Revisiting Software Requirements Specifications -- What Could We Learn

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ABSTRACT: Software requirements specifications (SRSs) are important documentations that report results of system requirements determination (SRD) when developing software. It forms a base for subsequent activities in a system development process. In order to increase the knowledge of SRS and how such documentation could be structured we present an analysis of nine SRSs. From the analysis of similarities and differences in composition and requirements organization in the SRSs we aim at giving some advice on how a SRS could be improved and thereby supporting development of information systems better. The analysis shows that the overall structure of the SRSs either follows the IEEE (Institute of Electrical and Electronics Engineers) standard 830 with three main sections (introduction -- overview -- list of requirements), or another structure (introduction -- references -- list of requirements). However, how specific requirements then are structured and presented differ from SRS to SRS. The most frequent type of requirements is functional requirements, which is not a big surprise. However, more unpredictable is that non-functional requirements are getting less attention. One conclusion is that even though using standards might not be the only way to formulate SRSs, they are being used and serve their purposes, at least to some extent. However, it can also be concluded that the high focus on functional requirements in standards could be seen as an influential factor explaining why SRSs have such a high focus on functional requirements. The main conclusion is that future SRSs should spend more focus on non-functional requirements since these are both more difficult to describe and will probably play an even more important role when developing information systems in the future.