Title of Article: A process framework for managing implicit requirements using analogy-based reasoning

Author(s): Emebo Onyeka

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Abstract: With regards to requirements elicitation, system requirements can be classified into two types - explicit (functional and non-functional) and implicit requirements. Explicit requirements are well-defined and clearly stated requirements that a system should execute while implicit requirements (IMR) are the hidden, unspoken, or assumed requirements that a system is expected to fulfill even though not explicitly elicited during requirements gathering. Most products have been rejected or have failed to meet user's expectation because of unhandled IMR. This planned research will investigate how automated support can be provided for managing IMR within an organizational context, which is currently lacking in practice. This work proposes an approach that is based on a combination of three technologies, namely analogy-based reasoning, ontology, and natural language processing for managing IMR. The ability to discover unknown and un-elicited requirements will mitigate many risks that can adversely affect system architecture design and project cost.