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Development of Large-sized Screen High-definition Displays

Recent developments in large-sized display are remarkable. In particular, as BS digital broadcasting started in 2000, services of high-definition picture quality and high-quality sound started accordingly. Studies of high-definition started from the 1970s. However, it was necessary to develop a large-sized flat screen wall-hanging television to gain popularity in homes. Various flat screen displays were proposed. Among others, H. Murakami, et al., focused on the plasma display panel and promoted the general development of device/system technology. On the other hand, studies on liquid crystal displays having the specific features of being thin, light, and low in power consumption, were also actively carried out. For liquid crystal color displays, T. Uchida, made achievements in academics and industry in terms of research and practical application.

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Pioneering Study on Integral Three-dimensional Television

Integral three-dimensional televisions were based on the principles of integral photographic technology used to take/display stereographs as proposed by Lippmann in 1908. F. Okano, et al., proposed the basic concept of the integral three-dimensional television system which enabled people to watch natural stereographs without using special glasses. In addition, in order to realize this system, they structured/realized element technologies ranging from taking images to displaying them. Accordingly, they enhanced the potential for the next generation of three-dimensional broadcasting services.