



The Cook Islands

CASE STUDY

Overview

The Cook Islands, spreading out in the heart of south Pacific, includes a net of fifteen small islands. The islands offer a rare opportunity for people from the cities of the world to experience a different type of vacation. Tourism is the country's number one industry and the leading element of the economy. With a total population of 16, 000, the Cook Islands welcome about 100,000 visitors every year to its most populated islands—Rarotonga and Aitutaki.

Providing high quality mobile services to tourists and local people has been a challenge to Telecom Cook Island (TCI), the sole provider of telecommunications for the Cook Islands. In 2003, TCI deployed a GSM network system in Rarotonga and Aitutaki. This system satisfied local users and tourists for a while but soon became outdated due to its limited capacity and coverage, and high maintenance costs.



After reviewing the existing GSM network system, TCI found that the system had separate Value Added Service (VAS) and switching platforms. It required extensive resources and costs to manage subscriber activities and service platforms, such as Pre-paid System (PPS), Voice Mail Service (VMS), Short Message Service (SMS) and Authentication Center (AuC). In addition, the old circuit switching network didn't support local switching in the islands. All calls had to be switched through the central site. Therefore, TCI was not able to effectively add more features to its services and reward its customers with a discounted rate. A new network solution was needed.

Challenges and Solutions

The key challenge for TCI was to find a cost-effective solution to migrate the legacy system to a new network system. The migration required minimum network disruption and no data and Call Detail Record (CDR) loss. TCI also expected to easily integrate, maintain and add features to the upgraded system in the future.

ADC's UltraWAVE R4S Softswitch was the ideal solution to meet all these requirements. The UltraWAVE R4S is based on 3GPP Rel 4 standardized architecture that enabled TCI to migrate their core network to IP architecture. During TCI's transition from circuit switching to packet switching, the UltraWAVE R4S Softswitch allowed connection to TCI's legacy network, integrating landlines and mobile users, resulting in no data or CDR loss and little network disruption. With a built-in media gateway, the UltraWAVE R4S offers local switching and distributed architectures that are essential to island networks in the Cook Islands. A media gateway also was placed in Aitutaki, which is some distance from the central site of Rarotonga. After the migration, the island networks in both Rarotonga and Aitutaki acquired local switching ability. Cells and PSTN calls within the island can be switched locally without going to the central site. Local residents and tourists can now enjoy low-cost, high-quality mobile services in the islands.

The updated network offers cleaner architecture and fewer nodes. Because of the integrated VAS platforms in the software, all service platforms are now managed by only one interfaces—Operation Management Center (OMC), greatly reducing the management resources required. The OMC also controls the network's configurations and subscriber management activities.

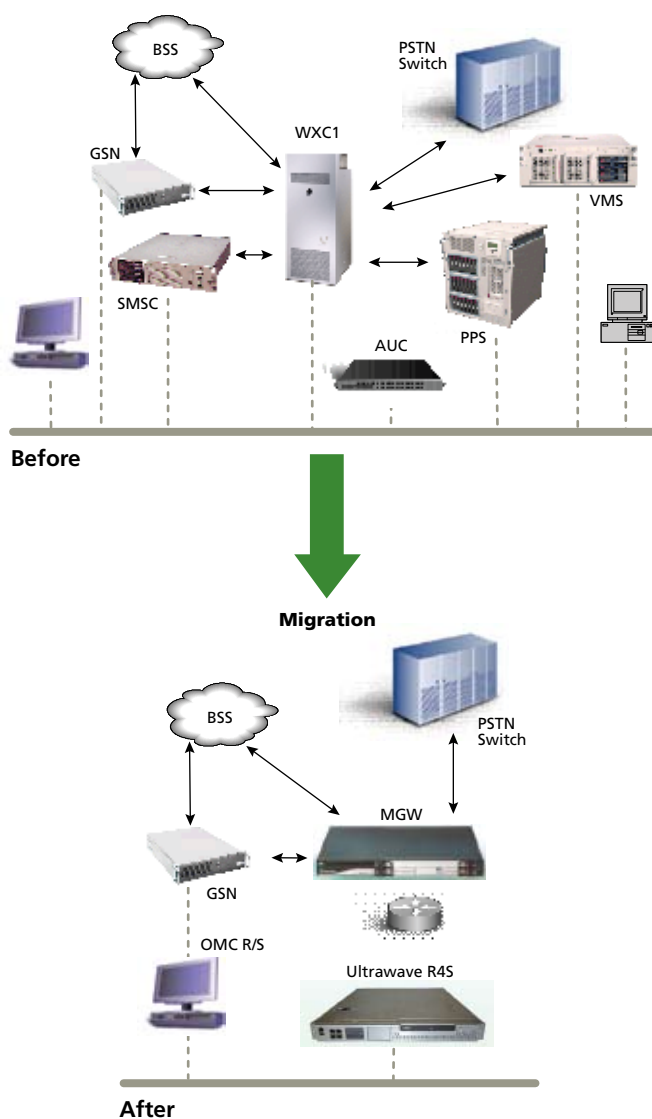


Results

TCI deployed the UltraWave R4S Softswitch in September, 2007 with the commercial operation launched in January, 2008. The UltraWave GSM Softswitch has completely upgraded the core network at TCI, enabling more efficient and cost-effective delivery of features such as Visited Location Register (VLR), (HLR), prepaid, voicemail, SMS and AuC for roaming support. The network's capacity has increased from 8,000 to 15,000 subscribers along with new services such as prepaid calling, SMS, voicemail, and GPRS data.

"ADC has enabled us to offer a better service network to more customers," said Stuart Davies, CEO at Telecom Cook Islands. "With this equipment, we can now offer our customers a suite of network services that compares favorably with those of any location in the South Pacific."

After the commercial deployments of the upgraded system, TCI announced another price reduction for mobile calling rates starting April 1, 2008.



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Website: www.adc.com

From North America, Call Toll Free: 1-800-366-3891 • Outside of North America: +1-952-938-8080

Fax: +1-952-917-3237 • For a listing of ADC's global sales office locations, please refer to our website.

ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, Minnesota USA 55440-1101

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