CYBERSPACE AND POWER

REBUILDING CITIES AS A POLITICAL ACT

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Ideas are forged out of the collective unconsciousness by individuals.
Ideas are created by individuals but they do not belong to individuals.
Ideas, if they are potent, produce the institutional support necessary for their realization.
Ideas, like kites, fly only if you let go of them.
*   - Edmund N. Bacon*

Introduction

Just as Berlin once symbolized wartime urban ruin, East St. Louis, Illinois, across the Mississippi River from St. Louis, Missouri, has long been seen as a prime example of urban blight in America. The city has experienced years of economic decline, post-war industrial abandonment and the disappearance of unskilled employment opportunities. Between 1960 and 1990 the city's population decreased by nearly 50 percent, a trend that continues as many employed residents have moved to more affluent communities. Unemployment is nearly 30 percent, and over half of the residents are living below the poverty level.

In 1990, the remaining population of East St. Louis was 98 percent African-American. Many residents have become community activists, struggling to rebuild their neighborhoods as a political act. To assist in their efforts, an interdisciplinary program at the University of Illinois, called the East St. Louis Action Research Program (ESLARP) was formed in 1990 with faculty from the School of Architecture, the Department of Urban and Regional Planning and the Department of Landscape Architecture.

This paper will discuss how plans for city rebuilding is a political act defined by local residents. The paper will present a case study describing how one ESLARP design studio used the Worldwide Web to foster "potent design ideas" accessible to community partners located 180 miles (290 km) from the university campus. The paper will conclude with a critical examination of how well cyberspace functioned as "the kite," the medium for letting go of potent ideas for city rebuilding (Selby, 1991).

Rebuilding Cities as a Political Act of Residents

In the United States city planning is typically a function of government agencies and their consultants. Information is often closely held by decision makers until a plan is formulated and publicly announced. Public meetings or hearings may be held for the ostensible purpose of soliciting citizen feedback regarding a proposed plan, but these superficial encounters do not engage citizens effectively in the planning process (Branch, 1983). When government planners deny citizens timely access to critical information they effectively thwart local residents' efforts to engage in a public debate on important planning policies. In such cases, the power to make planning decisions resides solely with official planners and politicians. Instances of this type of exclusion from the planning process have occurred in East St. Louis, where community based organizations have experienced repeated difficulties getting local government officials to make much needed improvements in their neighborhoods.

The antithesis of this "top down" approach is participatory planning, a process which emphasizes the development and advocacy of alternative plans by grassroots non-governmental community based organizations (Davidoff, 1973). By participating in the planning process, citizens assert their right to assume power over the rebuilding of their communities. Several community based organizations in East St. Louis are gaining the initiative for rebuilding their neighborhoods with the assistance of the University of Illinois East St. Louis Action Research Project.

One of the East St. Louis neighborhoods served by ESLARP is Emerson Park. In 1990 ESLARP conducted a planning study for the community based organization, the Emerson Park Development Corporation (EPDC). Results of this study, published as the *Emerson Park Neighborhood Improvement Plan*, document a number of disturbing trends (Henning, et al. ,1991). The population of Emerson Park fell from 3739 residents in 1960 to 2040 in 1990. In 1990, 61 percent of the lots in Emerson Park were vacant. Neighborhood residents decided that it was time to fight back and reverse these trends with a series of long and short term action items.

The *Improvement Plan* listed Emerson Park residents' nine most needed neighborhood design improvements: 1) Create new attractive entrances to the neighborhood. Residents wanted these symbolic expressions of territoriality as a signal to outsiders that their neighborhood will not tolerate vandalism and other criminal activities; 2) Improve appearance of 15th Street, the major street

running north-south through the center of the neighborhood. The residents' strategy was to begin their neighborhood rebuilding at the center and continue outward; 3) Rehabilitate or demolish existing buildings as appropriate. Derelict buildings were offensive to neighborhood residents because they were stigmatizing, hazardous and attractive locations to those conducting illegal drug transactions; 4) Provide new affordable housing. Residents wanted to meet the housing needs of low income families with attractive and convenient housing that would blend into the fabric of the neighborhood; 5) Plan for a mix of incomes in choices of locally managed, small scale housing options. Residents opposed the building of any more "projects" in the neighborhood; 6) Create safe buildings, streets, blocks, and open space using "defensible space" techniques (Newman, 1973). Residents wanted to rebuild their neighborhood to provide sufficient surveillance of streets and open spaces; 7) Clean up overgrown lots. These lots were often used by outsiders for illegal dumping of garbage. A clean and well mowed property would tell outsiders that this territory is not available for unwanted debris; 8) Provide more local shopping within walking distance to housing. Emerson Park no longer has a grocery store, pharmacy, laundry or other convenience stores where residents can shop for daily necessities; and 9) Provide more neighborhood parks and improve existing parks. Although Emerson Park has vacant land, it does not have adequate purpose-built outdoor play areas for small children or teens. (Henning, et al., 1991)

The *Improvement Plan* became the program for a series of Emerson Park studios conducted by the author from 1994 onward. Successive groups of students carried on the work of developing neighborhood master plans and architectural designs to show how the nine neighborhood improvements could be achieved.

As important as these design studies were, the most extraordinary and unprecedented political action began in 1995 after EPDC learned that the city was studying alternative routes for an extension of the MetroLink light rail system. One option under study would site the light rail through Emerson Park, the alternative preferred by EPDC to foster economic growth in their community. The option favored by the mayor would place the line in another neighborhood. EPDC asked the author for a revised neighborhood plan showing how well the new line could fit into the neighborhood. Further, they asked for architectural designs for an attractive, safe and comfortable station to be located near 15th Street. In accordance with EPDC's vision, the author's students integrated the light rail into the neighborhood master plan with impressive concepts for the Emerson Park station.

Designs were presented to the mayor and the public in the East St. Louis City Hall on November 28, 1995. Emerson Park residents attending the meeting pointed to the drawings and models and proclaimed, "This is what we want in Emerson Park!" EPDC's campaign had its intended effect. The mayor announced that night that the light rail line and station stop would be built in Emerson Park. The extraordinary success Emerson Park residents enjoyed that evening is dramatic evidence of the political power citizens possess when they act on timely information and present convincing alternatives. In the wake of this exhilarating historic victory in East St. Louis, concurrent developments on the University of Illinois campus began to open exciting new opportunities for sharing potent design ideas with community partners.

The Power of Cyberspace

Temple Hoyne Buell Hall, the new home of the School of Architecture, the Department of Landscape Architecture, and the Department of Urban and Regional Planning, opened in the fall of 1995. Studios and offices in Buell Hall were furnished with state of the art computers and backbone connections to the Internet. For the first time the author and his students had convenient access to the 'Net.

By the time Buell Hall was ready for occupancy, ESLARP had a Web site up and running. Since the fall of 1994, ESLARP was able to "send" information. What was needed was a way for the residents of East St. Louis to get on-line to "receive" information whenever they needed it and to give ESLARP feedback on design alternatives. To satisfy this need ESLARP was in the process of establishing a Neighborhood Technical Assistance Center in downtown East St. Louis to be fitted with computers, Web browsing software and a helpful staff. While never intended to replace important face to face meetings with residents, the author hypothesized that the Internet would become the "kite," the perfect medium through which students could let fly their ideas for use by community partners.

The author predicted that cyberspace would benefit both students and community partners. Students would be stimulated to do their best work since it would be seen throughout the world. Students could use the Intranet to foster communication among themselves and the internet to do research on transit oriented development. Community partners would gain timely access to important planning information when needed. Both students and residents would benefit from an accessible archives of a body of work created over several years and updated frequently. For these reasons, the author invited students to venture with him into cyberspace in the spring semester of 1996.

Although students in the School of Architecture use computers for many tasks, Web browsing was as new and exotic an activity to them as it was to the author in the spring of 1996. The studio's syllabus informed students they would learn to communicate with each other regularly on the intranet, they would continue work begun by others, and they would create an archives of this work on the ESLARP Web site. One of their first assignments was to find Kisho Kurokowa's home page using a search engine. This gave students experience navigating to various topics linked by hypertext markup language (HTML). Next, students were required to find the home page of any living architect and to report its "URL" address to the rest of the class as hypertext on the studio's Intranet discussion page. Sampling architects' home pages gave students experience at Web browsing and a connoisseurship of the graphic design techniques used on the Web.

Soon students were ready to try their own hand at Web publishing. With the assistance of the ESLARP Webmaster, Abhijeet Chavan, and two experienced students in the studio, students learned how to use HTML to create text for a Web page. They also learned how to scan images and integrate the image with the HTML text or link the image to the text with hypertext. Students began to develop a connoisseurship for what looks good on CRT and LCD screens. While students were investigating how to scan drawings and photos, the instructor was learning how several hundred color slides could be stored on CD ROMs to become JPEGs on the Web.

As a sort of dress rehearsal for presenting final projects on the Web, students were required to put mid-term sketches and models on the Web. Accordingly, the instructor asked the faculty assigned to jury mid-semester projects to do so by "hitting" the students' pages. This exercise was most effective at revealing the imperfections of both projects and presentations. One juror who was unused to Web browsing complained that text and graphics were not well integrated requiring excessive navigating back and forth among separate pages of notes, plans, sections, elevations, and model images. Furthermore, some drawings were judged to be too small to be read and criticized on the computer screen. However, on most computer screens even the smallest images were no smaller than typical illustrations in architectural journals.

Students were intrigued by the promise of presenting their work to an absent jury. Surely this would be a low stress design review. Indeed one great promise of publishing on the Internet is the capacity to have asynchronous interactive feedback from community partners, for example. Unfortunately, in this instance asynchronous communication proved ineffective. When faculty were not required to perform in "real time," in effect they were not required to meet any deadline at all. Reviewing faculty, some neophytes on the Web, avoided the pain of learning a new skill by putting off indefinitely critiquing student work. As a result of this avoidance, students, also novices in cyberspace, became very frustrated when much needed critical feedback was not forthcoming. The failure of mid-term presentations demonstrated to students that they needed to create exciting and easy to read pages with clear and convenient navigational links discernible to cyberspace novices and experts alike, whether for faculty or community partners. If the Web was going to serve as a "kite" it would have to be easy to fly.

Visual Examples of Student Work from the Cyberspace Studio

In spite of these initial difficulties, students showed remarkable resilience. They taught themselves how to improve their Web presentations and at the end of the semester students had substantially satisfied all the goals set forth in the syllabus beginning by archiving selected work from previous studios on the Web.

One of the images students put on the Web is shown in Fig. 1, a master plan model from the fall semester of 1994. This design was an attempt to integrate all of
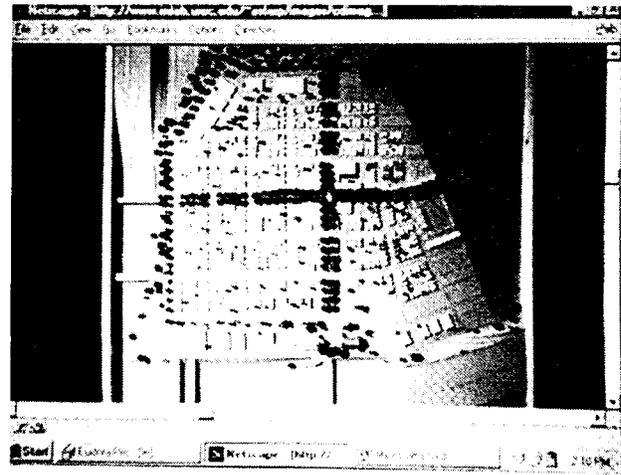

Fig. 1. Master Plan Model.

Emerson Park's desires as documented in the *Improvement Plan*, (Henning, et al., 1991). Accordingly, the design has clearly delineated neighborhood edges and entries and a visually improved 15th Street, the tree lined north-south street seen in the center of the model. The model also shows locations for new affordable infill housing to replace derelict buildings. Note that typical residential blocks are square with a central common green providing defensible outdoor play areas for small children (Newman, 1973.) New shopping, a mix of neighborhood convenience stores and highway commercial facilities, was located on the south edge of the neighborhood near Interstate 64. A community center, seen in the middle of the model, was developed as kind of neighborhood landmark suggested by Lynch and Hack (1984) and more recently by Langdon (1995).

Fig. 2 is an example of student designs for a light rail station created in the fall 1995 Emerson Park studio. This project proposed a track system elevated above the street for the safety of school children who must walk south on 15th Street, across the Interstate highway (see Fig. 1) to reach their elementary school. This solution avoided having school children crossing light rail tracks.

The station's image was intended to create a proud landmark for the neighborhood (Lynch and Hack, 1984; Langdon, 1995; and resident interviews). Fully enclosed, this design would provide commuters a safe, warm and comfortable environment within which to wait for a train. Interior amenities include seating areas, coffee shop, newsstand, and other convenience shops. The open plan and glass walls permit surveillance from exterior to interior and visa-versa to reduce the prospect of crime in or around the station (Newman, 1973).

After the successful presentation in city hall, EPDC and ESLARP learned that the Emerson Park station was to be a "park and ride" facility requiring parking for 200 to 400 cars and parking bays for nine buses. The track system was to be on-grade, not elevated as assumed in project shown in Fig. 2.

EPDC believed that the new station would foster economic development in Emerson Park, so they welcomed the park and ride concept. However, they were concerned about how well a station with a large
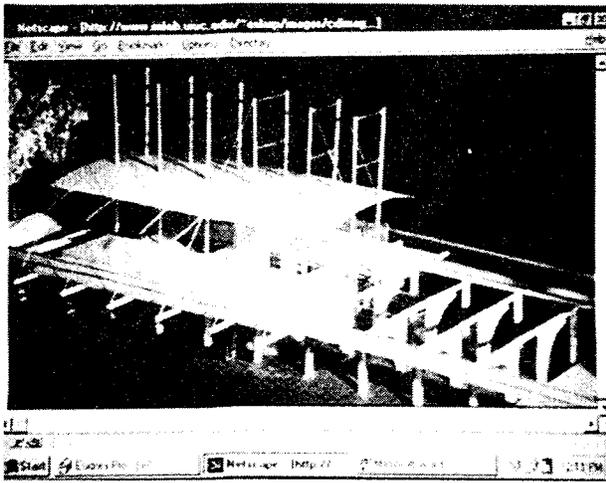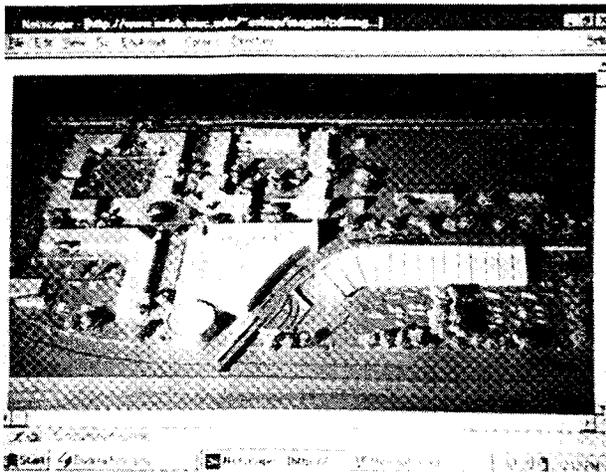
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Fig. 2 Light Rail Station Model.

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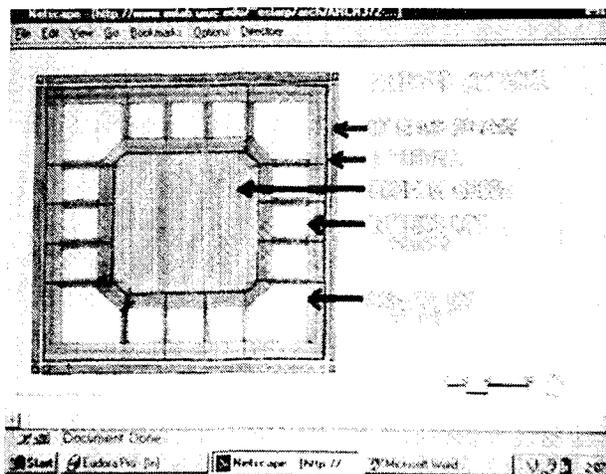Fig. 3. Transit Oriented Development Model.

Fig. 4 Typical Residential Block.

parking lot would fit into the neighborhood fabric. To develop an appropriate design that would assuage residents' fears, students proposed a site plan that would continue the network of neighborhood streets, a concept recommended by proponents of new urbanism, Katz (1994) and Langdon (1995). Students also proposed a new mixed-use transit oriented shopping district for the convenience of both commuters and residents with residential apartments above street level retail. In accordance with design principles advocated by Calthorpe (1993) buildings were placed along the street edge to reinforce the existing system of streets and sidewalks as shown in Fig. 3.

15th Street is on the far right of the model. Short-term parking and bus bays are located in front of the station. Long-term parking is in the parking structure to the left of the station. The parking structure has retail at the ground level to match the surrounding transit oriented mixed use development. To the far left is the highway commercial center for businesses selling automobile fuel, tires, parts and services. Each block resembles a "square doughnut" with the "hole" or interior containing parking for street level retail and for residential apartments and professional offices above the street.

As this work progressed, another student team continued work on affordable housing ideas for a typical square block near the light rail site.

Fig. 4 is a conceptual sketch of a typical residential block with four corner lots 120 feet by 120 feet (36.5m x 36.5m) and 12 interior lots measuring 60 feet by 100 feet (18m x 30.5m). Like retail blocks described above, residential blocks were also configured as square doughnuts with centers designated as a common green for use by the surrounding residents. This block configuration faces houses on all four enclosing streets providing surveillance of streets and the common green (Newman, 1993). The variation in lot sizes allows for a mix of housing types, single family houses on smaller lots, two family or "intergenerational" family houses on larger corner lots.

An example of an intergenerational house on a corner lot is shown in Fig. 5. EPDC requested that students design intergenerational houses with a larger dwelling unit for a working mother, single head of household and her children, and a smaller unit for her elderly parents. Living next to their grandchildren, grandparents would be available to provide necessary day care when the mother is away at work. This preliminary plan, prepared for the mid-term faculty review, has a common front entry porch and vestibule at the corner of the house to facilitate visiting from one unit to the other. The front porch allows surveillance of the street (Newman, 1973) and gives the house kind of attractive detailing that Wentling (1995) advocates for all housing, including housing for low-income families.

Fig. 6 shows how varying housing types fit together to create the central common green in the center of the block. Houses on corner lots have an "L" parti so the house "turns the corner" and both wings face the street.

Space does not allow for a full presentation of all the work from the Cyberspace studio. The reader is invited to go to http://www.imlab.uiuc.edu/~eslarp/arch/ARCH372-SP96/main.html. to view the whole collection.
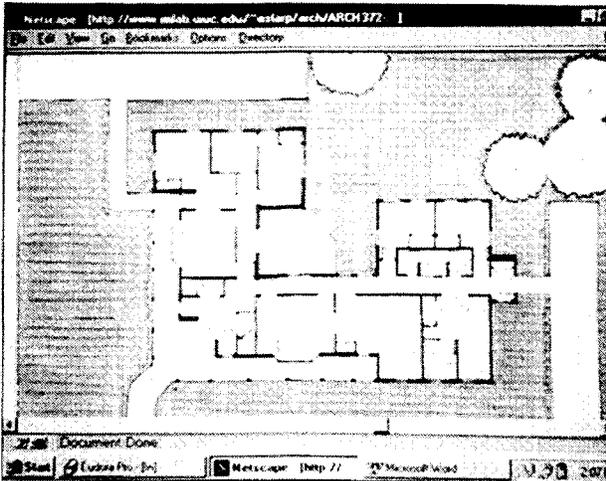
Fig. 5. Intergenerational House Plan.

Fig. 6. Model of Typical Residential Block.

Critical Evaluation of the Cyberspace Studio

As their work indicates, students were successful at publishing on the Web and they did appear to be inspired by the opportunity to have their work on view to the world. Their projects, as detailed above, met or exceeded the expectations of the community. The class discussion page was actively and effectively used by the instructor and students. The ESLARP Web site, to the credit of Webmaster Abhijeet Chavan, has won many awards and access statistics show that it appears to be a popular one to visit. In September 1996, the ESLARP site had 49,864 hits from 1067 sites, and another 45,488 hits from 1453 sites in November 1996.

As might be expected of faculty and students working on the Web for the first time, publication efforts were occasionally flawed. Some images that were intended to be published are still on someone's diskette, others are not properly scanned. On the whole the body of work that appears on the site is attractive, useful, and accessible.

The Neighborhood Technical Assistance Center opened in East St. Louis on October 11, 1996, an event that included a demonstration to leaders of East St. Louis's community organizations of how NTAC's computers can access the world wide Web. NTAC staff gives day-to-day service to residents seeking information, including assistance with Web navigating so residents can have timely access to the internet, filled with the potent ideas they need to rebuild their communities and assert political power at the local level. There now exists tremendous potential for asynchronous interactive feedback with community partners, feedback that is much needed in a participatory planning process that still depends on the efforts of students working on a distant campus.

It must be noted, however, that this potential has yet to be realized; residents are not currently using NTAC as a gateway to the 'Net. It may be too soon to conclude whether there is any resistance to a new technology or a lack of understanding of what useful information is available on-line. Perhaps Web pages need improvement or NTAC needs to extend its office hours for the convenience of working residents. In any case, ESLARP has let go the kite with the hope and expectation that residents of Emerson Park and other communities will embrace the computer and join in an on-line exchange of potent ideas.

If adults are reluctant to use computers youngsters are not. They are already "kite flying." Some ride the bus to use NTAC's computers to surf the net. Others visit Mt. Sinai Baptist Church for instructions on computer use. These young experts may not currently be browsing the ESLARP Web site or thinking about rebuilding cities, but they have the capacity to, if and when they so desire. When they assume leadership of East St. Louis they will know how to reach the world for knowledge and how to teach the world all that is good about East St. Louis.

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