

An Online Environment for Academics and Professionals to Locate Collaborators and Refine Ideas

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Abstract—Academic and industry conferences have been used for years as a key method for sharing knowledge and ideas among academics and professionals in specific areas of study. Conferences provide a rare opportunity for people to form relationships with colleagues around the world, and not only to exchange ideas within the context of formal presentations, but to get to know one another informally through other conference activities such as dinners and receptions.

While conferences do indeed have tremendous value and contribute substantially to the growth of research in their fields, we have identified some ways that we can use technology to improve the impact of conferences on research and results, to make better use of the time between conferences, and to allow more involvement from people who cannot attend conferences.

In this paper, we describe a community-based Web site for academics and professionals, and to be rolled out first for an international e-learning association.

Index Terms—e-learning, collaboration, conferences, web technology, social networking, professional networking

I. INTRODUCTION

Academic and industry conferences have been used for years as a key method for sharing knowledge and ideas among academics and professionals in specific areas of study. Conferences provide a rare opportunity for people to form relationships with colleagues from around the world, and not only to exchange ideas within the context of formal presentations, but to get to know one another informally through other conference activities such as dinners and receptions. Relationships formed at conferences may lead to future collaboration well beyond the conference itself, and to further the field of study. Thus the role of conferences is, ideally, to improve the relevant field not solely during the conference duration, but after the conference and into the future.

While conferences do indeed have tremendous value and contribute substantially to the growth of research in their fields, in today's world we have identified some ways that we can use technology to improve the impact of conferences on research and results, to make better use of the time between conferences, and to allow more involvement from people who cannot attend conferences.

In the remainder of this paper, we describe the detailed reasons for this project, describe the features of our

community-based Web site for academics and professionals, and discuss future extensions.

II. MOTIVATION, PART I: IMPROVING IN-CONFERENCE AND BETWEEN-CONFERENCE NETWORKING AND COLLABORATION

Conferences certainly have their value when it comes to academic and professional collaboration; however, they also have a few limitations:

- Many people who would contribute greatly cannot attend some or all conferences—funding is often limited, and travel to conferences can be expensive; also, schedules do not always allow people to attend all of the conferences they wish to attend.
- For those who do attend, there may be missed opportunities in terms of meeting people with common interests. Attendees can, and do, read the conference program to select which talks they would like to attend, but as we discuss below, there are likely more people that attendees may not know they have something in common with—for example, if a speaker giving a talk about simulations also does research on mobile learning, that may not be clear to an attendee who was interested in mobile learning, and a connection opportunity would be missed.
- Even in the best of cases, conference time is always limited and rushed; there's simply not enough time, as a practical matter, for colleagues to meet and discuss everything they would like, both with previous colleagues and new ones.
- People have the best of intentions regarding continuing collaborative work after a conference and into the future; but in practice, often "real life" takes over and people do not end up following up with each other post-conference, again resulting in a missed opportunity.

In today's world, "professional" social networking sites such as LinkedIn (www.linkedin.com) abound and are gaining popularity. Further, instant-communications sites such as Twitter (www.twitter.com) are also gaining popularity, as a way to allow regular, inexpensive communication by people around the world. These sites and other similar technologies have helped demonstrate people's interest in further communication, but are general in nature.

In order to improve the value of conferences and between-conference time, toward a stronger academic and professional community structure, we have begun the

design of a Web network that combines social networking with specific information such as people's academic research interests, helps people find others with similar interests, and provides information and support via a library of papers, videos, and demonstrations of products.

III. MOTIVATION, PART II: IMPROVING THE E-LEARNING FIELD

E-learning as a field has, particularly over the past several years, become very broad and also very fragmented, with numerous subareas. These subareas often could share more knowledge than they do in practice: for example, academics who study the use of e-learning in university classrooms rarely interact with practitioners who design e-learning products for job performance improvement of corporate employees. The e-learning industry has a variety of conferences: some are broad in scope and some more specific; some are more focused on high-level ideas; and many focused on technology specifically. Overall, e-learning commands huge interest internationally, and is still a rapidly-growing and exploding field.

However, the field of e-learning has met with fairly limited success relative to its expectations and possibilities. People across subareas and countries remain excited about e-learning and its potential but much of that potential remains unrealized. Conferences generate great discussions, but often the discussion threads die out after the conferences, as people return to their real jobs with little continuity. People do learn from each other to some degree, but more in fits and starts than in a continuous fashion.

These factors, plus the fact that e-learning as a field may want to practice what it preaches in terms of innovative uses of the Web and mobile devices for collaboration, make the field of e-learning the ideal candidate for the first site to try to improve collaboration within a field of study.

The features and methodology we describe in this paper can theoretically apply to any area; for the reasons above, we are rolling out the first version in our own field, e-learning, via the International E-learning Association (IELA, www.ielassoc.org). In the following sections, we define the IELA site design components.

IV. SITE DESCRIPTION AND KEY FEATURES

The new site, to be first implemented for the IELA, includes a variety of components which all work together in service of the high-level goals of furthering collaboration and communication among academics and professionals in the e-learning field. Since the IELA is a membership organization, members can opt to provide personal information on their interests and ways they may be contacted by other members. This personal information is crucial in order for members to make connections, though of course the option remains for members who prefer to be private to remain that way.

Key features of this site include:

- A library of papers, videos and audios (some of which are from IELA-sponsored conferences), and papers and articles, which are indexed so they can easily be found, and have reviews and comments associated with them.

- A list and descriptions of upcoming events in the field, including conferences, seminars, presentations, and other related events, and including both in-person and online events. Associated with each events, where applicable, is a list of IELA members (with links for more information on the people and their interests and contact information) showing who's attending the event.
- Live and recorded Webcasts of news, events, and discussions in the field. Recorded events are archived in the library described in the first bullet point above, and are augmented with comments and appropriate indexing terms.
- A networking section to connect with people with similar interests; this section lets people fill out a profile with their interests, then search for others with similar interests and explore their work (for whatever work and links are included in the IELA site), or (if the other person has allowed it) contact the person directly. People can be located using keywords, by name, by location, or by organization.
- A way for members to locate other members, or other members with specific interests, from a specific organization, etc., who will be attending a particular upcoming event.
- A single place to get in touch with people in multiple ways—such as phone, email, instant messaging and text messaging—for those who want to be contacted.
- Discussion forums to provide an additional way for members to interact.
- Comments and reviews are linked directly to the items they relate to, and all reviews and discussions are set up to be easily found in a search.

With a variety of features that are linked together and all designed to serve the goals of communication, collaboration, and furthering ideas and knowledge in the field, the site described above aims to use technology to improve connections between people, by employing design principles that come from research in the fields of e-learning and cognitive psychology (e.g., Schank, 1977; Schank, 1980; Guralnick, 1994; Guralnick, 2000).

V. SITE DESIGN AND THE ROLE OF TECHNOLOGY

One of the crucial points about the design of this site is that it is based on specific design goals, which in turn came from an analysis of the types of tasks that users may need to perform. As a result of this rigorous design process, the features above are closely linked together rather than simply compiled into a site. This does require more effort, on both the design and implementation sides, than simply linking to and using existing sites such as Twitter. We suggest here that this level of customization and additional work is absolutely crucial to the success of the site, that it is not sufficient to simply take existing technologies and compile them into one place. Instead, we have followed a goal-based methodology for the site design and interface, as defined in Guralnick (2003); Guralnick (2007); Norman (1988); and Cooper, Reimann, and Cronin (2007).

VI. IMPLICATIONS, FUTURE ADDITIONS, AND OTHER USES

This site is indeed a first release, and will benefit tremendously from the feedback from its member community of users. Our philosophy here, from a

scientific standpoint, is to generate and test; that is, we are creating this site based on an analysis of the goals of the users, and are producing this site and rolling it out to those users, after a prototype phase which will undergo usability testing, and after substantial technical testing. It will be instructive to study (and to report the results of the study in the future) the site in use and the users' view of it. Data will be tracked in the aggregate form to help us understand usage (but not at the level of each person, in order to protect users' privacy).

At a future point, changes and extensions will certainly be designed and implemented, and the site's design and methodology may well be adapted to other fields as well.

VII. CONCLUSION

Technology has the ability to support and aid in collaboration in many ways, from creating social networks to providing a knowledge base to supporting direct communication between people. Oftentimes, however, each technical piece is separate, which fails to provide the seamless usage, and resultant efficiency and ease-of-use, than an integrated system can provide. Academics and professionals, who tend to network at conferences and form connections there, are a group that could tremendously benefit from an inter-conference networking and collaboration suite, one that ties together conferences, journals, and people, with the goals of improving a particular field of study. Such an online system can help people maintain contact and project work between in-person meetings and conferences, and can provide a way to include people for whom finances or time prevent their participation in some conferences. The networking and collaboration site we have described in this paper has the potential to influence the way people collaborate, and to widen the group of people whose work can impact a field of study. By beginning with the field of e-learning for the first implementation of this suite, we hope to see an impact and also to gather data for the next version and for expansion into other fields of study.

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