



Press Release  
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## **BLUEWATER SYSTEMS TECHNOLOGY DEVELOPED FOR ELECTRONICS GIANT NEC SAVES TELECOMMUNICATIONS INDUSTRY MILLIONS**

**Outmoded 3<sup>rd</sup> party storage components in NEC NEAX telephone exchanges receive new lease of life through Bluewater Systems' 'Snapper' innovation and ARM technology.**

Major corporate electronics player NEC has entrusted ARM technology experts Bluewater Systems with the development of a modern, cost-effective replacement for the ageing and bulky 3<sup>rd</sup> party Magnetic Tape Units (MTUs) used within its NEAX Telephone Exchanges. The new Digital Storage Unit, designed using Bluewater's innovative Snapper System Module is being deployed to NEAX telephone exchanges in New Zealand, and will later be marketed globally by NEC.

The project with NEC New Zealand is Bluewater Systems' largest to date and required considerable research and development up front. Thanks to Technology NZ, Bluewater was granted over \$300,000 to help fund the project, which is potentially worth millions.

NEC New Zealand recognised that the telephone switches used by its telecommunications customers were still functioning correctly and would remain in use for more years to come. But the MTUs, used as secondary backup storage for critical exchange software and customer data, needed urgent replacement. Spare parts were becoming obsolete and replacement tapes impossible to source. Also, as the only mechanical device within the exchange, regular failures were leading to increased maintenance costs.

Having dismissed other options, such as hard drives and magno-optical solutions because of integration and time-to-deployment issues, NEC contracted Christchurch-based Bluewater Systems to design a modern, cost-effective, and easy to maintain substitute for the magnetic tape units.

Leonard Dench, Group Manager, Carrier and Provider division at NEC New Zealand explains, "We were looking for a total ubiquitous data storage unit that could interface with the different types of NEC exchange and be delivered within nine months. But, the options we examined could not meet the requirements for one of the older exchanges. Bluewater Systems, however, could give us one solution to work with all types of exchange, within our time constraints, saving us development time and money that we could pass on to our customer."

The Bluewater solution was designed using their innovative 'Snapper' system core. Snapper is a ready-to-use ARM-based microprocessor module that combines the high-performance and low power consumption of the Intel Xscale PXA225 microprocessor with the flexibility of the Altera FPGA (Field Programmable Gate Array). As the module provided a pre-validated computer system, Bluewater designers avoided building a system from scratch, and could immediately start work on the particular demands of the NEAX exchange project. As a result, NEC's requirements for rapid product development and lower overall development costs could be met.

Simon Glass, managing director of Bluewater Systems says, "Snapper's pre-validated design took care of one of the difficult parts of the project leaving us to work on the peripherals and other logic. This ensured that we were able to develop and deliver finished units of a very complex product to NEC on time and within budget. In turn, NEC could quickly bring a real, cost-effective solution to one of its major telecommunications customers before media for the MTUs ran dry."

Currently over 170 units of the Digital Storage Unit are being deployed to NEAX exchanges nationwide, and NEC NZ is confident that a number of telecommunications operators globally will quickly invest in the new digital storage solution.

Leonard Dench adds, "Many operators still have functioning exchanges, but suffer from expensive to run, and difficult to maintain, mechanical third party storage devices. With a significant number of operators using NEC exchanges across the globe, the opportunities for new deals and further deployment of Bluewater's digital storage solution internationally are considerable."

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#### **About Bluewater Systems ([www.bluewatersys.com](http://www.bluewatersys.com))**

Bluewater Systems is an independent company formed in 1996 and an *ARM Technology Solution Centre*, specialising in on board and FPGA design. With offices in Christchurch, New Zealand and Melbourne, Australia, Bluewater Systems services a number of international customers, including ARM PLC, NEC, Intel, Microsoft, Nintendo, Tenon a number of ARM partners.

The Company's vision is to enable all businesses to realise the benefits of ARM technology through tools, consulting, support and system modules. Products and services offered by Bluewater Systems include:

- Extensive range of ARM development tools
- Snapper System Module and Single Board Computer which enables fast design and turn-around and low-volume manufacture of advanced electronics designs
- ARM Consulting services, from FPGA design to full product development

#### **About ARM ([www.arm.com](http://www.arm.com))**

ARM designs the technology that lays at the heart of advanced digital products, from wireless, networking and consumer entertainment solutions to imaging, automotive, security and storage devices. ARM's comprehensive product offering includes 16/32-bit RISC microprocessors, data engines, 3D processors, digital libraries, embedded memories, peripherals, software and development tools, as well as analog functions and high-speed connectivity products. Combined with the company's broad Partner community, they provide a total system solution that offers a fast, reliable path to market for leading electronics companies.

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