

Beyond Threaded Conversation

Paul Resnick

School of Information
University of Michigan
Ann Arbor, MI, USA
presnick@umich.edu

Derek Hansen

School of Information
University of Michigan
Ann Arbor, MI, USA
shakmatt@umich.edu

John Riedl

Department of Computer Science
University of Minnesota,
Minneapolis, MN, USA
riedl@cs.umn.edu

Loren Terveen

Computer Science & Engineering
University of Minnesota
Minneapolis, MN, USA
terveen@cs.umn.edu

Mark Ackerman

School of Information
University of Michigan
Ann Arbor, MI, USA
ackerm@umich.edu

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INTRODUCTION

Online asynchronous communication is an important mechanism for sharing information, building relationships, and collaborating. Most asynchronous communication systems are dominated by a design theme that we'll refer to as "threaded discussion." It can be characterized by the following elements:

- Topics. A set of topics, groups, or spaces, sometimes hierarchically organized to aid users in discovering interesting groups to "join". Topics/groups are persistent, though their contents may change over time.
- Threads. Within each topic or group, there are top-level messages and responses to those message. Sometimes further nesting -- responses to responses -- is permitted. The top-level message and the entire tree of responses to it is called a thread.
- Permanence. Once a message is posted, it cannot be rewritten. A new message may be posted, but the visibility of the original message is unchanged.
- Homogenous view. The partitioning of messages into topics is shared by all viewers. Moreover, users all see the same view of the messages in a topic, either in chronological or reverse chronological order. In some cases, messages are sorted into threads, with chronological

presentation of threads, and chronological presentation within threads. In some cases, the system will keep track of which messages a user has previously viewed, so that it can highlight the unread messages, but that is the only personalization of how people view the messages.

- No summarization. There are no structural features that identify relations between messages other than the "replies-to" relation. In particular, there are no mechanisms that flag certain messages as summaries of others and no special support for processes that produce such summaries.

The threaded conversation design has proven very flexible and adaptable to many different styles of use by different kinds of user populations. Still, it seems plausible that other designs might be useful, at least for some types of uses.

Recently, some systems that have sizable user bases have broken this mold, in small or large ways. We are also aware of several research prototypes that are explicitly trying to break this mold, and we expect that there are others of which we are not yet aware.

Some Examples

- LiveJournal [1]. Subscribe to "journals", which may be people-centered rather than topical. The view is ego-centric rather than homogenous—

what you see for context is not necessarily what other readers see.

- Slashdot [2]. Very high level topics are persistent (e.g., “Linux”), but topics for partitioning messages are ephemeral: conversations revolve around individual news stories. Partially non-homogenous views exist because people can set different thresholds based upon ratings, sort posts differently, or view as threaded/not. No summarization, but group process exists for identifying best messages via moderation system.
- Wikipedia [3] and everything2 [4]. New fundamental entity: the editable node. No topic partitioning—text search and following hyperlinks are the only means of navigation. Nodes are editable by anyone. No threading via “responses” to nodes. All communication happens by editing the texts of nodes (or by private messaging).

Research and Development Efforts

Researchers are also starting to explore and experiment systematically with new features that break or extend elements of the threaded conversation model. For example CommunityLab is exploring the integration of recommender systems in conversation spaces and I-DIAG [5] is exploring methods of distilling large conversations.

The major challenges in this area are to

1. create innovative design elements and combinations thereof
2. refine them so that they are usable and useful at least in some use contexts,
3. characterize which design choices are appropriate in which contexts.

WORKSHOP GOALS

This workshop will bring together researchers who are exploring asynchronous communication systems that go beyond the threaded conversation paradigm on one or more dimensions. At the workshop we will compare notes and try to identify dimensions of a larger design space that encompasses all or most of the design innovations that we can identify.

Some questions that we will be addressing include:

- What innovative design elements and combinations of design elements have been used or are under development?
- What are some promising design elements that have not yet been explored?

- What are the various contexts in which asynchronous communication occurs?
- Which design choices are appropriate in those contexts?
- What theoretical lenses are likely to provide meaningful insights?

Workshop participants will all submit position papers that describe either a widely-deployed system with which they are familiar or a novel design, even if it is still on the drawing board. These descriptions will help us gain a unified understanding of what design elements exist and in what contexts they have been successful. Online discussions of these position papers before the workshop will enable us to come to the workshop with a common understanding of what has previously been accomplished in this area. Further discussion of these systems will occur during the morning of the one-day workshop.

The remainder of the workshop will be devoted to synthesis. Working groups will analyze and brainstorm on key elements of the design space discovered through the papers and presentations. The working groups will then present their findings to the whole group, and the key design features and most important open questions in each area will be captured in a Wiki. After the workshop, this summary document will become the first draft of a document that can be collaboratively edited by the participants after the workshop. Depending on the energy the workshop generates and the quality of the outputs, we may try to use it as a launching point for a special issue/section of a magazine or journal such as CACM, TOCHI, or the Journal of Computer Mediated Communication.

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