

# Mail2Wiki: Posting and Curating Wiki Content from Email

Ben Hanrahan\*, Thiebaud Weksteen†, Nicholas Kong\*, Gregorio Convertino\*, Guillaume Bouchard†, Cedric Archambeau†, Ed H. Chi\*

Palo Alto Research Center (PARC)\*, Xerox Research Centre Europe†  
{firstname.lastname}@parc.com\*, {firstname.lastname}@xrce.xerox.com†

## ABSTRACT

Enterprise wikis commonly see low adoption rates, preventing them from reaching the critical mass that is needed to make them valuable. The high interaction costs for contributing content to these wikis is a key factor impeding wiki adoption. Much of the collaboration among knowledge workers continues to occur in email, which causes useful information to stay siloed in personal inboxes. In this demo we present Mail2Wiki, a system that enables easy contribution and initial curation of content from the personal space of email to the shared repository of a wiki.

## Author Keywords

Enterprise Wikis, Email Plugin, Organizing, Sharing

## ACM Classification Keywords

H5.3 [Information Interfaces and Presentation]: Group and Organization Interfaces – Computer Supported Cooper. Work

## General Keywords

Design, Human Factors

## INTRODUCTION

The ability of an enterprise to share knowledge among workers represents a key competitive advantage. In spite of their broad diffusion and potential utility, enterprise wikis struggle to reach the adoption rates required to make them sustainable and valuable [4]. On the other hand, the centrality of email in many workflows exacerbates the problem of email overload. Useful knowledge remains trapped in individual email inboxes, making it difficult to reuse knowledge across the enterprise (review in [4, 5]). By lowering the interaction costs for contributing, Mail2Wiki aims at increasing participation in wikis, thus enabling more effective sharing across an organization.

## RELATED WORK

Previous systems have supported collaborative activities around e-mail. Systems such as XOBNI [3], Meshstro [1], and Salsa [7] achieve this by providing insights about the worker’s inbox from outside sources. These tools are all centripetal to email, as they ‘pull in’ relevant information from various sources and past activity while relating it to emails in an inbox. In contrast, Mail2Wiki, is centrifugal to email by giving direct access to shared spaces (i.e., wikis),

embedding sharing functions in email, and facilitating the offloading of useful content to these shared spaces.

Other tools have focused on making contributions to a repository easier. Posterous [2] makes blogging easier by allowing consumers to email contributions to a server that publishes the content. Mail2Tag [5] is a shared email repository that is searchable and persistent. Users can email their content to tags, which enables folksonomy-style organization. Mail2Wiki differentiates from these systems by integrating with the email client and enabling early curation of contributions in existing pages and sections.

## THE MAIL2WIKI SYSTEM

The Mail2Wiki sharing functions can be used via two alternative interfaces: a Microsoft Outlook email plugin that communicates with a wiki installation, or a standard email client as in the Mail2Tag system [5]. The embodiment described here is implemented for MediaWiki, no modifications are required for the MediaWiki installation.

## System Architecture

The architecture includes the recommendation server and Outlook plugin. The *recommendation server* performs several functions. First, it crawls and indexes the information contained in the wiki. Initial crawling is done by obtaining the URLs from listing pages, such as the “All Pages” special page on MediaWiki. The crawled content is then indexed using an implementation of tf-idf. Second, it recommends wiki pages in relation to email content. The algorithm used to calculate these recommendations is BM25 [7]. Actions such as viewing, editing, and contributing are used to further improve the precision and recall of the recommendation. Third, it also provides recommendations to users who have not installed the plugin, but contribute individual or batches of emails via a standard email client as in the Mail2Tag system [5].

The *Outlook plugin* is meant to be the primary user interface (UI) to our system. The plugin presents both saved and recommended wiki pages gathered from the server, as well as, their structure and content. The presentation of the wiki content remains the same regardless of the wiki site being utilized. This is accomplished by modularizing both the methods used to connect to the wiki and the syntax parsing procedures. The plugin also communicates directly with the *recommendation server*.

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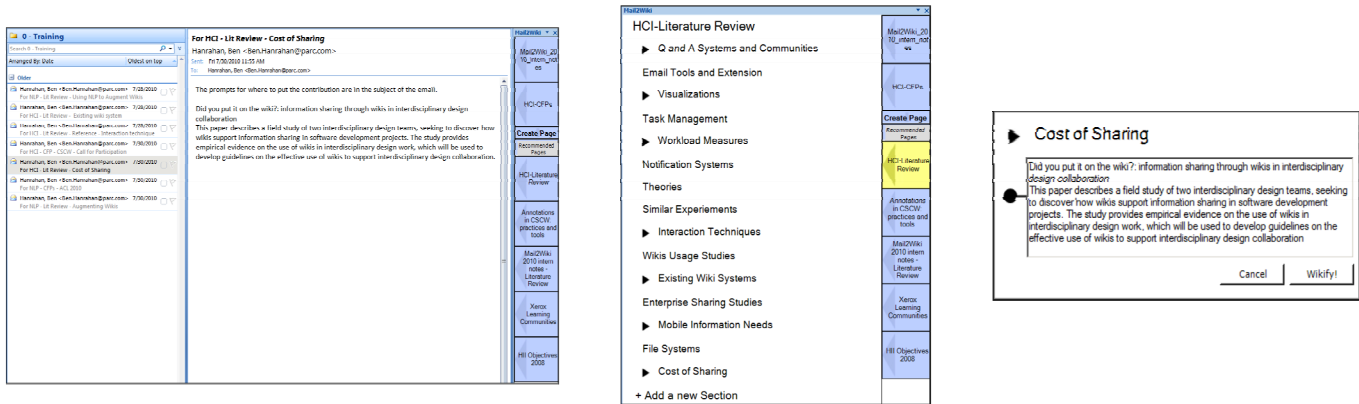


Figure 1. The outlook plugin: sidebar on the right (A), expanded outline (B), and an example of a contribution (C).

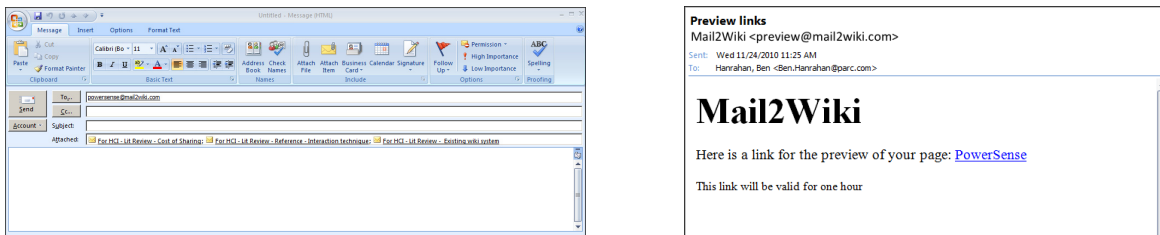


Figure 2. Submitting a batch of emails to recommendation server without the use of the plugin (A) and the preview email (B)

### Interacting through the email plugin

The Outlook plugin is implemented as an additional panel to the reading pane. The added panel provides an overview of relevant, recommended wiki pages and their content (Figure 1 (A and B)). This overview is meant to surface existing wiki pages while the user is processing incoming emails. The plugin supports three main functions: first, direct manipulation to support low-cost transfer and curation of content. Accomplished by selecting text from an email and dragging it to a section of a desired page. Second, recommendations are presented in two occasions: wiki pages relevant to the selected email are shown in the bottom half of the sidebar; moreover, the three most related sections are emphasized as the user drags the content in the expanded outline. Third, the user can post batches of email by selecting multiple emails and creating an entirely new wiki page or adding a new section to an old page.

### Interacting without the email plugin

Several functions of the system are also accessible without the plugin (Figure 1 (B)). Users can still contribute content by specifying a wiki page in an email sent to our server. The server parses the email address to recognize the target wiki page, similar to the parsing of tags in Mail2Tag [5]. In response, the system sends a feedback email message that the user can review and either confirm or cancel the contribution. Through this interaction the user can contribute a message, part of it, or a batch of messages, which are summarized in a new page or a new section.

The user can decide to skip the confirmation email by appending an exclamation mark at the end of the page name, i.e. powersense![@mail2wiki.com](mailto:powerense@mail2wiki.com). If uncertain the user can

request recommendations on the most appropriate wiki pages to publish on by using a question mark, i.e., [?@mail2wiki.com](mailto:powerense@mail2wiki.com). The system responds recommending a list of pages using the same algorithm servicing the plugin.

### CONCLUSION

A key barrier to enterprise wiki adoption is the high interaction costs associated with making a contribution. In this demonstration we illustrated a system that lowers the cost of making and curating contributions to a wiki. Future work is focusing on evaluating this system and supporting the work of wiki curators with a companion system [5].

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