

A Machine to Reflect on the Infinite City

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Called “Infinite City” (2012/13) – this project was the first design-build project sponsored by the international architecture competition, Downtown, who sought a low-cost installation on the “Evolution of Miami.” As winners, we built a 10’x10’x10’ aluminum structure with an abstract representation of 35 high-rise buildings, suspended above a network of neon tubes delineating the street grid and Miami River. Using cables and pulleys, buildings could be hoisted, illustrating the city’s growth over time. An interactive installation, the project was both machine and metaphor for the city.

What makes this project relevant is its ability to demonstrate the reflective potential of design-build and how programs such as these can bridge the gap between theory and practice.

Specifically, the project illustrates certain lessons that 1) can only be experienced while making, through real-time reflection or “reflection in action”¹ and 2) can only be made after the experience of doing, through “reflection on action.”² The former occurs when we are confronted with unexpected circumstances that challenge our programmed knowledge and require us to reformulate what we are doing in the moment. The latter exercise (which the project proffers as a new consideration for professional and academic design-build projects alike) occurs when one consciously looks back on an experience, framing the actions and responses within the context of what one already knows so as to develop new learning outcomes and perspectives.

In the act of real-time reflection made during the process of building, we were forced to:

- think metaphorically, making adjacencies with marine and machine worlds and collaborating with outside disciplines to solve an architectural problem³
- recognize that representational drawings do not always solve challenges at hand or account for intangible elements such as such as friction, weight, speed, balance, or a complex network of rope with varying slopes
- understand that in solving problems you reveal new problems⁴

Meanwhile, there were also discoveries that could only be made after the experience of doing. Practicing “reflection on action,” we consciously surveyed:

- what the project was conceptually versus what it became
- how the project fit within larger architectural themes and typologies
- what our level of engagement suggested in terms of the architect’s role and practice

In reflecting on the “making” experience, the initial concept was thickened, if not altered; we came to view the installation as a microcosm working at the scale of the body, building and city; drew typological parallels that considered the context of history; and recognized the expanding boundaries and preoccupations of architecture in contemporary practice. In doing so, the project gained deeper meaning, suggesting that the knowledge learned in design-build programs extends far beyond the realm of craft.

Notes

- 1 Donald Schön
- 2 ibid
- 3 Richard Sennett
- 4 ibid



2012 Downtown Winner - International Design-Build Competition

A MACHINE TO REFLECT ON THE INFINITE CITY

HOW IT WORKS

1+2+3 = A SIMPLE AND LOW COST ARTIFACT

An object that represents a flat shape of the city of Miami, capturing the main building of downtown, each one connected by a network. Only by pulling this machine the vertical building will pop up, illustrating the city.

No people aware the city will remain flat. As someone will need complex to become that it is time, and that will happen in a new, unexpected way.

HOW IT WORKS

TOP STRUCTURE: Represents the form of buildings, each with a different height and width.

REFLECTIVE UPPER SURFACE: A reflective surface that allows the viewer to see the building's reflection.

ELEVATION MECHANISM: A system of pulleys and cables that allows the building to be raised or lowered.

INTERACTIVE MECHANISM: A system of pulleys and cables that allows the viewer to interact with the building.

ROAD NETWORK AND RIVER: A system of neon tubes that represents the street grid and the Miami River.

REFLECTIVE LOWER SURFACE: A reflective surface that allows the viewer to see the building's reflection.

LOWER STRUCTURE FRAME: A system of pulleys and cables that allows the building to be raised or lowered.

