

CONCEPTUAL MODELLING: A METHODOLOGICAL APPROACH TO THE TUTORING SYSTEM DESIGN

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ABSTRACT:

The principal problem which Intelligent Computer - Assisted Instruction Systems encounter with is that, as they are being developed in base to expert knowledges in instruction, they are typically managed by apprentice users who plan different contexts and strategies.

Different I.C.A.I. design models, in particular the ones which refers to modules named "student model", offer poor and little expressive approaches and, in general, a scant planning of the interrelationships and requirements of their components.

Conceptual modelling brings a design methodology that makes emphasis in the integration of components in order to describe more comprehensively the reasoned behavior of all the system, and the possibility of verifying formally the set of desirable properties, its consistence and validation, as well.

With a design centered in this methodology, this study brings and approach from which a student is modeled as an apprentice that, as an answer solution to a determinate problem offers an "interpretative prototype" feasible of being validated if its semantics is correct in the conceptual modelling; that is to say, the planned prototype will reach a determinate domain and the formal verification will validate it only if that domain belongs to the posible conceptual modelling interpretation.

The input parameters are a result of module 2. The implementation and drawing is equivalent to module 2. The results are complete production drawings. The datas of these drawings can be used as input parameters to a CAM-System.

Common to all these modules is the interactive design of the software. So it is possible to use the experience and knowledge of the engineer on the possibilities of the technical realization.