

 CitiCall Communications

Interviewee:

**Francis Ng**

CitiCall Communications Pte Ltd

Representing the new generation of trunk radio operators, management at CitiCall has over three decades of radio/telecom expertise. Today, CitiCall is a nationwide digital trunk radio operator employing NEXEDGE® technology. For the SEA Games, CitiCall worked in partnership with Radioquip Communications, a dealer with 17 years of experience managing radio rentals for such sporting events as international motor racing, marathons, golfing, tennis, football, rugby and swimming competitions.

**CitiCall Communications Pte Ltd**

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CitiCall was chosen by the Singapore SEA Games Organising Committee to provide radio communications throughout the 28<sup>th</sup> SEA Games 2015. In this event, CitiCall achieved a great success being supported by NEXEDGE®\*1 radios backed by a nationwide digital trunking system.



The Singapore SEA Games Organising Committee faced a huge challenge when it came to the 28<sup>th</sup> SEA Games in 2015. With 402 events, 7,000 athletes and officials, 17,000 volunteers, and 20 different hotels to cover throughout the island nation, how could they ensure clear communication and coordination? The solution was provided by CitiCall Communications employing a KENWOOD\*2 nationwide digital trunking system, NEXEDGE, and 4,600 radio terminals. Indeed, it proved to be so successful that there was no need to call on the field engineers who remained on 24/7 standby.

## SEA Games 2015

The Southeast Asian Games – SEA Games – started in 1959. This sporting event is held in one of the 11 participating countries bi-annually (between the years when Olympic Games and the Asian Games are held). And in 2015 it was Singapore’s turn to be the host. The 28<sup>th</sup> SEA Games were held over 12 days, June 5-16. A total of 7,000 athletes and officials from the 11 countries participated in 36 sports and 402 events.

## The challenge

The Singapore SEA Games Organising Committee was in charge of the 28<sup>th</sup> SEA Games, and it was clear from the start that reliable communications would be critical to its success. Apart from the scale of the games, there was the sheer complexity. The main venue was the National Stadium, but there were also 31 other stadiums and sporting facilities around the country. Additionally, there was no central village to accommodate everyone; instead, no fewer than 7,000 athletes and supporting staff were accommodated at 20 different hotels throughout Singapore. Providing communications for the officials and 17,000 volunteers at all these locations, as well as at the air and land borders was never going to be easy. For this reason, the contract for supplying communications for the games was put out to public tender.



## Choosing CitiCall and NEXEDGE®

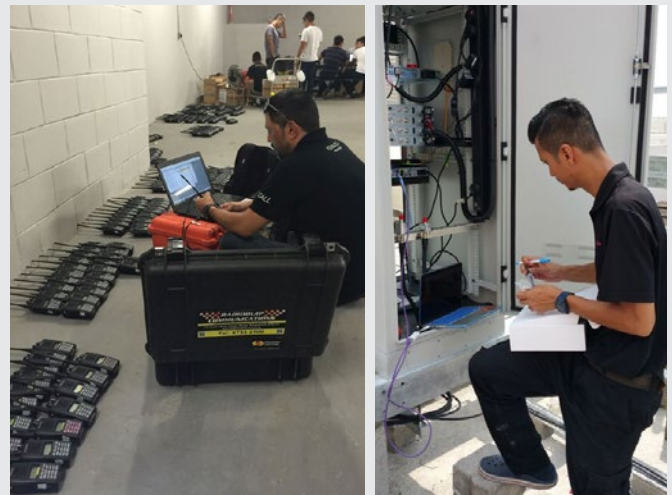
The Singapore SEA Games Organising Committee attracted bids from CitiCall and another trunk radio operator, and CitiCall was chosen.

As well as demonstrating extensive knowledge and experience, CitiCall was able to offer a strong support team. It had evaluated several infrastructure technologies based on technical performance and commercial feasibility, deciding to deploy a NEXEDGE digital trunking system which, with its robust infrastructure, is considered to be a true trunking radio system. Moreover, this flexible system operates in Trunking, Conventional Repeater, and DMO (Direct Mode Operation) modes. Additionally, NEXEDGE trunk radio base stations feature fail-safe and fail-soft operation, deemed to be crucial for the SEA Games opening ceremony. With NEXEDGE CitiCall has rapidly built up a reputation for providing reliable radio services at major events in Singapore, and this in turn helped the company to clinch the SEA Games contract.

## Obstacles and solutions

CitiCall went straight to work as there was no room for trial and error. It took three months to complete installation of the base station infrastructure using high-quality RF components, antenna systems and combiners. This provided building coverage at Singapore’s National stadium and at Changi International Airport. The stadium was a huge challenge, but CitiCall made good use of the excellent propagation characteristics of NEXEDGE’s narrowband 6.25 kHz FDMA technology to deliver the radio coverage required.

In addition to Radioquip, CitiCall was also supported by JVCKENWOOD<sup>3</sup>, the manufacturer of the KENWOOD brand radio equipment, which provided consultation and advice, helping to find solutions to any problems and troubleshooting the RF interference encountered at certain sites. Also the JVCKENWOOD factory ensured that both repeaters and radios were delivered in good time for programming and deployment.



## Managing large events

At large events like the SEA Games, CitiCall makes sure that the organizers enjoy secure voice communications, independent of any mobile phone networks. When a stadium is occupied with 50,000 phone-carrying spectators, only radios can ensure that all calls get through. CitiCall is also confident that the organizers can also rely on the priority broadcast feature of NEXEDGE radios.

The SEA Games communications system had to cover 31 event sites, 20 hotels and the National Stadium. Network coverage was also required for the airport and land immigration checkpoints for the VIPs and athletes arriving from the 10 other countries.

## Radio equipment

To satisfy these requirements, CitiCall and Radioquip provided conventional repeaters and radios (some configured for direct mode operation) for use by staff and volunteers at the various venues and events – opening and closing ceremonies, torch relay, entertainments, fireworks, VIP hospitality, crowd management, crowd safety, medical response teams and security. The core of the system consisted of:

- A nationwide NEXEDGE Type-C trunking system with a total of 350 talk groups configured for 4,600 radio users;
- and
- A total of 4,600 radios, including the NX-320M6, NX-320M4, NX-340M2 and NX-820-E.



The portable radios were used for transportation, hospitality, event management, security, competition management, anti-doping, etc. The NX-820 radios were installed at command centers and 30 official cars were equipped with NX-320 radios for the SEA Games cycling event.



This took a road-race format and included a 5km segment through the Marina Coastal Expressway tunnel. The organizers were able to maintain radio contact inside this tunnel thanks to the mobile radios in the official race vehicles traveling with the pack.



## Superb achievement

Thanks to the flexibility of NEXEDGE FDMA channel splitting, within a day CitiCall was able to set up the repeaters at remote locations using diesel generators. Also, throughout the games, CitiCall maintained a technical helpdesk to monitor the health of the network using an iPad and KPG-149 remote monitoring software. The network performed so well that there was no need to activate the field engineers who were on 24/7 standby.

Royston Chng, Deputy Head of Command Control & Communication for the 8th ASEAN PARA Games, gave high praise to CitiCall's work:

"CitiCall was the sole supplier for radio communication devices for the 28th SEA Games and the team did a fantastic job. The 28th SEA Games was the largest multi-sport and multi-venue games ever held in Singapore, and the greatest challenge was not only connectivity at the venue level but also cross-connectivity across the entire spectrum of games operations.

Throughout the operational period, there was zero equipment and network failure. The flexibility of the technology and hardware enabled the conduct of the first-ever Cycling Race through the Kallang-Paya Lebar Expressway tunnel with good signal strength along the entire race route. The system provided by CitiCall enhanced the decision-making process at the Games HQ as we were able to monitor ground operations and maintain command and control of events and incidents across the full spectrum. I am impressed with the professionalism and competence of the CitiCall project team and thankful for their support."

## Future prospects

Following the success of the 28th SEA Games, CitiCall sponsored radio communications for the 8th ASEAN Para Games held from Dec 3-9 2015 with participation of 3,000 athletes and officials from 10 countries. This is the first time Singapore is hosting the biggest ever South East Asian multi-sports events of this scale for persons with disabilities. Many tales of inspiration were written after a week of competition celebrating the achievements and potential of people with disabilities. A total of 1,100 NEXEDGE radios was used for opening and closing ceremony and competition venues at the billion dollar Singapore Sports Hub.

\*1: NEXEDGE is KENWOOD's advanced digital radio using the NXDN protocol.

\*2: KENWOOD is one of the brands of JVCKENWOOD.

\*3: JVCKENWOOD is the manufacturer of KENWOOD brand products, and the Corporate Brand of the parent company JVCKENWOOD Corporation.

The company is comprised of well-respected portfolio of brands including JVC and KENWOOD as well as EFJohnson and Zetron in the radio communications system business.

## Links:

<https://www.seagames2015.com/>

<http://www.citicall.net/>

<http://www.radioquip.net/>

# KENWOOD

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