

# NEC Group Commitment to Web Accessibility

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## Abstract

The NEC corporate website is our official site that transmits our corporate and product information for Japan. Since it was launched in the late 1990s, we have endeavored to address accessibility based on the web strategies that we have developed in line with the new technologies. This paper introduces our commitment to ensuring and improving accessibility to the NEC official website, including the preparation of guidelines, accessibility training, and improvements to the website administration structure.



web accessibility, guidelines, accessibility training, eliminating the digital divide

## 1. Introduction

Today a lot of corporate information is transmitted via web-sites and web applications. Some of them are information required for supporting society of its citizens, such as to facilitate recruitment and to provide product and service information. As information and communication technologies evolve with the development of new devices and systems, concern is mounting over the growing digital divide. This is tending to increase due to the user stratification brought about by social changes, such as aging populations, globalization and the social participation of the disabled etc.

In the aftermath of the Great East Japan Earthquake, there were cases where information not only on the public web-sites but also on corporate websites proved to be vital for life support and for the continuity of everyday lifestyles. This has encouraged public attention to be focused on the importance of websites. Similarly, Tokyo's winning bid for the 2020 Olympic Games has been arousing public attention with regard to corporate efforts to promote Web Accessibility.

It is now demanded that companies consider accessibility in order to allow as many people as possible with diverse needs to use their websites easily and equally. Nevertheless,

corporate websites are affected by many issues associated with addressing such accessibility. There are few companies in fact in Japan that are successful in coping satisfactorily with Web Accessibility in complying with the Japanese standards.

NEC's corporate site as intended for Japan (<http://jpn.nec.com>) (**Fig. 1**) is our official site that transmits NEC's corporate information and product news. The site averages about 1.1 million visitors a month and has 7 million page views.



Fig. 1 NEC's corporate website.  
(URL: <http://jpn.nec.com>)

Since our site was launched in the late 1990s we have been making every effort to improve Web Accessibility based on a web strategy that embraces the new technologies. In 2012 we made our site compliant with JIS X 8341-3:2010 (Web Accessibility JIS)<sup>\*1</sup> of the Japanese Industrial Standards Committee in international cooperation with the Web Content Accessibility Guidelines (WCAG) 2.0. We then announced details of our accessibility policy, and we will achieve compliance with Class AA of JIS X 8341-3:2010 for the websites under the “http://jpn.nec.com/” domain by 2015. This paper introduces our commitment to the assurance and improvement of accessibility as adopted for NEC’s corporate website.

## 2. Trends in Accessibility and Its Requirements

### 2.1 Social Trends Concerning Web Content Accessibility

In 1994, the standardization of the World Wide Web, which was then making rapid progress, was initiated by the World Wide Web Consortium (W3C). The issue of web content accessibility was brought into focus by the enactment of Section 508 of the US Rehabilitation Act in 2001. The W3C’s WCAG 1.0 recommendation caused a further rapid increase in the awareness of issues regarding accessibility to systems, products, and webpages. Subsequently, in response to this trend, preparation for drawing up standards regarding accessibility began also in Japan. The result was the establishment of “Guidelines for older persons and persons with disabilities - Information and communications equipment, software and services,” generally known as the “Web Accessibility JIS (JIS X 8431),” in 2004. In this guideline, Part 3 entitled “Web Content” particularly attracted attention due to the explosive spread of the Internet. Its revised version was released in August 2010 in line with the current technological advancements.

The “Web Accessibility JIS” specifies the minimum number of required items so that users working in unique environments can easily operate information devices and systems and also enjoy services. Appropriate compliance with laws and standards will help the elderly and disabled to participate actively in society. It also contributes to the creation of a society where everyone - including website visitors from various native language backgrounds and who connect from poor connectivity environment - enjoy the benefits of the digital society. It can also be helpful for solving the growth of the digital divide, which is one of social issues caused by the increasing complexity of society.

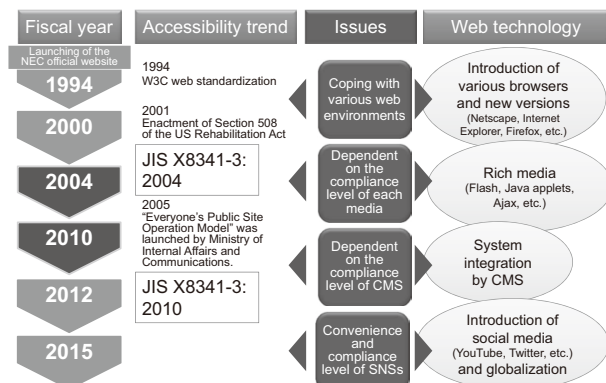


Fig. 2 Trends in web technologies and Issues in achieving the required compliance level.

### 2.2 Rapidly Changing Web Technologies and the Issues That Remain to be Solved

While the importance of coping with accessibility issues is increasing, web technologies are continuing to change and becoming more and more advanced and intricate.

In the late 1990s various non-standardized browsers and their new versions were flooding the market and they had to be examined and verified one by one. Rich media emerged around 2000, but its technology did not satisfactorily address the issues of accessibility. While adopting this new media, it was necessary to search for how to cope with the accessibility issues. By the mid-2000s, it became vital in terms of cost and efficiency to introduce a Contents Management System (CMS). Even today, however, there are still many functional issues in accessibility regarding compliance levels, thereby making it very difficult to achieve both the introduction of CMS and compatibility with Web Accessibility Standards.

Today, social networking services (SNSs) are playing an important role in communication, and they have become an indispensable tool and are optimally used in the administration of corporate websites. Such a tool, however, may only be introduced if the accessibility compliance level is verified (Fig. 2).

### 2.3 Requirements for Corporate Web Accessibility

In such an environment with constant and rapid changes, the following requirements are important for companies to deal with accessibility.

- (1) Clarifying one’s own company’s guidelines for accessibility and the goals, and also presenting practical methods based on the actual conditions.

<sup>\*1</sup> The expressions “partial compliance” and “compliance” are based on the expressions in the “JIS X 8341-3:2010 Compliance Level Indication Guidelines for Website Contents: First Edition - August 20, 2010” by the Web Accessibility Infrastructure Committee of Info-communication Access Council.

- (2) Improving the awareness of the importance of accessibility, and providing accessibility trainings that can offer tangible experience in the needs for accessibility.
- (3) Preparing administration systems that makes it possible to share information quickly and to deal flexibly with changes.

### 3. Positioning and Transition of Our Corporate Website

We position our website as an important medium that leverages communication for our various stakeholders. These are all the people concerned with our corporate activities such as: customers, shareholders, investors, suppliers, local communities, and employees. It is necessary for a company to take responsible action that is beneficial for both company and stakeholders by valuing their interactions and by improving management quality. In order that we may contribute to solving social problems through our business activities, we regard communications with stakeholders as especially important for enabling us to perceive social trends promptly.

Based on this notion, we have endeavored to achieve both assurance and improvement of accessibility since the very beginning of the launching of our website as an IT company, in order to let as many people as possible use our website easily and equally by providing web strategies incorporating the latest web technologies.

Our web strategies include various processes such as the early launch of our official site in the 1990s, introduction of the CMS, SNS linkage, and global domain integration as well as helping our site to transform from a mere information transmission site into a truly global marketing site.

Our efforts toward accessibility started immediately after our website was launched in 1994. At that time, there were no Japanese standards to guide us. We started our research with the assistance of a few experts. The recommendations announced by the W3C were translated into Japanese, and the translation was then compiled as a guideline for study

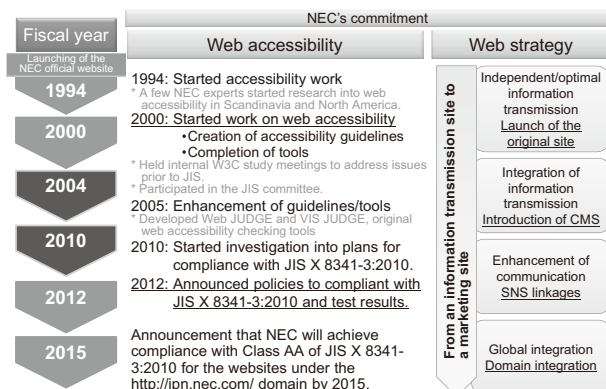


Fig. 3 NEC's Web Accessibility Strategies.

meetings. Prior to the announcement by the JIS, we completed our Web Accessibility Guidelines and the requisite tools in 2000. The experts recruited by NEC also became active as JIS committee members when the subsequent JIS announcements were made. Spurred on by the announcement of 2004, NEC strengthened both guidelines and tools. It was prescribed in the 2010 revised guidelines edition that policies and test results should be made public and that the graded class of JIS X 8341-3:2010 should be announced. It was also announced that the measures should be made available in a timely manner, the accessibility policies and test results should be made public in 2012, and also the compliance with Class AA of JIS X 8341-3:2010 for the websites under the “http://jpn.nec.com/” domain should be achieved by 2015 (Fig. 3).

### 4. The Characteristics of NEC's Commitment to Accessibility

Our commitment to deal with with the latest web technologies and accessibility in response to the ever-changing web environment has three characteristics. These are discussed below.

#### 1) Completion of the guidelines

NEC has established basic web guidelines in order to maintain the quality of our website at a defined level. This strategy features the dual purposes of specifying the goals of our website and of adopting practical methods based on the actual conditions. Although the basic guidelines include attention to accessibility, additional detailed guidelines are provided as to items that require particular consideration. For detailed accessibility specifications, the NEC Web Accessibility Guidelines are provided.

Moreover, because it is difficult to cope with accessibility in actual operations, we are also making efforts to ease applicability and also to maintain and improve quality by employing shared templates (Fig. 4).

We started our work on the employment of shared templates at the beginning of 1994. At that time, we contacted each business division and explained them

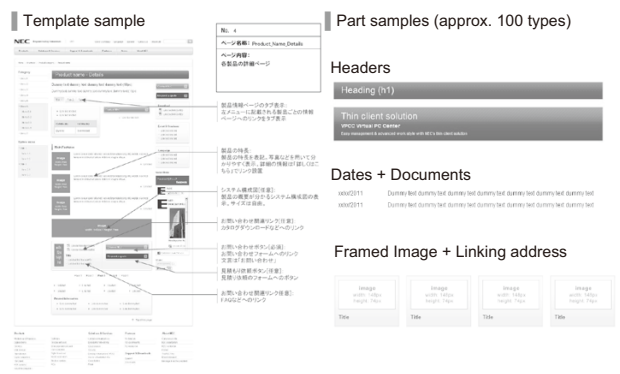


Fig. 4 Guideline for Web Accessibility (example).

about templates with standardized document structures that were manually created, and their HTML files were distributed as needed. Since 2000, we subsequently provided templates incorporating a syntax checking function added to the CMS. However, since these templates were editable, their evaluation required expert knowledge.

In 2012, we achieved global distribution of template components that implemented automate operations such as the elimination of HTML-tagging mistakes caused by human errors and the adjustment of consistency in headers design, which would conventionally require a knowledge of syntax. This strategy helped achieve an infrastructure to easily create webpage frameworks in accordance with our content accessibility guidelines.

2) **Accessibility training**

Even when the templates have been provided and the page creation infrastructure has been made available to ensure accessibility, it is still necessary to consider information content in order to deal more proficiently with Web Accessibility. Recent increases in data volumes and data renewal speeds make it practical for the information to be transmitted by all divisions and all employees. Therefore, it is of vital importance that a training system should be set up to improve the awareness of all the NEC Group employees and to offer tangible experience in the need for accessibility.

As part of our efforts to improve the awareness of all of the NEC Group employees, they are offered the e-learning course of accessibility training. Launched in 2008, the course has been taken by more than 32,000 employees as of February 2014. It is a training program that offers basic knowledge of the importance



Fig. 5 Accessibility training.

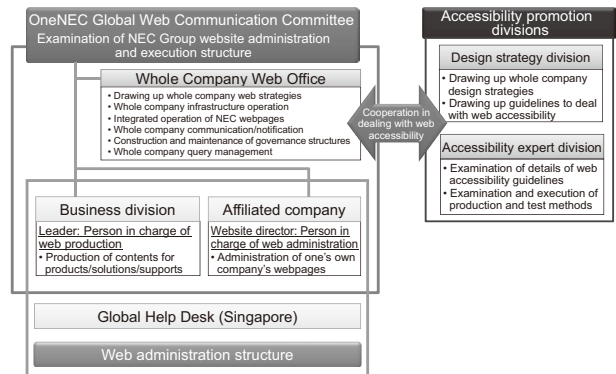


Fig. 6 NEC Group's web administration structure.

of dealing with accessibility, the relevant laws, and the JIS standards. In order to support the training framework for staff members who are involved in Web Accessibility to understand the needs for accessibility deeply, we also hold accessibility experience workshops. In such workshops, participants can undergo experiences that simulate the daily lives of the elderly and disabled by wearing various pseudo-experience tools (Fig. 5).

3) **Web administration structure**

Web trends are always changing rapidly. Therefore, administration methods, rules, and guidelines are also subject to constant changes. In order to cope quickly with these changes, we launched the Web Utilization Promotion Council, in which all web-related personnel at our business divisions and Group companies in Japan have been enrolled. While the Whole Company Web Office is playing a central role, information on web strategies, execution structures, and administration is provided and shared. Strategies to deal with accessibility are drawn up by the Accessibility Promotion and Expert Divisions in cooperation with the Whole Company Web Office. These guidelines and operational procedures are shared via the Global Help Desk in supporting production and the administrations of the business divisions and affiliated companies (Fig. 6).

5. Conclusion

In this paper, we discussed our efforts toward Web Accessibility at NEC's official website. These efforts are employed for the developments of public systems and also products supporting individual customers by providing consultations and training programs in order to implement Web Accessibility. We will deploy our efforts to develop more innovative products and services. The NEC Group intends to accelerate its commitment to accessibility in order to contribute to the achievements

of a society where as many people as possible can easily and equally enjoy the benefits of the digital age.

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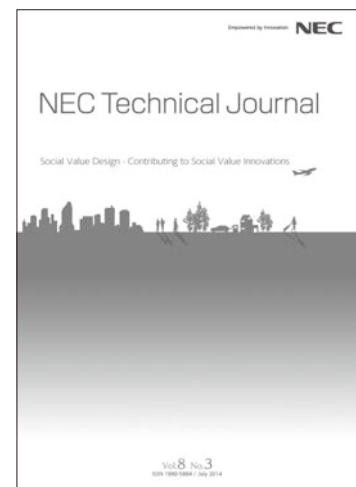
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