WER'04 Panel:

Requirements and Analysis where is the boundary if any?

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The concept of System Analysis was very common in the early stages of information systems. Different approaches to System Analysis share the goal of learning about the current system to establish the basis of the new system (Swanson, R., *An introduction to Business Data Processing and Computer Programming*, 1967). These approaches drove the development of software systems through a long period of time. The vision of the systems was driven by the goals and needs of understanding the functional side of the systems.

The System Analysis approach made several positive contributions. Two of the most important were the focus in goals and the recognition of the organization viewpoint role. The analysis stage of System Analysis was in charge of these initial activities of the Life Cycle.

On the other hand in System Analysis approaches we found several objections as the absence of Non Functional Requirements (analysis was identified to "functional analysis") and the absence of activities such as elicitation and validation of requirements. These weaknesses were related to the technological environment of the old times (mainframe environment). Obviously the scope of System Analysis was strongly associated with restrictions imposed to the business by the batch processing environment.

Requirements Engineering (RE) evolved associated to the need of attacking new problems in the software engineering field. The sources of these problems were located in the new application domains. Simultaneously the availability of new software architectures based on more advanced technologies suggested solutions for a lot of "unsolvable" problems. These two forces made big contributions to develop RE. The RE is associated with user needs to meet goals and solve problems. RE deals with requirements of the user and basing on that it builds the requirements allocated to the software.

RE incorporates analysis to his processes with bigger scope and content than the analysis stage of system analysis.

RE is related to software, it is a software engineering practice. On the other side System Analysis is a resource available to attack not just software systems, for example information systems.

At present RE is developing the activities and it is obtaining the results that traditionally were ownership of analysis. RE attack a set of issues longer than analysis. RE absorbed the role of System Analysis and increased the scope through the incorporation of Non-Functional Requirements. RE develops lots of new tools and approaches and improves several techniques that came from analysis. RE replace the analysis stage of System Analysis at least in the Socio Technical Information Systems.

In the field of system engineering there are strong efforts to develop an approach to system construction including requirements (for example INCOSE). May be these are the first step to build a new paradigm (in the Khun sense) to developing systems, including software systems.