

ReqFRAM: a computerized support system for eliciting software requirements from the Functional Resonance Analysis Method

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Information systems are important technological allies in the organizational context. Organizational activities occur in sociotechnical systems through interactions between people, technology and organization. So, technological systems are always embedded in a sociotechnical context. Such systems have been designed, constructed and used by people. Therefore, unexpected events can happen and generate variability and improvisations for system operations. Thus, IT professionals often strive for many efforts to correct possible deviations in order to fulfill specification gaps and achieve expected results. Thus, studies to develop software requirements elicitation are justified due to the hardship to design technological devices that support more resilient sociotechnical systems.

This report describes some results of a DSc thesis developed at PPGI/UFRJ related to improve the software requirements elicitation task in these complex contexts are justified due to the difficulty of designing technological devices capable of dealing with the variability inherent to sociotechnical systems. It presents the heuristic model to requirements elicitation (figure 1), and a support system for requirement elicitation ReqFRAM@ [1] (figure 2) that uses the existing information in the models represented by the functional resonance analysis method (FRAM). FRAM is widely used in Resilience Engineering to deal with complex systems modeling.

The Design Science Research is the method that operationalizes the construction of knowledge applied in the context studied, allowing conducting the stages of the work for the development of the proposed support system for requirement elicitation and the evolutionary assessments [2].

Healthcare was the complex sociotechnical context chosen for the application and validation of this approach, more specifically the Canadian medication therapy management, responsible for the public distribution of medicines to population.

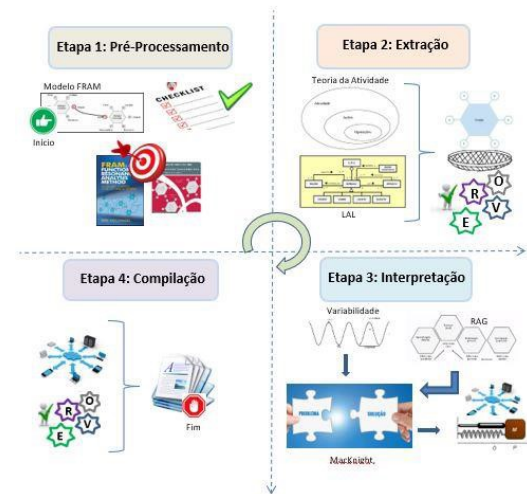


Figure 1. Basic steps for ReqFRAM application..

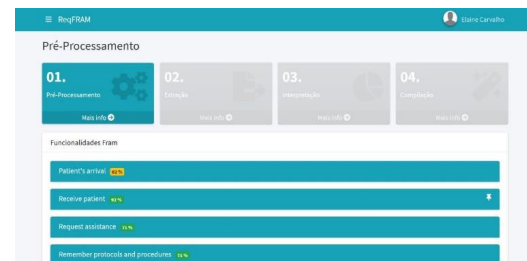


Figure 2. ReqFRAM main interface.

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