

# Synthesis Studio: Transportable Media Center for Kosovo

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This paper is based on a body of work produced in a fourth year topics studio. The topics covered started out as being digital media combined with student design competitions, but developed into a brief but profound look into issues that define architecture in a time of globalization. In designing these projects, the students synthesized ideas of digitally simulated "construction", materiality and information, developing a design process for architectures of pan-geographic social projection. They created a series of transportable civic buildings that were designed in real-time as the events in Kosovo escalated into a full-blown displacement of a whole People. In a sense, the studio became an active participant in world events by reacting to the consequences of globalization with an architectural response, one that acknowledges the need for information as a basic human necessity.

## Introduction

The dawn of the 21<sup>st</sup> Century finds architectural ideals, aesthetic values and technological expectations in accelerated flux, just like our expectations of the media, geopolitics and of the future of our world (dis)order. The technological fallout from the Cold War that gave us so many tools in our plight for political survival has also brought us a scenario of social and political discontinuity.

Hyper-communication interconnects regions and peoples in ways that are changing social and political structures literally overnight. Corporations merge and sell again; Cover-ups are uncovered and then buried under the landslide of the next scandal trumpeted by the mass media. Whole populations are evicted from their homelands in 72 hours as a voyeuristic world numbly watches the events unfold on TV, and with frightening regularity since the 1989 fall of the Berlin Wall. Technologies originally developed for warfare are re-shaping our world on many fronts. While some of the changes we observe are material and others more abstract to our senses, they are all increasingly tangible to ever-larger number of human beings around the globe. The immediacy created by hyper-communication has altered the meaning of space in relation to time and has re-scaled our perception of our planet.

Nonetheless, *the way we design and the types of buildings we design* for this changing context rarely seem to address the relationship between the material immediacy of locality vs. the global nature of information. This is not often seen as a design issue, but just a rhetorical or theoretical one.

We weighed the relevance of *information* (and its technological embodiment) in identifying an immaterial space. If as architects we are to participate in the changes that are evidently re-shaping our world, we must be open-minded in identifying

new programs and develop a design process that imbeds the technologies of our time within architectonic thinking itself. At the same time, we recognize the unquestionable need for a *physical* embodiment for that same architectural thinking. Information and materiality both become the indivisible instances that identify a building conceived in the context of Globalization.

A building designed as a physical vehicle for an information-based space would merge the architectonic need for *materiality* with the inevitability of also becoming *architecture as information*.

These thoughts were all brought to the forefront when we decided to create a building to serve a type of user/client who's outlook on life was directly linked to the consequences of globalization and the geopolitical changes brought about by the impact of the information age. It would help re-associate displaced people with one another other, and provide them with two-way window to a world they had little or no contact with. In a world where both the notion of *global* and *local* is simultaneous, these people had little left of either. We explored a way of using architecture to mend the dislocation between the two for the displaced people of Kosovo.

## Architecture for displaced populations

Population displacement has become a daily phenomenon of the New World order, as ethnic warfare replaces the relative stability imposed by the cold war's status quo. Whether in Kosovo, East Timor or Rwanda, large segments of a population lose their identity as a society in exchange for their lives. While the world rushes to supply traditional basic needs such as food, medicine and shelter, the one thing many of these people have lost and which cannot be given back to them easily is the ability receive and share information among themselves and with the rest of the world.

Our studio chose to develop a prototypical building that can be quickly transported anywhere within 24 hours and is conceived to become a link between refugees and the outside world. It had to be easily fabricated, be relatively lightweight, and include all built-in parts and equipment. However, rather than create an object that would be just some huge TV set in a box, we wanted to develop an architectural response to the need for information, and this implied the need for creating space, civic space. The building would have to generate a community space around and within it to become a gathering place for people, such as the Greek agora or the plazas of European cities.

The project(s) would have to link the constrained world of the refugee to the greater world of daily news and information, and at the same time provide an instance of urban continuity and social coalescence through cinema, theatre and other shared

cultural events. This is where the ideas of information space (global) and material space (local) is synthesized to create a building program that is specific to an architectural condition of our time.

In a world with quick change and sudden conflict, how can architecture be responsive considering it's traditionally slow process towards materialization and prolonged shelf life? How can industrialized construction relate to information-based change?

We explored a building typology that could operate as a global window and civic space at the same time, understanding the role of an architect as a manipulator of information. By exploring the possibilities of design through construction while dealing with construction as information, we hoped to develop a design process and a building typology that could bridge the gap between the three instances of design, construction and information.

## Process

Architecture as information does not necessarily imply architectural representation via computers nor does it simply limit us to the "liquid architectures" of the over-equipped cybernauts of our educational establishment. In our studio we explored the possibility of developing materiality through a process involving *electronic simulation* as the key link between idea and construction. This process was developed over a five-week period in which three 2-3-person teams of fourth year architecture students digitally "constructed" or "design-built" a series of transportable buildings through a combination of electronic simulation, traditional models and down-loaded graphics.

We avoided representation in the sense that the projects were never "drawn", and wood models were only built for specific unfolding studies and always alongside digital models. We embraced simulation as an in-vitro, surrogate experience of natural space, employing the World Wide Web as our source of images and information and using student-owned low cost desktop technology for it's execution. In this manner the information and images downloaded from sites rich in up-to-date material on the Kosovo crises were introduced directly into the design process. Every few days, as events developed in Kosovo, we would revisit the conditions for our self-defined program.

We mixed media (analog and digital) in a process we had in the past labeled "cyborg-modeling" as a means of spreading the design process between all members of each design team, blending in digital model photography with electronic simulation. In a sense this design process became an analogy to the project's very premise as a synthesis between real place and information space, the wood models being "real" and the digital models and downloaded graphics being "information". This constituted a broadening of the design process both in terms of collaborative design practices as well as becoming an inclusive way of making use of every tool possible, each student finding his or her



Fig. 1. Kosovo: displaced people and worldwide media.



Fig. 2. The Mobile Media Center, en-route to Kosovo.  
Project team: Aaron Torrence, Han Hoang.

own “mix” as needed.

Each project explored several key issues in developing what we decided to call the “Mobile Media Center”. These issues were:

1. The programmatic and spatial qualities of its internal and exterior spaces.
2. The material properties of the building as a finite, digitally “constructed” architectural artifact.
3. The architectural systems designed for the building’s unfolding and articulation from a simple prism into a complex organism.

These three issues helped maintain a conceptual overview of what at times could have become an overly result-driven process. It allowed us to discuss a design-build process as an act of *architecture* and not just one of *building*.

## 1. Program and spatial qualities

*Analog community, tele-communicated individuals*  
The program for the Mobile Media Center consists of “lo-tech” and “hi-tech” spaces.

“Lo-tech spaces” means a *physical* space where community interaction can occur. Examples of these are exhibit spaces and gathering/event spaces.

“Hi-tech spaces”, refers to a telecommunications envelope within the hollow steel tube structure that acts as an interface between the environment of the refugee and the outside world. It is thought of as an *electronic bridge* between material immediacy and the flow of information through global telecommunications.

While the buildings are born from a simple prismatic volume, they unfold to generate a variety of spaces that address human needs for interaction and sharing of experiences. The Exhibit space (or Gallery) is a *passive space*, while the Multimedia area is an *interactive space*, and the gathering space is conceived as a *communal space* or civic forum/performance area. Together these spaces describe a program where articulation and function are defined through its “construction”.

This type of program (as an architectural intervention) embodies spatial qualities that attempt to support the rebuilding of a shattered culture. A walk through the Mobile Media Center brings one culture in contact with the rest of the world, reminding the observer that while there are many cultures, there is only one planet. The building deploys in physical space but also expands in information space as well.

## 2. Structure and materiality

*Construction is not architecture, but architecture requires construction.*

We looked at structural information both as a diagram as well as a (simulated) physical assembly. The steel structure is inherently tied to the concept driving each of the projects and has a

direct impact on how the each version of the Mobile Media Center is used.. The buildings express their structural vocabulary and materiality as a direct consequence of the formal and physical properties of hollow steel section construction.

Physical forces such as horizontal and vertical loads are directly related to the design of the structure. Indeed, the idea of the structural diagram is defined through its connections and its assembly; its language expressed through its details and structural articulation.

Our proposal for this project relied heavily on understanding the building as an expression of how it unfolds and deploys, making the formal articulation of its structure one of the Mobile Media Center's key features. We understood from the beginning that this would be impossible to study and develop through traditional abstract representation or schematic modeling. Once the students decided on a concept for the container's unfolding process (employing bass wood models), we carefully computer-modeled the pieces of the structure, in fact "constructing" the building in electronic space, paying substantial attention to assemblies, connections and structural joints.

While this is obviously not equivalent to actually design-building the projects, we were able to simulate the materiality of the steel tube structure to a useful degree of accuracy. This in turn allowed us to design by actually assembling the simulated structure in (electronic) space. The process also allowed the students to learn about issues related to the impact of building technology on architectural design in a very short amount of time, enriching an already intense design process.

### 3. Unfolding and adaptability

#### *Design for adaptation requires an architecture of transformation*

The design process focused on assembling container-object capable of transforming into a complex, publicly accessed building. The simple prismatic volume of the shipping container unfolds to embrace the site. It generates *place* through the articulation of its forms and the array of its program. The resulting outdoor spaces created by the building's articulation vary depending on how the building is deployed. These exterior public spaces are completely different in each scheme even though they unfold from the same type of shipping container.

In exploring a materialized architecture we experimented with a design process based on assembly and deployment. It highlights adaptability and transformation, as the buildings can adopt a wide variety of configurations through its movable parts.

In comparison with the human skeleton, which is rigid yet adapts to dynamic spatial conditions, the structural skeleton of the mobile media center rotates, slides, and raises to acquire its final form. Just like the human body, our building had to move in space, a condition that obligated us to develop it spatially and by extension constructively. High strength to weight ratios and telescopic capabilities of hollow steel sections allow for the structure to easily vary its shape from a prismatic volume into a com-

plex, highly public building for the sharing of information and civic activities.

We employed electronic simulation as a means of "constructing" the schemes with great attention to structural and material systems, but also focusing on the transformation from box to fully deployed artifact. We found that digitally simulated assembly can become a testing ground for architectures that attempt to make the *conceptual* and *experiential* instances of the design process truly simultaneous. By linking both instances through materiality, the students developed ideas that were informed by the potential fabrication of the building while retaining the ability to exercise design iterations typical in most design processes. In other words, they learned through simulated "construction" without the irreversibility of actual building, while exploring ideas without the abstraction imposed by traditional architectural representation.

With the ability to simulate the building's materiality to a useful degree, we were able to explore areas of building systems such as adjustable hydraulic foundations and movable structural frames that characterized the projects' formal qualities. Wood models built alongside the simulations enabled group discussion and critique. Later on, these analog models were reused to create digitally enhanced images for presentation purposes.

In dealing with displaced populations located in rural and uneven terrain the transportable buildings would have to adapt to different site conditions and not simply deal with adaptability as a rhetorical issue. Students evaluated all the aspects of delivery, deployment, unfolding and usability of their projects, refining their concepts as they learned more about the physical environment of the refugee camps thanks to the media feeds they were closely monitoring.

### Conclusion

Pedagogically, the advantages of true design-build and digital/hybrid simulated construction can certainly find a common ground in terms of architectural education. Students can simulate construction as a first part of the design process and then build the full-scale edifice as the logical consequence. But then architects are not builders, nor should they be. We certainly need to teach the knowledge contained in construction as an inherent part of the design process (or even as the design process itself as was the case in the Mobile Media Center projects). But a significant degree of this knowledge can be achieved with alternative methods such as those that include digital simulation as a means of 1:1 scale visualization. The actual materialization of the artifact in our case remains in the realm of *manufacturing*, and not *design*.

The development of digital simulation combined with other design processes adds a layer of materialized and technical commitment to otherwise abstract and representational design methodologies that rely heavily on scale models. It also complements the traditional design-build studio, which has its own limita-

tions in terms of design complexity and depth.

Our intention was to follow world events as they happened and respond to them in real time both conceptually and constructively. We focused on generating a product and not a mere proposal. It had to be feasible and of authentic usefulness as a tool for the civic recovery of a refugee population. In the age of live televised ethnic cleansing, things like voyeuristic commentary and abstract theoretical discourses are too easy and of no help in actively participating as architects in the new world (dis) order. The projection of our participation would be furthered since the Mobile Media Centers could be re-located to villages and small towns during the UN-sponsored reconstruction of Kosovo, providing villagers with a semi-permanent civic point of reference and an accessible link to the outside world.

The three projects realized in this studio were produced over a five week period while our eyes were glued to the CNN web site and TV news channel, and their development evolved through images captured week by week as the refugee situation

took form in Kosovo. It was our way of tangibly reacting to changes of our time. Months later, we watched a similar scenario developing in East Timor, following a pattern that has become a signature of globalization.

We decided we had to find a way of straddling information with construction, blurring the line between the two, exploring a design methodology dealing with materiality and information as a simultaneous phenomenon. In the design process it meant wood models along side computer models; In the project, this translated into the physical space that addresses the immediate community and a simultaneous information space that projects that community on a global scale.

We feel that architects can project their knowledge and exercise their long forgotten social responsibility only by mastering the tools of their time and by simply making themselves initiators (and not just participants) of change. Because someone has to consider the design of the global village and this task will befall the architects of the new millennium.