

CASE STUDY

Media and Broadcasting
Video Transcoding



Software

Blazing Fast Video Transcoding

NetUP uses Intel® Media SDK to help bring the Rio Olympic Games to a worldwide audience of millions

“This project was very important for us. It demonstrates the quality and reliability of our solutions, which can be used for broadcasting global events such as the Olympics. Intel® Media SDK gave us the fast transcoding we needed to help deliver the Olympics to a worldwide audience.”

—**Abylay Ospan,**
Founder of NetUP

In August of 2016, half a million fans came to Rio de Janeiro to witness 17 days and nights of the Summer Olympics. At the same time, millions more people all over the world were enjoying the competition live in front of their TV screens.

Arranging a live TV broadcast to another continent is a daunting task that demands reliable equipment and agile technical support. That was the challenge for Thomson Reuters, the world's largest multimedia news agency. It planned to cover the Olympics in full force, with a complete multimedia presence including text, pictures, online video, broadcast video, graphics, and data.

Choosing a Technical Partner

To help it meet the challenge, Thomson Reuters chose NetUP as its technical partner, using NetUP equipment for delivering live broadcasts from Rio de Janeiro to its New York and London offices.

Founded in 2001 by Moscow State University graduates, NetUP is a software development company focused on serving the needs of the fast-growing telecom market segment in Russia and beyond. The company has expertise with IP networks, operating systems, databases, and hardware—all essential for developing up-to-date IPTV solutions. NetUP's solutions have been installed all over the world, from New Zealand to Canada.

Two-Stage Process

NetUP helped Thomson Reuters process the video signals for the Olympics in two stages.

For the first stage, the NetUP DVB to IP Gateway captured the ISDB-T signal. The gateway is a universal solution for receiving, decoding, and multicast or unicast streaming of satellite, terrestrial, and cable TV channels. It delivers high density in a compact, 1U rack-mount server, able to receive and decode eight transponders/multiplexes.

Next, the NetUP Transcoder prepared the video to pass through a content delivery network (CDN) by transcoding it. NetUP Transcoder is a software transcoding solution with hardware acceleration. It allows transcoding from MPEG-2 to H.264 or vice versa, changing picture resolution, frame rate, etc. The output can be sent to the network as multicast (UDP) or unicast (HTTP progressive) streams.

Fast Transcoding

In developing the NetUP Transcoder, NetUP worked with Intel, using Intel® Media SDK, a cross-platform API for developing media applications. Intel Media SDK provided NetUP with:



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- Fast video playback, encode, processing, media format conversion and video conferencing
- Acceleration of raw video and image processing
- Audio decode and encode support

Meeting the Challenge

"We are delighted that NetUP was able to create an innovative solution for the Rio Olympics on Intel® platforms. The success of these projects demonstrates how developers can take rich content delivery to the next level, leveraging hardware-accelerated video processing on Intel® Xeon® processor E3-1225-based servers through the Intel® Media SDK," said

Jeff McVeigh, vice president, Software and Services Group, and general manager, visual computing products, Intel.

"This project was very important for us," explained Abylay Ospan, founder of NetUP. "It demonstrates the quality and reliability of our solutions, which can be used for broadcasting global events such as the Olympics. Intel Media SDK gave us the fast transcoding we needed to help deliver the Olympics to a worldwide audience."

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