

Web Presence of Small Businesses in a Residential Community

Community Informatics Perspectives on Local Commercial Information

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Abstract: This study analyzes the nature of information on the web about restaurants, bars, stores, real estate agencies and other small businesses in a residential community in the suburbs of Tokyo. All the businesses in the area near a train station are examined in terms of what information on each of them is available on the Internet, what differences are observed in amounts and contents of information according to the characteristics of businesses, and what roles such web sites as collecting many stores and restaurants play in sharing commercial information with community people. These analyses imply the importance of considering a variety of factors when planning and implementing information sharing systems for community processes.

Keywords: community informatics; shopping information; restaurant information; suburban life

1. Introduction

This study analyses the web presence of stores, restaurants, bars, and other small businesses in a particular community in the suburbs of Tokyo. Community Informatics (CI) is “the application of information and communication technology (ICT) to enable and empower community processes” [1]. It emphasizes the importance of physical communities. In order to make clear the relationships between physical community activities and virtual information, this study explores how information related to commercial activities in a particular community of a specific residential area is represented on the web.

In Japan, ICT permeates into people’s everyday life widely and deeply. As of the end of the year 2008, the number of Internet users in Japan reached 90.91 millions, with an Internet penetration rate of 75.3% [2]. Over 90% of generations between teens and forties are Internet users. Even among seniors of late sixties, seventies and eighties, about 37%, 28%, and 15% of people use the Internet. In terms of the relationships between household income and Internet use, over 50% of people are Internet users in the lowest income category of annual household income of under two millions yen (approximately equivalent to 22,000 US dollars) which consists of about 18% of the whole Japanese population [3]. Over 90 % of these Internet users access to the net from personal computer, while 82.6% of them do so from mobile device including cell phones and PDA [2].

With this widespread use, people are thought to frequently browse, search for and look at web pages when they want to buy something or get some service in their community. About 55% of Internet users from PC look at government and business web sites, while about 14% of Internet users from mobile device do so. But what kind of information, especially on community activities,

is available, what amount, in what form, and so on are not well researched. This study is a showcase of a method of exhaustively collecting and analyzing web presences of particular community processes.

With the proliferation of information on the Internet, the amount of information we can obtain about distant places has increased dramatically. For tourists, it is enough if they can find information on a limited number of places to dine, stay or shop. In this regard, the Internet is very useful and powerful, because we can get much more information than before, especially for small towns with no tourist attractions, for example. On the other hand, residents often need more extensive information. They may need information on small stores and businesses. They may need detailed information on them to compare among different stores. Some stores and restaurants are run by seniors who do not use ICT. In order to figure out effective ways of using ICT for vitalizing community processes, it is important to take into account all the participants in the community and how each of them is and can be committed and related to communication activities on and through the Internet.

From this perspective, this study tries to exhaustively analyze how information of each commercial business is represented on the web.

2. Methods

2.1. Site of Study

For this study, several analyses were made as to the visibility of the web information of all the stores, restaurants, bars, real estate agents, and so on in a particular community. The community selected for the study is located around a train station in the Western suburbs of Tokyo. The major reason for the selection is that there seem to have been no systematic and organizational attempts of

revitalizing the community merchandise.

The area is convenient for commute to the central area of Tokyo, about 15 minutes by train to one of the largest terminal stations, or about 40 minutes by train and subway to the center of the city. The average daily number of passengers of the station is about 45,000. The area used to be agriculture-oriented, and was developed to be a residential region in 1960s and 1970s though some agricultural fields still scatter.

Features of this community include the slowness of development of the area around the station in these decades, because of a suspended plan for an expressway. A plan was made in 1966 to build a beltway around Tokyo, which was suspended in 1970. Since then, the development and renovation of the area have been difficult because of a restriction on reconstruction of buildings and people's concerns about possible changes in city planning policies. In 2007, the plan for building the expressway was re-approved and disputes are being made regarding the plan. Under such circumstances, no attempt of making a large-scale development and renovation has been made for long years, though a certain number of businesses come and go constantly. There are no large commercial buildings. The atmosphere of traditional shopping streets in residential areas has been kept while some recent trends of penetrations of chain stores are observed.

In this area, a good number of stores, restaurants, bars, real estate agents, and other kinds of small businesses concentrate around the station. There are two large grocery stores, one attached to the station and the other within five minutes walk from the station. Other than these two stores, many small businesses are lined along several streets in both sides of the station/train track.

I pick up the area on one side of the station, where there are over 100 small businesses within the area of three minutes walk from the station. Some of them are chain restaurants and drug stores, while many are privately owned and operated.

2.2. Procedures

As a preparation for the data collection and analyses, the complete list of all the stores, restaurants, and other small businesses was made. The local shopping street union has a web page where all the affiliated shops are listed. The number of shops in the target area on this list is eighty-one. After spotting those shops on an area map, I walked around the area to find all the other shops that are not part of the union. The total number of the shops in the area turned to be one hundred thirty five. Those shops are lined on four streets, two of which run from the station and the other two of which connect to these two streets.

In order to assess the degree of web appearance of those shops and businesses and the nature of their infor-

mation on the web, several analyses were administered.

The first analysis is on whether or not any information of each shop, restaurant or other business can be found on the web. The purpose of this analysis is to see if it is possible for any of these shops to have no information on the web, which means it does not exist at all in the cyberspace. As stated above, the local shopping street union has a web site where the member shops are listed. The eighty-one shops on the list have at least minimum information of their names, addresses, phone numbers and types of business there. For the rest of the shops, restaurants, bars, and other small businesses in the area, I searched for each of them by using Google to see if there was any information. I made this search on June 20, 2010.

The second analysis is on whether each shop has its own web sites or pages. I made searches for all the shops in the period of June 20 to 23, 2010 by using Google with search key words of the shop name and the town/station name. If no web site or page of the target shop was found after looking at up to three pages of the search results, I judged that there was no web site or page of it. It is said that many people see only first a few items from search results. Of course some people look beyond the first page of the search results, but do not go much further. So I assumed that looking at three pages from the top of search results would be sufficient to evaluate the visibility of web information of each store. Another reason why looking at only up to three pages of search results was that we can safely expect to be able to find web pages or sites pretty early in the search results if there existed their own web sites or pages and if we specified their store names and town names. I analyzed where and how their sites and pages were located on the web.

The third analysis is about information on restaurants, bars, and pubs. People often use the Internet to look for where to dine or drink in daily lives.

Not only do many eating and drinking places have their own web sites and web pages, but also there are many "gourmet information sites" where we can find basic information (e.g. address, map, phone number, opening hours, regular days-off, etc.), detailed information on products and services often with photos, customers' comments and evaluations, and coupons. I pick up three different large-scale gourmet information sites¹ that claim to cover the whole country. One of them even has information for Beijing and Shanghai. On each site, I made a search for restaurants in the target region by using the station name as the search key word. Not only did I count how many hits were made, I looked at all the web pages found.

¹ <http://gourmet.locmap.net/>
<http://www.gnavi.co.jp/>
<http://tabelog.com/>

Besides them, I found a web site² which collect information on restaurants, bars and pubs in two towns including the target area of this study. These two towns are adjacent to each other and both towns have train stations that are also next to each other.

I checked these four sites to see which restaurants are listed there and what kind of information is available.

After collecting and analyzing these data, I made a few case studies on “under-represented” stores and big chain and franchise stores.

3. Findings

3.1. Existence on the web

A simple finding is that, of all the 135 shops, there is no single one that has no information at all on the web.

As described earlier, eighty-one shops (60%) on the list have minimum information of their names, addresses, phone numbers and types of business on the web page of the local shopping street union. The same minimum information for all the other fifty-four shops can be found in one way or another. If they have their own web sites or pages (as described in the next section), more detailed information on them can be found easily with those sites and pages listed at or near the top of search results. So the basic information, including their names, addresses, phone numbers and what types of businesses they are doing, can of course be found there. For many of the restaurants and bars, their information on several different gourmet information sites is found at or near the top of search results. Another form of existence on the way is as part of the lists of stores of the same businesses in the district, ward, city, and so on. In most of these cases, only minimum information with addresses and phone numbers is listed. But in some cases, they have more detailed information.

For those stores which none of these ways apply to, the top of the Google search results is the link to Google map, with their addresses and phone numbers. It is astonishing that for the shops and small businesses in the target area there is none that has no information found on Google.

It is possible that we cannot find any information for a very new store. As of the date I made searches for this analysis, one bicycle retail company was preparing for opening a new store in this area (the opening day was about two weeks after the search date). This store was not found on Google map. But, fortunately, the company already had the information on the new store on their web site. Also a bulletin board for local information of this area has a post about the plan for this new store. This store was not included in my analyses in this study because it did not open at the time of the analyses, but it

is interesting, or astonishing, that all the stores, including the one under preparation for opening, “exist” on the web. In this sense, the web can be said to be more powerful than conventional paper phone books.

3.2. Web sites and pages

The result of the analysis of web existence of shops, restaurants, and so on in this community is summarized in Table 1. Of all the 135 shops, eighty nine (65.9%) do not have their web sites or pages. There are three categories in terms of how they place their web sites or pages.

Among the 135 shops in this area, only fourteen (10.4%) have their own web sites. Some of them have their own web sites, having their unique domain name. Others have their own pages on Internet Service Providers. These two cases can be categorized as “having their own web sites or pages.” Still others have their pages under their companies or on local information sites with detailed information specific to the particular shops. This consists of the third category.

The other thirty-two shops (23.7%) have their web pages under their company web sites or on local information sites. Strictly speaking, these shops do not have their own web sites. But they can be said to publish their information created by themselves.

For example, branches of banks, bookstores, chain drug stores, and chain restaurants have their information on the web sites of their companies. In some cases, they have much information related to specific branches. In other cases, they have only a little information specific for particular branches, but we still can obtain rich information that is common to all the branches of the company, including their major products, merchandises and services. There are twenty shops and branch offices which have web pages of this sort.

Table 1 Existence of web sites or pages

	No web sites or pages	Web pages within company sites	Web pages within same business sites	Own web sites	Total
Number of shops	89	20	12	14	135
Percentage	65.9%	14.8%	8.9%	10.4%	100%

Another way of publishing web pages is observed. They have their web pages on the sites that host shops of the same or similar businesses. For example, two Japanese confectionary stores have their web pages on a site where forty-three stores of the same business in the ward gather. Nine bars and pubs have their web pages on a site where are listed many restaurants, bars and pubs in the areas between this and the next stations. A real estate agent has its web page on the site of the ward branch of the Tokyo real estate agent association.

² <http://www.seki-kami.com/gurume/>

3.3. Appearance on gourmet information sites and a local restaurant and bar information site

On each of the three large-scale gourmet information sites that I selected for this study, several of the restaurants, pubs and bars (just “restaurants” hereafter for short) are listed. The numbers of restaurants listed on those sites are fifteen, five and twenty respectively. Interestingly, none of the restaurants in this area is listed in all of these three gourmet information sites. Ten restaurants are listed in two of these sites and twenty are listed in one of them. Thirty-four restaurants are not listed on any of them.

Thirty of the total of sixty-four restaurants (46.9%) are listed on a web site collecting local restaurants. Nine of them have their web pages on this site, while the other twenty-one have only their addresses, phone numbers, and categories.

How about the overlap between listing at global restaurants information site and on local site? Among ten restaurants listed on two of the three large-scale gourmet sites, four (40%) are listed also on the local information site. Among twenty having their information on one of the three sites, only three (15%) are on the local information site. On the other hand, seven (23.3%) out of the thirty restaurants that are listed on the local information site are also on at least one of the large-scale gourmet sites.

Table 2 Number of gourmet sites having information on local restaurants

Number of gourmet sites	3	2	1	0	Total
Number of restaurants	0	10	20	34	64
Percentage	0%	15.60%	31.30%	53.10%	100

Table 3 Appearance on gourmet sites and local list by chain or local restaurants

	Gourmet Site 1	Gourmet Site 2	Gourmet Site 3	Local List	Total
Chain	3	1	10	1	11
%	27.3%	9.1%	90.9%	9.1%	
Local	12	4	10	29	53
%	22.6%	7.5%	18.9%	54.7%	

This relatively small overlap between global and local sites can be explained by the differences of types of restaurants listed on each kind of sites. Eleven restaurants among sixty-four restaurants are chain or franchise ones. Among them, three (27.3%), one (9%), and ten (90.9%) listed on large-scale restaurant information sites, while only one of them (9.0%) is listed on the local restaurant information site. On the other hand, out of fifty-three locally operated restaurants, twelve (22.6%), four (7.5%) and ten (18.9%) are listed on large-scale information sites, while twenty-nine (54.7%) are on the local information site (Table 2). This means that global large-scale information sites tend to have more information on chain and franchise restaurants than privately owned and operated

local restaurants while local information sites show an opposite tendency.

4. Case analyses

In this section I describe a few concrete examples of online information on stores and restaurants, especially considering comparisons between small traditional private stores and large chain and franchise stores.

4.1. Small traditional stores

In this area, there are several small food stores. They have kept doing the same businesses in the same styles for many decades. For example, one store is owned and run by an old man. Main goods he sells are Japanese pickles that he makes by himself. As you can expect, this store does not have its own web site or page. Only its address and phone number are found on the web, on Google map and on several pages listing many stores in this region. The same is applied to some other old-style small stores. Another example is a tofu store. They make tofu and very small number of other products made from or related to tofu. It’s a family-owned business. An old man makes tofu and other products and his wife usually sells them. One more example is a take-home sushi store. This is also a very small store. The kinds of fish used at this store are fewer than most franchise sushi stores. On the web we can find only their addresses and phone numbers for these stores.

All these stores have good reputations among residents who have long lived in this area. Such reputations are usually transmitted by word of mouth. Those who have good contacts with seniors in the community have opportunities to hear those words. On the other hand it is difficult for them to be passed on to younger people, especially those live by themselves in apartments.

The same thing can be applied to other traditional small stores. There are two Japanese confectionary shops, two fishmongers, two bakeries, a Japanese tea store, and a cake shop in this area, all of which have only their names, addresses and phone numbers found on the web. Many of them are owned and run by seniors and their customers are mostly elder people too. But it does not the case for some of them. For example, one of the bakeries has customers of all generations and is always very lively with many customers.

Still, there are some exceptions. For example, one liquor shop with a small bar attached to it has its own web site where they provide information on different kinds of beer, wine and sake that they recommend. Its web site functions also as an online shop, where we can order their merchandise to be delivered home.

There are not many stores in this area that has online shops on the web. An interesting case is a Korean barbecue restaurant. They have their web site, where their restaurant information is not very rich. But they are doing e-business to sell Korean food products on this site.

4.1. Chain and franchise stores

The shopping street of this community is not an exception regarding the existence of chain and franchise stores. There are several of such stores as well as some branch offices of banks, real estate companies, cell phone shops, and so on. Most of these shops have their web pages on their company web site, where we can find basic information of locations, phone numbers, open hours and days-off, products and services, and so on. The formats of displaying this kind of information are usually the same across all the shops and branch offices. In some cases, detailed information about particular shops and branches can be found. But in many cases, information specific to particular shops and branches does not exist except for locations and contacts. Products and services are described as common to all shops and branches. It is often occurs that when searching Google for a particular store by using “store name + town name” as search key words, we get a link to the company web site instead of particular pages for those stores.

Some large grocery and drug stores have their advertising circulars (being inserted in home-delivered daily papers) digitized either on their company sites or on web sites collecting such flyers. Those pages can be found usually at from third to fifth places from the top in Google search results after company web sites and a few other information. In these cases, we can obtain detailed information on specific stores.

These kinds of information on chain and franchise stores are useful to community people. But it is similar to information we find in mass media and does not have personal touch and feeling.

5. Discussions

The community I focused on in this study is regarded as being very comfortable and convenient to live in by most residents, but its development is somewhat slow with a good old days atmosphere of one generation or so ago. This study is an attempt to explicate the existence and nature of web information of commercial activities in this community.

Despite the widespread use of the Internet and mobile communication devices among ordinary people, the information we can find on the web by and on the shops, restaurants and other businesses in this community is not very rich. Even though all the 135 stores and restaurants have at least minimum information of locations and contacts, about two-thirds of them do not have any information beyond it. This relatively low web presence of local commerce may be due to the high proportion of small privately owned and operated stores and restaurants.

We can find some useful information on eating and drinking place. One kind of such sources is large-scale, sometimes nation-wide, gourmet information sites. But the restaurants and pubs in this community that are listed

on such sites are limited. One factor may be that on such large gourmet sites, eating and drinking places in downtown areas, commercial areas, and big terminal areas tend to be listed more than those in small residential regions. Another factor that may be relevant is that on these sites small family- or privately-owned restaurants and bars are listed less frequently than large chain restaurants and pubs. A web page which lists local restaurants, bars and clubs is found to be complementary to those large gourmet sites. The restaurants and bars listed in these two kinds of sites have only small overlaps. This demonstrates the different roles these two kinds play.

Usefulness of local-community oriented information collection is observed not only on the local list of dining and drinking places but also on web sites where shops of the same businesses gather. Though most of the shops listed in such sites have minimum information only, there are cases where small shops have detailed information on those sites.

In order to vitalize community lives including commercial activities, it is not a good strategy to focus only on limited categories or groups of community participants. Small family-operated shops mostly run by seniors have gradually decreased. If we ignored these stores and focused on more modern types of shops, the community may be divided into distinct sub-groups, which may hinder empowerment potentials of the community. On the web, we find little information on those shops. The local-community oriented information sites may be useful in supporting them to make some presence on the web and to take part in community processes extending over physical and virtual spaces.

6. Conclusions

In order to effectively use information and communication technologies to empower and enable community processes, we need to take into many factors. This study provides a framework to comprehensively analyze community information on the Internet, which is expected to be useful in planning and implementing community information sharing systems.

One kind of information sources on the Internet I did not include in this study is electronic bulletin boards. There is an online bulletin board where people exchange information related to the area focused on in this study. This board is not very active, but people sometimes share information on shopping, dining and other activities in the community. Analyses of posting on such a bulletin board is expected to give us insights that supplement the findings of this study.

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