

## Nextgen Delivers Game Changing Content Delivery Network for Premier Media Group



A new Content Delivery Network from Nextgen Networks has facilitated cost reductions, operational efficiencies, converged communications and an enhanced viewer experience for Australia's leading live sports broadcast producer.

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Tony Scanlan, Chief Technology Officer, PMG

### PMG Customer Profile:

**Industry:** TV Broadcast

**Size:** 2 offices with 400 staff  
Connections to 15 sports venues

**Snapshot:** Premier Media Group is Australia's leading sports producer, broadcasting an average of 20 hours of LIVE sport per day into 2.2 million homes around Australia on subscription television.

### Objective:

PMG needed to upgrade its operating processes and content contribution technologies to meet the demanding needs of High Definition broadcasting – critical performance criteria, high volumes of data and the goal to produce the best possible viewer experience for top quality sports broadcasting for both National and International consumers. PMG wanted to take control of its own stadium communications infrastructure and connect to a national fibre optic network to transport all converged production data between the stadium and its Sydney headquarters with optimum efficiency and cost effectiveness.

### CUSTOMER BENEFITS SNAPSHOT:

#### Production Benefits:

- Permanent, on-demand high bandwidth connections to prime sports venues
- Converged video, audio and production communications data
- Increased automation of operational processes
- Simplified communications architecture
- Reliable, self managed transmission services
- Improved flexibility and scalability of network usage
- Less reliance on data compression

#### Business Benefits:

- Reduced costs of carrier and satellite services
- Improved operational efficiencies
- Strategically positioned for revenue and business growth
- Continual improvement in production quality and viewer experience
- Reduced burden on accounting and additional game-day human resources

## About PMG:

Premier Media Group is Australia's leading sports producer and broadcaster. PMG compiles and produces the FOX SPORTS TV channels, FOX SPORTS NEWS, FUEL TV, How To Channel, Foxsports.com.au and a range of video, text and statistical content for television, mobile phone and online delivery. FOX SPORTS broadcasts an average of 20 hours of LIVE sport per day into 2.2 million homes around Australia on subscription television with almost seven million potential viewers through FOXTEL, AUSTAR and OPTUS TV. Premier Media Group also produces a dedicated FOX SPORTS NEWS TV mobile phone channel and provides mobile content to all four major Australian Telco's. The FOX SPORTS channels are also available in more than 4,100 hotels and licensed venues as well as 190,000 hotel rooms throughout Australia.

## New Challenges for Sports Broadcasters

The broadcast game changed for PMG with the launch of the first FOX SPORTS HD Channel in June 2008, a channel produced entirely in native 1080i/50 High Definition. Further HD services were developed for the subsequent launch of FOX SPORTS 1, 2 and 3 as SD/HD Simulcast services in November 2009.

PMG's established content delivery networks and operational processes needed dramatic transformation in order to manage the significantly higher amounts of data involved in transmitting HD TV-quality content from prime sports venues to broadcast facilities.

Legacy broadcast carriage services utilised by PMG were externally managed, cumbersome, expensive and inflexible. There were a large number of labour-intensive manual processes involved in co-ordinating and managing of the services and capacities.

Most core program contribution solutions used by PMG had multiple bandwidth-restricted connections. Often video was heavily compressed, transmitted via satellite and decompressed at the production centre, while in most cases audio and/or production communications were being carried over disparate and relatively low bandwidth services.

The video compression processes were a restriction on PMG's ability to exceed customer expectations for premium quality broadcasts. The restrictions also hindered its own commitment to delivering the best possible viewer experience.



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# BROADCASTING

## Projecting Forward

PMG's forward looking strategic objective was to offer native HD broadcasts wherever possible. A far more efficient high speed, high capacity Content Delivery Network had become an operational imperative to provide HD TV broadcasts without compromising data quality.

To effectively leverage new broadcast technologies, the new network would need to be self-managed from end-to-end as well as flexible and scalable in operation. It needed to be immediately available when and where live broadcast data was being produced from prime sporting venues all over the country, with direct connections to PMG's central production facility in Sydney.

"Historically, sports broadcasters in Australia have not owned their own broadband networks connecting a stadium to the studio production facility," Mr Tony Scanlan, Chief Technology Officer at PMG said. "We wanted to change that.

## Building a Better Content Delivery Network

Following a critical review of current and forecast HD outside broadcast events, PMG engaged Nextgen Networks to establish a high bandwidth network with multiple connections of up to 10Gbit/s from its Sydney-based production centre directly to 15 of Australia's most popular sports venues in Queensland, New South Wales, Canberra, Victoria, South Australia and Western Australia.

Nextgen owns and operates a 10,000km fibre network across Australia stretching from Queensland in the nation's north east through just about all major metropolitan and regional population centres to Perth in Australia's south west. The network includes geographic path diversity across state borders so that traffic can be re-routed in the event of outages and has more than sufficient bandwidth to carry converged video, audio and production communications.

Nextgen was able to extend its fibre network to the identified 15 sporting venues with a dedicated Layer 2 Switched Ethernet service with dual 1Gbps services for PMG.

Nextgen helped PMG to design customised switching systems at each sporting venue which would be used to connect stadium infrastructure to the attending outside broadcast truck. The wall boxes include dual military specification optical connectors inside a weather-resistant steel casing. Additional cabling and



According to Mr. Scanlan, "Effectively, shifting all of our traditional video transfer methods, to a private Ethernet service gives us unprecedented point-to-point and point to multi point bandwidth with complete control of usage and configuration."

connectors required within the stadium have the same military specifications custom selected by PMG to suit its pre-defined broadcast quality objectives.

At PMG's headquarters in Sydney, two fully diverse 10Gb/s network aggregates connect to dual carrier class routers which manage the consistent reliable performance of the key network connection.

## A Self-Managed High Bandwidth Solution

Owning and managing its own infrastructure at venues and then connecting directly into a nationwide fibre optic network allows PMG to own their own processes. Now able to automate many of the production procedures that were previously labour intensive and inefficient, PMG are also able to eliminate the costs incurred previously through event-by-event connections. This has in turn reduced the staff load for both accounting and connection and communication management.

Perhaps the greatest benefit PMG is obtaining from its Nextgen Networks premium broadband solution is in the improved quality of content it is providing to its broadcast partners now and beyond.

Meanwhile, with bandwidth to spare, PMG is able to proactively pursue opportunities to engineer further innovation in its production processes and broadcast content. It is also well positioned to adapt to future broadcast enhancements such as multiple independent broadcast video feeds, downstream graphics operation, advanced statistics and media switching, in addition to developments such as 3D sports broadcasting, and increased broadcast resolutions such as 1080p.

“This new network will provide exceptional video quality, with low latency and good performance across the entire contribution and production chain,” PMG’s Mr. Scanlan said. “At the end of the day, it is a highly flexible and scalable network that has enabled us to set new benchmarks for operational efficiency and production quality which equates to a better end viewer experience for Australia’s premium sports.”

After two months of finalising the technical aspects of the design so that the solution would be capable of meeting PMG’s pre-defined SLAs, the subsequent rollout to 15 stadiums was completed within six months.

“Along every step of the way, we found Nextgen to be a very flexible and supportive partner in helping us achieve our objectives for optimum broadcast quality, process improvement and sustainable technical support of business growth,” Mr. Scanlan said.

**nextgen**  
networks



### ABOUT NEXTGEN NETWORKS:

Nextgen Networks is a specialist provider of high performance data services and solutions. A member of the Leighton Group, Nextgen Networks owns and operates Australia’s third largest fibre optic network and Australia’s first national VPLS network. Its customers include managed network service providers, network integrators, carriers, corporations and government agencies.

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