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NHK Technology

Millimeter-wave Mobile Camera Enables Freestyle-Shooting in a Soccer Stadium

The Japan Pro Footballer's Association (JFPA) held a Christmas Charity Soccer game on December 23rd of last year to support the reconstruction effort after the Great Eastern Japan Earthquake. The game took place at Yurtec Stadium in Sendai and was recorded with HDTV wireless camera, called "millimeter-wave mobile camera," developed by the NHK Science & Technology Research Laboratories. Two receivers were installed in the Press Gallery, and two more were placed under the spectators' seats. The millimeter-wave mobile camera enabled to transmit

uninterrupted, wireless, low-delay, high-quality HD video from anywhere in the stadium.

This event also presented performances by the players at various locations around the field after every goal to entertain the audience. The extremely millimeter-wave mobile cameras greatly contributed to the highly dynamic, engaging broadcast of the game by capturing images from inside the circle of joyous players after a goal and by following players as they presented their individual post-goal performances.



Millimeter-wave mobile camera (camera side)



Receiver (under the spectators' seats)

From the Editors

NHK cooperated with Olympic Broadcasting Services (OBS) and the British Broadcasting Corporation (BBC) in making possible public viewings of the London 2012 Olympic Games in Super Hi-Vision (SHV). The viewings were held at various locations in the UK, US, and Japan from July 27th to August 12th.

We used an a production van, three SHV cameras, and a 22.2 channel audio system to record the action at the competition venues and transported to the editing room at BBC Television Center in London. The SHV footage produced in the editing room was compressed and transmitted by IP network to public viewing sites in the UK (London, Glasgow, and Bradford), the US (Washington D.C.) and Japan (NHK (Shibuya, Tokyo), Akihabara (Tokyo), and Fukushima). We believe the successful completion of this public viewing project is one of the biggest milestones in the development of SHV.

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