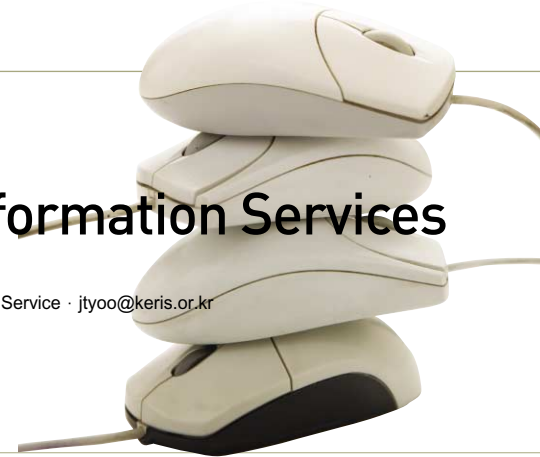


Web 2.0 and the Development of Information Services

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Web service has evolved continuously to the point where it is now shifting from a provider-oriented service to a user-oriented one. Internet users now evaluate the trustworthiness of information posted on the Internet, and share their knowledge more widely on that information. This trend is also applicable to education-related information services. Education information services will be able to provide new opportunities for the education sector once education providers accept this new trend in the web world, thus creating new and vital services. Web 2.0 is certainly facilitating this kind of change in the education service sector.

❖ Concept and characteristics of Web 2.0

Web 2.0 is about openness, sharing and participation. An individual can post his or her own content on the web, and allow other people to share it. People participate in enhancing the value and quality of the content. Tim O'Reilly, CEO of the U.S. company O'Reilly Media, made seven definitions of Web 2.0, by gathering the common features of the companies that survived after the burst of the *dot.com* bubble. These are : The Web as a Platform, Harnessing Collective Intelligence, Data is the Next Intel Inside, End of the Software Release Cycle, Lightweight Programming Models, Software Above the Level of a Single Device, and Rich User Experiences. The application of Web 2.0 can be seen in the following.

Cases of Web 2.0 Application

Concept	Cases
The Web as Platform	www.google.com www.overture.co.kr www.google.com/adSense bittorrent.com
Harnessing Collective Intelligence	www.google.com www.amazon.com ko.wikipedia.org
Data is the Next Intel Inside	www.mapquest.com www.amazon.com
End of the Software Release Cycle	www.google.com www.yahoo.com gmail.google.com maps.google.com www.flickr.com del.icio.us
Lightweight Programming Models	www.amazon.com maps.google.com
Software Above the Level of a Single Device	www.apple.co.kr/itunes www.tivo.com
Rich User Experiences	gmail.google.com www.writely.com

❖ Major technology elements of Web 2.0

Easy access, easy use, and a good environment are the conditions necessary for attracting more people to the Internet. This requires key technologies such as standardized methods and general-purpose tools.

First, technologies supporting web browser standards such as CSS and XHTML are required. These enable easier access for users in various kinds of environments, and an active compatibility and exchange of information.

Second, UTF-8 is needed to support a variety of languages in the world. Unicode is a universal language



code for solving problems that could arise because of miscommunication arising from the use of different languages.

Third, Really Simple Syndication (RSS)¹⁾ and Application Program Interface (API) are needed, which are used to distribute content. Previously, Internet users had to choose a menu or a keyword to acquire the necessary information. But the RSS regularly distributes the information that a user needs. The user can acquire information regardless of time. Meanwhile, web service providers enables the mash-up²⁾ by users themselves via an API.

Fourth, tag technology is needed through which the user classifies information. Users can classify information using given keywords through tagging, instead of using a typical

category classification method. Users can select the keywords by themselves which enable them to categorize and search for necessary information. The photo sharing site like *www.flickr.com* or a bookmarking site like *del.icio.us* are representative examples.

Fifth, AJAX is needed, which is a programming language that can enhance user convenience. This is an excellent tool for realizing Web 2.0. The major OS features of AJAX are the automatic completion of keywords typed into the Internet, and an auto refresh function that automatically updates web pages.

❖ Direction of web information service application

As web users make their own content, referred to as the User Created Content (UCC), the Internet has now come to see a great variety of content and individuality. Each individual can display their own specific knowledge on the web, and when this is accumulated, it can create a broad range and high quality of new services. Interface, database, and search systems related to service platforms are needed to support this.

The web community is a space in which information is produced, corrected, complemented and shared. It is necessary to improve the quality of this knowledge, and encourage users to autonomously evaluate the quality of the information. In addition, it is necessary that web service providers offer individual space to users so more information can be generated, while using web technology to allow more people easy access to the information.

In order to achieve this, web content requires various standardizations in terms of hardware and software, as well as document formatting and searching. As different portable devices continue to come onto the market, it is necessary to

design and develop content that is suitable for these devices. Also, search systems should include a user tag. Meanwhile, it is necessary to introduce a semantic web to enable the building of an intellectual search engine.

Allowing easy access by people relatively alienated from the information society, such as the disabled and the aged,

is also crucial. The economic and cultural gap between those that can freely access the Internet and those that cannot is widening. For this reason, the text on the web needs to be converted to audio and images. How to apply Web 2.0 in content and technology can be summarized as follows.

Direction of Web 2.0 Application

Contents	Application	Technology	Application
Content Production	The user creates content	Content Production Technology	Produce content that can jointly be used in many devices (utilize web standard such as CSS, XML)
Quality of Content	Make users evaluate Web 2.0 by adding recommendation, reply, and opinion posting functions on the web	Korean Code	Post multi-languages, apply unicode (UTF-8) in case of compatibility or exchange
Search System	Make a semantic web search system, while allowing the user to classify and upload content	Convenience Function	Automatic completion of the keyword in time of web search, provide user-friendly function such as web word processor
Individualized Space	Enable each individual to create his or her own menus, blogs while offering a mash-up function	Accessibility	Make a web service that all users can share equally



❖ Conclusion

Web 2.0 is emerging rapidly, and has characteristics that can be sustained. The web is growing into a 'living' space as users create, evaluate and develop information. The increasing speed of Internet services and the growth of wireless Internet will create more information and attract more user participation. Web 2.0 shows the direction in which the education information service should head and offers implications on how one could forecast the education information service field. Education information services will gain further vitality by actively accepting the trend and characteristics of Web 2.0 and making services that satisfy all service users. KERIS@

1) Enables users to easily identify data updates without visiting the web site
 2) It is a service made by mixing two or more web resources, including open API.