

Kovac, Tom. "100YC [100-Year City]" Reprinted from Log,
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Log

WINTER/SPRING 2013

Observations on
architecture and the
contemporary city

46° 33' N, 15° 39' E

Maribor, Slovenia, 2069. Speculative urban-future projects typically are compelled toward the race of progress and prediction, but the central park spanning the Drava River is a paradoxically anachronistic provocation. After 57 years, the project – a simple stitch between the river's north and south banks – is fully mature, a carpet of vegetation filling in the twisting curlicues of the flesh-structure grafted onto the old city. This gesture of pure density should hope to prevail as long as the world's oldest living vine, Maribor's more than 500-year-old Žametovka, the grapes of which produce a still undrinkable sweet wine.

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\$15.00



100YC [100-Year City]

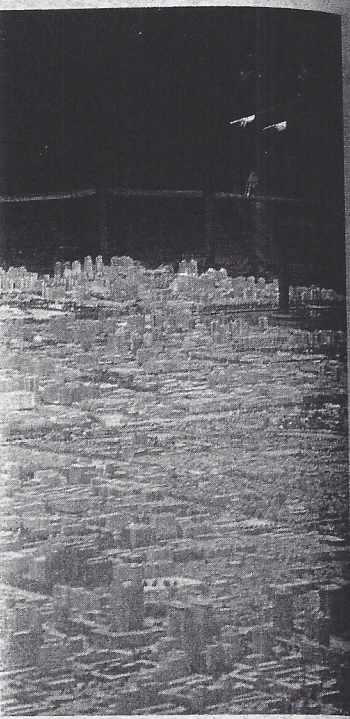
Talk is cheap. Show me the code.

– Linus Torvalds

What is our vision of the world's cities one hundred years from now? Is it possible to speculate about the functions, requirements, and operations of cities a century in advance and to generate innovative processes for the design of corresponding future urban infrastructure? Between March and June of 2012, the 100YC project, commissioned by the 2112Ai, Maribor 2012 European Capital of Culture program, engaged 37 studios at 23 international institutions to explore future scenarios for the Slovenian city. Working in four categories – technology, transportation, knowledge, commerce – the transdisciplinary teams produced more than 100 projects that envisioned a strategic blueprint for Maribor in 2112.

Forty years ago, Marshall McLuhan imagined a global village that now has become the reality of our everyday life. But not only is that life mediated and connected, it is also shaped by ideas of freedom and openness barely imaginable in McLuhan's era. Taking a page from McLuhan, as well as free-software pioneers Tim Berners-Lee and Linus Torvalds, the 100YC also reflects on what the global village can become in an era defined by the World Wide Web.

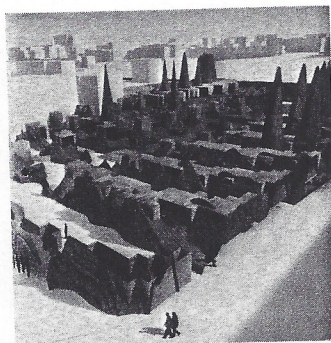
In the past architecture has documented the trajectory of the needs and complex social behavior of citizens. While architecture may also be a tracking device for urban development in 100 years' time, today urbanism can be seen as an ongoing attempt to rationalize such developments, to inject direction, order, logic, and judgment into structures that have emerged, and to provide a rationale, understanding, and evaluation of their historical dynamics. Until now, the rationalization process of urbanism that all cities undergo has been dominated by discussions of external influences (historic factors, wartime destruction and occupation, changes in governance and cultural mores, etc.), and internal systemic implementations (technological developments in transport, energy and water supply, communication facilities, etc.). What has been neglected in looking through this conventional lens



SCALE MODEL OF BEIJING INSTALLED IN BEIJING URBAN PLANNING EXHIBITION HALL, CHINA, 2006. PHOTOS: DAVID HUBER.

solves a practical problem: since restrictions on building-height near the Forbidden City prohibit observation towers, and the smog and dust smudged sky obscures views from airplane windows, the exhibition hall's model fulfills that impossible panoramic gaze over the metropolis. But the greatest pleasure of seeing these models isn't the clear views or their sheer size. It is the effect of seeing, up high yet close up, so many small things in such great volume. In this way the model simulates life in cities best: lots of little events, indifferent to but within the plan.

– David Huber



VIVIAN MITSOGIANNI STUDIO, RMIT,
FORMFIELD4: THE SPECULATIVE
CAMPUS PROJECT. A PROJECT FOR
100YC, MARIBOR 2112. IMAGE COURTESY
THE ARCHITECTS.

of urbanism is closer consideration of the actual living conditions in the city. Because the experience of living in the city has stood in the shadow of the orthodox topics of city planners, cities now find themselves on the verge of collapse, burdened by their very own architectures and buried under layers of urban theory and built ideology.

As the broader site for the 100YC project, Slovenia poses striking possibilities and specific challenges. Over half of the population of approximately two million lives in smaller social environments of towns and villages with less than 5,000 people. Only two of Slovenia's eleven cities – Maribor and Ljubljana, the capital – have populations greater than 100,000. These statistics, together with the fact that more than half of Slovenia is still forested, call for new ways to define a quality of living for Maribor that reflects the city's desire to redefine itself as a model city for a global future.

Cities may play a fundamental and constitutive role in the social fabric of modern societies and may be of vital importance to future societies' cultural capital, yet, paradoxically, the city seems to be under threat. The United Nations predicts that global population growth will continue, peaking at nine billion by the year 2070 – well before 2112. Will the 21st century witness the emergence of the Gigaopolis, as city populations expand into the billions, or at some stage will a new population diversification and atomization occur, producing new quarters, regions, municipalities, subcultures, and urban tribes? The 100YC project recognizes the challenges of change, disruption, tension, and paradox as filled with possibilities for restructuring, redefining, and reinventing the city of the future, and to venture into new forms of life in extreme urban and trans-urban futures. 100YC places itself at the center of this field of discovery, speculation, and research to be conducted by individuals with a sense of responsibility, sensitivity to the common, and a clear understanding of what is at stake.

With the ambition to expose patterns of global change and identify disruptive mechanisms and their impact on life in the extreme future, the 100YC project's methodology consists in practice-based research – that is, research through design. The 100YC themes of technology, transportation, knowledge, and commerce represent laboratories for exploring and showcasing innovative approaches and appropriate models of design-practice research. This method of investigation holds transdisciplinary thinking and transformational collaborative practice as core competencies essential to conditioning future innovation. It acknowledges the evolution in material science,

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1. This was a significant component of the exhibition of 100YC at the 13th Venice Architecture Biennale and at the European Capital of Culture 2012. The digital platforms also aim to build Maribor's international reputation as a city of innovation. For a showcase of the 100YC projects produced and exhibited in 2012 see the 2112Ai 100YC app, available for free download at the iTunes app store.

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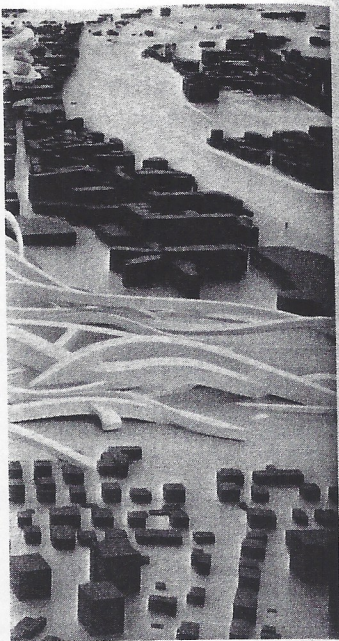
human-computer interfaces, experience design, and engineered systems emerging from new dynamics across cognitive and technological platforms. 100YC initiates a design vision and evolution for a 100-year program not only to enrich and transform the future for Maribor, but also to set up an open forum for envisioning the future of cities everywhere.

Thus one goal of 100YC is to establish the project as a permanent global research lab focusing on the evolution of architectural intelligence. An online cloud-facilitated project collaboration – a core aspect of the project – and mobile and web applications enable global access to and dissemination of curated material from the project, allowing people all over the world to engage with the work and thinking it produces.¹

100YC aims to become one of the world's leading proponents for open architecture technologies and the development of a truly open form for reshaping the urban future; 100YC connects people and their ideas, promoting exploration and fostering optimism as the core conditions needed to reshape the city and transform design and the global economies of the future. This intention parallels Torvalds' Linux software project, which now supports Internet functions such as Google and Facebook, as well as GitHub (based on Torvalds' Git software), where code writers can upload software for public comment and community use.

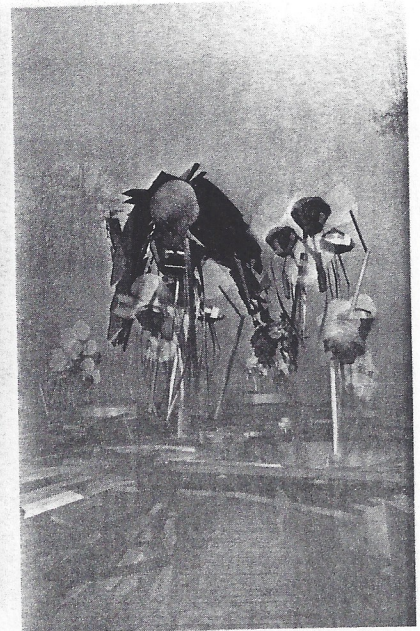
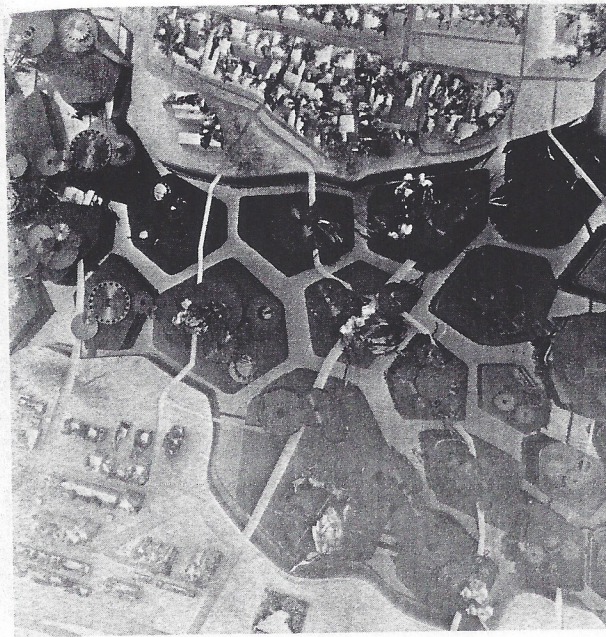
Since its inception in 1991, Linux, a community-driven phenomenon, has grown to become a force in computing, powering everything from the New York Stock Exchange to mobile phones to supercomputers to consumer devices. Similarly, 100YC is a nonprofit consortium dedicated to fostering the growth of future urban initiatives. Founded in 2012, 100YC promotes global research on the future city with the goal to be supported by leading technology companies and developers from around the world. As demonstrated at the 2012 Venice Biennale and in the Maribor 2112Ai project, it is possible to bring Linux-like, open-source architectural thinking to the future city through global design-community collaboration that allows for interaction and significantly improves the performance data to be used in the design of emerging architectural space.

100YC is continuing with a global program of *architectural* intelligence, which hopes to gain a more sophisticated understanding of the world than anything built before. The greatest problem in science and technology today – how brains swarm and generate collective intelligence – is informing the future of 100YC.



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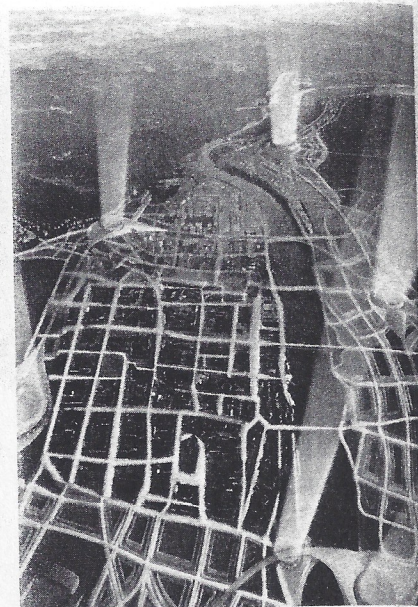
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ARCHITECTURAL MUTATIONS: CIPHER SYSTEMS

TINA-HENRIETTE KRISTIANSEN STUDIO, LUND UNIVERSITY
Maribor 2112. A new breed of structurally intelligent swarm-robots is the latest trend in building. These robots act according to a novel structure-based flocking algorithm, which has been developed in this project. By using this technique the robots collaborate to reinforce complex sets of building members at structurally important locations, such as areas of high curvature. Swarm intelligence is also used on a master plan level. New parametric simulation software has been developed here to test the influence of different parameters and urban field conditions on new developments in the city of Maribor. These field conditions could be proximity measures of current structures, topography, height restrictions, etc. Using particle swarm systems and ant colony simulations, the new structures are effectively nested into the current urban fabric.

The new software has been used to develop several neighborhoods in central Maribor, but we chose to focus especially on a new expansion of the University of Maribor. New faculty buildings, a new auditorium, administration offices, etc. are effectively placed close to and connected with the main university building and the technical faculty. High density and interconnectivity are promoted in order to facilitate greater transdisciplinary research.

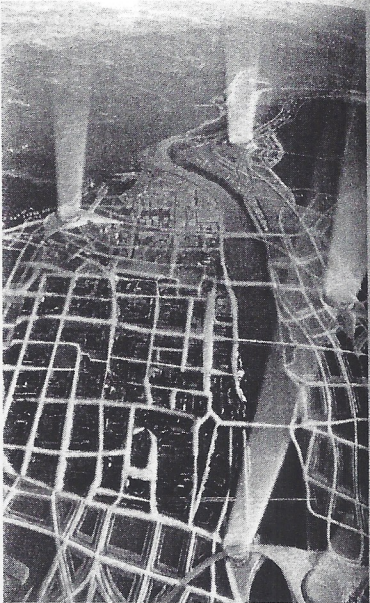


SOFTCITY

TOM KOVAC, JOSE ALFANO, KARL FENDER STUDIO, RMIT

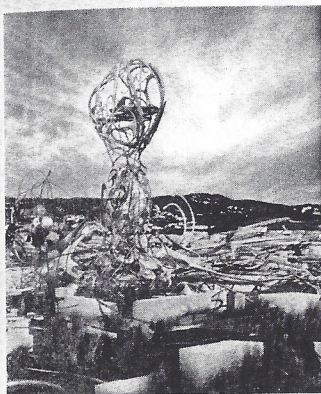
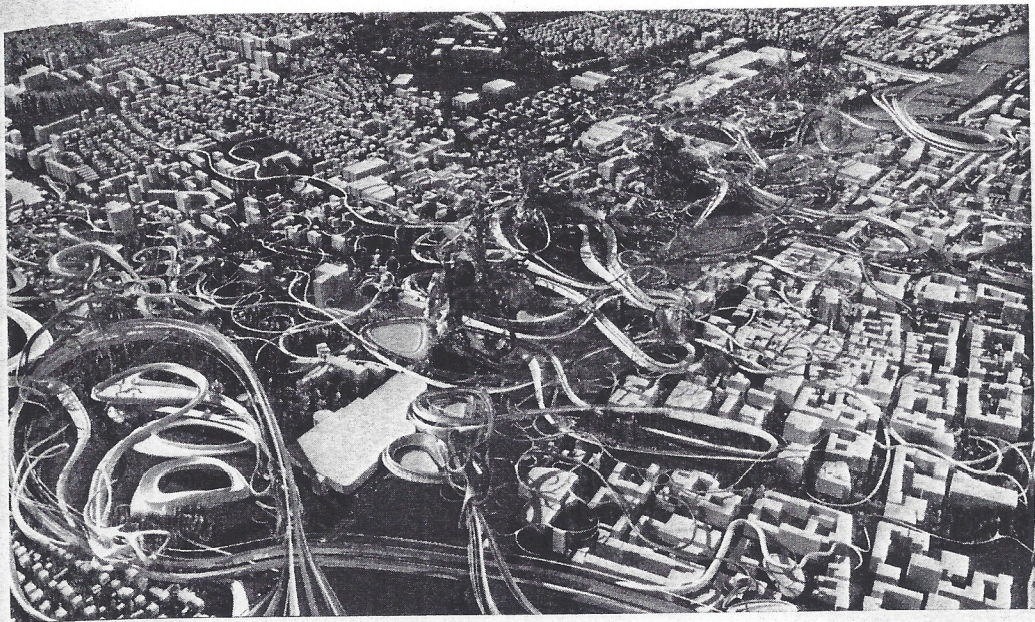
In 2112 AD the world has streamlined the use of natural resources, resulting in essentially infinite energy. Sustainability is obsolete, technology is omnipresent and beyond singularity. We live in a world more intelligent than ourselves, yet we defy its rule, molding the SoftCity to our will. Maribor, engaged with interconnection and interactivity, lies at the forefront. The architect's role in such a place is challenged. It is a world where the interaction between humans and cybernetics is everywhere, and the composition of the physical is no longer static. Efficiency is maximized as particles are aggregated and assembled to perform their required functions and then returned to their resting state. A lifespan in constant flux.

SoftCity's quantum levitation/trapping loop transport system powers the city and also decentralizes and distributes service nodes, creating an intelligent system. The loop maintains a relationship to original roads and optimizes connections to neighboring cities and beyond. Personal transport pods arrive at their destination, and once passengers disembark, these pods disassemble and the particles rejoin the system, lying idle until their use is required again. People are in charge of the way they experience their environments and who they share their personalized experience with. In essence each person can choose to be a designer, thus the role of the architect must evolve to include curating possibilities and facilitating others to design their environments.



ARL FENDER STUDIO, RMIT
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MARIBOR MUTATIONS

XEFIROTARCH/HERNAN DIAZ ALONSO STUDIO, SCI-ARC
Commencing in 2012 and maturing in 2069, this proposal, a belated exercise in the city of Maribor "becoming-forest," is not about the mimetic career of biology into and onto architecture but about the transference of multiple physiologic scales into the systemic intelligence of the involute surface-landscape and back again. Flesh instead of surface, vegetation instead of volume.

We took the footprint of Central Park in New York and mutilated it into pedestrian ways for plants, flowers, and people, nothing else. If mobility and transportation intervene primarily by means of their dynamic strength, we will grow them by means of their topological intensity. Assuming infrastructure transformation is at stake, we will concentrate on its mutation not in a manner of structure, core, or repetitive stacks; rather, we will develop active nesting techniques where the inner body is not a sequential, linear proliferation but a discontinuous organic growth. At the same time this inner mass will stretch the outer flesh inward and outward. Flesh differs from surface in its layered nature; it cannot be detached from the inner organs, it is just one more coat, deeply attached, that stretches and compresses for the sake of smoothness, porosity, and voluptuousness. The model is not that of transparency and structure but rather one of cuts, inserts, nips and tucks, the hand of a plastic surgeon that manipulates matter.

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