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Direct Satellite Broadcasting Technology

This is the world's first direct satellite broadcasting technology, achieved in 1984.

For the realization of direct satellite broadcasting, the following achievements have been made: home receivers with small parabolic antenna with low-noise downconverters, broadcast satellites with molded beam antenna, and control technology, and the investigation of the propagation characteristics of 12GHz band radio waves for satellite broadcasting and research on satellite broadcasting services and so on. As a result, it has become possible for households all over Japan, including in the mountains and on remote islands, to receive television broadcasts, and laid the foundation for the satellite broadcasting services currently being used around the world.

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Color TV Signal High Efficiency Digital Transmission Technology

This is the result of a color TV signal high-efficiency coding technology that greatly reduces the amount of data while maintaining the image quality.

A new 30- and 15-Mb / s coding scheme with a new inter-frame adaptive prediction method has been developed, and with the possibility of a high-quality, high-efficiency digital transmission system that surpasses conventional FM systems through international transmission experiments, the world's first demonstration that digital systems can achieve higher efficiency than analog systems when broadcasting TV programs over broadcasting or communication lines contributed to the advancement of TV digital transmission technology.

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Live-action based Virtual Studios

This is the result of the development of a live-action-based virtual studio system that can combine an all-sky video transmitted from a remote location in real time with the background of the video being shot in the studio. In addition to CG composition, it made it possible to easily compose a live-action image of the entire sky as a background that matched the movement of the camera, making it possible to produce images as if the performers in the studio were at the interview site.