Oh What a Feeling!

Toyota and NEC Forge Australian Technology Partnership

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Introduction

Toyota Australia has become the first company outside Japan to implement NEC's ground-breaking 'pure' IP solution, UNIVERGE, with the opening of their new corporate Headquarters in Victoria, Australia.

The building is the first Toyota facility in the world to embrace NEC's IP technology, boasting a robust voice and data infrastructure designed to support Toyota well into the future.

Toyota Australia CEO, Ted Okada said technology had always been an integral component of the building's design.

"We wanted the advanced architectural and environmental design of the facility to be matched with a leading edge converged voice and data network," said Mr. Okada.

"Our search for a technology partner led us to NEC — and the result was the implementation of a full IP telephony solution."

Mr. Okada said Toyota were delighted that the commitment and excellence to technology that drives their innovation in vehicle manufacture, has been reflected in NEC's commitment to developing an IP solution.

"This new building clearly reflects Toyota's position as a visionary leader in the automotive space. With the NEC technology, we have further reinforced our reputation for ingenuity, creativity and technical excellence."

Selecting NEC Business Solutions

Plans for implementing a new IP technology solution at Toyota Australia's Corporate Headquarters were based around a requirement for flexibility, high availability of the

Photo 1 Toyota Australia new Corporate Headquarters.
The newly built Toyota Australia Corporate Headquarters in Melbourne, Victoria.

network, cost effectiveness, and future savings in carrier costs.

Toyota Australia's Divisional General Manager of Knowledge and Information Systems, Peter Holland said the new technology not only had to reflect the innovation of the building, but had to be in line with the company's key corporate mission, "Be the best in everything we do."

"This building was always envisioned to be a centerpiece and showcase for the innovative technology we use at Toyota," said Mr. Holland.

"We needed a long-term partner offering leading edge IP technology that would remain at the forefront of telephony development for years to come."

Following the tender process, NEC was invited to install and demonstrate its technology onsite — including VoIP, unified messaging, contact centre technology, wireless LAN and cordless telephony solutions — to ensure the solution would be fully integrated and compatible with existing Toyota technology.
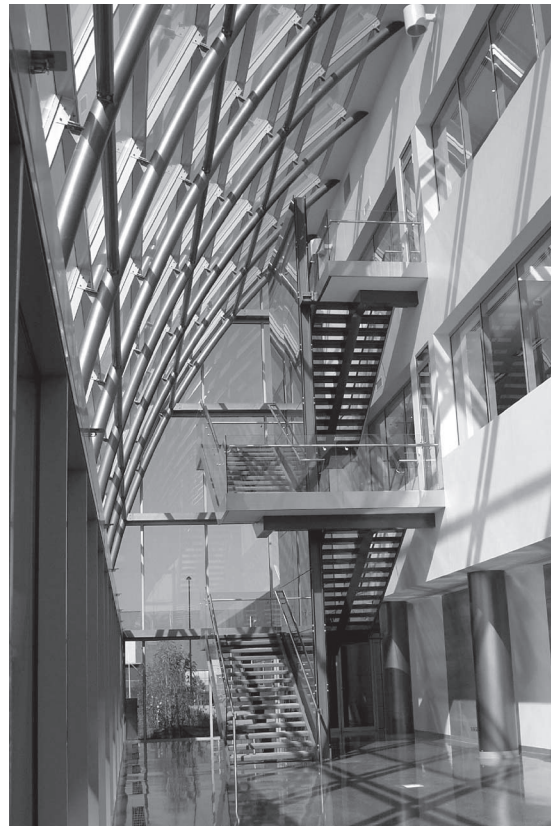

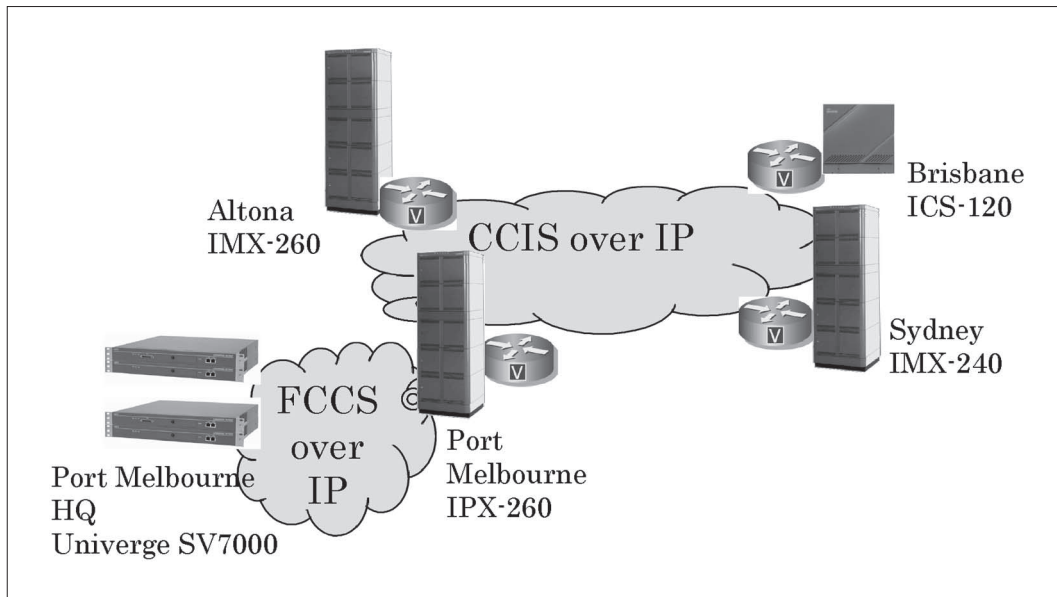Photo 2 Inside the new Toyota Australia Headquarter building.

Fig. 1 Toyota Australia Voice Network.
Each site at Altona, Brisbane, Sydney, Port Melbourne have mesh connection with CCIS over IP. Port Melbourne existing building and the new Headquarters is connected and in operation with FCCS over IP.

Proof of Concept

To ensure a risk-free installation, NEC engineers pre-staged the Toyota solution, simulating and testing in the NEC R&D laboratory in Melbourne, Victoria. As further proof of concept, the solution was also demonstrated to Toyota employees onsite.

The proof of concept was built in an old office environment at Toyota's Port Melbourne site to demonstrate the compatibility of equipment. The existing IPX was upgraded to provide the core telephony functionality and to support the trial VoIP Dterm handsets.

Faced with a very tight timeframe, the NEC Engineering team evaluated the new SV7000 and completed VoIP interoperability testing with the IPX, running a new version of software and FCCS (Fusion Call Control Signaling). Significantly, this configuration had never been undertaken outside Japan. Following the successful testing process, the solution was shipped and installed in the new Australian Corporate Headquarters.

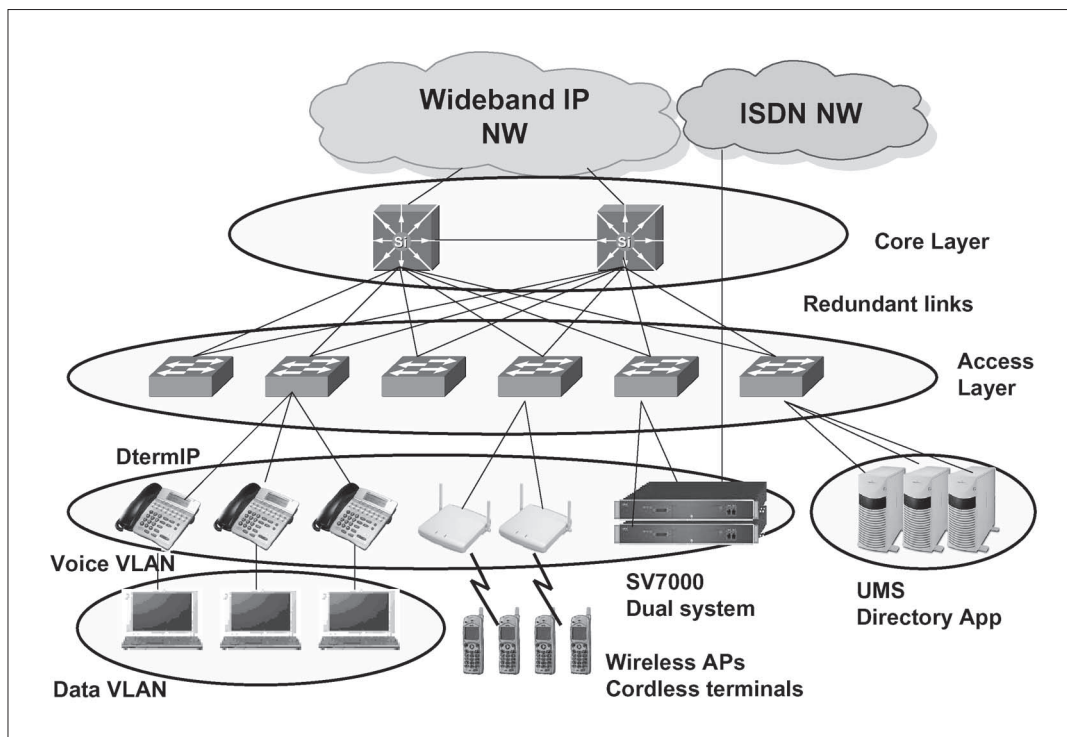Photo 3 Office with NEC solution at the new Headquarter.

Fig. 2 New Headquarter network overview at Port Melbourne.

The NEC Solution

The NEC solution implemented at Toyota Australia included the Active Voice AD-64 with unified messaging to Lotus Notes, Enterasys wireless access points and Spectralink cordless handsets. The UNIVERGE SV7000 was the core telephony equipment utilized.

The solution combined and deployed for the first time, NEC's new IP Dterms, LAN, Wireless LAN, IP cordless telephones, soft phones, Active Voice unified messaging and eDirectory with Click2Dial in one rollout. The project management team, including a range of NEC partners, completed the installation just four weeks prior to the opening of the new building.

The solution includes 410 IP Dterms, and 16 IP cordless handsets operating in a FCCS

Network. The existing NEC IPX still supports the majority of the traditional telephony in another Toyota building located at the same site in Port Melbourne, with the remainder of the Toyota Australia voice network still working over VoIP Trunks using CCIS#7 signaling.

According to Toyota Australia's Peter Holland, the NEC technology paves the way for future technology developments across the company.

"This NEC solution has put us at the forefront of technology in the Toyota world and throughout corporate Australia."