



Written Testimony of Xcential Corporation
Before the United States House Appropriations Subcommittee on the Legislative Branch
April 2, 2019

Xcential Corporation (“Xcential”) appreciates this opportunity to submit written testimony for the Public Witnesses Hearing of the Legislative Branch Subcommittee.

Since 2002, Xcential has worked to transform the drafting, amending, publishing and codification of legislation from 19th and 20th century technology – pencils, paper, word processors and PDFs – into the machine-processable, cloud-ready and digitally efficient platform required by today’s government counsel and citizens. Xcential has deep experience at the state level (California), at the Federal Level (U.S. House, GPO), in Asia (Hong Kong), in South America (Chile), and in the United Kingdom. Xcential is also a leader in the development of international technical legislative standards for legislation (OASIS, Akoma Ntoso).

In the last several years, the House, led by the Office of the Law Revision Counsel (OLRC) and the Bulk Data Task Force, has made significant progress in developing and adopting a modern, flexible legislative document data standard, United States Legislative Markup (USLM). Recently, the Government Publishing Office (GPO) extended the use of USLM to other legislative documents, and into the federal regulatory space. But the job of implementing that single standard is far from complete and there are still many benefits to be gained by the House.

We believe that the time has come for the House to move toward adopting USLM as the common machine-readable open data format for all of its legislative materials.

Crucially, USLM is, and always should be, nonproprietary and freely available to be used by any government office or commercial vendor.

A single, modern data format – USLM – implemented throughout the lawmaking process would provide Members and staff with greater access to browser-based bill drafting, amending, search, comparison, analysis and visualization tools. It would also create new efficiencies and speed in House Legislative Counsel bill drafting and amending, and create data interoperability and linking throughout the legislative process, from initial drafting to amending, codification and publishing. It would create opportunities for seamless electronic transparency in the process for all Americans.

As described below, USLM’s capabilities are already being proven in projects initiated by the House’s support offices and the GPO. With the right policy changes and a well-phased plan, all the benefits of straight-through processing can be realized for the House, its Members and staff, and the American people we serve.

Current State: Five Different Data Formats

The House currently uses at least five data formats to draft, exchange, and manage legislative materials. Inefficiencies arise in the conversion to and from these various formats.

- **PDF** is used to print official copies of legislative materials for review and exchange between support offices, such as the Office of the Legislative Counsel, the Office of the Clerk, and the OLRC, and Members, leadership, and committees.
- Members and Committees typically use **Microsoft Word** to create discussion drafts of bills, committee amendments, and similar proposals.
- The GPO uses **Locator Code** format, developed in the 1980s to support typesetting. Locator Code is still used to exchange official legislative text between the GPO and other offices.
- A decade and a half ago, the House adopted a first-generation eXtensible Markup Language (XML) structure, referred to as **Bill DTD**, which is used for official drafting by the Legislative Counsel and publication on Congress.gov.
- Finally, in 2013 the OLRC introduced **USLM**, which was later updated by the GPO. USLM is now maintained by the GPO as an open data format, freely available for anyone to use.

Currently, USLM is used by the Office of the Law Revision Counsel to deliver the U.S. Code to the public and to prepare new codification bills. USLM is used by the Office of the Clerk to produce “Posey” comparisons for the use of Members and committees. The House Rules have been produced in USLM by the Rules Committee. The GPO also delivers Enrolled Bills, Public Laws, and the Statutes at Large in USLM.

Importantly, USLM is a derivation of the “Akoma Ntoso” (or LegalDocML) international data standard for legislative documents. This international standard was recently formally adopted by OASIS, the world's XML document standards setting body.

Challenges of Multiple Formats

Because the House’s lawmaking system has evolved over time, no entity is responsible for the technical management of the entire lawmaking system. The House’s support offices work together to help Members, leadership, and committees to make laws, but they cannot dictate technical changes to Members or to one another.

Modern technology has helped make lawmaking more efficient and transparent than ever before. Nevertheless, the continued use of at least five different data formats blocks further progress. Nearly every time a bill or amendment moves between different offices, it must be translated from one format into another. Translations usually require custom software and may require manual verifications, which risk errors. Translations take time, create bottlenecks, and hinder transparency.

For example, during the drafting process, the Legislative Counsel often must convert incoming bill materials from Member offices, which typically are created in Word, to Bill DTD. The Legislative Counsel drafts bills using Bill DTD, but then must convert them into Locator Code and PDF to provide to Members’ offices. The Clerk receives bills as Bill DTD files, translates them into USLM to produce comparisons, and then must provide the comparisons to committees and Members as PDF documents. The Clerk must also translate bills into Locator Code to provide to GPO for publication. Meanwhile, the Law Revision Counsel drafts codification bills in USLM, but then translates them back into Bill DTD files, then to Locator

Code, and finally to PDF for transmittal back to Congress for consideration. Each of these translations delays the next lawmaking step.

Future State: Benefits of a Single Format for Legislative Materials

If USLM is adopted throughout the lawmaking process, beginning at the headwaters, in the Legislative Counsel's drafting office, the House, its Members and staff, and its stakeholders could realize five additional benefits:

- **Simpler Drafting:** House staff would have access to software tools allowing them to produce amendment documents by simply editing the text of bills and automatically generating amendment language. A similar process could be used to generate bill language to amend the U.S. Code or the existing Statutes.
- **Automatic Redlining:** House staff would be able to instantly compare amendments against bills, and bills against existing law.
- **Automatic Engrossment and Self-Execution.** If legislative materials created using the drafting process described above, then, once amendments to bills are approved, they could flow directly into those bills in an automated fashion. A similar process could be used to automatically merge bills into the U.S. Code.
- **Auditability:** House staff, Members, and the public would be able to call up the text of a bill as it stood at any moment in the bill's history, or review the U.S. Code as it stood at different points in time.
- **Instant Transparency:** The House would be able to publish current versions of bills immediately at every stage of the legislative process.

In addition, because USLM is non-proprietary, and maintained and published by the Federal Government, every software vendor would be able to compete to create solutions to perform these tasks.

Moving Toward a Single Format

The Legislative Branch Subcommittee is uniquely positioned to provide leadership for the House's movement toward a single data format for legislative materials. The House's support offices work well together to help Members, leadership, and committees, but they do not have sufficient authority to set goals for the whole chamber. Meanwhile, Members, leadership, and committees are rightly focused on the substance of legislative materials, rather than on the mechanics of how such materials are drafted, amended, published, and codified. The Appropriations Committee is one of the most prolific producers of legislative materials and stands to benefit most from the efficiencies of a single data format for such materials.

The Legislative Branch Subcommittee has an opportunity to move forward in the following ways:

- Within the appropriations process, after proper consultation and testimony, direct the House's support offices to move toward adopting USLM as the single data format for their own drafting, amendment, publication, and codification activities, and, in particular, USLM-based legislative drafting by the Legislative Counsel.
- Empower the Bulk Data Task Force or another appropriate body to develop a roadmap for the adoption of USLM throughout the lawmaking process. Under such a plan, for

instance, the House Legislative Counsel might first decide to use USLM and related tools internally, continuing to provide PDF translations to Members' offices, leadership, and committees. Later, Members' offices, leadership, and committees could be invited to begin using software that would allow straight-through processing in USLM.

- Pilot USLM-based software within the Subcommittee's own legislative work.

Xcential is proud to serve as a partner with the House's support offices in building software to improve lawmaking. Xcential stands ready to assist the House in moving toward a system in which straight-through processing of all legislative materials brings transformative efficiency for the benefit of Members and staff and immediate transparency for the benefit of all Americans.