

A data network where results really count

All eyes will be on Melbourne in March for the 2006 Commonwealth Games – and the data network keeping everyone connected and abreast of results will be under as much pressure to perform as the elite athletes (if not more). Cynthia Karena reports.

As one of the biggest sporting events in the world, the much anticipated Melbourne 2006 Commonwealth Games is going to be a spectacular event, bringing elite athletes from 71 nations to our shores in March next year.

But the Games don't just happen – meticulous planning and organisation is needed, and considering the success of the planning and organisation of the Sydney Olympics, Australia is well placed to stage the Melbourne Commonwealth Games.

Already there has been much work done to ensure a smooth Games for audiences and athletes, but one important aspect of the Games is keeping everyone connected and making information, such as event results and times, available to people in 'real time'.

So a high-quality reliable data network for the Games is critical.

Victorian IT company Australian Project & Consulting Services (APCS) has been awarded the contract to implement the Games data network.

APCS is a small company employing about 30 people in the Melbourne suburb of Mt Waverly, which has been busily designing the Games data network over all



A top view ... Melbourne, in particular its sporting hub, will play host to the 2006 Commonwealth Games in March next year. Communications are vital to a successful event.

competition and non-competition venues. It is partnering with other companies to help build the network and roll it out.

Very important fact

The multi-million dollar contract will see APCS set up infrastructure across all Games venues including the athletes' Village, competition venues and the media centre. APCS is installing the infrastructure which will support the all-important results system between venues, as well as the Games management systems which provide services like staff rosters and accreditation.

"We started planning the IT strategy and layout over two years ago," says APCS managing director Scott Coleman. "We

had the final design in December last year. Once complete, the Games data network will incorporate up to 2000 desktops, 100 servers, 180 switches and 900 reprographic devices, such as printers and faxes."

There will be thousands of people wanting access to the network. Games officials and volunteers will need real-time access to event times and results, as will the international media contingent who will also need 24-hour access to facts, figures, images and athlete profiles as well as being able to file their stories. Meanwhile, athletes will need the network to keep in touch with family, friends and sometimes coaches, all over the world.

At the Melbourne 1956 Olympic ➤



APCS managing director, Scott Coleman ... "we started planning the IT strategy and layout over two years ago."



Above: Where the real action will be – the 2006 data centre. Pictured are APCS project director Jeff Carlin (right) with project manager and system consultant Glen Viney (left) and technical architect Matthew Fisher. Left: The heart and brains of the operation ... literally hundreds of thousands of people will be wanting access to the Games data network which incorporates up to 2000 desktops, 100 servers, 180 switches and 900 reprographic devices. The data network has undergone countless hours of testing leading up to the Games.

Games, 3184 athletes competed in 15 sports in 31 competition venues. Over 12 days in March 2006, the XVIII Commonwealth Games will have a record 4500 athletes competing in 14 individual and four team sports, and 24 disciplines for a total of 241 events. There will be 1500 team officials, a 3000-strong media contingent, and 90,000 visitors from overseas and interstate.

The 14 individual sports include athletics, badminton, boxing, cycling, diving, gymnastics, lawn bowls, shooting, squash,

swimming, synchronised swimming, table tennis, triathlon and weightlifting; and four team sports of basketball, hockey, netball and rugby sevens.

The athletes and team officials will be housed in the athletes' village located within 3km of the city centre. Most of the sports venues are located along the Yarra River in the city precinct. The venues include the MCG, Melbourne Park, Multi-Purpose Venue, and Telstra Dome. Events will not only be held in Melbourne, but in four

regional Victorian hubs – Geelong, Ballarat, Bendigo and Traralgon.

The Commonwealth Games Federation is made up of 71 nations and territories representing about 1.9 billion people – a third of the world's population. The Games are expected to attract more than one million spectators and a potential global television viewing audience of over one billion people.

Logistics

Scott points out that the key to successfully installing a network of this size is planning and testing as much as possible before implementation. "It is anticipated we will implement the network in most venues in under a day, because it has been all heavily pre-staged and pre-tested. We've already rolled out the core equipment to the first venue in early October, and all other venues will continue to be rolled out before the end of the year."

A live version of the data network is running and connected to the WAN in APCS's logistics test centre. A lot of testing has to be done to ensure a smooth rollout in all venues, and it has been a crucial part of the process.

Imagine if the Games officials couldn't get their event results data; imagine the outcry if international journalists couldn't display the results. The network system will also be tested in conjunction with test events, such as the World Gymnastics in November 2005.

"It is well tested," Scott says.

Other logistics issues include portability. The network needs to be capable and flexible enough to cater for road events.

Technical requirements are also expected to change, in terms of what applications people want and who is allowed to access what information. Restricted access to information is another important consideration.

"There will be different requirements and different levels of access to information from different groups – media, officials, athletes and volunteers," Scott says. "The athletes' village needs to be connected for the 4500 ►

athletes to communicate with each other and with family and friends back home.”

The village is situated in a new suburb being created in Parkville, 3km from the city centre, with 200 social housing units. As these will be sold after the games, all the units have all been future-proofed, for example, the village has fibre optics installed all around.

Peak usage, that is, times when access to data is critical, is yet another issue that must be addressed. “Peak periods will be during the events when timing and scoring information will be in demand,” Scott says. “Our network carries traffic to people who need it in real time – Games officials, media and volunteers all need access to data. We need to manage who gets access to information and printers. We need to consider, for example, when people move from one location to another, how does that affect which printer they use? The system needs to know who the person is and where they are.”

The Games data network is a huge system that will need to be monitored. “Everything from data security to how hot the computers are,” Scott says. “If the network has errors, we need to know about it before the users do.”

It’s not just about designing and implementing a system, there are people involved as well. “People want to change things, so this has to be managed. There are a lot of people who want to have a say, so we had to manage the communication.”

Scott highlights another issue in the design phase: “When does the system become ready for testing? We had to decide when design stopped and when we were in test mode.”

The Games last for 12 days, so the whole system will only be in place for a short time. “We’ll take it down as quickly as possible – within two weeks,” he says. All the equipment is hired and will be returned to the suppliers.

Equipment

APCS is partnering with other companies to build the Games network and roll it out.

Microsoft is the technology partner, supplying the desktop server software and IT services, Telstra is the telecommunications partner, Dell is supplying workstations, servers and storage technology, Konica Minolta is supplying the printers and office automation

equipment, and Cisco is supplying the communications gear of routers and switches.

Windows Server 2003, along with a broad range of .NET server technologies, will be the base platform for the online operations.

Microsoft’s server technology – BizTalk Server and SQL Server – will be used by organisers to record and collate competition results from 20 venues in real time, covering 12 individual and four team sports, which would then become available for publication on the Internet.

Microsoft Content Management Server will provide Games officials and journalists with an easy-to-use web-based solution for authoring and publishing news and stories about the Games.

A combination of 68 tower and rack Dell PowerEdge servers will act as the backbone of the Melbourne 2006 Commonwealth Games, hosting business-critical administrative systems such as ticketing, content management and customised management applications. Additionally, the vital data network will be backed by Dell PowerVault storage systems.

The Dell OptiPlex™ GX280 has been awarded the official Games ‘desktop



Cathy Freeman and schoolchildren help promote the event. Everyone wants to get into the act ... Prime Minister John Howard poses with Games mascot Karak.

THIS ARTICLE HAS BEEN REPRODUCED WITH PERMISSION FROM CABLING CONNECTION MAGAZINE, DEC/JAN 2005.

Connection Magazines does not endorse any manufacturer, product or service nor does it provide any assurances of product or service performance.



Hurdler Kyle Vander Kuyp (left), badminton player Tania Luiz and rugby sevens coach Glen Ella can't wait for the Games to start. Past present and 'future' athletes have been used to promote the Games.

of choice' based on its value offering and configuration flexibility. In all, 1250 Dell OptiPlex systems, coupled with over 130 Latitude D-series notebooks, will be installed across multiple sites to connect officials, athletes, media and volunteers to each other and the far corners of the globe.

Dell server and notebook hardware will also be deployed for use on route with the Queen's Baton Relay team which will see the baton cover 180,000km throughout all the nations of the Commonwealth.

Security

In the light of world events, security of the Games is high on the agenda for police and security agents. A total of \$84.8 million is being provided for Commonwealth security services to ensure a safe and secure environment.

Victoria Police is responsible for overall planning and co-ordination of security for the Games, and will be backed by federal agencies including the defence force's counter-terrorist units, army bomb disposal experts, ASIO, the Australian Federal Police, Customs and the Department of Immigration.

This heightened awareness of Games

security flows on to security considerations of the Games data network.

"Due to security in general, specific details on the network security plans can't be released," Scott says. "There is a big emphasis on network security and disaster recovery. There is a huge amount of data – like event results – which needs to be protected. There will be a back-up system, back-up links, and fail-over devices. There will be redundancies in the data centre and in the Telstra links."

About APCS

Australian Project & Consulting Services is an IT services company, and at five and a half years old it is a relatively new outfit that specialises in project management and transforming the technology in a business.

Another high profile project of APCS is supplying the data needs of the Grand Prix Corporation in the Melbourne office and on the track. ■

CONTACT



Australian Project & Consulting Services (03) 9888 2366

www.apcsit.com.au

Melbourne Commonwealth Games 2006 1300 00 2006

www.melbourne2006.com.au