Using narrow-angle directional microphones with suppressed rear sensitivity in coverage of outside broadcasting of road-races

In order to improve open-air recording quality, NHK STRL has been developing narrow-angle directional microphones with suppressed rear sensitivity which are able to suppress background noise. These microphones clearly record the sounds of competitors during marathons and other road-race events. Sounds such as motorcycles, truck engines, and cheering fans are suppressed, while sounds such as breathing and footfalls of competitors are picked up clearly.

The microphones are 15, 30, or 55 cm long, and their directivity becomes narrower with length. Their selection is based on the distance to the sound source and on the surroundings.

In particular, various microphones are used to cover road races, and it is important to set them up in a way that provides the best sound quality. Through extensive discussions with audio engineers, we succeeded in making improvements to the recorded sound’s color while preserving its clarity.

We will continue to use these microphones for recording programs in various genres, as well as for making experimental 22.2 multichannel sound for Super Hi-Vision programs. We will also continue our development to improve their capabilities.

From the Editors

Super Hi-Vision (SHV) was one of the center of attention at the IBC2010 conference and exhibition. Two papers on SHV from NHK were selected as "The Best of IBC". This year’s exhibit was third time for us to exhibit SHV in IBC. In particular, we showcased practical prototypes of several equipments. Some visitors who saw the new equipment commented that it is compact enough to be used. Others said they hoped that SHV technology will progress just like the HDTV did, and they appreciated the pioneering work done by NHK. One participant noted that new content production methods for SHV should be studied. I think that there is growing interest in SHV content production and applications as well as its hardware.