channel DDR-266), support of P4 processors with 800MHz FSB (up from 400/533MHz), 8x AGP (up from 4x), Serial ATA (up from ATA-100) etc. There is even talk of including Serial ATA RAID (in ICH5). The new chipset will be referred to as i865 (versus i815 for PIII and i845 for the current generation of P4). Similar to 845, there will be different flavours of 865 such as G, P, and E etc (to confuse layman customers). In the interim period, Intel has released Granite Bay to provide some of the above new features. We consider most of the new features as evolving at this stage, and will only accept to make a system under our Bleeding Edge model conditions such as a reduced warranty period, longer supply lead time and a contingency cost requirement.

#### AMD Responded with Several Strong Alternatives...

AMD has responded to the Intel challenge at several levels almost at the same time. There is the 64bit K8 at the upper level, the NForce2 at the mid level and KT400/KT400A at the mainstream level.

- K8 motherboards are ready now but K8 processors are not ready until April or May. K8 processors are 64bit (versus 32bit for Intel P4), and can run 32bit software such as Windows XP and Office. It will be high performing but a pricey alternative.
- NForce2 from nVidia is available for supporting Athlon processors. New features are Dual Channel DDR-400, 8x AGP, PCI-64/66 bus, and integrated TV Out and Firewire (1394). It is very close to Springdale.
- KT400 from VIA has 8x AGP but not the other new features. It will support Athlon with 333MHz FSB. A later version called KT400A will support DDR 400 memory with an improved algorithm called Fast Streaming that is said to produce a 10% performance improvement.

#### Serial ATA Deployment for Desktop Systems...

Intel and VIA will incorporate S-ATA in the next generation chipset in April. However, PCI add-on cards and HDD with S-ATA interface are available now. Shall we adopt this technology now?

- It has physical advantages over the existing ATA100/133 parallel ATA technologies (thin cable versus ribbon) and is therefore preferred
- It has no performance advantage over existing ATA100/133 due to PCI bus limitation and HDD data transfer capability

- It is more expensive to deploy than existing ATA100/133 in terms of the price of the control electronics and the hard disks.

Summing up, there is no compelling reason to introduce S-ATA at present (other than for a modern look). There will be a transition period for the price gap to close. We believe this transition will take about 6 to 12 months. Developments of SATA have not stopped however. If it supports RAID (redundant array of inexpensive disks) as its native capability, then the transition period will be cut shorter.

#### Do Not Take 8X AGP for Granted...

8X AGP is not yet a mature technology. We have recently tested the latest VIA KT400 based motherboard for Athlon XP (Thunderbird Workstation). This motherboard claims to support 8X AGP. This is correct, however, with the exception of 0.8V 8X AGP cards. These cards are detected as 2X AGP which is not desirable. This motherboard only supports 1.5V 4X and 8X AGP cards. Many current 4/8X AGP cards are not supported including the popular Geforce4 Ti4200 (such as Leadtek A280 LE TDH). There are also some known issues with ATI Radeon cards. Do not believe 8X AGP cards will work out of the shrink-wrap for at least another couple of months. The good news is that 8X AGP is downward compatible with 4X. Compucon Thunderbird currently uses GeForce2 MX400 with 64MB AGP 4X as the entry level. We will research this topic further and report again.

#### Sony AIT-1 ATAPI Tape Drive a Good Choice for Desktop...

Similar to HDD development, ATAPI (layman call it IDE) tape drives provide a very impressive price performance ratio. Sony AIT-1 has 35GB native capacity but achieves a compressed size of 105GB. We have tested it and passed it for being reasonably fast (10MB/s compressed), low power consumption (12W), quiet and easy to use. It is a good choice for workstation or small server use.

#### Fast Response and Internet Enabled Intruder Surveillance...

Video capturing and image compression technology has progressed to a point that conventional intruder surveillance equipment will become too expensive and not flexible enough. Compucon has released a PC based surveillance station that allows the customer to connect up to four (Note: There are 9 and 16 options) closed circuit digital cameras and display monitored areas at 320 x 240 resolution. It detects and stores motions within a pre-defined territory. It saves images in MPEG4 or Wavelet file format that can be played back for viewing or analysis in slow motion. Remote monitoring is supported for local area networks (LAN) and the Internet via a variety of transmission protocols-TCP/IP, IPX and modem.

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### Computer Systems

#### How Compucon makes machines faster and more compatible than others...

Faster is not the answer for customer purchase decisions. It is a desirable benefit and one of the reasons. Compatibility is another benefit and reason. Herewith, we explain how Compucon achieves both. As you understand, there is an intimate relationship between hardware and operating system, and between operating system and applications. For a piece of computer hardware to work well, the OS must have the best device drivers. This means Device Drivers have to be a product of 2 efforts, and have to be constantly evolving as hardware and OS evolve. Drivers that accompany off-the-shelf hardware and OS may be the best at the time of their production but would have been dated by the time they travelled from a Taiwan factory, say, to a system assembler's bench in Auckland. Instead of using dated drivers; Compucon constantly update drivers from various sources, confirm their validity, test and apply them. Compucon keeps drivers in a central repository for system production and technical support use to maintain currency and consistency. The information here is known to most long-time Compucon partners and is not new. We just confirm that the practice is not a bad idea at all.

#### Quad Xeon Enterprise Server for Transactional Processing....

This is the top-of-the-line server for iA32 computing consisting of 4 Intel Xeon MP processors and Server Works Grand Champion HE chipset. It employs 4-way interleaving memory transfer to match processor computational capability that is boosted by 1MB of L3 cache. (Note: There are 2 versions of Intel Xeon- MP for Quad and DP for Dual. They are not the same and are not inter-changeable). The presence of Level 3 cache means multi-user processing capability is very high and transactional latency is very low. Max memory is 32GB for extending multi-user processing capacity. There are 4 peer-to-peer PCI-X buses (6 slots) ensuring the smooth flow of data to and from users. This system is ideal for enterprise level transactions or database server. Compucon is one of the few computer brands with the capability to provide this high level of computing platform. System price is not cheap, but it is the cheapest and sweetest in its class.

#### Xeon Server Lite Version for an Interesting Customer Sector...

Compucon has released Platinum DX Lite server for an interesting customer sector. The system is a Dual Xeon platform with IDE storage. It is suitable for small networks demanding server grade reliability and uptime (versus beefed up Workgroup Server that is based on a desktop motherboard). IDE storage with RAID-1 is fine for data redundancy and its appeal is lower cost (versus SCSI RAID). The I/O processing capability is not as impressive as the full DX system. It has 3x 64/66 and 2x 32/33 PCI slots but no PCI-X buses as found on the full

version. Maximum memory is 4GB Registered ECC DDR, versus 8MB for the full version. It uses a Grand Champion chipset. Another demand for this system comes from professionals such as software developers who require high and reliable computational resources.

#### Hi-end Graphics Workstation for Professionals for Half the Price...

One of the top graphics chipset makers nVidia has released a new product called Quadro FX that has enabled Compucon to compete comfortably with heavy weight graphics workstations such as SGI and Sun. Quadro FX sits above Quadro XGL. There are 2 models, FX2000 and FX1000. Both are 8x AGP cards. Both use the same graphics engine with 128 bit floating point precision producing 16x full screen anti-aliasing (FSAA). Both are fully compliant with OpenGL 2.0 and DirectX 9.0. Both use 128MB of the latest memory technology called DDR2 that is alternately known as Quad Data Rate SDRAM. Both provides dual DVI capable of driving 2 independent digital displays at 1600 x 1200 or one at 3840 x 2400. All these features and performance levels are very impressive. For comparison, Quadro 4 XGL achieves 8X FSAA and ATI FireGL X1 achieves 6X only. Without doubt, FX targets the very top end of the graphics, CAD and content creation professional market. FX can be interpreted as the fifth generation nVidia technology whereas Quadro XGL is fourth generation. Equip a Compucon Titanium with FX 2000 and it will be a flying workstation.

#### Another New Diamond in Production while Jasper Awaits...

Compucon has started shipping new Diamond Workstations that support P4 and Celeron with 400 and 533MHz FSB and Hyper-threading capability. This is a natural evolutionary process and is meant for future proofing for planned releases of new Intel processors. Compucon's last system upgrade happened in early November 2002 when Intel phased out P3 Tualatin based Celeron. At that time, Compucon adopted 845GL as the system platform. Now it uses 845GV as the new platform. These are the highest spec platforms for micro tower form factor systems in the market.

In the meantime, Jasper Workstations stay with the same platform that has been in use for a year- a long period in the PC industry. The platform is fine and is capable of taking Duron and Athlon XP processors. The price difference is incredibly small between the 2 classes of processors these days. In anticipation of an increasing use of Athlon in this entry level desktop system, Compucon will upgrade the platform in the near future to boost the system performance level.

*Email editor@cnz.co.nz if you need any explanation or information on these system platform developments or performance.*