Ethnochat: An Instant Messenger Program for Ethnography

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Abstract
This paper describes the design of Ethnochat, an instant messaging (IM) program built for ethnographers to conduct computer-mediated, semi-structured or unstructured interviews. To our knowledge, this is the first program of its kind. Ethnographic techniques are becoming a common method to investigate social interactions and settings in digital contexts, and this creates a demand for a proper tool with which ethnographers can practice their craft. This paper details the design and articulates how Ethnochat will have significant implications for HCI practice.

Keywords
Instant Messaging, Ethnography, Online Interviews, Evaluation Methods

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction
Instant Messaging (IM) programs are powerful and unique tools for conducting ethnographic interviews. Unfortunately, to our knowledge, there are no clients designed specifically for online ethnography. Qualitative analysis software, such as MAXQDA,
ATLAS.ti and NVivo boast powerful annotation and analysis tools. Thus, Ethnochat, a work-in-progress, is not meant to be a replacement but rather an open-source, user-friendly complement to these programs that is filling a gap for researchers who conduct IM interviews. Our hope is that: (1) Programmers will build a rich and diverse set of plugins or extensions and, (2) Ethnochat will someday be able to export seamlessly to these existing programs. In the fall of 2007, one of the authors (Zalinger) conducted a three-month long, informal ethnographic study of participants’ feelings about online dating, and all of the interviews were done via IM. Thus, this paper draws upon that first-hand knowledge of what an ethnographer needs to conduct thorough interviews using IM. Rather than having multiple windows and programs open at once, Ethnochat will act as a “command center” for everything the interviewer needs during the interview. Aside from the typical interview screen, the researcher can invoke separate panels inside Ethnochat for research questions, field notes and tagging. All notes and tags can be linked to any text that is highlighted in the transcript. Rather than copying and pasting questions, they can populate the chat field with one click, which is vital since interviews are fluid events. Also, tagged data can be viewed across interviews. For example, if you make a tag for “Happy,” you will be able to view every instance of that tag across one or all interviews, thus making it easier to visualize connections. The goal of Ethnochat is to create a “one-stop shopping” experience for ethnographers. This paper will detail what we feel are the most unique features of Ethnochat that make it powerful and worth building. We believe that interviewing in person or online is an art form. Thus, we feel Ethnochat might have more in common with creative software like Photoshop, rather than merely an IM program. Photoshop is designed to give photographers a creative canvass upon which they can perfect their craft. Likewise, we see Ethnochat as both academic and creative software.

Current State of Software
Although Ethnochat is currently in prototype form, we have implemented much of the functionality that is discussed in this paper. Currently, Ethnochat allows for (1) chatting with automatic logging to a file, (2) creation and management of interview questions with one-click question copying into the chat window, (3) plug-in IM network service support, (4) cut-copy-paste to/from the question window and the conversation window and (5) tag creation and management.

Related Research
This paper is more concerned with describing a tool rather than engaging in debates over the pros and cons of interviewing with IM. Still, it is important to note previous work because it largely validates the idea of using IM as an ethnographic tool. There is still ongoing debate in the CHI community regarding what exactly ethnography is and how to use it effectively [2]. Regardless, recent research at CHI seems to suggest that researchers are taking advantage of ethnographic techniques—whether alone or blended with other methods—(see [5, 6, 9] for a variety of interesting projects). To our knowledge, only one other IM client was built for interviewing, but it was used for automated, structured interviews, not semi- or unstructured interviews [8]. Other research seems to suggest that IM interviews are not only viable but offer many advantages over traditional interviews [3, 7].
We believe instant messenger interviews will become a more widely used practice in ethnographic research, whether used as the sole method or in combination with other techniques. Thus, Ethnochat has more in common with programs like Photoshop, a tool to help artists be creative, or Zotero, a powerful bibliographic extension for Firefox that was built by academics, for academics [10]. Urban planning researcher Giovanni Attili wrote, "New technologies transform ethnographic analysis into a different communicative tool that offers a surplus of meanings and interpretations. It does not exhaust itself. It is not univocally determined. It never finds a precise answer. Each view finds another richness" [1]. Thus, we hope to provide ethnographers with a new tool to harness the richness of IM interviews.

**Motivation and Background**
When Zalinger conducted his informal study on the topic of online dating, all the interviews were done via IM with one goal being that the form of the technology would allow for more open disclosure by the participants. The interviews were successful in that participants were open and willing to provide details of their online behaviors. The project produced a body of rich data, however, the inadequacy of various IM clients used and the messiness of copying and pasting sections into Word provided the motivation to begin work on designing Ethnochat in the spring of 2008.

**Ethnochat Design**

**Multi-Protocol**
Ethnochat is built in Java allowing it to run across multiple platforms. We plan to distribute the code as an open-source project, enabling anyone to download the source code and redesign the program to fit his or her needs. Ethnochat is a multi-protocol IM client. The goal is to get it to connect with as many networks as possible (e.g., AIM, Yahoo!, Google, Jabber, MSN). Others have dealt with the issue of connecting to multiple networks when conducting IM interviews [7]. When Zalinger conducted ethnographic interviews using the Adium client for the Mac OS, it worked well with most major IM networks. However, Microsoft’s MSN network always seemed to be an obstacle. This led to installing MSN Messenger. Besides the hassle of extra installed programs, the other problem was that MSN Messenger formatted data in a different way, which made copying and pasting into Microsoft Word an awkward, time-consuming issue. This is why Ethnochat will work with all major networks. When conducting IM interviews it is vital that the researchers’ client program works seamlessly with whatever networks their participants prefer.

**Add-Ons**
Like many extensible, open-source projects, we envision Ethnochat as the center of a vibrant community of programmers who create add-ons to support ethnographers. For example, a hypothetical extension for Ethnochat could be called Ethno-timeline, which could be used to help ethnographers visualize their data temporally.

**Modular Design**
Ethnochat is intended to give the interviewer the most flexible working space possible. The online interview is a fluid process, and the researcher must have a workspace that is tailored to their needs. Photoshop is a great example in which the main "canvas" is completely customizable. Photoshop users can show and hide whatever windows they want to see. Similarly,
ethnographers need their own "canvass," in which all of their tools are ready at a click. Instead of using a variety of programs, users can have their main interview screen, as well as panels for their research questions, tags and notes. Users will be able to drag the panels in whatever configuration they choose. The point is to give researchers a true canvass in order to practice the art of IM ethnographic interviewing.

Tagging
We believe one of the most unique features of Ethnochat is the ability to tag data. Tagging allows users to mark their data with textual flags, which enables easier searching and organization. Ethnochat enables researchers to tag their data inside the interview window either during or after an interview. A user will highlight a specific line(s) directly from the interview window. Once the text is highlighted, the user simply clicks whatever tag is appropriate, or he or she can add a new one. The data and the tag are now linked permanently, unless the user specifies otherwise. All roads lead to Word, or at least some type of word processor. When ethnographers begin to write, they will undoubtedly chop up their data and move it around as their ideas coalesce and organize around various themes. This cut-and-paste phase can lead writers to forget from where their data originated. Kazmer and Xie echoed a similar problem of keeping IM transcripts complete and in order [4]. Ethnochat solves this problem. In Ethnochat, once you tag any piece of data, it is linked to that tag.

Tag Sorting and Cloud
Keeping with the theme of Photoshop, just like any artist, academics work in their own, creative ways. Thus, users will be able to generate a "tag cloud," which is an easy and useful way to visualize which tags have the most weight. The ability to sort tags is yet another important feature of Ethnochat. Users will be able to choose one or more tags and then choose which interview they would like to see sorted by tag data. This feature could prove especially useful as it allows for yet another way to visualize their data and, hopefully, illuminate patterns otherwise difficult to see.

Notes
Whether during or just after, it is essential to take field notes on each interview. Ethnochat’s “Notes” panel allows for quick notes while interviewing or afterwards.
**Search**
Users of the Mac OS Spotlight will be familiar with the notion of a comprehensive search function. Ethnochat will include a search feature that will index across all interviews and all data. This allows the user to quickly find, say, a specific line from an interview, without having multiple documents for each interview. In other words, all your data is quickly accessible and centralized.

**One-Click Questions**
As we have stated, interviews are fluid. The ethnographer needs to pay attention to what the participant is saying and should not be distracted by tedious chores like cutting and pasting questions into the interview. Like a driver reaching into the back seat for a CD case, this can be fatal for the interview. The ethnographer cannot get lost in a momentary Word or browser ordeal. Thus, although it may seem trivial, it is vital that Ethnochat also include a “One-Click Question” function. Similar to having radio volume controls on the steering wheel of your car, with one-click, the interviewer simply clicks a question, and it populates the interview panel. It might seem simple, but we believe this feature will save time and maybe even embarrassment especially if an ethnographer accidentally pastes the wrong question, personal or inappropriate data into the interview panel. Flow is important, but we see this as having to do mostly with the skill of the IM interviewer. The ethnographer must be able to “feel” the ebb and flow of a conversation. Ethnochat’s one-click question button can help to smooth out awkward spots.

**Future Evaluation and Research**
Once Ethnochat graduates from phase one, we will conduct a small pilot study using graduate students who are heavy users of IM clients and have experience in ethnography. These participants will use Ethnochat as their primary IM client for a few weeks, and they will be asked to conduct “fake” interviews with each other to test each of the specific functions. When the pilot is complete, the authors will conduct semi-structured interviews with the students (via Ethnochat, of course) to evaluate student perspectives on what works and what does not. In addition to evaluation, there are many features that we hope to implement in future versions:

- Ethnochat allows for cut-copy-paste, but we hope to implement importing/exporting of full transcripts from Word and analysis programs like MAXQDA, ATLAS.ti and NVivo. However, we realize the extent to which it will be possible to provide integration with other programs depends upon the degree of interoperability allowed by those programs.

- Photoshop and other creative software packages contain "libraries" of commonly used objects that make inserting media into their projects much more user-friendly. We want Ethnochat to contain an "Insert" panel. The reason for this is because not all interviews will be purely based on questions [4]. It’s possible that a researcher will want to show a participant images, video or audio. With a click, for example, a researcher could insert a picture into the main interview panel, thus eliminating the need to send a file via IM or email or even...
an external link. Again, this feature will depend upon what mechanisms are supported by each IM service.

- Finally, Ethnochat will feature an Auto-Backup system. When the user closes the program, they will be prompted to backup their data to an external source, for example, an external drive or ftp site.

**Implications for HCI**

IM interviewing with Ethnochat may have significant implications for the HCI community. First, time and money are constant challenges for academic research projects, especially for long-term ethnographic interviewing. In contrast, as others have noted, IM interviewing is cheap, convenient and self-transcribing. Second, as more and more people grow accustomed to communicating via IM, we argue that conducting interviews via IM will feel more natural and routine. Third and most important, all creative and intellectual work is fundamentally about making connections, linking relationships, connecting the dots, so to speak. Poets connect words and make beautiful poems. Programmers connect code and produce elegant software. Interdisciplinary academics unite diverse ideas and forge new insights. Ethnochat is an attempt to take advantage of the new ways people communicate everyday and help ethnographers connect new dots and make sense of our rapidly changing media ecology. New ways of communicating demand new ways of researching, which demand new tools. We hope Ethnochat will become not just a robust tool for HCI research but part of a larger conversation about how to make new academic tools for new media. This is a tool that does not exist and is long overdue. The more digital our world becomes, the more important it is for ethnographers to take advantage of the potential of new technology to help them gain new insights into why people do what they do.

**References**


