

# BETAVILLE: THE VIEW FROM NEW BROOKLYN

Carl Skelton

The Betaville project has matured from a software art experiment into a vehicle of creative collaboration and exchange: a tool in planning and architecture studios, and a *fully public medium* for concept development and advocacy in the context of local art and urbanism projects. In this paper, one of Betaville's founding citizens will present some of the first results from Betaville's implementations in the field.



Fig. 1 Inside Betaville, lower Manhattan: Concept for a mixed-use development that would permit/thrive on public access to the waterfront.

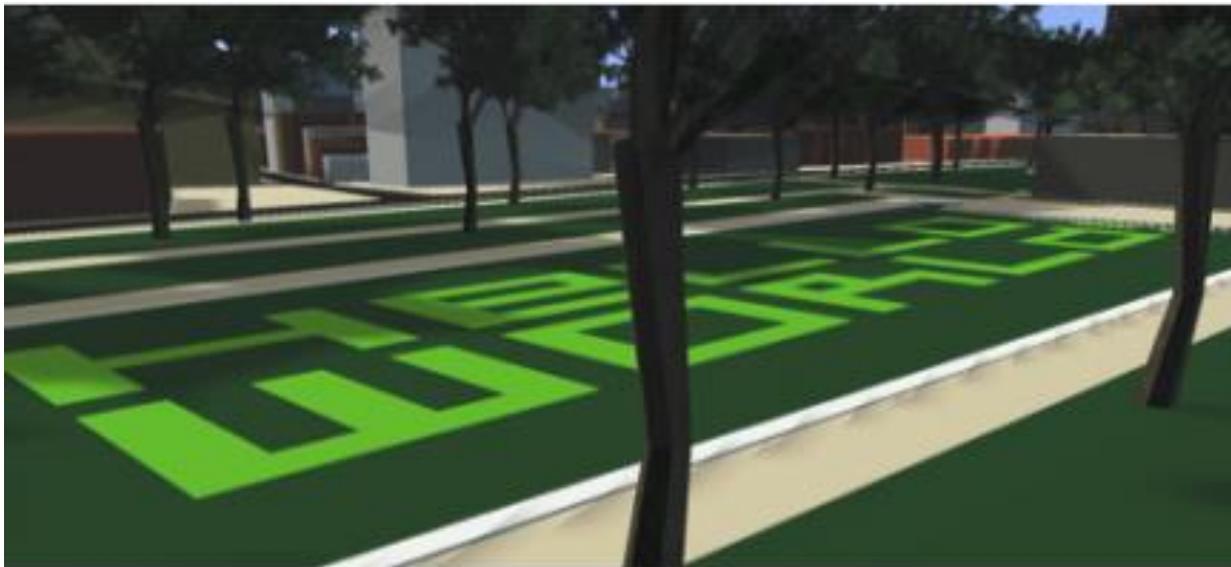


Fig. 2 Concept for artificial turf playing field, Cadman Plaza Park, Brooklyn.

Betaville is a massively participatory editable virtual world, designed to support collaborative development of new ideas for the built environment, from public art installations to comprehensive plans for urban design and development. Betaville is built to provide a shared environment for deeper, broader, and more effective public participation in the elaboration of new ideas, by providing an online “mirror world” of a particular building, place, neighborhood, or district, in a visual language that is common to artists, architects, and other professionals, but also to the rest of the community. Ideas for changes can be uploaded from most modeling applications from Google Sketchup to Autodesk Maya into the world for discussion through built-in commenting mechanisms, and each proposal can be iteratively matured over weeks and months, as necessary.

Betaville's driving motivation was to provide a way to upgrade public art and urban planning/design: could public work, or works, be developed further before major investments are undertaken, by more appropriately public means? The infrastructure and tools had accrued in society at large by happenstance, could we bring them together to get public culture more developed? If tools needed building, the work that had gone into building creative programs in engineering schools ought to be helpful... after all, the best precedent was open-source software development, and we had lots of friends with skills around, looking for big yummy problems to solve. Might there be an opportunity for another, broader approach to Douglas Engelbart's agenda for the augmentation of human intellect at creative levels, in regard to the built environment? The common language of 3D fly-through, with embedded links to full background information, and a complete record of the process to date, combined with the competence to leverage public data, verifiable dimensions, low enough overhead to permit implementation before and between formal proposal processes, or processes initiated at smaller scales than the multi-billion.

The precedent had been set in software development: over time, ad-hoc communities of interest, through mixes of formal and informal kibitzing by amateurs, noobs, self-taught anarchists, academics, and bored support staff gradually build consensus around mature design solutions to complex problems: GNU, Apache... Why not try to port this to local art, design, development issues? Ideally, such an environment could be set up ad-hoc at any scale, from an undergraduate or even high school studio course to an architect's office, a city agency, or a community group; development of the core tools and specialized extensions would be ongoing through a subset of the global community, while creative coalitions might form at a local level between stakeholder groups with a tradition of rivalry or antagonism, within the hortus conclusus of a virtual variant of the world in play, capable of supporting any number of ideas and of tolerating any number of re-combinations and refinements until a consensus emerges around a mature solution, or a viable distribution of distinct zones.

Constant's New Babylon, his *Autre Ville Pour Une Autre Vie*, might yet meet David Gelernter's *Virtual Worlds* as day-to-day lived public space, with an understanding that the built environment both expresses and determines the “terms of use” of citizenship, and that therefore debates about public space are as fundamental as any other public debates, for which the development of access and effective (read-write) literacy are both human rights and socio-cultural “capital”.

The Betaville project was launched as a joint initiative of the Brooklyn Experimental Media Center (BxmC) of New York University's Polytechnic Institute and the Media2Culture (M2C) Institute for Applied

Media Technology of the University of Applied Sciences of Bremen in July 2008, at a symposium for International Urban Media hosted by M2C in Bremen.

I had arrived in Bremen with a loose knot of what seemed like incommensurable desires as an artist with an interest in the public realm as a creative field at three levels: As an artist, making unfamiliar concepts (proposals) for new public works clearly understandable in their form and relationship to context not just to juries and panels, but also to neighbors in good enough time to provide opportunities to develop concepts further through open consultation with people whose knowledge of contemporary art, but whose informally-acquired knowledge might crucially improve the work, and whose standing as a citizen of the district ought, in any honest definition of the public realm, give them a say in plans to alter the physical world whose alterations are intended to change the environment in which they live. As a citizen sensitive to the effects and side-effects of public space, to explore the possibilities for an augmentation of collective creative capacity, analogous to Engelbart's vision for the augmentation of human intellect through real-time shared computing environments with graphical interfaces, or a post-Beuys "very social sculpture".

If the ideation and experimental concept development stages of urban art, design and development can be available to the breadth of people, and on the kinds of terms, that have characterized open source software development, might it not be possible to arrive at analogous levels of imaginative consensus and quality over time? If that many can and will commit that much to SimCity and Google Earth and Linux, why not open up the question of real streets and neighborhoods, to a similarly rich mix of academics, creative professionals, and bootstrapping self-teachers? As the founding director of creative programs within an engineering school, serving a complex mix of artists, designers, and programmers from a hyper-diverse mix of backgrounds, with a weirdly rich mix of perspectives and ambitions, might it be possible to build a set of software tools as a shared resource whose code base would be open and available for alteration on the same terms for us and others with similar interests at a global scale? In "media" terms, it was a simple twist on the old McLuhanism: if the medium is the message, we might simply make the medium itself *plastic*, amenable to both local and global change.

While New York City is a major world capital in many domains, it is an astoundingly small town for computer science and engineering, and particularly so for research and development cross-overs between the cultural, civil, and technology sectors. BxmC is a fledgling enterprise, and the opportunity to partner intensively with a like-minded group in Bremen has been a precious boon. It should be noted that BxmC and M2C are exceptionally compatible hybrid enterprises, offering creative programs with an orientation to the public and civil sectors, within engineering schools which are themselves set within comprehensive local academic networks. Together, we have been able to build Betaville through what might be considered a complete avant-garde cycle: from the kind of speculative-exploratory "experiment" that properly characterizes cultural innovation, to the due diligence of design and technical development of an "experimental" prototype, to a responsibly deployable infrastructure for general use in situations where third parties are at stake: a public space, a neighborhood, a city.

As we have moved further into realms where the work is not only taken at face value, but begins to risk long-term impacts, the burdens of due diligence have increased, and extra-curatorial pressures on the work's content have arisen as not only subject matter, but the actual purpose of the work, requiring attention sustained beyond the festival or conference, and local engagement beyond the limits of itinerant art practices... a level of participation in which the *public* is treated as not just an audience, but a constituency. Likewise, the full engagement of other professions (planners, architects, politicians) requires a range of approaches outside the scope of even "relational" practices within contemporary art norms.

As a work of collaborative art, Betaville makes visible and performs a new scenario, and stages the experience of distributed creative transformation of built worlds for the people who "go there". As an open software project, it offers a set of tools which must be robust, scalable, and non-destructive in interacting with the contemporary realpolitik of urban evolution and transformation. First, we could ask ourselves as citizen-artists, What Would We Do If We Were For Real? Then, we had to ask ourselves as citizen-engineers, What Would This Do To Us If It Were For Real?

BxmC and M2C can span these gaps, at the price of some complicated logistics and VERY promiscuous interdisciplinary collaboration: art, engineering, politics, roughly in that order, bearing in mind that graphical computing skills, hardware, and networks have developed well beyond the traditional perimeter of authority-empowerment in these *incompletely public* domains.

The Brooklyn team has led the basic server and web client technical development, and certain instrumentation functions for assessment purposes. We worked up a first 3D "base model" of terrain and buildings, and experimented with deployments in downtown Manhattan and Brooklyn, while the Bremen group led on alternative clients, polling systems, and the ThinkBETA consortium.

In fact, the two groups have worked together quite closely, through a coordinated program of integrated research, project courses, and thesis work, with regular exchange of students and researchers in residence. The first public demonstration of the Betaville suite was given at the Municipal Art Society's first Summit for the Future of New York City in October of 2010, and a follow-up presentation/announcement is scheduled for October 2011. What follows is a partial outline of a selection of the developments on the Brooklyn side.

The research prototype and test flights have proven the robustness of the platform, and collaboration with experienced partners provides some necessary assurance that we won't actually cause damage by jumping into situations we don't know well enough. At the time of writing, several full deployments are planned or underway out of Brooklyn:

- International University Haiti/James Jay Dudley Luce foundation, Architects for Humanity
- Urban Assembly Gateway School
- ReGenerations, New York Hall of Science
- Betaville on the Bowery, New Museum
- Downtown Brooklyn Commons

Consider this last item, in a bit more detail: by the spring of 2009, we had a mock-up and a rough prototype in hand. As the Polytechnic strove to establish an "urban" initiative, I was asked to present the project to Joe Chan, president of the Downtown Brooklyn Partnership (DBP), a local development corporation for the area around NYU Polytechnic... the kind of institutional diplomatic errand that typically leads (at best) nowhere, and (at worst) to many more before petering out. Joe responded in particular to a design concept for the extension of an auditorium down to the basement level, and then out as an amphitheater scooped from the MetroTech Plaza. "Like the Pompidou!" he exclaimed. "What the...?" I thought. Joe proposed the idea of using Betaville as a public vehicle for an open process about the issue of "making sense" of the odd disconnected patchwork of green spaces in downtown Brooklyn, initially through an ideas quasi-competition to be run in Betaville, including the area colleges with architecture and/or planning programs: City College of New York (planning), New York City College of Technology (Architecture), Pratt Institute (Planning), and NYU's Polytechnic (Digital Media).

As it became clear that a one-semester design studio couldn't really accommodate both familiarization with the Betaville environment AND serious conceptual work, we opted to run Poly's participation through Betaville, as one new vehicle/approach. The program was defined by the DBP as "Downtown Brooklyn Commons", an area centered on the Cadman Plaza park, bounded by the Brooklyn waterfront to the north and west, and the Fulton Mall commercial district to the south and east: a perfect storm of urban art, design, and planning conundra, from parkland isolated and bisected by commuter pass-throughs to extreme socio-economic diversity, large-scale redevelopment projects in the teeth of unstable economic conditions, and open questions about future plans for adjacent lands, both private and public.

After a bit of background research, and a bit of discreet consultation with a few local experts and stakeholders with deep roots but without local partisan grudges, we opted for a very broad range of propositions, from park quasi-art installations that could be used to teach math or keep score by local schools using the park as their playing field, to speculative concepts for art/infrastructure hybrids, elevated linear parks, a stadium project as a lever to bankroll healing of the interface between local/pedestrian/bike traffic and regional commuters (Bring Back the Dodgers, AND Save Lives!), some straight-up public art installations that might be visible from Google Earth, if not outer space... and a handy comparative example of a similar problem in downtown Bremen, the Rembertiring, where the similar physical spaces contrasted usefully with the very different regulatory, planning, and cultural forces at play. At the presentation, in Brooklyn's borough hall, a latent coalition crystallized around one particular concept, the adaptive upgrade of a semi-utilized park building very close to the pedestrian access to and from the Brooklyn Bridge boardwalk: a visitors' center and "Open Museum", which would provide orientation to the district in three distinct modes:

- historical~ (phone apps for self-guided tours through historical points of interest, AR exhibitions of buildings and infrastructure that are no longer there, or were designed but never built at all);
- contemporary~ the district as an open-air gallery, augmented by new works of art to be experienced by the blending of the direct experience of the district with audio and graphical media supplied through portable devices, or simple downloads to the equipment visitors are already carrying as a matter of course;
- future~ again, through mobile multimedia applications and mobile web-based tools, but here a program built around a Betaville of downtown Brooklyn, populated and created/re-imagined over time by the full spectrum of visitors, workers, students, and citizens of Brooklyn's downtown.

This strange blending of modes and mandates struck a chord with advocates, planners, and local political representatives, and attracted more interest from likely collaborators within area institutions, all at once. In effect, a sensitively calibrated demonstration had opened the door to a full engagement. We are now working to follow through on this concept, with a full spectrum of participation. A series of formal announcements will be made over the course of the next few months.

At the very least, we can "augment" the current practices~ town hall, charrette, call for proposals... at best, we may be able to seed an effective local virtual avant-garde, working with locally adapted mash-ups of the tools and practices conventionally associated with art, engineering, and politics, making the most of direct access to a global network of local, virtual, and ever-expanding vanguards. Virtualization of experimental ideation for the built environment makes it possible to combine the best of both worlds: opening up of the conceptual range traditionally associated with science fiction and revolutions, while providing for a level of inclusiveness, intelligibility, plasticity, due diligence, and a collective attention span beyond the research grant term, the five-year plan, or the four-year election cycle.

Betaville has already demonstrated that the development of a fully functional open-source software infrastructure for such applications is feasible, and that therefore the prospect of a citizen-built virtual city, rather than a commercial virtual world whose politics can never transcend “house rules”, is also feasible in the near term. Betaville itself may yet suffer a crisis of legitimacy as a work of ‘extremely relational contemporary art’ as it becomes a reliable medium, a ‘public work’ of infrastructure... the good news is that we will now be able to fully exploit its potential as a medium, for new works and forms of mutually augmenting imagination, iteration, and development. That will suit us fine. After all, we’re not just the principal investigators, research assistants, partners, participants... We’re also Betaville’s first constituents. In the meantime, everyone is welcome in our world, or to build your own with the tools already available for download via Betaville.net.

Every Living City is in Beta. Let’s Play.

## **References and Notes:**

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### **LINKS**

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<http://regeneration.nysci.org/>

<http://bxmc.poly.edu/betaville>

<http://betaville.net>