

CASE STUDY

OLIMPIYSKIY NATIONAL SPORTS COMPLEX, KIEV, UKRAINE



ENSURING PUBLIC SAFETY

DIMETRA IP MICRO DELIVERS SECURE, RELIABLE AND EFFICIENT COMMUNICATIONS THROUGHOUT KIEV'S NATIONAL STADIUM



OLIMPIYSKIY NATIONAL SPORTS COMPLEX

The Olimpiyskiy National Sports Complex in Kiev, known as NSC "Olympic," is home to the Ukrainian National Football Team and Dynamo Kiev Football Club. It is the second-largest stadium in Eastern Europe and hosts numerous other entertainment and sporting events, sporting events. The final of the European Championship football tournament EURO 2012 was played at the stadium.

The stadium underwent extensive renovation prior to this tournament. In parallel the communications system was upgraded too from an analog system to a digital platform. This was done to improve communications among personnel and ensure the safety of fans visiting the ground. In addition, UEFA stipulated that digital communications should be installed as standard at all grounds hosting EURO 2012 games.

Following a competitive tender process for the new system, NSC "Olympic" chose to work with the locally based Dolya & Co Ltd. Drawing on its extensive experience in delivering similar successful radio communication systems in Ukraine, Dolya & Co Ltd. recommended Motorola Solutions' TETRA solution.

The Dimetra IP Micro network provides optimal coverage throughout the 145,741m² complex, including the underground parking and dressing room areas. Quick and easy to install, the solution is also simple to operate and maintain. It provides highly robust and reliable critical communications between stadium staff on match days and at events, even at peak times and during emergencies.

CUSTOMER PROFILE

Company
Olimpiyskiy National Sports Complex

Location
Kiev, Ukraine

Industry
Sports and leisure

Partner
Dolya & Co Ltd., Kiev

Motorola Solutions Products

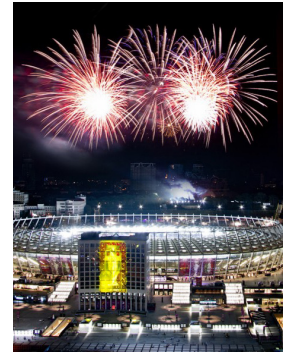
- Network:
- Dimetra IP Micro
 - 4 MTS2 Tetra Base Stations
- Terminals & accessories:
- 25 MTP850 Tetra Portable Terminals
 - 110 CEP400 Tetra Portables - used by stewards
 - 15 MTM800 Enhanced TETRA Control Heads – used by medical and emergency team dispatchers
 - 135 Headsets
- Software:
- 2 MCC 7500 IP Dispatch Consoles

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“At NSC Olimpiyskiy public safety is of paramount importance. At full capacity, we have over 70,000 fans, 15 emergency teams, 250 security guards and 1000 stewards on site. Our teams need to be able to communicate efficiently and quickly, wherever they are. With Motorola Solutions’ TETRA solution they can now respond immediately to any issues or emergencies and always have vital information at their fingertips to make informed decisions.”

Maxim Sergeyeovich Solovyov, CIO, Olimpiyskiy National Sports Complex



CHALLENGE

NSC Olimpiyskiy needed to extend reliable radio coverage to remote and underground areas of the complex. Capacity also needed to increase so that users could always have access to a channel, even at peak periods. To meet EURO 2012 criteria, it also had to expand the functionality of its previous analog radio system to offer data communications, reduce response times to emergencies and ensure the safety of both fans and staff. Audio quality was a further critical requirement within the stadium area where high energy football games and pop concerts can raise noise levels to over 110 dBA. Previously personnel had often struggled to hear and convey messages.

The new network and terminals had to be fully functional for the re-opening of the complex on 8th October 2011. The system was put to the test from day one.

SOLUTION

A fire broke out at the beginning of the opening ceremony, due to an issue with the protective film on the stadium spotlights. Subscribers using standard analog radios suffered coverage issues due to the high user load. Moreover, they had no coverage at all in the lower levels of the stadium and could not communicate to resolve the emergency. In contrast, the Motorola Dimetra IP Micro subscribers enjoyed a reliable and stable connection throughout the crisis and stadium. Eleven talk groups were immediately alerted and cooperated effectively to ensure the blaze was quickly brought under control.

The second test came a month later, during the opening International between Ukraine and Germany. Stadium teams were faced with various security issues prior to and during the match, such as the outbreak of fights, vandalism, and large numbers of fans trying to enter the ground without going through the official checkpoints. Analog radio users again suffered connection and coverage issues. However, the 15 Dimetra IP Micro subscriber groups cooperated to resolve the issues.

Dimetra IP Micro has proven repeatedly that it is perfectly suited to the stadium requirements, being especially designed for the provision of radio communication with a high density of users. It also includes a multichannel interface with the existing stadium analog network, so allowing these users to participate in group calls with the TETRA users. The radio coverage in the underground parking below street level is provided by one MTS2 base station connected to a Distributed Antenna System (DAS). External coverage is provided by the other three MTS2 base stations: two being installed near to the two video screens and the third being fitted on a hotel next to the stadium.

The MTP850 has been designed to protect its users, with its high quality voice calls and large emergency button. Moreover its voice compression technology provides superior audio quality and suppresses background noise, so ensuring transmissions are not misheard. The comfortable headsets are suitable to be worn for prolonged periods and allow hands-free communication.

Finally there are two dispatching stations from which personnel can swiftly and effectively dispatch medical, emergency and security staff using Motorola Solutions’ CENTRACOM Elite software-based dispatch console.

BENEFITS

Dimetra IP Micro has delivered a huge improvement in communications between stadium personnel. It has doubled the capacity of the radio network, ensured extended coverage throughout the stadium and users can enjoy crystal clear audio, even in the noisiest of environments. Users say that the TETRA terminals are robust, reliable, and easy to use.

Moreover with low installation and maintenance costs, NSC Olimpiyskiy has already seen a return on investment. The Motorola Solutions TETRA deployment has become a vital asset to successful stadium operations and has repeatedly proven why it is the technology of choice for public safety.

Applications

- Reliable two-way voice and data communications (including PSTN and VoIP telephony via a PBX switch)
- PTT group calling
- Text messaging
- Swift personnel dispatch

Benefits

- Reliable communications for over 1,000 users throughout complex
- Increased channel capacity
- Crystal clear audio quality even in the noisiest of environments
- Multichannel interface with existing analog networks and those used by Public Safety Organizations during some events
- Small, robust, easy-to-operate terminals with large emergency button
- Low investment and operational costs

For more information on how Motorola Solutions’ TETRA technology can provide secure, reliable and efficient communications for your business, please visit us on the web at www.motorolasolutions.com or access our global directory at www.motorola.com/enterprisemobility/contactus.

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