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A Collaborative Problem Driven Approach to Design an HR Analytics Application

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Abstract : The requirements engineering process is a crucial phase in the design of complex systems. The purpose of our research is to present a collaborative problem-driven requirements engineering approach that aims at improving the design of a Decision Support System as an Analytics application. This approach has been adopted to design a Human Resource management DSS. The Requirements Engineering process is presented as a series of guidelines for activities that must be implemented to assure that the final product satisfies end-users requirements and takes into account the limitations identified. For this, we know that a well-posed statement of the problem is "a problem whose crucial character arises from collectively produced estimation and a formulation found to be acceptable by all the parties". Moreover, we know that DSSs were developed to help decision-makers solve their unstructured problems. So, we thus base our research off of the assumption that developing DSS, particularly for helping poorly structured or unstructured decisions, cannot be done without considering end-user decision problems, how to represent them collectively, decisions content, their meaning, and the decision-making process; thus, arise the field issues in a multidisciplinary perspective. Our approach addresses a problem-driven and collaborative approach to designing DSS technologies: It will reflect common end-user problems in the upstream design phase and in the downstream phase these problems will determine the design choices and potential technical solution. We will thus rely on a categorization of HR's problems for a development mirroring the Analytics solution. This brings out a new data-driven DSS typology: Descriptive Analytics, Explicative or Diagnostic Analytics, Predictive Analytics, Prescriptive Analytics. In our research, identifying the problem takes place with design of the solution, so, we would have to resort a significant transformations of representations associated with the HR Analytics application to build an increasingly detailed representation of the goal to be achieved. Here, the collective cognition is reflected in the establishment of transfer functions of representations during the whole of the design process.

Keywords : DSS, collaborative design, problem-driven requirements, analytics application, HR decision making
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