Arecont Vision Megapixel Camera Captures 'Photo Finishes' at "Karadjordje" Stadium

Track and Field Club in Serbia Decides the Results of Close Races with the Help of Arecont Vision Cameras

CUSTOMER

Vojvodina track and field club is a 145-year-old athletic club in Novi Sad, Serbia, whose athletes often compete successfully at the international level. The club's stadium was upgraded in 2004 and has hosted two European Cups: a European Junior championship and a Balkan athletic championship. Another upgrade this year provided a new building, new lights for evening events and a modern track surface for all levels of competition. A large-screen display now provides attendees a 580-square-foot, full-color view of the action.

CHALLENGE

In sporting events including track and field, the term "photo finish" has historically been used to describe competition results that are too close to be decided by a judge's naked eye in real-time. Accurately determining results of a photo finish nowadays depends on the ability to discern the precise details of a video image. Decisions are made based on minute distances and the ability to clearly see the faces of participants.

MEGAPIXEL SOLUTION

Vojvodina track and field club uses an Arecont Vision 1.3 megapixel IP camera along with Windows XP Webcam software to provide the detailed images needed to decide the winners of close races, according to Dusko Milicic, international photo finish judge at the Vojvodina club. The Arecont Vision high-definition camera records races and helps with the identification of athletes and their finish order.

The camera is placed on the inside track of the stadium and is used in conjunction with a recording laptop. The camera can also be used to decide results in biking, horse racing or dog racing events and will be used in every future technical athletic event to record every shot or jump in case an appeal needs to be decided.

The Arecont Vision AV1300 provides a 1,280 x 1,024-pixel images using MJPEG compression and a 4-12mm varifocal zoom lens. Arecont Vision's MegaVideo® low-cost massively parallel image processing architecture involves more than 80 billion operations per second to provide simultaneous streams at full frame and individual regions of interest.

Mr. Milicic designed and installed the system, which is an upgrade of the previous photo finish system. He says the IP system is more portable and easier to install on laptop computers.   "I need something I can bring with me and is easy to install in other facilities, for all levels of competition," he says.

The laptop is connected to an 8-port switch, and a midspan injector provides Power-over-Ethernet (PoE) to the camera along a 400-foot UTP cable. Races are recorded, and the Webcam XP5 software encodes them to the video recorder using ffdshow format. The system can also provide the same results using two TP-Link N wireless routers in bridge mode.

The camera is connected with a switch to a local network with an Internet connection. The race is recorded on one laptop (HP), and a second laptop (IBM) receives the live stream. A third (Air Mac) picture from the camera is shown on the Philips big screen display at the stadium.

The local distributor offered several camera choices but recommended the Arecont Vision product as the best for Mr. Milicic's needs.

MEGAPIXEL BENEFITS

Mr. Milicic likes that the camera can record at 30 frames-per-second and appreciates the ease of network installation. "We needed something mobile, and Arecont Vision provides the mobility required," said Mr. Milicic.

The Arecont Vision camera has performed well. It is reliable, easy to set up and operates even in wet conditions (there was rain the second day it was used). The camera's clear images have already been used to settle appeals in a couple of races by determining the correct order of athletes. Identifying athletes was much faster than the usual method of waiting for a paper from judges listing the names.

The system has been very successful to date and Arecont Vision technical support has been very responsive. The improved video quality of megapixel imaging is especially important to the application. Better video quality ensures Mr. Milicic's ability to discern race results accurately.

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