

Separated at Birth

Searching for Symmetry in Distributed Design Studios

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While distributed or collaborative design studios have a long pedigree (Donath 1999), there seldom arises the chance to test the limits of the concepts implied by the idea of the physically separated design team. The indigenous differences of culture, schedules and language accentuate this. The authors entered into an experimental design exercise that would seek to explore the range of dualities, which are often encumbered by such studios owing to their very nature. As an additional catalyst in the experiment, a design topic was chosen which reflected the nature of the studio thereby creating a Gödelian knot of self-referentiality.

Virtual Design Studio; CSCW; Distributed Practice; Intensive Learning

At Opposite Ends

The RWTH Aachen University, Germany and the Auckland University of Technology, New Zealand are about as far apart as is possible. Members of both universities undertook a joint design studio in the winter of 2002 to test the limits of the Netzentwurf or "Net-Studio" concept that has been tried in varying degrees. (Forgber, Russell 1999). The studio was characterised by a range of similarities and dissimilarities. This was reflected in the studio title, "Separated at Birth", which implies an underlying fraternity while recognising the contextual and cultural differences of the partners. The dualities were perhaps most poignantly illustrated by the physical locations of the two universities: New Zealand and Germany. Owing to the idiosyncrasies of "Daylight Savings Time", the partners were separated by exactly twelve hours in addition to an (almost) antipodal physical location.

Although the project used the relatively established collaboration platform, (<http://www.netzentwurf.de>) as a basis for communication, the Auckland partner had absolutely no experience in Internet communication or distributed practices. The RWTH Aachen, in contrast, has helped to develop the Netzentwurf platform and so has a pedigree of Internet collaboration. (Elger, Russell 2001) Further differences between the partners could be attributed to language, national culture, and most importantly, institutional attitudes towards design development and the role of the design studio in the curriculum. Most importantly, and unlike previous collaboration projects such as the Liquid Campus project (Elger, Russell 2002), the students involved in the S.A.B. project did not have the chance to physically meet at any time before, during or after the experiment.

The syllabus called for the creation of a "listening post" bringing into the program a further duality of transmitter and receiver. Here too, the program implied a self-referential understanding of the problem. Eight students in each country were paired into teams and given 10 days to develop their concepts. The short duration of the studio also contributed to the "extreme" nature of the studio. To add to the suspense, the studio communication was based on a relatively new web-based videoconference software (Macromedia Flash Communication Server), which alleviated most every firewall problem that had previously dogged other virtual design studios. As well, this videoconference software was integrated into the collaboration platform thereby negating the need for additional software and at the same time, advancing the "state of the art" in integrated CSCW platforms. (<http://comm.arch.rwth-aachen.de>)

This suspense was truly evident when the first antipodal contact was made. The excitement of seeing and hearing the others a half a planet away was truly exciting for all involved. True, the technology is not altogether new, but to be able to "make it work" lent a great sense of success to the initial contact. From



the point of initial contact onwards, the students were given “rooms” on the Communication Server where they could communicate together in relative privacy.

The "mid-term" and final reviews were held with all eight student groups and their tutors physically present together. The final review involved a somewhat elaborate setup involving 2 video projectors at each end. (See Figure 1) Two computers were joined using the VNC (virtual network computer) software, which allows the video of one computer to be displayed and controlled by two computers. This setup allowed a projector at each end to display the same webpage. The second projector displayed the videoconference images. That is, one computer was for communication, and one for content. The other review sessions ran as parallel conferences with 8 - 10 sessions occurring simultaneously in time and parallel in space. (See Figure 2)

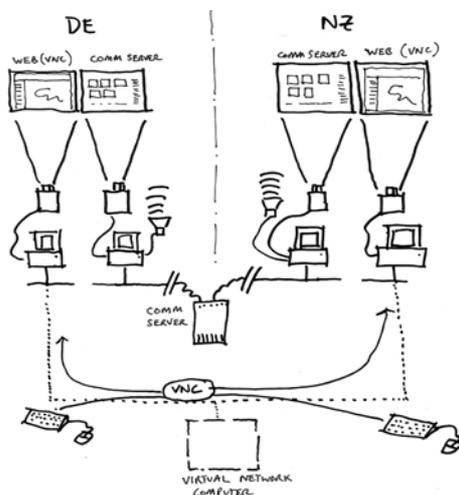


Fig1: Web-Review Hardware Configuration



Fig2: Desk Crits in Collaborative Environments

Common Ends

Because of the symmetrical time difference, the students were able to use the "ping-pong" method (Schnabel, Kvan 2002). This meant meeting at around 7, whether it be day or night in order to pass off the design to the partner on the other side of the planet. In this system, the one partner had just completed a days' work and then passed the design onto the second person, who had then had 10-12 hours to work on it before returning it. This process was fruitful, but extremely taxing on the students. In post-studio discussions with the students, many felt that the format was fecund, but was not sustainable for longer periods. It was often hard for students to sleep, knowing that the project was being advanced – the communication between the partners took place at all hours of the day and night.

The design studio tradition at each university provided perhaps the biggest difference to deal with. One university advocates a very pragmatic and technical approach to design problems while the other promotes a more conceptual way of solving design problems. This was, in contrast to initial expectations, a source of inspiration for most of the student teams. They stated afterwards, that they rarely had the chance to discuss their design ideas in any other terms than those of their home institution. The differences took some time to adjust to, but proved to be advantageous, as were most of the dissimilarities.

The character of the teams was also embellished by the predominance of one or the other gender at both universities. The age and professional development of the participants also played a large role in the roles the individual students took in their own teams. Interestingly, the decision to conduct the studio in English resulted in the majority of the "German" students (that is, the students in Germany) being either

foreign students from third countries or German students with extensive experience abroad. It must also be noted, that within the small number of teams, the co-operation levels ranged from true collaboration to what can best be described as "jovial frustration" to tragedy (including the unexpected death of one of the students).

Understanding, compassion, tolerance and a will to "see the thing through" coupled with a belief in the project in general helped to mitigate problems as they arose and to reinforce positive aspects as they became apparent. Naturally, a host of things in this short, sharp project did not work as intended. However, the flexibility and ingenuity of the students worked to create a real success. The results of the short design studio can at most be called design intentions, however, the "Separated at Birth" Studio served as a proof of concept; the next studio is planned (in a modified form) for the summer of 2003 over 8 weeks.

The initial conclusion is that, indeed, collaboration can occur without physical contact – anywhere on the planet. However, the authors are ready to allow that the nature of the studio, with its short time frame and novel atmosphere make any conclusions as such inconclusive – except to say, that all of the students found the project worthwhile, enlightening and rewarding. The results of a longer Studio in the summer of 2003 should help to clarify the limits of these projects.

References

- Donath, D., Kruijff, E., Regenbrecht, H., Hirschberg, U., Johnson, B., Kolarevic, B. and Wojtowicz, J. (1999) Virtual Design Studio 1998 - *A Place2Wait*, *Architectural Computing from Turing to 2000* [eCAADe Conference Proceedings / ISBN 0-9523687-5-7] Liverpool (UK) 15-17 September 1999, pp. 453-458
- Elger, Dietrich and Russell, Peter (2001) *Net-based Architectural Design: The Difficult Path from the Presentation of Architectural Design in the World Wide Web to Teamwork in Virtual Planning Offices: A Field Report*, *Architectural Information Management* [19th eCAADe Conference Proceedings / ISBN 0-9523687-8-1] Helsinki (Finland) 29-31 August 2001, pp. 371-375
- Elger, Dietrich and Russell, Peter (2002) *The Virtual Campus: A new place for (lifelong) learning?*, *Connecting the Real and the Virtual - design e-ducation* [20th eCAADe Conference Proceedings / ISBN 0-9541183-0-8] Warsaw (Poland) 18-20 September 2002, pp. 472-47
- Forgber, U. and Russell, P. (1999) *Interdisciplinary Collaboration in the Virtual Design Studio* *Design Studio*, Proceedings of the 17th Annual EAAE Annual Conference, Plymouth UK
- Schnabel, Marc Aurel; Kvan, Thomas. (2002) *Interaction in Virtual Building Space, Distributed Knowledge in Buildings* [CIB-W78 Conference Proceedings Vol. 2 / ISBN 87-90078-34-9] Aarhus (DK) 12-14 June 2002, pp. 91-98

