NHK Science and Technical Research Laboratories

New Technology Leading to the **Future of Broadcasting**



Katsuji EBISAWA, President, NHK

igital terrestrial television broadcasting began in the three metropolitan areas of Tokyo, Osaka, and Nagoya on December 1, 2003. This new kind of digital broadcasting is yet another means for viewers to receive programming in Hi-Vision (HDTV), the technology which NHK started developing in 1964.

Broadcasting is a culture founded on technology. It is a mission of everyone involved in broadcasting to incorporate cutting-edge technologies, to provide more and better programs to as many viewers as possible. In particular, my desire is to see the digitalization of broadcasting and the utilization of new technologies lead to an evolved television as a central part of a future media. Through the full exploitation of digital HDTV technology, NHK will improve program quality and contribute to the culture and welfare of Japan, international exchange, and dialogue between cultures.

This year's Science & Technical Research Laboratories Open House, the 58th, had the theme: "Digital technology leads to new forms of broadcasting and toward the future," and presented a total of 40 exhibits showing off digital terrestrial broadcasting, new broadcasting services for the digital era, and technologies that will lay the foundation for broadcasting in the years to come.

"Integrated services television" is a form of digital television that incorporates diverse state-ofthe-art technologies to give it the capability of connecting with the Internet. It can provide services that cross the boundary between broadcasting and communications. It will grow to become the "information backbone" of the home environment, which will support people in every aspect of their lives in the 21st century.

The center of digital broadcasting is, of course, the clear images and high-quality sound of HDTV broadcasting.

In August, the summer Olympics will take place in Athens, Greece. Since the Seoul Olympics and the Sydney Olympics, HDTV relay broadcasts for the Olympic Games have been provided solely by NHK. The Athens Olympics will be the first summer games to be broadcast through an international joint production, and the broadcasts will no doubt be celebrated as the foray of HDTV onto the world stage.

In addition, we will exhibit "Super Hi-Vision," an ultrahigh-definition video system with 4000 scanning lines, at EXPO 2005, which will be held in Aichi prefecture starting in March of next year. This system has approximately 16 times the resolution of the current HDTV system. NHK is preparing the system and programs to present at the exhibition. So far, we have made an ultrahigh-definition nature program on the Yakushima World Heritage site and a program on the

The annual open house is an ideal opportunity for people to see the latest results of NHK's cutting-edge research and development, which is geared toward creating more convenient, useful broadcasting services.

HDTV was presented to the general public for the first time at the 1971 STRL Open House, and the first "Super Hi-Vision" was exhibited at the 2002 STRL Open House. During this year's open house, I believe that visitors experienced the potential of future broadcasting by viewing the aweinspiring scenes shown on the ultrahigh-definition video system.

ISSN 1345-4099

CONTENTS

Interview

New Technology Leading to the Future
of Broadcasting1
Refinement • Innovation •
Breakthrough2

Feature

2004 STRL Open House	
Dreams ON AIR:	
Welcome to the Fantastic Future	3
Addresses	4
Technical Presentations	6
Exhibition	7

Report

System model for t-learning application based on home servers (PDR)16

About us

Overvie	ew of	NHK	STRL	 1	4

Researcher / R & D / Invention / Treatise / NHK Technology



