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Modeling User Context Using CEAR Diagram

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Abstract : Even though the number of context aware applications is increasing day by day along with the users, till today there is no generic programming paradigm for context aware applications. This situation could be remedied by design and developing the appropriate context modeling and programming paradigm for context aware applications. In this paper, we are proposing the static context model and metrics for validating the expressiveness and understandability of the model. The proposed context modeling is a way of describing a situation of user using context entities , attributes and relationships .The model which is an extended and hybrid version of ER model, ontology model and Graphical model is specifically meant for expressing and understanding the user situation in context aware environment. The model is useful for understanding context aware problems, preparing documentation and designing programs and databases. The model makes use of context entity attributes relationship (CEAR) diagram for representation of association between the context entities and attributes. We have identified a new set of graphical notations for improving the expressiveness and understandability of context from the end user perspective .

Keywords : user context, context entity, context entity attributes, situation, sensors, devices, relationships, actors, expressiveness, understandability
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