

Nomination for the 2020 Robert J. Colborn, Jr. Innovation Award

NOMINATED PROGRAM INFORMATION

Title of Nomination: Wisconsin's Web-Based Rules Publication System

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Executive Summary

This application for the Robert J. Colborn, Jr. Innovation Award reflects the culmination of a project to convert the Wisconsin Administrative Code and Register from a printed publication to an automated, integrated, web-only publication system. The Wisconsin Legislative Reference Bureau (LRB), which serves as publisher for the code and register, implemented this project while discontinuing the printed administrative code and register, resulting in a significant reduction in costs to the state.

The LRB collaborated with the Wisconsin Legislative Technology Services Bureau (LTSB) in developing, programming, and implementing an automated publication system for the administrative code and register, a new administrative rules website, and a centralized web-based rules document archive. An important focus of the project was the use of metadata in documents to (1) trigger automated processes to publish the administrative code; (2) create and publish the administrative register; (3) operate and maintain web-based public rule comment and rule-making activity notification systems; (4) populate and manage the content of various website menus; and (5) facilitate related improvements and other technological upgrades in rule-related publication enumerated below. Completion of the project has reduced the costs and labor required for production while improving the presentation of, and accessibility to, administrative rules-related material on the Wisconsin Legislature's website for both government and public users.

The homegrown approach to the publication of Wisconsin's administrative rules accomplished in this project reflects the ideals of creativity and innovation that the Colborn Award embodies.

Statement of Justification: Wisconsin's Web-Based Rules Publication System

Overview

In 1943, Wisconsin was one of the first states to enact an administrative procedure act. Following a major legislative study, further changes to the act in 1953 and 1955 established the Wisconsin Administrative Code and Register, making Wisconsin—what is believed to be—the second state to have established a system of continual revision for administrative rules. This was accomplished via a subscription service that allowed subscribers to receive copies of the monthly register containing rule-making notices, along with updated code pages. While the register itself became a bimonthly publication in 1980, the basic system consisting of printed registers and monthly code updates remained similar until 2015. That year marked the culmination of years' worth of efforts to modernize Wisconsin's rule publication practices by moving to an online rule publication system for both the code and register and an online service for notifying subscribers of updates while maintaining the essential functions of the register and the practice of regular, continuous revision of the code.

A. Project Description

The goal for the development of the administrative rules portion of the “Publisher,” the Wisconsin Legislature's web-based publication system, was twofold: (1) automating the electronic publication processes and upgrading the overall presentation of rule-related materials on the Wisconsin Legislature's website; and (2) maximizing public access to rules-related materials by increasing the interconnectivity of related documents and providing various access points to, and landing spots for, these materials on the website. The LRB and the LTSB conceived of the project entirely in-house, and LTSB designed, programmed, and implemented the project using only open-source software and code that the LTSB had written. No outside vendors, contractors, or consultants were used. Completion of the Publisher project has touched every aspect of administrative rules-related publication engaged in by the LRB and by other legislative entities involved in the rule-making process.

Major elements adopted or implemented in this project include the following:*

- Automation of code and register publication process (2010–11).
- Creation of “nesting” website menus, including code and register tables of contents that duplicate the file structure maintained in the repository (2010–11):
https://docs.legis.wisconsin.gov/code/admin_code/sps.
- Creation of a home page for each new and post-1996 archived rule order that contains links to relevant documents and a procedural history for the rule that integrates material from four separate legislative entities (2012).
- Discontinuation of printing code and register and replacement by Internet publication as “official” documents, including all of the following (2015):
 - Re-creation of register as an interactive, web-only publication.
 - Creation of register “tool” to automate and simplify document filing, naming, storage, and organization and to provide a mechanism for saving metadata to filed documents.
 - Replacement of twice-monthly register publication with *weekly* publication each Monday, resulting in significant reduction of lag-times between filing and publication of documents.
 - Development of an e-mail notification system to replace paid subscriptions to print register and code.
- Creation of topic-specific, limited-scope website menus to categorize and list rule documents and generation of an “emergency rules in effect” alert in code chapters based on metadata saved with filed rules-related documents (2015). Similar alerts were implemented for emergency orders issued during the COVID-19 public health emergency that affected administrative code chapters (2020).

- Development of a unified presentation of archived materials that dates from the original code and register in 1956 and incorporates new rules-related documents as they enter the rule-making process (2016).
- Development of a centralized, online public commenting mechanism for proposed rules (2016) and rule scope statements (2017).
- Development of an online rules activity calendar generated from metadata attached to filed rules-related documents (2017): <http://docs.legis.wisconsin.gov/calendar/rules>.
- Development of special administrative rules-related search templates for the legislature's website (2017): <http://docs.legis.wisconsin.gov/search/Register>.
- Implementation of scope statement/rule expiration system (2017, 2020).

*Implementation dates are in parentheses. Links are provided for items not further discussed.

B. Significance to the Improvement of the Operation of Government

1. Paperless publication. After completing a user survey and considering the actions of other states that had adopted paperless publishing of their codes and registers, the LRB concluded in the early 2010s that a considerable cost savings to the legislature, with no significant loss of services to paid subscribers, would result from discontinuing the printed code and register and adopting free, web-only publication as the official publication thereof. The 2013 Wisconsin Legislature adopted legislation, as part of the 2013–14 state budget, authorizing Internet publication as the state's only code and register, admissible in all state courts as presumptively correct, and updating and clarifying statutory publication requirements accordingly. The changes became effective January 1, 2015.

Prior to the change to web-only publication in 2015, the Wisconsin Department of Administration charged the legislature approximately \$30,000 per month for managing and distributing the printed code and register subscriptions to fewer than 1,000 subscribers. That cost was eliminated.

The time required to send copy to print, to proof copy, to have final copy printed, and to sort and mail the printed register and code before each publication date resulted in imposing a two-week lead time on agencies for filing notices for register publication and a six-week lead time for the final publication of rules in the code. With the new streamlined system, notices received as late as a Sunday evening can quickly be added for inclusion in the following day's weekly register. Code chapters that are updated to incorporate final rule orders filed by agencies are regularly published in the register within two weeks of the filing of the rule order with the LRB, and last-minute changes can also be made with relative ease.

Prior to the enactment of the legislation authorizing paperless publication, full-text publication of proposed rules in the register was not required and generally not done, and the text of filings, such as emergency rules and final permanent rule orders, were never published in the printed register, although links to those documents were included in the online version of the register for several years prior to the adoption of the web-only register. Hearing notices did not require inclusion of the rule text, but did require a rule analysis and a notice of where copies of the rule could be obtained. Now, the size or length of documents is largely a non-factor for purposes of register publication, and publication of full-text copies of proposed and final rule orders is mandatory, providing the public easier access to the current, full text of rules. Hearing notices include the full text of proposed rules, eliminating the requirement of a separate analysis and simplifying the process for agencies.

2. The web-only register. After the enactment of legislation authorizing web-only register publication and the elimination of the need for documents suitable for printing, the LRB and the LTSB worked to rebuild the underlying architecture of the register so as to reconstruct it as an Internet-based publication. While the basic structure and content of the register remained the same, the goal of the new register was to provide users with easier navigation within the register and greater access to the documents published in the register, as well as to related documents outside the register. Major changes made to the register include the following:

- Making the register a virtual document that exists as a whole only on the web, generated by linking separately saved notice documents through a table of contents.
- Saving a variety of information related to published documents as metadata that is permanently attached to those documents and used for a variety of purposes, discussed in part C below.
- Automatically converting Microsoft Word documents to HTML and PDF for publication in the register.

The new register is generated by a dedicated “register tool” through which Word or PDF documents submitted by agencies for register publication can be quickly dragged and dropped into the tool, from which individual register entries then are generated. Register entries are named according to LRB conventions (the names become the headings used in the register’s table of contents) and can be edited if necessary. After various pieces of metadata are saved to an information “tool sheet” for the item, the item is saved to the repository by document type (register sections are organized by document type) and accessed by the Oven for publication in the register. Each notice can include an essentially unlimited number of separate Word and PDF files, with each file being saved in the same tool sheet with a unique name and the whole notice being presented in the register as a series of links from the table of contents to the various component pieces. This benefits both the LRB and other state government agencies, because combining or reformatting separate documents into a single, printable document is not necessary. An example of a register is at <http://docs.legis.wisconsin.gov/code/register/2018/746B/register>. Agencies may even submit additional attachments to provide further information that is as easily accessible as the rule documents themselves. See the “Rule-Making Notices” in the register linked above for examples of multi-piece documents.

The register tool has allowed for reduced labor devoted to register editing and production. Before the tool’s implementation, one LRB staff person spent up to two weeks of each month editing and formatting agency documents and saving them into the separate text-processing software then used to generate the single two-column register document that was printed. The process of creating a register now typically takes one employee less than a full day’s work, plus the time required for proofing using the preview site (see below).

The web-only register also allows for added functionality. Notes can be added at any time to document pages providing additional or supplemental information on a particular notice or document. Registers can be republished to correct errors in rare circumstances or to update information. Automatically generated links in register documents allow for additional accessibility between documents.

3. Publication automation. In 2008, when the LRB inherited responsibility for publishing the code and register, the code and register were published on the Internet through the use of a series of time-consuming and manual processes on LRB-created files. The inadequacy of this system led the LRB and the LTSB to agree that LTSB would create new publication processes to allow LRB personnel to complete Internet publication of the code and register using simple, automated applications and processes. Over the next three years, LTSB wrote new code that resulted in two innovative processes: the Oven and the Wrangler.

The Oven is a web-based application that provides for the automated publication of the code and register, as well as various other publications such as the Wisconsin Statutes. The Oven allows for publications to either run automatically on a set schedule, or manually, as the particular publication demands. The Oven also works with a preview function that allows documents to be published in full and on demand to a nonpublic site for proofing purposes. The preview function produces a report of nonworking links in the code, which is a great resource for ensuring that defective cross-references are corrected prior to publication. Each Monday, separate Oven processes automatically publish the weekly register. Using metadata attached to the notices included in the register, the Oven generates a table of contents that provides a link to each notice and an informational header attached to each notice showing a variety of information. On the last Monday of each month, the Oven also publishes additional components in the register to reflect code updates being made for that month.

The Wrangler is an application that lists and saves any chapters being published or removed from the code in a given month. When edits to code chapters in the Wrangler list for the month are complete, one click of a mouse triggers the Wrangler to finalize the chapters for publication, designating the files within the repository for insertion into the published code and generating PDF copies of the chapters being inserted or removed. Upon finalization of the chapters, the Oven inserts or removes chapters as PDFs in each end-of-month register. Then, on the following first day of the month, the Oven automatically generates an HTML file of each chapter published in the end-of-month register, inserts both the HTML and PDF versions of the chapters into the published code, deletes all earlier versions and any repealed chapters, and updates all code tables of contents on the website.

C. Benefits Realized by Citizens, the State, and Others Associated with Rulemaking

1. Rule home pages. One of the major features of the Publisher is separate information pages for each permanent rule that has been assigned an identifying number since rule numbering began in approximately 1979. Wherever the rule number appears on the legislature's website, a link is generated to the rule's information page, and any search for a rule number on the legislature's website returns a link to that rule's information page as the first search result (example: http://docs.legis.wisconsin.gov/code/chr/all/cr_17_012).

An information page is created when each new rule is initially filed for review with the Legislative Council staff, which reviews all permanent rule filings. All documents and various pieces of information related to a rule that are entered into the repository by any of the four legislative offices with whom rules-related documents are filed are amalgamated into the information page through automated processes triggered by metadata attached to the various documents. As documents are filed with the LRB for publication in the register or with the two legislative house clerk offices in relation to legislative review, entries are added to the information page. Entries are added that show relevant dates, legislative action, and descriptive information, and links are added to related documents, such as the scope statement (a notice of intent to make rules) for that rule, any emergency rule that parallels the permanent rule, and the existing code chapters that are affected by the rule. As a rule moves through the rule-making process, its progress is documented on the information page until, at the rule's final promulgation, there is a complete and permanent procedural history that can be accessed that draws from a variety of sources.

Prior to the creation of the information pages, there was no single source for the histories of rules. A user had to search separate registers and legislative journals for that information. Subsequent to the implementation of information pages for permanent rules in 2012, information pages for scope statements and emergency rules have been added. Scope statement information pages include full histories of all rules, both permanent and emergency, that are based on the given scope statement.

2. Menus and notations generated from metadata. While rebuilding the legislature's website, LTSB created a web page for all legislative documents (<http://docs.legis.wisconsin.gov/>) that is subdivided into subject-specific pages, including a dedicated administrative rules page (<http://docs.legis.wisconsin.gov/code>). The rules page contains links to topic-specific menus for rules-related documents in addition to links to the code and register. Each of these menus is updated automatically by processes triggered by metadata attached to the included documents when they are filed for publication.

The Legislative Council staff saves each new proposed permanent rule to a repository, with the rule number, agency name, and rule subject saved as separate pieces of metadata. Automatic processes identify the presence of a new rule in the repository, capture the metadata, and insert entries for the rule into the menus on the administrative rules web page for *Active Clearinghouse Rules* (proposed permanent rules currently in the promulgation process) and for *Clearinghouse Rules Open for Public Comment*. When notices for the rule are filed for register publication, information such as comment deadlines, hearing dates, approval dates, and related rules are entered in specified fields in the register tool sheet for the document and saved as metadata; the metadata triggers both information page entries and the addition of an entry for the rule to applicable listings. For example, when a hearing notice is filed for the rule, the rule is added to

the *Clearinghouse Rules with Hearings Pending* menu, and when that hearing date passes, the rule is automatically removed from that menu. When the rule is in final form and filed with the LRB for publication in the code, the label on the rule's information page indicating its status in the rule-making process is changed from "active" to "final," removing the entry for the rule in the *Active Clearinghouse Rules* menu and adding it to a *Final Clearinghouse Rules* menu.

A comparable process for emergency rules generates similar menus. Because emergency rules are not published in the code, a warning is generated in each code chapter affected by the emergency rule indicating that there is an emergency rule in effect. The warning is automatically removed upon expiration of the emergency rule or the publication in the code of a final permanent rule identified by metadata as a related rule (example: http://docs.legis.wisconsin.gov/code/admin_code/atcp/090/99). The LTSB quickly implemented similar alerts for emergency orders issued during the COVID-19 public health emergency that affected administrative code chapters.

3. Online commenting. In 2016, the LTSB created a centralized commenting system for permanent and emergency rules on the legislature's website. The responsibility for hosting a public commenting site was transferred to the legislature from an outdated executive branch website that was not integrated with the legislature's rules website. The new process for public commenting is as follows:

- a. When a proposed permanent rule or an emergency rule is first posted to the Internet, a link is included in its information page that opens a blank, fillable commenting form. The completed form is then sent to an e-mail address designated by the promulgating agency.
- b. Simultaneously, an entry for the rule is added to the appropriate *rules open for comment* web page that includes links to the comment form, the rule text, and the rule's information page.
- c. When the hearing notice for the rule is filed for publication in the register, the agency provides a commenting deadline that is saved to the rule metadata. Publication of the register triggers the display of the comment deadline on all links to the comment form.
- d. When the comment deadline passes, the rule is automatically removed from the *rules open for comment* menu; the link in the rule information page is replaced with text indicating that commenting for the rule has closed; and all links to the comment forms in previous registers are replaced with a link to a message stating that the comment period for the rule has closed.

In 2017, a law change provided for commenting to also be permitted, or in some cases required, for rule-making scope statements. The commenting system for rules described above was adapted to allow for scope statement commenting, using a similar setup.

4. Additional automation. The new system has allowed for additional information, stored as metadata, to be input for administrative rules, publicly displayed on rule pages, and used for internal and automatic tracking processes. For example, in 2017, a change to the law was passed providing for the expiration of proposed rules if they are not finalized within a certain period. The use of metadata for rule filings allows for these "expiration dates" to be input at the time rule-making begins, which are in turn publicly displayed on rule-making pages and can be used by the system for purposes of tracking the expiration of administrative rules. Automatically generated e-mails are sent to agencies and staff to notify them of rules with upcoming expiration dates that are not finalized. The system, therefore, allows for an automated implementation of what would have otherwise amounted to a laborious tracking process with limited opportunities for public visibility.

5. Expandability and accessibility. The register publication system allows for new categories of documents to be added to the register and published relatively easily. For example, in late 2018, a law was passed to require the submission of "guidance documents" for publication in the register. While the printed register of old would have been ill-equipped to accommodate large volumes of documents and would not have allowed for electronic publication of the documents themselves, the electronic register allowed a new category to quickly be implemented for these documents, with the documents categorized by agency. The system allows for a virtually unlimited number of such documents to be input for publication in a given week. Similarly, during the 2020 COVID-19 emergency, a new register category was quickly added for

publication of the dozens of emergency orders issued by the governor and agencies. A feature was added that read the metadata for these filings to create alerts on code chapters implicated by the orders. Other aspects of the system, such as online commenting, have also proven to be adaptable, as described above. The system is therefore versatile and allows for new categories of documents to be easily published and allows new ways to use and display information. Specific documents, rule pages, and provisions are easily linked to in online articles, newsletters, and web sites, providing the media and the public with specific, easily accessible information that will remain available for reference.

6. Online archives. Since 1996, electronic copies of all final rule orders filed by agencies for publication in the code, all code chapters inserted into and removed from the code, and all register notices have been saved in the repository. All pre-1996 code pages inserted into the code, most pre-1996 code pages as removed from the code, and all pre-1996 rule orders filed for publication in the code have been scanned and stored in the repository by code chapter number, register number, and date. However, although there were links to this material from history notes in the online code beginning in the early 2000s, there was no unified online or paper archive for this material prior to 2015.

From 2015 to 2016, the LTSB implemented a full-text, searchable archive of inserted code chapters and rule orders published since the first register in 1956 and of notices published in the register since 1996. The archive is presented as part of the register home page (<http://docs.legis.wisconsin.gov/code/register>) and contains a link, from each register published since 1956, to the rule orders incorporated into code published in that register; the code pages inserted into and removed from that register; and, beginning in 1996, the notice section for that register. Upon publication of each new register saves that register as part of the permanent archive (example: <http://docs.legis.wisconsin.gov/code/register/2015/720B>). This archive allows for the online research of and tracking of changes to rules dating back to the code's 1956 inception.

7. Notification system. Prior to 2015, paid subscribers could choose to receive all registers, including all published code, or to receive only a certain agency's code, or parts thereof, and only the notice sections of registers that contained notices that referenced the codes included in the subscription. The Department of Administration maintained a list of subscribers to each agency's codes and mailed a hard copy of a register to a subscriber only when the register contained a notice or a published code chapter included in the subscription. In January 2015, the subscription service was ended, and the LRB implemented an online notification service for administrative rule users to track rule-making activity. These changes were implemented as part of the legislature's existing notification system for tracking legislative activity—users can use the same system to track both administrative rules and legislation authored by the legislature. The rules activity notification system allows users to subscribe to receive an e-mail notification whenever a selected chapter, a chapter in a selected group of chapters, or any chapter of a selected agency's code is updated. Subscribers can also choose to receive e-mails when registers contain notices related to subscribed-to chapters or for specific types of register documents, such as notices of filing emergency rules, hearing notices, or notices of filing final permanent rules. Metadata attached to filed documents identifying the agency, chapter group, chapter number, and document type triggers processes that generate sending the notices. Free subscriptions are initiated and managed through a password-protected web page. As of March 2020, the system had approximately 1,500 unique subscribers for register-related content.