Design and Development of an e-Legislation System for Japanese Local Governments

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Abstract. Municipal laws and ordinances have direct impact on the daily life of people. It is the duty of the officers of municipalities to draft and update the law of the region in a timely fashion. The task of legislative drafting requires diverse skills. In addition to a basic knowledge of law, the drafters must be able to use terms and phrases to make fine distinctions. They must be familiar with the unique writing style and formats of bills and other legal documents. Unfortunately, the majority of legislative drafters of municipalities of Japan have no professional legal education. The idea of "e-Legislation System" was set up to provide a computer-assisted environment to help legislative drafters. We will describe the outline of our "e-Legislation System" and argue that "e-Legislation System" will contribute to produce bills in a more plain language and to make laws of municipalities more coherent and easily accessible.

Keywords: e-Legislation System, legislative drafting, municipal laws, XML.

1. Introduction

The procedure of legislative drafting has not been standardized in Japan. The example below are typical steps of the municipal laws amendments taken by local governments.

1) A draft of the partial amendment law is prepared in the presiding division of the local government.
2) The draft is checked for its contents and description at the divisions in charge of legislation.
3) The draft is tabled in the municipal assembly.
4) If the draft is passed, the amendment law is promulgated.
5) The amendment law is consolidated into the existing provisions after its enforcement.

Step 1), 2) and 5) are handled by officers of local government and currently these processes entail enormous time and expense, because they usually do not have professional legal education to handle these legislative works.

The drafters are required to have basic knowledge for using particular expressions as to describe amendment sentences such as "A is replaced with B" and "Add A after B" including some special usage of terms like "削除 (sakujo)" and "削る(kezuru)", that are distinguished in drafting, though both

have almost the same meaning "delete" in daily life. The drafters are also required to have knowledge of systematic rules to handle law amendments such as branch numbering for adding new articles, how to set different enforcement dates for each amended part in the law etc.

Moreover, drafters are required not only to make drafts of amendment laws, but also comparative tables of current provisions and to propose new provisions to be used as reference documents for the municipal assemblies.

However, most of the drafters have never had professional education, enough training or experience to manage their tasks, unfortunately. Some of the local governments have enough budgets to outsource these legislative works, but the others find it difficult to do so because of financial reasons. In the latter case, it is inevitable to have some problems of inaccuracy or inadequacy in the legislative work. Local governments are provided instructions and some kind of templates for municipal law amendments by national government ministries and agencies and prefectural governments in past years. Since the enact of "the Act on the Maintenance of Related Acts for the Promotion of Decentralization (The Omnibus Decentralization Act)" of July 16, 2000 by the Japanese government, national and prefectural government come to provide fewer indications for municipal law amendments. This change caused an increase of the burden on local government officers.

In order to solve these problems, we designed and developed an e-Legislation System named "Joreikun®," which supports legislative processes including amendments. In this paper, we will show the major functions of the system, how to implement the system, and the current status of the system (Fig.1).

2. Process of Developing "e-Legislation System"

The procedure of legislative drafting has not been standardized as previously mentioned. Each local government has developed its own work-flow and procedure of legislative drafting. A key task in developing an e-Legislation System is to identify all relevant steps of legislative drafting and promulgation of municipal laws and ordinances. We were actually engaged in the work of legislative drafters of a particular local government for one year and identified the steps of legislative drafting through many hearings and interviews. This field research will be of much interest in itself. We would like to share how legislative drafting is practiced in reality. Our system was developed on this extensive field research and it was designed to have substantial flexibility to adjust itself to varied practice of different municipalities.

After the development of the system, we have visited a lot of local governments all over Japan. We tried to visit as many governments as possible which show a variety of locations, sizes, populations, industries etc. to introduce the system and get their feedback for further improvement. Based on this further r research, we have improved the system year by year.

Fig. 1 e-Legislation System top page

Fig. 2 Editor for drafting laws

3. Major functions of "e-Legislation System"

The system has three major functions.

The first function is to assist the officers who work for the legislative assembly. When legislative drafters use this system from scratch, the system can provide amendment bills automatically (Fig.2). The bill to amend an existing law needs to be prepared in a particular format and the system can input the results of drafting work into the bill-format required.

Fig.3 Comparative table

Conventionally, a comparative table of the proposed provisions (Fig.3) and corresponding current provisions is submitted to each legislator for reference. The system can generate this table automatically for delivery when the drafting work is completed. When a bill to amend a law passes the legislative assembly, amended parts must be consolidated (i.e., included) into the existing text of law. The system can do this consolidation automatically on the date that the new law becomes effective.

The system will keep the records of past amendments for laws and it is possible to reproduce the law on a specific date in the past. This enables legislators to review the past development and changes of laws.
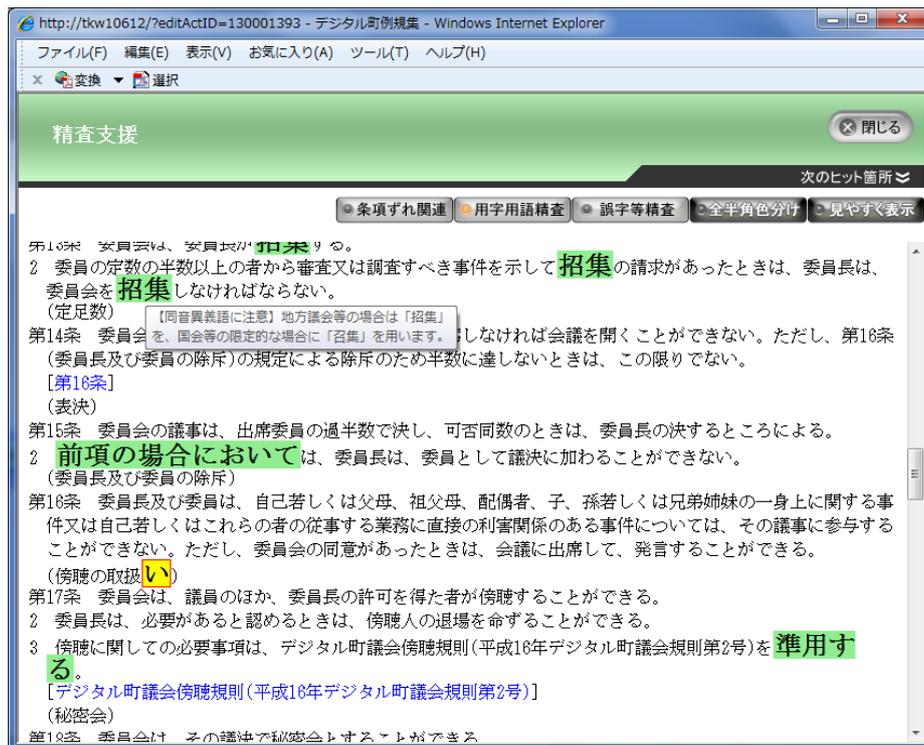
Fig.4 Check function

The second function is to check consistency of use of terms and expressions. It is desirable to use terms and expressions in a consistent way over time. This consistency includes the use of particular Chinese ideograms, punctuation, numbering style of provisions and so forth. The system has a built-in dictionary to check consistency. Legislative drafters can use this function during drafting (Fig.4).
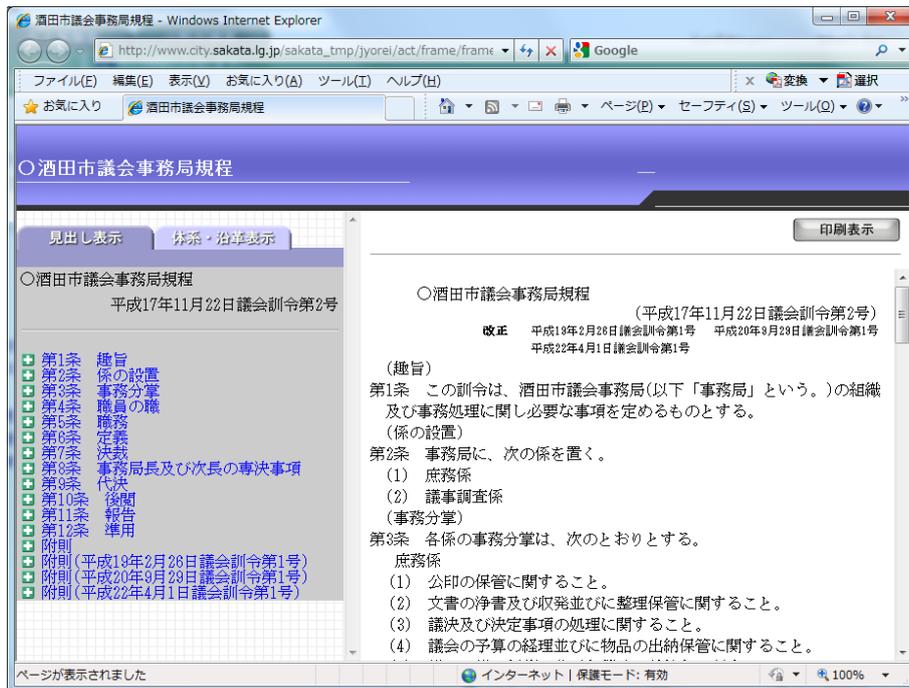
Fig.5 Laws of municipalities via the internet

The third function is to publish the laws of municipalities via the internet. The people can access directly to the municipal law data, which are generated and published by the system automatically (Fig.5).

There are 47 prefectures and 1,724 smaller municipalities in Japan and most of them publish their municipal laws via the internet. For this publication, local governments usually outsource these IT works to outside companies.

However, working with our system, the officers of municipalities can publish new and amended laws by themselves and cut cost significantly as a result.
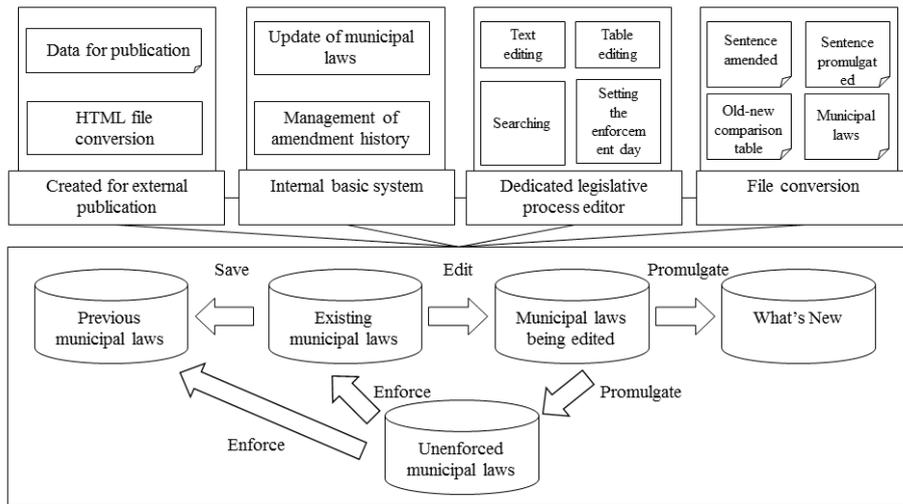
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Fig. 6 System configuration

4. Implementation

4.1. SYSTEM ARCHITECTURE

This system consists of three databases for current laws, past laws, and laws under edition as its core, as well as a basic system which manages users' interactions inside municipal offices, and an editing system for legislation. In addition the system is equipped with modules for file conversion and contents conversion for external publication (Fig.6).

4.2. STRUCTURE OF THE LAW DATA

In the system, law data is in XML format. 92 elements and 131 attributes are defined. These elements and attributes contain Meta information of municipal law itself such as the law number, promulgated date, enforcement date, revision history. The elements and attributes also express the structure of the document like the chapter, section, article, item etc.

Moreover, attributes are also given indicating parts deleted by amendment and parts which must be omitted in a law book for public use.

4.3. GENERATION OF AMENDMENT SENTENCES

We analyzed a huge collection of amendment provision sentences and extract some typical sentence patterns from it. The dedicated editor gives operation tags such as "delete", "add" and "replace" to the XML document when the user edits sentences. We convert the XML document with these operation-tags into amendment provision sentences by using XSLT.

4.4. MANAGEMENT OF THE AMENDMENT HISTORY

To manage amendment history efficiently, the system puts ids to every amendment sentences within the amendment laws as the smallest unit. This management method realizes consolidation of complicated amendments such as "Arrange for simultaneous amendment" and "Multistage amendment".

4. Current Status of the System

Since its release in 2002, the system has adopted by about 170 local governments in Japan and the number is still growing. The system has improved legislation work, raised work efficiency and reduced cost in local government. Some local governments have actually succeeded in halving the relevant expenses. These effects result from the fact that the system is self-contained, which enables local governments to manage their municipal laws entirely by themselves, without outsourcing to companies.

The system won the 4th Japan IT Management Grand Prize in 2003 and the 4th Hamamatsu Vigorous Corporation Grand Prix in 2003.

5. Conclusion

We achieved our aims to design and develop an e-Legislation System to support legislative process. The system is currently concentrated to support amendment processes of the municipal laws. We are now focusing more on the lawmaking process of the municipal laws for further development.

We are now conducting joint research and development to construct an integrated environment "eLen" (e-Legislation Environment) for supporting a whole process of legislation with the Japan Legal Information Institute (JaLII), Nagoya University. Since we consider that the essential tasks in legislation processes are independent of nations or languages, we would like to provide the environment globally in the future.

Acknowledgements

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