Shared Design Space

The Contribution of Augmented Wiki Hypertext to Design Collaboration

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Abstract: Collaborative design activity that involves remote multilateral, multidisciplinary communication has become more commonplace with the electronic means to communicate across any distance in real time. The communication itself can be both an important repository of project information and an important part of the process of conceptualisation and design development. This research has explored the apparent shortcomings inherent in commonly used means of communication and how these impact on the design process. This paper describes research that has taken as a starting point the analysis and observation of actual design communication from the archive of an internationally published collaborative project involving disciplinarily diverse and globally scattered participants. Through the analysis, we have identified characteristics of communication tools or information environments that would address the particular issues found to impede collaboration while fostering those aspects that support it. The findings have been used to inform the design, specification and implementation of collaborative information spaces based on Wiki software.

1 INTRODUCTION

Multilateral communication between designers collaborating remotely poses particular challenges to the design process especially when they are contributing from different discipline backgrounds. Many of the challenges can be seen as more widely applicable to collaboration and communication than just to architecture or design. However the latitude that is afforded to conceptual shifts in the process of design and the many different sets of parameters that are brought to bear in moving towards a shared “solution” or more detailed, better understood model, make this a most demanding subset of collaborative enterprise.

“Design stands midway between content and expression. It is the conceptual side of expression and expression side of conception” (Kress and Van Leeuwen 2001).
Shared Design Space: The Contribution of Augmented Wiki Hypertext

For this reason, collaboration-in-design places unusually onerous demands on modes and media of communication. For genuinely ‘collaborative’, as opposed to ‘cooperative’, multidisciplinary design activity the schema must be kept fluid in order for the holistic model or conception to assimilate the different design inputs developing on the basis of different expertise and creative insights. (Kvan 2000) It appears that this fluidity with regard to maintaining an extensive design space and deferral of formal, technical, or architectonic commitment is also manifest in the development and use of terms in design communication. We analysed the email archive of an internationally published design project with diverse participants and highly speculative ends. Employing a constructionist participant observation approach, we observed the development of a sometimes volatile project language (Crotty 1998). It included many evocative metaphorical terms, which once created, had a meaningful role in fostering the collective imagination. They sometimes endured or reappeared through the life of the project, sometimes faded out of communication very quickly and sometimes altered their meaning in the course of use. We also identified significant events in the history of the project through the archive and developed ‘thick descriptions’ of the lead up to these (Geertz 1998). The thick description is a history of events compiled by a researcher immersed in the process, in this case reconstructed after the events from the record in the emails but by an individual who had had intimate knowledge of the project. These are not objective studies but rather a record drawing inference and constructing meaning from the communications.

Through this process we could generalise two areas of communication that impacted on design collaboration. They are distinct but closely interrelated. The first is structural and the second ontological. This approximates to form and content. (Fairclough 1995). The graph of communication routing and the way in which the communication archive functions as a repository for shared project knowledge and information are both in the structural category. The barriers put up by discipline specific- or skewed- terms and notation and the development of a ‘project language’ that evolves with the collective conception are examples of ontological issues, that is issues about the things that exist in the communications and the relations between them. There are other phenomena that fit loosely into the ontological category such as misunderstandings caused through over familiar colloquial “empathetic conformity” which is ambiguous out of social context and modal problems, for instance the same information understood differently when presented in different modes, whether these are textual, graphical, mathematical, filmic, sonic etc. This understanding has formed the basis for developing performance specifications for tools to support communication in collaborative design. These tools are in development based on Wiki software.

2 WIKI

The name Wiki has two principal definitions. “A Wiki or wiki is a website (or other hypertext document collection) that allows a user to add content, as on an Internet