Modelling trade contractor information production

Abstract

Design management research usually deals with the processes within the professional design team and yet in the UK the volume of the total project information produced by the Specialist Trace Contractors equals or exceeds that produced by the design team. There is a need to understand the scale of this production task and to plan and manage it accordingly. The model of the process on which the plan is to be based, whilst generic, must be sufficiently robust to cover the majority of instances. An approach using design elements, in sufficient depth to possibly develop tools for a predictive model of the process, is described. The starting point is that each construction element and its components have a generic sequence of design activities. Specific requirements tailor the element’s application to the building. Then there are the constraints produced due to the interaction with other elements. Therefore, the selection of a component within the element may impose a set of constraints that will affect the choice of other design elements. Thus, a design decision can be seen as an interrelated Element-Constraint-Element (ECE) sub-net. To illustrate this approach an example of the process within pre-cast concrete cladding has been used.

Keywords: Design management, Information transfer, trade contractor design