

international concrete design competition for students 2003/04

ROBUSTNESS

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International Jury session: May 17, 2004, Berlin

JURORS

Michael Speaks, USA, chairman
Gonçalo Byrne, Portugal
Rob Nijse, Netherlands
Selahattin Önür, Turkey
Paul Robbrecht, Belgium
Amandus Sattler, Germany
Alan Stanton, United Kingdom
Derek Tynan, Ireland
Gert Wingård, Sweden

International Jury Comments Curator's Summary

General comments

Both national and international juries agreed that the competition brief was ambitious and offered a unique opportunity for an industry sponsored educational initiative. Robustness, the juries also concluded, seemed to provide a strong conceptual framework for developing innovative uses of concrete through material research and product application.

The international jury, which consisted of members from each of the concrete consortium member countries-Turkey, Germany, Portugal, Belgium, The Netherlands, Ireland, UK, and Sweden-met in April 2004 to judge three entries from each of these eight countries. After three rounds of intense conversation and debate, the jury selected two winners and two honorable mentions from the twenty-four entries. While all jury members ultimately agreed on the winners, there were a number of other entries that the jury thought deserved mention in the commentary. Before moving on to the summary jury comments on the winners and honorable and special mentions, it is worth noting some of the general comments about all the entries.

Among the weaker entries were those that appeared to be adaptations of previous studio projects to the competition brief. This is not a good approach to a competition. In rare cases this occurred by simply adding the word "robustness" to the boards. Even in cases where the work seemed of sufficiently high quality-owing no doubt to work previously completed-these entries rarely addressed the issue of "robustness" in any meaningful way. It was also observed by several jury members that the larger scale projects-especially those that attempted to address urban scale issues-were less successful than those that addressed smaller scale issues. This was not simply a matter of scale; it was not the case, for example, that entries focusing on a single architectural detail or object were more successful. Often, in fact, they were not. Instead, the problem was one of not dealing with the brief. Had they done so, these urban scale entries might have been encouraged to deal with the city as a robust system rather than treating it as a frame or context for design problems. By contrast, the most successful entries were those where new building systems, components or technologies were introduced. Such systems could be deployed at any scale and were thus considered robust in-and-of-themselves. These entries were easier to discuss on their own merits relative to innovative uses of concrete to develop structural systems that were observably robust. The fact that several prominent structural engineers were members of the jury made such discussions-which included analysis and evaluation of the feasibility of the systems designed-among the more

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interesting that occurred during the day of judging. There were several entries in this category, however, that failed to make meaningful application of what otherwise was considered rigorous research and testing of concrete structural or component systems. In addition, there were a few entries that had clever or strong concepts that were not sufficiently developed or deployed. In such cases the entry seemed to simply stop after an initial-and in some cases quite successful-proposal. It is also worth observing that the jury was impressed by the relative strength of the entries from non-architectural, or rather non-specifically architectural design schools. This was especially evident in the quality of the presentation materials and the strong conceptual response each made to the brief. But it was also evident in the rigor of material research and documentation of the research and design process.

Winners

Rather than choosing one overall winner the jury decided to award two overall winners, each with € 2,500 prize money. The jury moved through three rounds of discussions. The first round was a general discussion of all the entries resulting in seven moving to the second round. The second round discussions focused on these entries and decided on four for the final discussion. In the third and final round two entries were selected as overall winners not so much a compromise but in an effort to recognize two different approaches to the brief.

Winner one CC001 - *Open source*

The judges agreed unanimously that this was one of the two best entries of the competition. Unlike many entries, CC001 took very seriously the competition brief elaborating and expanding it not only in their text but also throughout their presentation panels. The project title, "Open Source," is borrowed from software developers who share code in an effort to make more robust operating and other forms of computer software. Code becomes more robust when the community participates by working out individual bugs or code design flaws openly and collectively. Accordingly, CC001 deals explicitly with the idea of community and also with how communities evolve and change over time, two issues at the heart of the definition of robustness offered in the brief. Most of the jury felt that this entry dealt better than any other with the brief. CC001 also develops a very strong material research and design proposal. Taking "change-over-time" as its watchword, CC001 showed how concrete could be used to create environments that change according to different needs. A system of concrete tiles that change color to signal different uses during the week, month and year, is deployed to create environments for the different ways communities use public space. The square, which is constructed from these tiles, is shown in the boards as it might appear over the week and even as it might appear 10 years hence. Though not asked for in the brief, CC001 was also the only entry to prototype an actual design component. Attached to the board is a concrete tile fitted with an electrical plug that changes color when current is passed through it. This little presentation innovation made explicit CC001's recognition of the importance of material testing and prototyping. Ultimately, all jurors were agreed that in almost every respect, CC001 is an extremely strong proposal that deserves to be recognized as one of the two winners.

CC001 is designed and submitted by:

*Afshin Mehini, Christopher Glaister and Thomas Rosen
all studying at the Royal College of Art, London, UK*

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Winner two

TC120 - Spatial Skeleton Structure

"A great concept: to live in a concrete sponge! A brilliant idea!" This is how one of the structural engineers sitting on the jury described the TC120 entry. All of the jury, in fact, agreed that the submission created a uniquely flexible means of building with concrete, and as such dealt with robustness by showing an example of a robust design process and construction system. The proposal is for a construction system that uses pneumatic devices to create what the designers call a "non-directional spatial skeleton structure." The structure, created from concrete, is one of two control mechanisms that allows the designer to shape a structure using two seemingly incompatible materials: concrete, which is heavy; and air, which is light. Air is pumped into pods which are held in place by the concrete skeleton to form different sized spaces; air pressure coupled with the skeleton are the design mechanisms that allow TC120 to create cellular spatial pockets more reminiscent of reef structures or soap bubbles than the spaces one normally finds in buildings of similar size. Indeed, the way organic and inorganic systems develop over time is more than a metaphor in this entry. Their process and the final design are, like many natural systems, remarkably adaptive and yes, robust. What is especially impressive in this regard is the iterative and interactive process of designing and testing that took the designers through several phases, adding, with each test, intelligence to their process while at the same time embedding the structural system with its own form of adaptive intelligence. While the jury agreed that the construction system created by this team was very impressive, they also agreed that the application of the system was less impressive. At times, the jury was not sure if the panels for the structural system were part of the same entry as the design, which was conventional and somewhat uninspiring. Nevertheless, TC120 was judged one of the two best entries in the competition.

TC120 is designed and submitted by:

Il Hoon Roh

studying at the Royal College of Art, London, UK

Honorable mentions

Two entries were singled out for Honorable Mention. Each will receive € 500. While clearly among the best entries discussed over the course of three rounds, the Honorable Mentions were not consensus winners; that is, while some jurors felt strongly about them, all jurors did not think they were overall winners and so they did not move the final round of discussions.

Honorable mention one *S0124 - Hangover*

The jury was very impressed with the directness, simplicity and flexibility of the structural system developed by S0124. The presentation panels dealt with the brief in a rather implicit way by showing a concrete column system performing under many different conditions. A robust system was generated and tested by deploying a single concrete column element in multiple locations, each with its own performance criteria. The panels also made visual reference to natural structures and games that allowed the jurors to imagine the kind of strength and adaptability one might expect from the deployment of the system of columns. Several jurors observed that S0124 made for a new, more flexible domino system-high praise indeed. But the jury also thought that while the system was very robust-even as one juror noted under seismically unstable conditions-it was also limited to the consideration of one element. No mention was made, for example, about how the columnar system worked with floor plates. This relationship, if worked out more fully, might have led to an even more robust system.

S0124 is designed and submitted by:

Niels Verkooijen, studying at Delft Technical University, Delft, Netherlands

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Honorable mention two DK021 - Hazelwood

The jury was especially taken with the attention to context, nature, and craftsmanship in the DK021 entry. For some of the jury this entry was one of a very few that focused on the inherent properties of concrete. One juror remarked during the discussion, "Now that's a real concrete project." DK021 also dealt with the brief implicitly rather than explicitly by developing a dock that interacted with both shoreline and water. The panels featured visual connections with nature and implicitly with natural, evolving systems. The concrete intervention is thus meant as an augmentation rather than a replacement of the relationship between natural systems or boundaries such as shore and water. But while some members thought this a poetic interpretation of robustness, others felt that the entry was rather conventional and showed no truly innovative uses of concrete. Even so, most of the jury members felt it important to recognize such a project with the award of Honorable Mention.

DK021 is designed and submitted by:

David Kelly, studying at University College Dublin, Ireland

Special mentions without award

The jury felt strongly that the projects selected to proceed into the second round of discussions be recognized at the awards ceremony. These included the following:

NG319

A much discussed project. The jury agreed that the project was extremely sensitive, well thought out and executed but that was perhaps stretched too thin trying to cover too much territory. Translation: a bit ambitious for what got worked out in the end.

NG319 is designed and submitted by:

Nils Nolting and Sönke Gebken,

both studying at University of Hannover, Germany

EB105 - Active Force Within

Described by the jury as very literary and poetic; but it made no real connection to fabrication or construction. One juror remarked that the entry was conventionally extraordinary. Other jurors said it was a digital storm; others still a digital salad bowl. I would take both as complements.

EB105 is designed and submitted by:

Daniel Zajsek, studying at University of Technology Kaiserslautern, Germany

UW010 - Surface Robustness from Surface Condition

Another much discussed project. Paul Robrecht, from Belgium, and I, argued strongly (to no avail) for this project which was very focused on material research and fabrication. It was also very beautiful.

UW010 is designed and submitted by:

John Hutchinson and Thomas Kilvert,

both studying at University of Westminster, United Kingdom