

Colloki: Rethinking local conversations on the web

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ABSTRACT

Local conversations online are an important means of building awareness and increasing participation amongst citizens. However, most local websites are restricted to using forums or collaborative blogs as the medium of conversation. We are designing ‘Colloki’, a local conversation system that aims to utilize a set of social and organizational features for a more effective conversational environment. In this paper we discuss our design and social features for colloki.

1. INTRODUCTION

Local action groups are crucial to create awareness and draw average citizens into dialogue about local issues and concerns in democratic life (Kavanaugh et al., 2007). These groups are centerpieces of local democratic activity and act as an intermediary level of organization between the individual and the government (Verba and Nie, 1972). Most voluntary organizations face the typical challenges of leadership burnout and limited resources (Kavanaugh et al., 2007). There is growing evidence that information and communication technology aids in resolution of these problems and increases participation among the members of these voluntary organizations (Kavanaugh et al., 2007).

While the mainstream web has seen explosive growth of social software systems in the past few years, local online deliberation systems are still using the traditional discussion forums and email listservs. We believe that online deliberation systems for small groups have very unique design challenges that separate them from mainstream systems, and hence mainstream social software systems don’t translate very well to the local environment.

In this paper we present our arguments on why the current social systems are not a good fit for local conversations, followed by a design for an online “local conversation hub” that we are designing in close collaboration with several civic organizations in Blacksburg, including Citizens First¹, a grassroots organization; and Blacksburg Electronic Village², which represents the web presence of many local community groups. This design aims to utilize Web 2.0 features and techniques in a local environment to provide what we believe is a more effective local conversation medium.

2. SOCIAL SYSTEMS

Social software refers to software that “enables people to rendezvous, connect or collaborate through computer-mediated communication”³. This type of software has existed for years in the forms of listservs, forums, newsgroups, and other online systems. Recently, however, blogs (Tepper 2003), RSS feeds, tagging systems, and collaborative filters have made social software very popular, particularly among young computer users. A recent Pew Internet & American Life Project (Lenhart 2007) found that 55% of all American youth (ages 12-17) use some form of social networking site.

¹ <http://citizensfirstforblacksburg.org>

² <http://www.bev.net>

³ http://en.wikipedia.org/wiki/Social_software

Some of the most popular websites today are excellent examples of social software systems, including: multimedia content-sharing systems like YouTube and Flickr; product recommendation systems like reviews on Amazon and Netflix; content recommendation tools like Digg, Del.icio.us and last.fm; social networks like Friendster, MySpace and Facebook; and virtual worlds like Second Life.

Social Software today goes beyond emails and forums in that it allows social networks to be formed among people who already have something in common. For emails and forums, users need to know each other's email address, or need to know where to find a forum with a particular topic for participation. Social software, on the other hand, is organized around a particular activity or topic, such as photo sharing. Users often find value in putting their information in the social system. But the biggest value comes from the social network and the sum of the parts effect that comes from many people crossing paths online.

One of the most intriguing features of most social software systems is the tagging of resources by the members of the community. We are just beginning to understand how this tagging works (Furnas 2006), its implications, and its possible uses (Marlow et al., 2006). Tags are even making their way to personal information management tools, such as Google's Mail program. Marlow and colleagues (2006) have studied tagging systems and proposed a taxonomy of features. In their view, social networking systems with support for tagging (they call them social tagging systems) can be classified by two organizational taxonomies that describe: a) the user incentives at play and b) the system design and attributes. In our work, we have been studying many well-known social systems with an eye to identifying examples and features that can be used in colloki. The list below includes some of the features that these services have in common, divided into the two taxonomies proposed by Marlow et al. (2006).

2.1 User Incentives

All social systems have user provided content. Users must have an incentive to contribute information to the site. The incentive can be organizational (Marlow 2006), like saving a url in del.icio.us so that it can be found at a later time; or it can be social (Marlowe 2006), like uploading pictures to Flickr to share with others. In other instances, providing content serves a role of attracting attention, for example uploading video files to YouTube. In addition, social software systems provide ways for users to organize their content in a flexible manner, using folksonomy (Veres 2006) to minimize pre-defined categories and structures.

2.2 System Design and Attributes

Social systems find "connections" between users based on the system's organizational scheme. The goal of finding these connections might not be the primary goal of these systems. In services like Friendster (boyd and Ellison, 2007) or Facebook (Lampe et al., 2006), the goal is identifying others. But in services like del.icio.us, the goal might be to identify bookmarks from other people. In a way, social software exploits weak ties for added functionality and benefits. This is called social connectivity by Marlow et al. (2006).

Social systems also provide commenting features that allow some form of community discussion. The discussion, however, varies. In some services it is nothing more than "wow, nice picture", a polite social commentary, similar to what you would say to someone at a casual encounter on the street. In other cases, however, the comments can be detailed descriptions of the user's point of view about something (e.g. Amazon's reviews). In the case of blogs, the comments can take the form of more traditional debate with support, rebuttals, etc.

Most social systems (if not all) provide some form of syndication. Most of the sites have a way for a user

to “subscribe” to a particular stream of information. This allows the user to see the information of interest remotely, without going to the site. Users can then visit the site when new information is available. Some successful social systems also provide a developer “application programming interface” or API that allows others to build extended services. Some of these services include importer/exporter tools, offline viewers, editors, and visualizations. All of these features together contribute to create systems that provide many new benefits to users.

3. LOCAL CONVERSATIONS

Our goals for colloki are to support local discussion and information discovery. Often finding local news sources and local online discussions is hard to accomplish for the following reasons: First, there are fewer resources devoted by the news agencies to local issues. Second, online deliberation at the local level often times occurs in particular groups and it is difficult for online citizens to join and become active participants. Third, social software systems that allow users to gather online and discuss their interests (e.g., Digg, Slashdot, and other similar sites) work in part due to the large number of people participating and are not as effective when the social network is small.

The effectiveness of social systems brings in more people, thus increasing its popularity and its effectiveness at the same time. But for local participation, the number of participants will always be low when compared to national opportunities for discussion, as only people with local concerns would be participating. Automated solutions and aggregators are not sensitive enough to pick up material that is truly relevant. Either the service is too simplistic, doing mostly “surface” checks (e.g., matching “Blacksburg” to identify local news) or they require specialized programming to do some form of “smart” aggregation. For example, the simple search aggregators often return stories where “Blacksburg” is mentioned by coincidence, but the story is about another topic or location (e.g., “Joe previously worked as manager of a restaurant in Blacksburg”). A solution is needed that:

- a) does not depend on thousands of users participating in the social networking sites,
- b) does not depend on automated ways of identifying relevant information,
- c) provides support for opinion leaders, politically active citizens, as well as lurkers, and
- d) makes use of Web 2.0 concepts (content syndication, tagging, user-provided content and organization).

4. COLLOKI

We are exploring a replicable social networking system that aggregates news and local information in such a way that it becomes the “hub” of local deliberation. The goal of aggregating information is to have a combination of automated plus human provided content. In addition, the site will include blogs, citizen commenting, links to town and county information, links to other relevant online information, aggregation of new feeds, and other online mechanisms to support citizen-to-citizen interaction. In the remainder of the paper we present the design as it stands at the time of this writing. We have developed this design using lo-fidelity paper prototypes (Snyder 2003). These prototypes provide a visual understanding of the concepts being discussed, and help us gather feedback of our design from local citizens before we commit resources to building the system.

4.1 User Contributed Content: Citizen Opinions

Colloki will have multiple ways for users to express their opinions. For example, opinions can be typed text, video postings, or even audio postings. We will support doing so from mobile devices, so if citizens want to stand at a particular location in town and “file” a story with images from the location, they have the freedom to do so.

Opinions are organized in sections of interest called ‘hot topics’ (Fig. 1) that are an aggregation of a particular subset of information. Hot topics are usually a small number of significant issues that a local

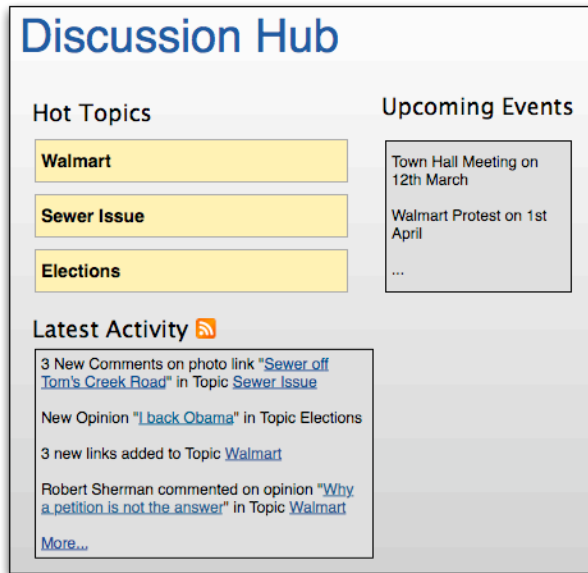


Figure 1: Colloki Homepage

community is facing. Topics like Upcoming Town Elections, Revisions to Comprehensive Plan, Downtown Revitalization are examples of possible local issue labels to organize content. Community leaders have a significant role in defining these sections. In our research we have found that local civic organization tend to focus on a particular small set of issues. They often have a community leader in charge of “the issue.” We are organizing colloki in an analogous fashion, so that local citizens can quickly identify the issues at hand.

Browsing one of these topics is like browsing a subsection of the newspaper (e.g. the sports section, or the stock market section). Each section will have different type of content depending on how it is defined and used by the citizens participating in it.

Some might have more events, others might have more opinions, etc.

With collaboration from the local town, town officials could use appropriate tags for communications and Town Council agendas so that information is automatically classified into the appropriate “section” of colloki. Our aggregator will pick up content from local town and community group websites and listservs and automatically classify it in colloki.

4.2 User Recommended Content: Stories

Colloki will provide users with easy ways to share content from the web, in the form of posts called ‘stories’. ‘Stories’ are a flexible form of user recommended content (Fig. 2). In spirit, they are similar to the bookmarks on del.icio.us, the ‘Posted items’ feature of facebook.com and the news stories posted on digg.com. A story can be a news story, an image, a video, or any other form of web content that a user recommends to other users of colloki. This can be done by submitting it on the site; or more conveniently, by using a bookmarklet⁴ or a browser extension. Other users can then ‘vote’ positively or negatively on the items. Hence, organization is brought to the section using the same sum of the parts effect that systems like digg.com utilize, but the initial posting of the story is done by community leaders.

4.3 User Contributed Content: Local Deliberation

Beyond the top level organization of opinions and stories around 'Hot Topics', all online participants are allowed to comment on each other’s contributions. We will allow any content item to have a series of comments or posts following it, in a manner similar to blog comments. This supports discussion and

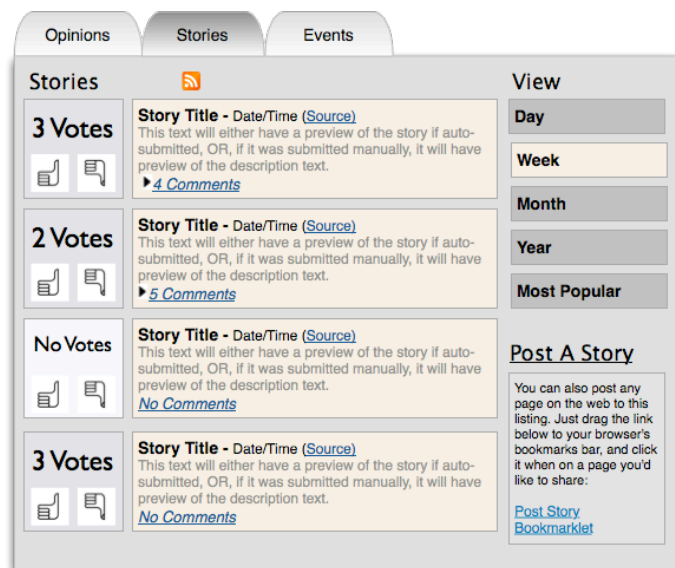


Figure 2: Stories

⁴ A bookmarklet is a small JavaScript program that can be stored as a URL within a bookmark in most popular web browsers

deliberation by citizens as a response to the postings of community leaders. We will develop an easy way for cross referencing, to support people posting comments that easily link to other stories/comments within the site.

4.4 Promoting real and virtual world conversations: Activity streams and events

Activity streams ('Latest Activity' in Fig. 1) are flowing commentaries on users' actions on the different sections of the site. They were first made popular amongst social sites by Facebook in 2007. Activity streams can be customized to give preference to a user's 'close friends' on the site in the stream that he/she sees. They are an effective way of helping users discover content that they might be interested in. Colloki will provide an activity stream of the site's activity at a system level, and topic-level streams on the topic homepages.

Events are another feature of colloki. Users can create, subscribe, enroll to visit and discuss events on the site. In addition, they can choose to let their friends know that they are visiting the event via entries in their activity stream and a mention on the event's entry (Fig. 3).

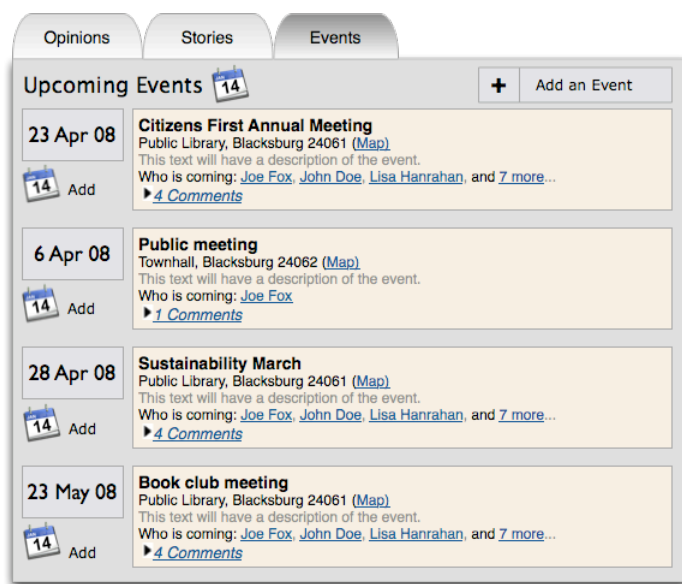


Figure 3: Events List

4.5 Information Organization and Ratings: Feeding Colloki

We plan to provide a service for users to explicitly manage their online content for organizational and social purposes (Marlow, 2006). With personal accounts on colloki, we will support the creation of a social network by having people identify their "friends" online. This relationship can be used to increase the social connectivity in the site (Marlow, 2006). We will use the social connectivity to allow events and information to be shared by others. Further, by providing support for tagging, colloki will let people organize information in a flexible and personal manner.

To counter the lack of user recommended content and for the purpose of aggregating relevant content on the site, colloki stories section will use a 'bot user' - A computer program that aggregates several sources of information - including blog search⁵ results for topic-specific terms and aggregated feeds from trusted local news websites and local blogs; filters⁶ them based on the set of keywords that the site administrator provides to the system; and then posts the most appropriate stories on the site. If the human users on the site vote on the story, it stays in the system and is cached and later archived. Otherwise, the system flushes these automatic posts on a regular basis. This helps keep the system updated with the latest relevant news items from around the web, and provides the users a constant flow of stories. Colloki will provide a flexible browsing mechanism of stories and content so that people can easily navigate among the information that is being collected in the site. The browsing mechanism will make use of people (contributors), tags, news sources, and social networks (friends of friends).

⁵ e.g., Google Blog Search, <http://blogsearch.google.com/>

⁶ Several tools currently provide feed aggregation and filtering services, such as Yahoo Pipes, <http://pipes.yahoo.com>

4.6 Content Syndication: Feeding the Web 2.0

User's content can be syndicated out to other services (e.g., their photos of Montgomery County or their comments on revisions to the Town Plan). The goal is to provide as many ways to get information out to people as possible. We will allow information in colloki to be reused by other systems, thus giving way to a wider network of information about local issues. This will support convenient access for interested participants.

We will provide RSS feeds by sections, recent stories, particular users, tags, and any other organization scheme in the system. This allows users to be alerted when new information is available in whichever way they find most appropriate. We will also provide options to send updates via emails, SMS, Twitter, and RSS, and subscription to calendar feeds using popular applications like Google Calendar, Apple's iCal and Microsoft Exchange.

5. Conclusions

Our work on colloki has just begun. We have designed the prototype here shown and expect to have it in operation soon. We work closely with several civic organizations in the Blacksburg (home of Virginia Tech) and New River Valley area, and they are committed to help us in the design and evaluation of such system. In addition, the Blacksburg Electronic Village is interested in hosting this service as a evolution to support local discussion and deliberation.

The main challenges we face in designing and building such an integrated system are: 1) making it easy to use to maximize the number of online participants, and 2) get people to use it regularly. We hope that by collaborating with local civic organizations and local town officials we will have the initial support to get this service off the ground.

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