Recapturing What Was Lost:
Re-emphasizing Locality in Social Interactions on the Net

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Abstract

Locality, the impact of geography in physical space on social interactions in virtual space, is resurfacing as an important attribute in the successful design and maintenance of Web sites and online communities. This paper briefly traces the history of this attribute in computer-mediated communication system experience over the past 15 years and offers a critical survey of contemporary localization efforts online. A set of fundamental design dimensions and a preliminary framework for examining locality on the Web are developed from real examples. This exploratory work forms the foundation for future empirical work to better understand and support locality for Net users' online interactions.

1 Introduction

Locality, the impact of geography in physical space on social interactions in virtual space, is resurfacing as an important attribute in the successful design and maintenance of Web sites and online communities. Recent developments, such as the beta release of Google Local (Figure 1), highlight the trend toward tighter integration of our boundless virtual lives with our geographically rooted ones. However, this drive is not novel and the current forms of integration being offered are often less rich than those which we had previously. This paper will briefly trace the history of this attribute in computer-mediated communication (CMC) system experience over the past 15 years and provide a critical survey of localization mechanisms in use today.

Figure 1: Localizing a support group search *(www.google.com).*

2 Locality in CMC: A Brief History

In the earliest days of online communities, locality was a given – community members were either on the same closed network (e.g., a company bulletin board) or regionally proximal (e.g., a dialup hobbyist bulletin board system (BBS)). With the popular ascendancy of the Internet in the early 1990's, newsgroups, MUDs, IRC channels, and the

like opened up new CMC possibilities, each taking advantage of this truly global network. The popular rhetoric shifted to reflect these new possibilities (e.g., Rheingold, 1993) – free from the shackles of geography at last! Much of the excitement surrounding these new communication venues centered on the fluidity of identity in these online spaces (Turkle, 1995); one significant component of which was the decreasing importance of where one was from. One could be an equally valued participant in an online community whether she was from a rural Montana farm or Beijing.

In the excitement of this globalizing potential, much of the utility of locality was ignored in the headlong rush to pursue less-geographically tied online interactions (Lutters & Ackerman, 2003). The community building and sustaining aspects of the pizza parties on the WELL (Rheingold, 1993), as one example, were trivialized as old fashioned in the age of the Web. As the hardware and software infrastructure for online communities developed, evolved, and crystallized, support for local interaction was limited, frustrated, or prohibited.

One related movement, unfolding during this same time period, was community networking (Schuler, 1996). This attempted to augment pre-existing physical communities with virtual counterparts. One of the most studied of these early physi-virtual communities was the Blacksburg Electronic Village, a digital facsimile of Virginia Tech's college town (Caroll & Rosson, 1996; Cohill & Kavanaugh, 2000). While these efforts clearly emphasized geography, they were more concerned about better supporting the pre-existing physical relationships than fostering new CMC-based relations and nurturing these resulting non-physical collectivities (the emerging digital *third places* (Oldenburg, 1989)). As time passed, many of the grand community networking visions have faded, replaced instead by "wireless city" efforts, providing anyplace-anytime connectivity to its citizenry, though not necessarily any support for online community.

In the past few years, locality has returned to the online community design palette, albeit in a strikingly different form. Locality is now a means of *personalization*, users entering their zip code for local news, weather and reviews, and *filtering*, shifting through online dating sites or retail auction houses for "commutably close" hits.

3   Motivation and Method

This paper provides a survey and critique of contemporary localization efforts for online communities and different Web sites. It seeks to capture the dimensions that have changed since the pre-Net work on locality was completed. It updates our understanding of the design space (Kim, 2000) with locality's unique constraints and affordances (Lutters & Ackerman, 2003), in particular examining elements of aggregation supported (e.g., club, neighborhood, zip code, city/suburb). It also addresses the underlying technical mechanisms for achieving locality support. This is all in the hope of moving beyond the current experience of locality being a tacky targeted marketing gimmick and returning to the rich local experiences that have been lost in our digital forums.

The findings presented in this paper are not result of a rigorous empirical evaluation; they are rather the result of a thoughtful description and critique of how locality is handled by over fifty different Web sites and online communities that we, the authors, frequent in our daily lives. From this we derive a set of fundamental dimensions and a preliminary framework for examining locality on the Web today. This will form the foundation for future empirical work.

Our survey was international, but for illustration purposes we have chosen a specific location for examples in this paper. Given the location of our academic institution, we chose Baltimore, MD / Washington, DC as our metropolitan region and our college towns of Arbutus and Catonsville as our immediate neighborhood.

4   Locality Matters

While the boundary-less, global experience of the Internet is one of its most compelling attributes, most of our lived experience remains tightly bound by our local geography. To better integrate our virtual and physical lives, most users personalize experiences and filter information according to their location in physical space. This customization requires extra effort from the user. In the next section we will discuss definitions of "local" and motivations to do additional work to localize one's online interactions.

4.1   Fluid Definitions of Locality

The definition of locality is not absolute, it is contextual. At times local can mean one's street, neighbourhood, ZIP code aggregation, town, city, metropolitan region, state, province, nation, or even continent. Studying its use across our various sites, there was not a clear pattern as to when the term mapped to a specific unit of analysis.

Lutters and Ackerman (2003) used the term locality to mean "geographical locality," referring to a partitioning of a metropolitan region. In their study of a local dial-up BBS for Disneyland enthusiasts, almost all participants were a "local call" distance from the theme park, as defined by the local telephone company. Calling from within this region precluded expensive toll surcharges that would have accrued if they had dialled in from elsewhere. This local concentration had useful consequences for the community staying focused (*locality of focus*), how people made sense of their world and their interactions (*locality of reference*), and in creating new interactions (*locality of action*).

Liu, Day, Sun, & Wang (2002) studied the relationship between Taiwanese users' behavior and the "globalness" of Internet, revealing that "the importance, significance, and relevance of the global are not as great as that of the local." Yet, at the same time, they found it was hard to define "globalness" or to answer "how local is local?" (Sreberny-Mohammadi, 1996). Additional research is required to identify patterns of fit between levels of locality and user's task or information needs.

4.2   Reasons to Go Local

As mentioned above, localizing one's online experiences requires extra effort. An early research question in this project was the motivation for localizing an interaction – when was it worthwhile? Why? Under what conditions? What were the advantages?

The first reason we uncovered was obvious: when using the Net to augment their daily routines in physical space, people only need information bounded by their local geography. This includes a host of activities, including finding sales circulars to their local grocery or department stores. To do so they can either choose the physical store location closest to their home or work (e.g., www.foodlion.com or www.giantfood.com) or enter their zip code (www.safeway.com). They follow similar processes to find their local TV schedule (e.g., www.tvguide.com/listings, tv.yahoo.com, or www.zap2it.com), movie show times in the nearby theatres (e.g., www.imdb.com/showtimes or movies.yahoo.com), the latest weather information (e.g., www.accuweather.com or www.weather.com), driving directions (www.mapquest.com), traffic updates (www.traffic.com), the cheapest local gas price (www.gaspricewatch.com), and local restaurants with different styles of cuisines (www.restaurants.com).

A second reason of localizing information online is less obvious than the first one. This involves finding local social gatherings of national or international groups that they can physically attend. Many online medical support communities, such as American Cancer Society (www.cancer.org), are good examples of this. Another genre is online matchmaking sites. When online dating services first began, enthusiasm built around the notion that singles were no longer bound by local geography. One did not have to select solely from singles in the limited immediate local area, but from across the country and internationally – greatly enlarging the pool of eligible candidates. However, almost all current online dating Web sites (e.g., www.match.com, personals.yahoo.com, or www.perfectmatch.com) request zip code information when members register so that their searches can be tailored to the local singles that they can conveniently meet face-to-face.

5   Supporting Locality

Localizing one's online experiences is accomplished via multiple user interface approaches, typified in the multi-method approach of Restaurants.com (Figure 2). Each method has different effects on the user experience. A second fundamental research question raised by this project regarded the fit between these techniques and the experience the user desired. Specifically, what was the impact of a particular method on the perceived success of the localizing experience? Simply put, did the extra work get them the extra benefit that they had anticipated? To start investigating this question, we began constructing a simple taxonomy of support methods, introduced below.
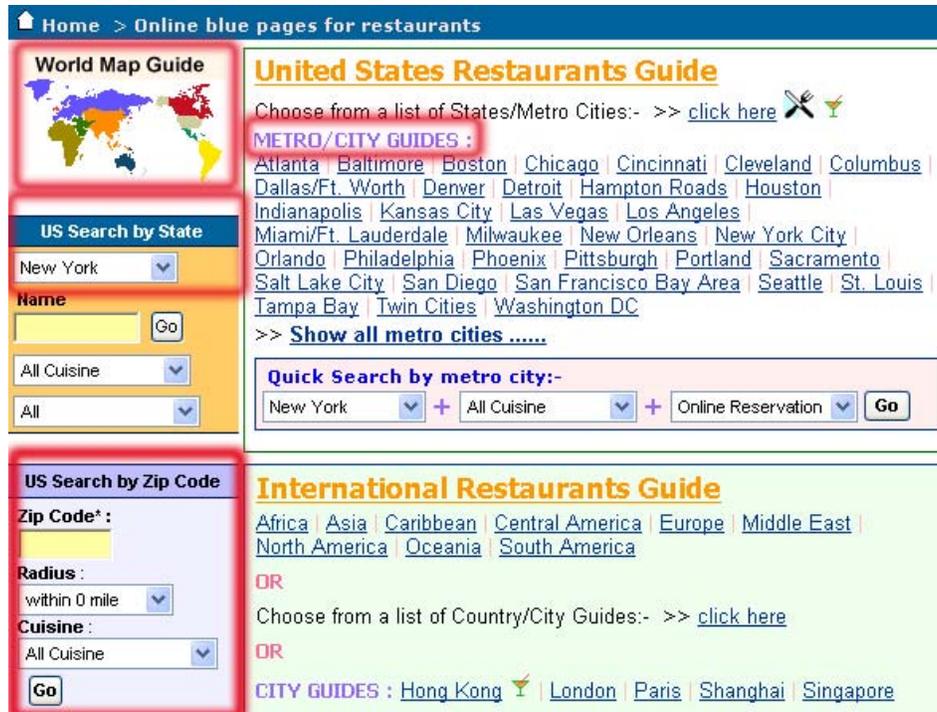
Figure 2: Diverse methods of localization *(www.restaurants.com)*, emphasis added.

5.1 Domain Names

The most direct means of indicating locality is via domain names themselves. Examples of this include government Web sites such as www.maryland.gov and www.dc.gov as well as private sites such as www.washington.org (maintained by the "Washington, DC Convention and Tourism Corporation"). However, many obvious place names are already taken (e.g., www.baltimore.com) and others may be of dubious quality (www.baltimorecity.com). Knowing that many people's first impulse to get local information is to enter the URL directly (Iivonen & White, 2001), some Web sites exploit this behavior by deliberately selecting logical place names to attract Net traffic to generate advertisement revenue (e.g., www.washingtondc.com).

5.2 ZIP Code

Currently the most common way to indicate locality on the Internet is through zip code aggregation. This method, targeting the super-neighborhood level, is easy to implement, easy to use, and familiar to most North American users.

An extreme example that the authors encountered during the study was in the Hot Deal Forum of www.fatwallet.com at the end of January 2005. People in this forum usually share information on bargains for different products. After one shopper posted an item deal, another user asked them "where are you? Is this national?" (They desired to localize this information – to find out whether the deal was nationally applicable or only local to the initial poster.) A third person reiterated the deal and answered the second poster by saying "BTW, my Zip code is IL 61821." In this example, instead of specifying the actual city name, the third person spontaneously chose to use the zip code. The assumption here seemed to be that the second person would need to input the zip code to find local store information anyway, so the actual zip code might actually make more sense than the city name that would be more commonly used in conversation.

Despite its near universal implementation, ZIP code aggregation has significant drawbacks. First, one cannot logically deduce zip codes from geography or common maps (www.usps.com does provide zip code lookup given a correct street address). Users tend to know their own zip code, but rarely the zip codes of their favorite stores. Users

who live on the boundary of zip codes or in oddly districted code areas can encounter problems. The super-neighborhood may frequently be the wrong level of locality for a desired experience. Lastly, the zip code is viewed as cold and impersonal ("Do I feel like 21250?"), bereft of much of the personal color that place names afford.

A typical extension of the zip code method, zip code plus radius, addresses some of these early concerns by using the users' zip code as a starting place and then radiating out from there using a distance metric instead of hopping between other zip codes. Restaurants.com (Figure 2) is one example of this method.

5.3   Selection

Another common method of localizing an online experience is by selecting from a pre-defined list of locations, usually metropolitan regions. For example, users choose from a list of cities to see general local information (local.msn.com), the latest traffic information (www.traffic.com), or find entertainment guides for a certain city (www.digitalcity.com). Pre-defined maps are another method to access location-dependent information (e.g., www.gasbuddy.com and www.restaurant.com). Users of Restaurant.com (Figure 2) can click on the map on the home page to find restaurants in Europe, Africa, Asia, Canada, US, Mexico & Central American, Australia, and Middle East. After clicking on the map, users can either use the directory list (such as for Asia) or another clickable map (such as Canada) to choose cities and find restaurants in the area.

5.4   Special Forums

Locality can also be supported in a local forum or BBS within a larger site. A very popular Chinese Web site, www.wenxuecity.com, is such an example. The site offers specific bulletin boards for Chinese people in different countries or areas, which include: North America, Europe, UK, France, Australia & New Zealand, Japan, Singapore, German, Hong Kong, and Korea. Within each board, users post or ask for location sensitive information, such as looking for housing, medical information, immigration help, financial aid, travel information, language learning, safety tips, local food recipe, or shopping information. Craiglist (www.craiglist.org), a San Francisco Bay area online community, allows users to select a US metropolitan region to access local community, housing, jobs, personals, and for sale information.

5.5   Illustrative Examples

The following are three particular sites that implement locality support in engaging manners.

The first example is Circuitcity.com (www.circuitcity.com), which intentionally asks the customers to provide city names when they review the products that the store carries (Figure 3). In addition to a review title, the header of every customer review includes location information as part of reviewer as part of their identity (e.g., "Reviewer: YO from Baltimore MD"), if the reviewer provides it. It is unclear if or how this location information affects other customer's purchasing behavior. This warrants further examination.

Figure 3: Localizing information in a national forum *(www.circuitcity.com).*

The second example is the Mom-to-Mom Ratings message board of the National Membership Organization for Moms (www.clubmom.com). Members must specify their zip code when they register, and most website content is customized to their location (e.g., special events, entertainment schedules, store listings). In additional, they are limited to rating only businesses in their immediate neighbourhood (Figure 4). ClubMom offers the following rationale:

> "When it comes to your community, no one knows the people and places to put on a mom's "A-list" better than moms like you. When you submit Mom-to-Mom Ratings, you're helping moms *who live near you* [emphasis added] make better decisions about how and where to spend their money. And other moms' submissions can do the same for you!"

Further questions raised by this interesting approach are: is it true that only local people provide valuable local information? Do local people really know the local area well? Is there any value to the opinions of "outsiders"? Is not it true that sometimes local people would avoid going to touristy places that visitors patron? Should there be another option to give moms the opportunity to rate places outside their immediate location?

Figure 4: Limiting customer reviews to businesses in their immediate neighborhood *(www.clubmom.com).*

The third example involves efforts to localize search engine results. Many sites have recently begun offering similar services or are piloting them (e.g., eBay or Yahoo). We have chosen Google's beta release of their local search (Figure 1) as they have opted for the most fluid user-defined notion of location of the set. Their results are situated in physical space via a map window (similar to those used by travel sites such as www.priceline.com). The users can click on any point of the map to re-center the map. For example, the search results from the search in Figure 1 are presented in Figure 5 below.

Figure 5: Situating search results in physical space *(www.google.com)*.

6   Conclusions

This paper has examined the concept of locality on web sites and in online communities. The concept was first framed within in its historical trajectory and then developed by exploring contemporary motivations and support techniques. As Web sites and online communities start to re-emphasize locality, Internet users now routinely personalize experiences or filter information based on their physical locations.

This preliminary work has laid a foundation for future empirical work by starting to map out the design space including contextual definitions, user motivations, and technical delivery mechanisms. It has also raised myriad new research questions: how satisfied are users with current locality support? Are these attempts enough to restore the values identified a decade ago? Are the means of provision appropriate (e.g., effectiveness of reducing locality to a zip code)? When do they prefer reviews from local people (e.g., www.clubmom.com) and when they do not? When should local experiences and information be truly local?

Our hope is that as these and other related research questions are empirically evaluated, a set of general locality measures and metrics can be developed. These would then inform the design and evaluation of locality support in a manner similar to how usability engineering (e.g., Nielsen, 1994) and sociability (e.g., Preece, 2000) factors respectively guide interface design and social experiences today. Ultimately this effort will provide more seamless integration of our physical and virtual lives.

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