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Design Systems and the Need for a Usability Method: Assessing the Fitness of Components and Interaction Patterns in Design Systems Using Atmosphere Methodology

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Abstract : The present study proposes a usability test method, Atmosphere, to assess the fitness of components and interaction patterns of design systems. The method covers the user's perception of the components of the system, the efficiency of the logic of the interaction patterns, perceived ease of use as well as the user's understanding of the intended outcome of interactions. These aspects are assessed by combining measures of first impression, visual affordance and expectancy. The method was applied to a design system developed for the design of an electronic health record system. The study was conducted involving 15 healthcare personnel. It could be concluded that the Atmosphere method provides tangible data that enable human-computer interaction practitioners to analyze and categorize components and patterns based on perceived usability, success rate of identifying interactive components and success rate of understanding components and interaction patterns intended outcome.

Keywords : atomic design, atmosphere methodology, design system, expectancy testing, first impression testing, usability testing, visual affordance testing
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