

WestminsterResearch

<http://www.westminster.ac.uk/westminsterresearch>

FAB FEST – International Fabrication Festival

Scott, D., Zvirgzda-Zvirgzdina, K., Olendra, M. and Girardin, F.

A paper presented at *Architecture Connects, AAE 2017 Conference*, Oxford Brookes University, 6 to 9 Sep 2017.

The WestminsterResearch online digital archive at the University of Westminster aims to make the research output of the University available to a wider audience. Copyright and Moral Rights remain with the authors and/or copyright owners.

Whilst further distribution of specific materials from within this archive is forbidden, you may freely distribute the URL of WestminsterResearch: (<http://westminsterresearch.wmin.ac.uk/>).

In case of abuse or copyright appearing without permission e-mail repository@westminster.ac.uk

Workshop/Case Study/Film: FAB FEST – International Fabrication Festival

David Scott, Krista Zvirgzda, Matas Olendra, Francois Girardin
University of Westminster

KEYWORDS Digital Fabrication, Architectural Design, Co-production, Creativity, Crowd Fabrication

Description:

FAB FEST is an International Fabrication Festival held at the University of Westminster in Central London. The festival is a unique pedagogic and social project, combining creative architectural design with innovative digital fabrication methods using lightweight, recyclable materials.

It was introduced in 2016 and developed and repeated in the Summer of 2017. The festivals involved 50 teams of five or more students from across the UK and around the world including participants from India, China, USA, Turkey, Greece, Spain and Italy. Teams worked together over a four-month period to develop a design for a habitable pavilion. Groups combined students, professionals in practice acting as design mentors, as well as staff from the University's Fabrication Lab, advising on materials and digital fabrication processes. Following a series of design stages teams submitted their proposals to be digitally fabricated using CNC knives, lasers and robotic arms. In the week of the festival teams then worked together to assemble and install their pre-fabricated pavilions, collectively creating the architecture for a large-scale public event. Building and celebration took place in Ambika P3 - a 14,000 square ft space in Central London

developed from the University's former concrete construction hall. The project ended in a three-day celebration with live music and making-based events for visitors and the local community.

Aims:

There are several connected aims:

- Encourage students to explore, test, document and develop new manufacturing processes using the given materials;
- To investigate how to make a pop-up, short burst workshop where digital tools are used to build full scale pavilions;
- To engage students to think and build at a scale that is seldom possible in an academic environment, and to bring their ideas to a wider audience in interesting and unexpected ways;
- Systematically investigate innovative ways of meeting the demands of the brief in a restricted time period and with limited choice of materials. Utilization of digital fabrication as an exceptional tool to work with cheap, recyclable materials;
- Investigate into remote manufacturing and how international liaisons might successfully work to create the architecture of the festival by developing digital designs in one place and using digital fabrication tools in another;

- Broaden the making community, look into the ways of creating a one-off community bringing together different disciplines and cultures and include the local community including primary schools and businesses in the celebration of making.

Methodology:

Technology was used to communicate with teams, facilitate the transfer of information, enhance learning, as well as to provide the means to test and manufacture participants' designs wherever they were based. The project had at its disposal, for a limited period of time, the full resources of the University's Fabrication Lab from laser cutters to industrial robots. The project made considerable use of digital and social media to form a community around the event. Trained students working in the Lab also played a key role as international liaisons, communicating with international teams in order to help to test their designs on our digital fabrication machines and feedback on their proposals.

The project was not only a new form of collaboration between students from the host university. There was also collaboration with universities around the world, working with a diverse array of architectural offices, and industrial sponsors, some of whom also entered their own teams and supported the student teams in the use of their materials. To engage the local community, we visited local Primary Schools giving short presentations about the event and the theme. Pupils were asked to try their hand at imagining what a Pop-up City could be in drawings.

Festival participants and visitors were asked to use hashtag #fabfestlondon and/or #fabfest2017 in social media platforms such as Instagram, Facebook and Twitter in order to spread the word about the festival and to create an extensive online library of the work produced.

Findings:

The brief "Pop-Up City" encouraged ideas about the city directly, and how cities

WORKSHOP/CASE STUDY/FILM

might be transformed through participants' designs for what they imagine the cities of tomorrow to be. The most successful participating teams were the ones that had their projects as part of their architecture degree courses in their home universities. The international nature of the festival encouraged the blending and exchange of ideas between creative young people from very different cultures.

Outcomes and impact:

FAB FEST provided an opportunity to create a one-off community bringing together different disciplines and cultures, with a depth of shared interests and understandings developed over a period of several months, as well as the more intense shared experience of the week's festival of concerted effort and entertainment. Students had the rare opportunity to see their professionally guided designs realised and enjoyed in use by the general public, by expert judges and fellow students from around the world. The event triggered an interesting conversation between academics, designers and students about digital fabrication and established short-term partnerships between professionals and students - the next generation of designers. The transient urban space that was produced in Ambika P3 became a site in which to interact with the local community, brought into the festival through joint projects instigated in the months building up to the event. The events were documented through video and still images as well as interviews with participants at all levels, and with festival attendees. The project produced a remarkable range and diversity of work, offering innovative forms and approaches to fabrication, as well as creative responses to the briefs. Of equal interest to the pavilions themselves however were the ways in which they created a temporary community. This involved both those engaged with the project from the start as well as an extensive group of visitors who participated in student-led making activities and workshops, were inspired by the architecture of the pavilions on display,

Architecture Connects, aae 2017 conference

WORKSHOP/CASE STUDY/FILM

and entertained by the performances of the musicians and artists accommodated by their spaces.

Commented [PS1]: Please use the MHRA Style Guide for referencing, a free copy of which may be found [here](http://www.mhra.org.uk/Publications/Books/StyleGuide/index.html).