# Remarks for Special Issue on User-Centered Design

On behalf of NEC, I would first like to express our gratitude for your continued support and encouragement for our products and services.

In recent years, information and communications technologies have advanced at a dizzying pace, and their increasing importance in the home, workplace and public sector - indeed as social infrastructure - is undeniable. In addition, the widespread adoption of personal computers, mobile phones and other advanced digital information devices has had a dramatic impact that has even revolutionized our lifestyle.

These information and telecommunications technologies are employed by everyone from children to adults, senior citizens, non-Japanese residents and visitors, and those with disabilities. The ATM at the local bank and the many other services that rely on these information and telecommunications technologies have become such an integral part of our lives that the inability to use them can pose a major obstacle in everyday life. It has become increasingly vital that all can use these devices regardless of handicaps, language or any other potential barrier to accessing their functionality. Also as these devices have become more advanced and powerful, their operation has become more complicated. More and more people are unable to exploit their functionality, and we can see the phenomenon of a growing gap between those who can take advantage of these technologies and those who cannot.

In the case of business systems, there have been examples of operational errors that have led to serious system troubles with severe consequences for society. It is critical to design error-resistant systems that are so easy to use that users need not refer to an operations manual. In addition, by assembling information and communication technologies according to a "human-centric approach" that takes into consideration the new experiences and values introduced by the technologies, our designs will give birth to innovation that can fundamentally change everyday lifestyles and work lifestyles.

At NEC Group, we have given careful consideration to the shape of the society we aspire to create and the company we aim to become. This has been defined in the NEC Group Vision "To be a leading global company leveraging the power of in-

novation to realize an information society friendly to humans and the earth." In order to realize "an information society friendly to humans and the earth," we are pursuing product development from the perspective of universal design founded on 1) Accessibility that makes products and services available to an expanded scope of users with diverse needs, wants and limitations; 2) Usability that results in easy-to-use, intuitive products and services; and 3) Innovation that endows products and services with distinctively attractive qualities.

We have incorporated a user-centered design (UCD) approach to ensure that our product development will embody our Universal Design ideals. The UCD process begins with interviews and direct observation of users to absorb information about their actual issues and needs, and then continues with repeated cycles of prototyping, evaluation and improvement. The priority is on advancing development based on factual data.

In this special issue, we would like to introduce the reader to how we define and optimize Accessibility, Usability and Innovation in our product development, and to describe the development process that transforms those ideals into NEC Group products. In these pages, we will also provide a look at activities to promote UCD throughout the NEC Group as well as the fundamental activities to supply product development in our laboratories.

NEC Group would like to develop "People-friendly and Earth-friendly Products" in a broad range of areas including consumer-oriented products, products utilized by diverse people in public locations, and business products used by professionals in the workplace, and to contribute to shaping an Information Society that brings enjoyment of superior, highly advanced services. As we pursue this goal, we hope that you will continue to provide us with your encouragement and support.



NIINO Takashi Senior Vice President

# Information about the NEC Technical Journal

Thank you for reading the paper.

If you are interested in the NEC Technical Journal, you can also read other papers on our website.

## Link to NEC Technical Journal website

Japanese

**English** 

# Vol.6 No.2 User-Centered Design

Remarks for Special Issue on User-Centered Design NEC Group's Approach to User-Centered Design (UCD)

# **◇ Papers for Special Issue**

#### Basic activities supporting practical projects

User-Centered Design Promotion Activities in NEC

The Role of Design in UCD (User-Centered Design)

User-Centered Design in SI/Software Development

Development of Design Patterns for HI Design

Development of Accessibility-Related Tools and Their in-House Applications

#### Product development case studies/Accessibility

FIS (Flight Information System) Design at Haneda International Airport

Innovative ATM Development Pursues Usability and Environmental Performance from the Viewpoint of the Customer

Approach to UD Font (Universal Design Font) Development

User-Centered Design Activities of NEC Infrontia

### Product development case studies/Usability

Development of Server Management Software "ESMPRO/Server Manager" Based on User-Centered Design VoiceGraphy, Solution Supporting the Preparation of Minutes for Meetings Using Speech Recognition Technology, and Its UI Design

User-Centered Design Employed for the Smartphone "MEDIAS (N-04C)"  $\,$ 

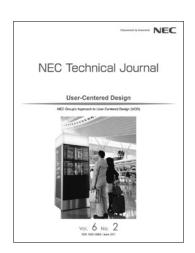
Human-Friendly UI Design for "Cloud Communicator"

User-Centered Design Activities for PCs

#### Product development case studies/Innovations

User-Centered Design for Projector Product Planning

Marketing of the "ShieldPRO" Rugged Notebook with User-Centered Design



Vol.6 No.2
July, 2011

