

# World's First LCD That Simultaneously Displays Different Information in Right and Left Viewing Directions

July 14 2005

---



Two-way viewing-angle LCD (26-inch LCD IT-TV prototype)  
Reflecting the LCD in a mirror shows that one user sees TV images from the right while another can see an Internet home page from the left

Sharp has developed a new LCD, which can simultaneously display different information and image content in right and left views in a single unit by directionally controlling the viewing angle of the LCD. This feature makes it possible to provide information and content tailored to specific users depending on the angle at which they view the screen. Volume production of the LCD will begin in July 2005, marking the introduction of the world's first practical application of this technology. A new LCD television technology will allow two different

programs to air at the same time depending where one sits.

Increasingly wider viewing angles in LCDs have made possible clear, highly readable displays without loss of image quality no matter what direction the display is viewed from, and mean that several users can view an LCD simultaneously. This has drastically boosted demand for LCD application products such as LCD TVs and monitors, notebook PCs, mobile phones, and the like. Meanwhile, as the settings in which such devices and equipment are used continue to diversify, and the information and visual content displayed on them continue to expand, there is a rapidly increasing need among a broad range of users for a single device capable of restricting the display to only the information or content users need to see.

Using a number of proprietary technologies, such as a parallax barrier superimposed on an ordinary TFT LCD, the LCD sends the light from the backlight into right and left directions, making it possible to show different information and visual content on the same screen at the same time depending on the viewing angle. Controlling the viewing angle in this way allows the information or visual content to be tailored to multiple users viewing the same screen. For example, one user can view the display as a PC screen for browsing the Internet or for editing video shot using a digital camera (IT) while at the same time another user watches video content such as a movie or a TV broadcast (A/V). This ability to enjoy two functions in a single unit in full-screen size will contribute to achieving a full-fledged convergence of digital home electronics A/V and IT.

Citation: World's First LCD That Simultaneously Displays Different Information in Right and Left Viewing Directions (2005, July 14) retrieved 27 April 2024 from <https://phys.org/news/2005-07-world-lcd-simultaneously-left-viewing.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.