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A Design Assistant for Environmental Optimisation of Buildings

Darren Ward, Andy G. P. Brown, Frank F. Horton

Green Architectural Research and Design (GARD)
School of Architecture & Building Engineering
University of Liverpool
PO Box 147, Liverpool L69 3BX
United Kingdom

Summary

The dual function of the Environmental Design Assistant which we have developed is to act firstly as a teaching aid and secondly as a design aid. In terms of it's role as a design assistant it is similar in nature to the application described by Papamichael, K, in Novitski, B. J. (1993). However, the work described here forms part of an overall strategy to develop a user friendly design assistant across the spectrum of Architectural design disciplines: this is one particular strand of the project.

One aim embodied in the development of the environmental design assistant has been the pragmatic one of the production and refining of a tool to perform environmental assessments of buildings in accordance with the British recommendations made in BREEAM (Building Research Establishment Energy Assessment Method). In this respect the assistant allows for the consequences of design decisions to be readily assessed and then for those decisions to be modified. The Assistant has undergone a series of refinements to make it more user-friendly, efficient and appropriate as an Architectural design aid; and this has been the second aim of the project. The project has acted as a vehicle for the application of design principles applied to the presentation, information structuring and navigation associated with Hypermedia and Multimedia products. We are applying the kind of good design principles which have been summarised well by Schulmeister, R. (1994). These principles include Ariadne's Thread (paths for navigation), Lost in Hyperspace (backward navigation), More-than-browsing (interaction) and Tutoring (providing feedback to the user). Adoption of such principles is, we believe, essential in order to realise the potential of Hypermedia tools.

The principal development tool for the work has been SuperCard. This has been used in conjunction with a range of other software including ArchiCad and Intellidraw and a range of image grabbing devices.

References

Schulmeister, R. (1994) *A shift of paradigm,* Syllabus, Spring 1994, No. 4, St. Albans, UK.
Papamichael, K, in Novitski, B. J. (1993) *Energy Design Software* , Architecture, June, pp.125-127

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