

Concepts and Features of Government 2.0 and 3.0

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- Governments today are progressing toward 'Government 2.0', which is characterized by its citizen-oriented services enabled by information sharing and facilitated participation.
- The future governments are expected to advance toward 'Government 3.0' – customized and intelligent government using Semantic Web technology.

□ Progressing Toward Government 2.0

- Governments today are using Web 2.0 technologies to transform themselves from government-oriented to citizen-oriented government that is characterized by cooperation based on information and service sharing, new government services oriented toward the demanding side, and easy participation of citizens.

[Paradigm Shift of Government Services]

1995 ~ 2000 World Wide Web	2005 ~ 2010 Web 2.0	2015 ~ 2020 Real-World Web
Government 1.0 (e-Government)	Government 2.0	Government 3.0 (u-Government)
Government-oriented First-stop-shop	Citizen-oriented One-stop-shop	Government service portal for individuals
One-way service	Bilateral interaction	Customized intelligent service
Time and place restrictions for services	Mobile services	Seamless services anytime and anywhere
Uniform services mainly based on supply	Services based on public- private collaboration	Intelligent services

- ① Mashup services allow government organizations and citizens to easily share and utilize government data and services.
 - Mashup is a Web 2.0 technology that combines content from more than one website to create brand-new content or services.

Organization	Possible Mashup services (examples)
Local Governments	<ul style="list-style-type: none"> Develop geographic information system (GIS) and providing relevant services by integrating maps of other organizations like Google, Yahoo, etc.
National Police Agency	<ul style="list-style-type: none"> Manages traffic and monitors accidents by mashing up information on vehicle registration and GIS
Tax Offices	<ul style="list-style-type: none"> Tax form pre-filling are available, on which information such as tax management service, bank account information, medical expense and other compensation data of insurance companies, etc. is mashed-up

- Mashup services enable public and private entities to reuse various public information, including weather, traffic, and geographic information. Such services, therefore, are expected to improve cooperation between ministries and between public and private bodies, enhance service levels, and create new businesses and industries.

※ Furthermore, citizens and firms can also mashup public information and government services to create new businesses.

② Citizen-oriented Services and Improved Accessibility

- A new service type is created, enabling accessibility to government services through other organizations.

※ Citizens can conveniently use government services through portals of various organizations, rather than through only one government portal.

Organization	Possible Intermediary Services (Examples)
Banks	<ul style="list-style-type: none"> Provide tax e-filling and payment services by integrating e-forms of tax offices and bank account services
Communications Providers	<ul style="list-style-type: none"> Provide address change notification service for all government organizations that require notification
Industrial Associations	<ul style="list-style-type: none"> Provide start-up firms with various integrated forms and services required by government offices

- Channels for accessing government services, such as mobile devices and TV, become diversified.

③ Use of 'blogs' and 'wikis' to Strengthen and Expand Participation by Citizens and Government Workers

※ Wikis: websites that allow groups of users to cooperate with each other to edit the content (e.g. Wikipedia, etc.)

<Cases of Government Services based on Web 2.0>

o User-oriented Portal Services

Portal	Services
The Norwegian Government's Web Portal (eNorway.no)	<ul style="list-style-type: none"> • Government services are integrated into and provided through one portal site by using web 2.0 technologies, such as RSS, blogs, social networks, etc. <ul style="list-style-type: none"> - Voting, social security, vehicle registration, health and welfare, residential services, etc. • Accessible from various channels
Seoul Metropolitan City's Website (www.seoul.go.kr)	<ul style="list-style-type: none"> • Phasal development of tailored services for each user type (children/women/workers, etc.) • Points are given for recommendations and participations in policy discussions • Provides various services, including city news delivery (RSS), favorites service (Ajax), UCC pages, etc.

o Public-Private Mashup and Using Communities

Portal	Services
US Environmental Protection Agency (airnow.gov)	<ul style="list-style-type: none"> • Users can directly analyze pollution information thanks to location information of polluted lands provided through XML • For regions requested by users, 'Window to my environment' service provides environment information acquired by the federal, state, and local governments
US Chicago Police Department (www.chicagocrime.org)	<ul style="list-style-type: none"> • Provides visualized crime information upon GoogleMap by mashing up crime data and the Map • Enables real-time browsing of crime status by date, security district, ZIP code, administrative district, street, and crime type
US Department of the Treasury (www.pay.gov)	<ul style="list-style-type: none"> • Connects financial organizations and brokerage firms • Each organization uses 'pay.gov' that plays the role of the collecting agent, rather than negotiates directly with credit card companies in regard to commissions
Australia Queensland Government (Spatialink)	<ul style="list-style-type: none"> • Enables sharing of geospatial data assets among government organizations and provides relevant services to citizens
HousingMap (www.housingmap.com)	<ul style="list-style-type: none"> • As the first mashup service, combines real-estate information and the GoogleMap service • Enables locating and providing information on the surrounding environment with addresses given • Provides housing information (with photos) by city, price, and environment
US CIA 'Intellipedia'	<ul style="list-style-type: none"> • DNI (Director of National Intelligence) founded 'Intellipedia' and created 16 intelligent communities • Utilizes it as the cooperative Intranet tool for sharing information among government bodies

□ Evolving into Government 3.0

Government 3.0 is a Semantic Web-based government that personalizes and 'intelligenizes' all government services according to the conditions and preferences of each individual

- The Semantic Web provides tailored services for each individual by allowing easy search of requested information via any type of channels including websites and DBs.

➤ The **Semantic Web** is a next generation, artificial intelligence web technology that enables computers to define, understand and logically deduct the meaning of information, further to help better search of requested information ('smart web that thinks for itself')

- Search engine 'Web 3.0' is currently being developed by applying Semantic Web technologies to the existing 'Web 2.0', which enable facilitated interactions via networks.
- By 2012, 70% of public websites are expected to utilize Semantic Web technologies (Gartner).

- The Semantic Web enables computers to define 'hidden intentions', which have not been found in usual search processes before, so that users can receive requested information without having to read through all the relevant information given.

※ Under Web 2.0 environment, users had to read each and every document by theme and field. What's more, most of the documents provided were not even related to the intentions by the users.

- It also provides customized and intelligent services according to demands, characteristics, and preferences of individuals by storing and analyzing records of individual lifestyles via information devices and sensors connected onto networks.

※ Different levels of Semantic Web technologies allow a wide range of services from simply providing information to customized guide services such as tax consulting, career consulting, etc.

Type	Possible Services
Tourist information service	<ul style="list-style-type: none"> • Simply entering information such as 'winter resorts', 'budget', and 'children accompanied' leads to provision of tailored and packaged tour information without having to search for transportation, accommodation, car rents, and other tour information.
Personal medical information service	<ul style="list-style-type: none"> • Provides health information based on personal medical information (records, family history, biosensor information, etc.), delivers relevant information prior to checkup, notifies checkup results, and provides reservation service (show visited hospital records and information on nearby hospitals and doctors + choose hospital/doctor + make reservations)

- The Semantic Web detects context information and provides intelligent services by sensing surroundings and social infrastructures such as places, environment, objects, etc.
 - It allows forecasts of and responses to the climate change, environmental pollution, disasters and accidents by collecting, analyzing, and interpreting massive amount of data on objects and places on a real-time basis.

- **Real-World Web** is an intelligent web that connects objects and places onto sensors and wireless networks to improve decision-making processes for businesses and individuals.
 - By 2015, the web currently recognized as virtual space will be connected to the real world by using technologies such as wireless communications, the Semantic Web, and RFID/USN to provide and process requested information from users(Gartner).

- With the ubiquitous environment established, **all government services** will be provided and processed **online**, which rids of offline visits to and face-to-face consultations in relevant organizations.
 - Personal mobile devices (mobile phones, PDAs, MIDS, etc.) will allow use of government services regardless of time and place.
 - Ubiquitous environment will be established, where the boundaries of web servers, desktops, PCs, and mobile devices disappear but services become integrated.
- The government will develop into a **virtual government** that processes one-stop or zero-stop production and delivery of services in the virtual space.
 - Functions of many organizations are connected and information is shared to provide government services relating to multiple ministries or organizations, which enable virtual integration at anytime and anywhere.
 - The virtual government can be established in the personalized government website called 'My Gov'.

※ *All interactions between citizens and government organizations are processed and provided on the personalized website on a real-time basis.*