Data-first Legislative Drafting
Laws as data first: What becomes possible

- Greater drafting/amending efficiency
- Greater transparency
- Connected information
- Standards-based technology
- Greater citizen engagement

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Our mission
To drive modernization, efficiency, and transparency in how governments make laws, regulations, and essential documents.

What we do
Our software platform transforms legacy print-driven processes into connected information systems – browser-based, vastly more efficient for users, and enormously more transparent and accessible for everyone else.
Many challenges face drafters and ITC staff…

✓ Growing workloads – more complex documents to draft – less time
✓ More frequent departures from “regular order” – more “crisis to crisis” legislating
✓ Legacy technology reaching its end of life
✓ Mismatched tools can’t keep up: WordPerfect & Word aren’t enough
✓ High costs to maintain old systems and thousands of custom macros
✓ Drained resources
✓ Digital-first world makes your paper/print-driven processes outdated and unsustainable
To data-first – and XML. So what’s “XML”?  

- The rulemaking world is moving away from word processing – and to “data-first” authoring – with XML.
- “Extensible Markup Language”: it’s a standard, non-proprietary computer language for encoding documents.
- It’s a way to treat information as “marked up” data – which can be stored, retrieved, and machine read in fine, granular detail.
- The information is stored separately from formatting or styling. **Styling is applied later**, depending on how the information will be represented – as a web page, a PDF or something else.
- This allows the information to be updated, amended, linked, searched and analyzed with **high efficiency and accuracy**.
- That’s because it’s **data first**.
Laws as structured data

• Rulemaking documents – policies, laws, regulations, orders and more – have well-defined structure. That’s ideal content for XML.

• Titles, chapters, sections. Enacting clauses. Parts. Paragraphs. A hierarchy. With citations, references to other elements within other documents.

• Think of them as chunks of data – which can be “marked up” – tagged – in XML.

• Those chunks can be easily linked, related, given context and semantic connection.

• With those chunks in a standard structure, modern, data-driven tools can be applied to the tasks of authoring, analyzing and publishing these essential documents.
With standards-based, data-first authoring, the formatting comes later. That means no rekeying when you export your content to print, the web, PDF or another database. Much more efficient. That also means your data is "future proofed," not locked in a proprietary format.
This is where governments are headed

The future of document drafting and reviewing is a smarter, more modern and unified approach to rule-making, enabled by data standardization and data interoperability.
§11. Tax imposed
(a) Corporations in general
A tax is hereby imposed for each taxable year on
the taxable income of every corporation.
(b) Amount of tax
(1) In general
The amount of the tax imposed by subsection (a)
shall be the sum of-
(A) 15 percent of so much of the taxable income as
does not exceed $50,000,
(B) 25 percent of so much of the taxable income as
exceeds $50,000 but does not exceed $75,000,
(C) 34 percent of so much of the taxable income as
exceeds $75,000 but does not exceed $10,000,000,
and
(D) 35 percent of so much of the taxable income as
exceeds $10,000,000.

SEC. 3001. REDUCTION IN CORPORATE TAX RATE.
(a) IN GENERAL.—Section 11(b) is amended to
read as follows:
“(b) AMOUNT OF TAX.—
“(1) IN GENERAL.—Except as otherwise
provided in this subsection, the amount of the tax
imposed by subsection (a) shall be 20 percent of
taxable income.
“(2) SPECIAL RULE FOR PERSONAL
SERVICE CORPORATIONS.—
“(A) IN GENERAL.—In the case of a personal
service corporation (as defined in section
448(d)(2)), the amount of the tax imposed by
subsection (a) shall be 25 percent of taxable
income.

§ 1.11-1 Tax on corporations.
(a) Every corporation, foreign or domestic,
is liable to the tax imposed under section
11 except (1) corporations specifically
excepted under such section from such tax;
(2) corporations expressly exempt from all
taxation under subtitle A of the Code (see
section 501); and (3) corporations subject
to tax under section 511(a). For taxable
years beginning after December 31,
1966, foreign corporations engaged in trade
or business in the United States shall be
taxable under section 11 only on their
taxable income which is effectively
connected with the conduct of a trade or
business in the United States (see section
882(a)(1)). For definition of the terms
“corporations,” “domestic,” and “foreign,”
see section 7701(a) (3), (4), and (5),
respectively.
Data-first enabled
Document Comparison

Original bill draft

Final bill draft

“Comparative Print”

“LegisCompare”: U.S. Congress now uses XML technology to compare drafts of legislation
**Data-first enabled Amendment Impact Program**

**Amendment Impact Program (AIP),** developed for U.S. House Office of Legislative Counsel, provides visualization of amendments to legislation as engrossed in the bill. AIP displays an unlimited number of amendments, toggles from engrossed amendment to bill, either direction.
Data-first enabled Automation of amendment engrossment

Now in development at the U.S. House, an NLP application identifies and interprets amendment language, displays the redlined text insertion/deletion, and shows precisely how the amended law will read.
Data-first enabled Point-in-time search

Search with data and status of a law as parameters.

Information organized to allow documents to be generated based on date and status.

Works with past dates, current date and future dates of effectivity.

Hong Kong legislative & regulatory point-in-time search tool: elegislation.gov.hk.
Data-first enabled Drafting, amending, codification, publishing

Modern, browser-based XML editor applications look and feel like the Word or WordPerfect tools drafters are familiar with – but enable them to do so much more, and with greater efficiency and accuracy.
Data-first enabled Drafting, amending, codification, publishing

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Article 1

[Purpose and Definition]

For the purpose of this Agreement, the definitions contained in Article 1 of the Convention shall apply. In addition:

(a) “Convention” means the United Nations Framework Convention on Climate Change, adopted in New York on 5 May 1992;

(b) “Conference of the Parties” means the Conference of the Parties to the Convention;

(c) “Party” means a Party to this Agreement.

Article 2

[Goals]

1. This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and

(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

2. This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and capabilities in the light of different national circumstances.
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Data-first enabled Drafting, amending, codification, publishing

After January 1, 2011, the state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.

38563. Nothing in this division restricts the state board from adopting greenhouse gas emission limits or emission reduction measures prior to January 1, 2011, imposing those limits or measures prior to January 1, 2012, or providing early reduction credits where appropriate.

38564. The state board shall consult with other states, and the federal government, and other nations to identify the most effective strategies and methods to reduce greenhouse gas emission greenhouse gas control programs and to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.

38565. The state board shall ensure that the greenhouse gas emission reduction rules, regulations, programs, mechanisms, and incentives under its jurisdiction, where applicable and to the extent feasible, direct public and private investment toward the most disadvantaged communities and citizens of California and provide an opportunity for small businesses, schools, affordable housing associations, and other community institutions to participate in and benefit from statewide efforts to reduce greenhouse gas emissions.

PART 5.
MARKET-BASED COMPLIANCE MECHANISMS

38570. (a) The state board may include in the regulations adopted pursuant to Section 38552 the use of market-based compliance mechanisms to comply with the regulations.
Here’s the XML data that’s been created automatically as drafters work. This is the standards-based, structured data that enables greater automation, accuracy and transparency.

Data-first enabled
Behind the scenes, it’s data-first XML
Data-first enabled Improved access to legislative data

U.S. House and U.S. Government Publishing Office now provide downloads of bills as they’re introduced in standard XML format. This “levels the playing field” for public access to legislative information.
Data-first enabled accountability, citizen engagement,

Machine-processable access to federal legislative data has sparked an explosion of services for citizens and businesses – some free, others by subscription – tracking and deeply analyzing rulemaking measures.
Thank you

For more information:

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