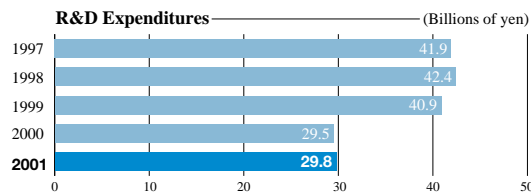


RESEARCH AND DEVELOPMENT HIGHLIGHTS

To achieve our network solutions provider vision, we emphasize speed in our R&D activities. By integrating various advanced technologies, we develop a distinctive lineup of products in advance of other companies and focus on R&D, which leads to product innovation and new business. R&D highlights in fiscal 2001 were as follows:



Telecommunications Systems

Three Topics for MPEG4 Standardization (PEG4 ARTS Profile, RTP for MPEG4 and Patent Pool of MPEG4 Video Portion)

In July 2000, the advanced real time simple (ARTS) profile, proposed jointly by Oki, NTT Corporation and Fujitsu Laboratories Ltd., was standardized as the profile for MPEG4 Visual Version 2 by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) for real-time communications. In addition, in November 2000 the real-time transport protocol (RTP) for MPEG4 audio and video was approved by the Internet Engineering Task Force (IETF) as Proposed Standard RFC 3016. The patents for Oki's video CODEC were registered in the MPEG4 video portion of the patent pool as a mandatory patent, or a patent necessary to standardize technology.

Video Monitoring System

A CODEC software module and a basic design for a video monitoring board were developed.

E-mail Summary Service

An e-mail summary service was tested in-house. Functions were upgraded to raise service quality and practicality.



We have developed a new method that allows visually impaired people to use ATMs by using tactile symbols that correspond to the monitor's buttons next to the liquid crystal panel. This new method enables the approximately 90% of visually impaired people that cannot read braille to use the ATM. It requires no special hardware and the tactile seals are inexpensive. Furthermore, operation time is quite short compared with the time involved in using telephone-to-audio guidance.

Information Systems

Integrated Media Server

We developed OKI MediaServer, a standard-based video-on-demand (VOD) and live video delivery software system for standard hardware platforms. This system supports MPEG4 as one of its video formats and integrates a multi-point control unit (MCU) for multi-point video conferencing with conference recording and retrieval functions. With parallel and distributed architecture, OKI MediaServer provides high performance and scalability suitable for broadband IP video services through digital subscriber line (DSL), cable and FTTH.

Universal Design

Embossed icons to help the visually impaired use ATMs were developed in cooperation with NEC Corporation. The standardized icons received a commendation from the Japan Vending Machine Manufacturers Association.

Electronic Devices

Photo Acceptance Units

We developed a photo acceptance device for 40-gigabit optical transmitters and will be able to use it in practical applications.

Gallium Nitride (GaN), Ultra-High Frequency Electric Power Devices

We developed the GaN high electron mobility transistor (GaN-HEMT) as an electronic element for next-generation wireless base stations. This HEMT achieves top-level mutual conductance at geometric mean 327 as its basic measure.



Sample image