LIVING NEIGHBORHOOD MAPS:
THE NEXT WAVE OF LOCAL COMMUNITY DEVELOPMENT

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INTRODUCTION
The South of Market community in San Francisco has developed a dynamic Geographic Information System (GIS)-based “living neighborhood map.” A living neighborhood map simulates a community's people, businesses, and buildings and continuously archives its growth. It is an interactive tool that empowers communities to control their own economic and physical development. It enables up-to-the-minute planning and supports creating applications tailored to fit local development needs.

A living neighborhood map's unit of analysis is the parcel or individual building. As such, address-level information about businesses, residents, buildings and land values can easily be linked to a parcel map. Geographical boundaries for inquiries about specific areas can be assigned arbitrarily, allowing a user to pick any number of blocks, portion of blocks or individual parcels and buildings. Data can also be freely analyzed and mapped by attribute, such as business type, household income, number of employees, or whichever variable (or combination of variables) is of interest. While the small size of a parcel allows infinite flexibility in terms of size of area to be analyzed, annually renewed address-level information provides an up-to-date picture of the community. Such freedom revolutionizes the ability to track change in a community. Unlike traditional data sources (like Census Data), time and boundary limits pose no constraints.

Living neighborhood maps have several powerful applications in local community development. These include analytical uses, political applications and as interactive tools which promote economic development. It is the latter two uses which concern this essay, as they illustrate a unique public role for GIS. In this role, GIS provides a medium for exchange among groups that seldom interact (other than at the expense of one another). Non-discriminating community-wide access to up-to-date location-based information is giving neighborhood people a voice in their local economy, while mapping and field checking can mediate among stakeholder groups disputing landuses. By re-focussing energies toward cooperation rather than confrontation or private gain, GIS serves as a very important medium for a democratic and public life.
As a political tool, GIS can be used to educate, inform and thus empower people that do not have a public voice. GIS seems more effective at doing this than any other statistical database, likely because it puts information in a format that everyone can understand: pictures. In addition, the act of map-making and collecting information can serve as a means for moderating conflict and providing a common ground for discussion. If GIS is used politically, however, it is very important that all groups have equal access to it. If not, it can be just as destructive as it is empowering.

Interactive economic development applications likewise illustrate unique public roles for GIS. Interactive applications foster collaborations among groups that do not normally associate with one another. For example, a simple commercial Space Locator Service has brought a neighborhood non-profit, commercial brokers and prospective commercial tenants into a unique partnership. The Space Locator Service, run by the non-profit, provides prospective tenants with unbiased context-related information to help them choose the best possible location. Commercial brokers, on the other hand, provide a listing of available space to the non-profit, and receive referrals in return. This type of collaboration is highly beneficial to everyone involved, yet were it not for this interactive tool, it would not occur. This simple tool illustrates the potential for many other similar types of GIS-based interactive tools which bring unlikely partners together in highly mutually beneficial situations.

This essay demonstrates two very powerful community development applications of South of Market’s living neighborhood map. The first is at the center of a grassroots planning effort to control gentrification and the displacement of uses. The second is as a series of GIS-based tools designed for use by merchants, brokers and property owners to assist people in finding commercial space, finding a job, or arranging cooperative buying collaborations with neighboring merchants. The first application of the map empowers groups that might otherwise be disenfranchised, while the latter strengthens the local economy by facilitating transactions among local people.

TWO APPLICATIONS OF LIVING NEIGHBORHOOD MAPS IN THE SOUTH OF MARKET AREA

1. Community Empowerment

The South of Market area in San Francisco (SoMa) resembles old industrial districts in many American cities. Yet, unlike many cities where the economic usefulness of these districts has long since
disappeared, SoMa has re-emerged as a powerful and unique economic engine for both the City and the San Francisco Bay Area region. It hosts over 9,000 small businesses, including traditional manufacturing as well as an emerging new high-tech multimedia industry. These businesses serve the finance, advertising and entertainment companies in downtown San Francisco, the large retailers in Union Square, and the large high-tech companies down the peninsula in Silicon Valley.

A network of non-profit neighborhood service providers caters to the needs of SoMa’s small businesses and low-income residents. This network provides job training and placement, builds affordable housing, serves small businesses, provides healthcare and childcare, and provides recreation and education programs for innercity youth. One of these non-profit service providers, the South of Market Foundation (SOMF), developed a living neighborhood map of SoMa, linking information about buildings, businesses and residents to a dynamic physical map. This map, in turn, has been an important tool in helping the community battle uncontrolled residential gentrification.

SOMF initially used its living neighborhood map to document the importance of light industry’s and high-tech’s proximity to downtown. Mapping was combined with interviews to understand and illustrate the importance of various location factors. Among the study’s more important findings, interviews revealed that many businesses were starting to move, citing problems with increasing rents and evictions due to building demolition and renovation into loft-style housing.

The living neighborhood map was paramount in studying these claims of displacement. The mapped location of demolition, renovation and new building permits was overlaid on top of a business map that included employment and sales information. All businesses that were once located where demolition or new construction took place were telephoned to find out why they moved. If reasons given included eviction due to demolition or new construction, it was noted as “business and job displacement due to gentrification.” Change among commercial rent prices was also mapped, as were important economic links being broken due to job and business displacement. Without GIS, this type of analysis would have been near impossible to do.

Coincidental with the community’s mapping study, the Planning Department and residential developers were publicly stating that (1) traditional industry left San Francisco 30 years ago, (2) not one
business had been displaced by new loft construction, and (3) there was a surplus of industrial space in the city and therefore all industrial land should be rezoned to a higher and better use.

Had this been prior to the days of GIS, the community would have a tough time countering those claims (even though they were not true). This is because all of the traditional data sources--census data and outdated planning studies--would have supported the planner/developer claims. The living neighborhood map, however, was able to put forth a much different picture of reality.

Given faults with the planner/developer arguments, which the community made public through the media, politics soon came to the forefront. Residential builders employed their considerable political muscle and influence throughout city government to help sway judgment in their favor. As its own political response, the community organized itself into a coalition of over 500 small businesses, residents and artists. In its efforts to be inclusive, this coalition represented a vast array of interests, each wanting to create a livable place, yet having very different opinions on how to do that.

Given the many different community interests around the table, it was difficult to develop any kind of consensus. This was because (1) people did not understand the complexities of a local economy. They just understood that they did not want to be displaced; and (2) like the Planning Department, everyone had his/her own preconceptions about what was happening. The living neighborhood map became a tool that helped people move beyond their opinions, judgments and naivete.

Maps allowed people to see complex information. Economic jargon and statistics magically became clear when re-drawn as pictures. In addition, voluntary data-gathering efforts, with teams of people from “opposite sides of the fence” were paramount in helping opinions and positions fade as everyone began to see the situation for what it really was. These two consequences of mapping, in turn, made people much more intelligent at public hearings. Rather than reacting through emotion, people could present intelligent and well-informed fact-based economic arguments.

Such an articulate, well-informed and well-organized community, in turn, forced the Planning Department to engage in its own very rigorous study, employing the same GIS methodology as used by the community. Its studies, in turn, concluded that "contrary to ten years ago (as reported in Census Data), industrial lands are now very utilized and certain industries appear to be getting
displaced. At the same time, however,” the studies conclude, “there is also serious demand for new housing in the city and industrial lands offer the last place in the city to build it.” The Planning Department then announced that there would be a series of public planning workshops to determine where industrial protection zones and master-planned mixed-use neighborhoods should be created.

The workshops concluded that the SoMa District indeed has a very unique and important function in San Francisco’s and the region’s economies. They also concluded that there is a very real demand for housing in San Francisco. As such, the Department committed itself to finding land elsewhere within City limits to develop high density mixed-use residential districts. In this approach, the SoMa District would likely be preserved as an industrial district. To document their case, the Planning Department mapped and field checked all uses on a parcel-by-parcel basis, coming up with the same conclusions as the local community.

It is unlikely that the Planning Department would have engaged in such a detailed study and invited public participation had it not been for a very informed and sophisticated community which publicly forced the issue. The living neighborhood map played a very important role in empowering the community, educating it and offering a means by which people could shed their opinions and judgments and see a situation for what it truly was. By both improving the quality of information and providing a means for working together, people stopped reacting through emotion, hearsay and opinions, and were thus much more credible and powerful in arguing in the public arena for their rights as a community. In turn, the Planning Department employed the same methodology and came to the same conclusions. GIS played a role akin to a neutral moderator throughout the story. It assisted people who were very much at odds with each other to find a common ground for communicating. Whenever a stalemate occurred due to lack of trust, walking the area with a map-in-hand helped resolve the differences, as dis-believers could go out and “see for themselves.”

The fact that everyone used GIS in this tale, helped to keep abuses in check, because everyone knew the "other side" would be checking up. However, given its very sophisticated graphical display of information, there are real opportunities for the misuse of such a powerful GIS technology. People who are otherwise uninformed may be easily persuaded to believe a misleading highly polished graphic image. For these reasons, it is important that GIS is just as available at the "grass roots," neighborhood level, as it is throughout city government and among private development interests.
This leads to the next example of using living neighborhood maps in a very proactive way to facilitate interactive local economic development tools.

2. Neighborhood-based Electronic Commerce Applications

Since 1996, the South of Market Foundation has been developing a set of GIS-based tools which strengthen the local economy, while making everyday transactions among small and large businesses, residents, brokers and property owners a little easier.

The South of Market Foundation’s Affordable Space Locator Service (ASLS) is a commercial listing service that helps businesses find affordable space in San Francisco’s rapidly changing real estate market. It is a local economic development tool integrating business information, local economics, demographics, transportation and real estate brokers’ information to help businesses locate in the best possible location for the local economy and for the business. A small business looking for commercial space in SoMa can query a constantly-updated database of available space. They query based upon size of space, price range, lease type/option, building type, location in building, and desired neighborhood location. All spaces matching these criteria are then located on a map. The user can generate reports that compare spaces among characteristics, location within special incentive districts, proximity to selected business types, economic/demographic information within a quarter mile of the location, and maps of transportation routes, amenities (childcare, parking), and future developments. In turn, each space lists the name and phone number of the broker to contact.

Such a service gives a small business the capacity to make a locational decision informed by what is beneficial to both the business and the local economy. In addition, it acts as a referral service for local brokers. By serving as an unbiased intermediary between real estate broker and future tenant, this GIS-based application greatly benefits these two parties, while transforming the commercial real estate process into a local economic development tool. GIS adds a dimension to a very traditional practice, liberating and enhancing interaction to yield more intelligent choice.

An “Online Neighborhood Guide” is a local business telephone/e-mail directory, which allows a user to search for specific businesses, products or services within a certain distance of a specific address. An “Online Buying Cooperative” enables businesses to arrange their own collaborative buying
arrangements, easily assisting them in sharing facilities or purchasing products and services from each other in bulk quantities, reducing cost and time for delivery. An “Interactive Job-Link” facilitates matches among local businesses posting jobs and residents seeking employment. Each of these applications, in turn, will become part of an overall interactive website for the South of Market community. For those without computers, this website will be available via public kiosks located all throughout the SoMa neighborhood.

SO MF’s GIS-based economic development tools have been developed in parallel with the Federal Government’s new initiative on Electronic Commerce. Since the initiative’s inception in 1997, the Federal Government has realized that in order to make Internet-based buying/selling an effective National economic development tool, it must first start at the community level and then branch-out. Only by starting at the local level, can economic development efforts be inclusive and beneficial to the overall economy. After all, commerce is really just a set of relationships and agreements among the merchants, residents, brokers and property owners of a neighborhood.

As such, a Federally-backed Prototype project called the “Next Generation Cities,” will use the South of Market area as its “testing ground” for developing Internet-based economic development technologies. Recognizing SO MF’s efforts to date, the project may feature the living neighborhood map with its set of GIS-based applications and support the development of other local economic development tools. To do this, a very unique collaboration may form among local government, private industry, and neighborhood-based non-profits.

The collaboration will be unique in a number of ways. For example, teaming large, for-profit corporations with small neighborhood-based non-profits is a very strange partnering, indeed. It has taken a while for people to understand each other’s language, etiquette and even manner of dressing. The matter of trust is an even larger issue. How can two groups work together that, historically, have had very different goals? The economic trend throughout the latter part of this century has been that, increasingly, local communities want self-sustainability and independence from the whims of large corporations, while multi-national corporations want to make a profit as quickly as possible, and thus operate quite independently of a local community. Given this, depending upon who uses it, and what their objectives are, this powerful technology could just as easily result in a very rapid gentrification of
the neighborhood as it could in maintaining a stable neighborhood with a strong, self-sustaining local economy.

Before the partnership can materialize, a common meeting ground will have to be established. This meeting ground will likely form around the premise that in order for private corporations to profit through electronic commerce, the local economy must be profitable and strong. Private corporations are therefore dependent upon the intimate knowledge and relationships of very local neighborhood-based non-profits. Non-profits, on the other hand, require the financial and technical support offered by the private corporations.

The tools themselves provide for a series of relationships among groups that otherwise would not interact with one another. A Neighborhood Buying Cooperative, for example, makes it easier and cheaper to buy from or share facilities with your neighbor than going elsewhere. It is cheaper because buying in bulk reduces price and transportation costs are erased. Finding a way to share facilities (e.g., studio space, parking) benefits everyone by removing the need for building more facilities or for traveling in search of others.

In the case of the Affordable Space Locator Service, it is in the best interest of brokers to cooperate with the neighborhood non-profit, SOMF, because they will get client referrals. In exchange, SOMF gets a list of available spaces from the brokers. Tenants, in turn, come to SOMF first rather than brokers, because they trust an informed, non-biased opinion of where the best location in the neighborhood is. (Tenants understand that SOMF’s mission is to strengthen the local economy rather than making a profit for itself.) In addition, when the Affordable Space Locator Service is coupled with the buying cooperative, a tenant will be able to factor-in the prices of neighboring products, services and shared facilities before choosing a specific location. This, in turn, will assist him/ her in writing marketing and business plans, essential to securing a loan for business expansion, building purchase or tenant improvements.

CONCLUSION
The odd couplings illustrated in the above two scenarios, reflect a breaking free of traditional roles among community developers, local politicians, large corporations, small businesses, property owners and residents. Interactive access to up-to-date, comprehensive location-based information that had not
existed until recently, is fundamentally altering the relationships and roles people play in a local economy. User-friendly local economic development tools encourage partnering of many disparate groups who have traditionally focussed on very private gains usually at the expense of both their neighbors and the environment. GIS-based tools promote new relationships formed around a new focus on the local economy. This re-focussing, in turn, may help move us toward more sustainable and intelligent development patterns.

Living neighborhood maps hold great potential as aids in community development in an era of the World Wide Web and increasing economic globalization. They can empower local businesses and residents to intelligently demand a development pattern that respects existing diversity and complexity. They can also serve as the platform for entrepreneurial electronic commerce applications that help to strengthen local economies. Networking local businesses and residents can help encourage important links and collaborations. Placing available space in its economic, demographic and physical context can greatly assist small businesses in making locational decisions and will be a great aid in business attraction to an area.

Perhaps most intriguing, however, is the potential for collaboration and partnerships among individuals and entities that have worked quite independently of one another and, quite often, at odds with each other. The two scenarios portrayed in this essay illustrate a revival of public life in a neighborhood. The maps act as a medium for exchange. The act of map-making provides a common ground for disputing parties. Interactive tools facilitate unheard-of partnering. In each of these circumstances, issues of distrust had to be overcome. But, upon reflection, overcoming distrust and meeting over a common ground to debate and build new knowledge is the very definition of democracy. Living neighborhood maps offer a very important medium for both reviving and facilitating this public life.