Acoustic Processing

Regarding acoustic processing, the telephone took the lead for human voices. Regarding acoustic data, compression coding such as MPEG has advanced. In recent years, studies on acoustic processing/sound source separation using plural/single microphones and acoustic processing, e.g., a robot playing music together with a human, and the analysis of songs of living creatures such as birds has been developed. S. Makino, et al., proposed a separation system for plural sound sources based on independent component analysis based of these studies.

Coding and Standardization of Images
Coding of Images
Standardization of Image Coding

Along with the spread of television, the importance of image compression increased, and studies were promoted. Achievements included the development of CODEC ahead of the rest of the world. H. Kaneko, et al., developed CODEC which converted analog TV signals to digital signals and transmitted at 20Mbit/s, H. Yamaguchi, et al., developed an image coding transmission system at 64bit/s targeting TV telephones and TV conferences. M. Hatori, et al., proposed a motion compensation system using MPED as well and interior predictive coding. J. Murakami, et al., realized digital high compression coding technology which could relay multi-channel TV signals by one channel capacity for analog TV. Image coding is standardized by MPEG series. H. Yasuda, et al., contributed to MPEG2 standardization. The contribution of MPEC4 by K. Asai, et al., was also worthy of mention. A. Nakagawa, K. Nitta, et al., contributed to the development of the codec mounting these standards. Y. Nakajima, et al., developed coding for mounting, editing/searching methods related to MPEG particularly in consideration of mobile terminals.

 CODEC: COder/DECoder/COmpressor/DECompressor