

# An Improved Taxonomy for Major Needs and Requirements Artifacts

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**Abstract.** Each of the major systems engineering standards and guides has a different focus, uses slightly different terms for the various needs and requirements artifacts, and reflects a different emphasis on each of the activities from the enterprise level down to the system level. While there is a lack of consistency among documents with the use of terms and artifacts (and all are internally inconsistent to some degree), the differences are not significant and mostly reflect the different emphases on particular levels or specific parts of the overall process. None-the-less, the disparate views result in considerable obscuration of the underlying process which can only be resolved after considerable study and deliberation. Worse, the lack of a common taxonomy in the early part of system/requirements engineering process adds confusion at a very critical time in the definition of the system of interest. This paper reviews the early processes and the needs and requirements artifacts described in the major systems engineering standards and guides. An improved (synthesized) taxonomy is proposed that clarifies the language used to describe the major processes and artifacts in the early portion of the system life cycle.