An Assignment On

Comparison of Various Software Requirement Specification Formats

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1.2 ADVANTAGES

- This format of SRS is very detailed and concise
- It is useful for the developers to get a good idea of what the client wants to see in the final product
- There is a provision to add requirements later by including them in the “To Be Discussed” section
- It is an evolving documentation, which provides an option of improvement in further versions of the SRS
- It follows a standard document convention that has to be followed by all the maintainers

1.3 DISADVANTAGES

- It is hard for the client to specify all requirements at the beginning phase
- Many sections may be marked under “To Be Discussed” remain unfilled during the initial phases.
- It is time consuming.
- The SRS undergoes many revisions due to refinement of requirements
- Less focus is made on UML/class diagrams, though they help the developer visualize the final product

2. TCS SRS FORMAT

2.1 FORMAT

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2.2 ADVANTAGES

- Prioritizing of requirements helps software developer know which requirements should be given more importance and time.
- Site adaptation requirements help in ensuring the end product will be compatible with more systems by specifying any data or initialization sequences that are specific to a given site
- Additional comments section help to cover up the missed out details in the SRS.
- The requirements are more organized compared to other formats.
- It also provides information about the database requirement details.

2.3 DISADVANTAGES

- No diagrams to aid developers think of the final product.
- It is harder for the client to specify all requirements detail at the initial stage.
- More focus on non functional requirements compared to functional requirements.

3. IBM SRS FORMAT

3.1 FORMAT

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3.2 ADVANTAGES

- Less complicated than Format 3 to create
- "Key Milestones" give the client a good idea of what to expect and when. This avoids unrealistic expectations
- "Project Proposal" provides a complete summary of the given problem statement and what the end product will be capable of
- System features are split into core and additional so that developers can assign priorities.
- Key Resource requirements divide the huge problem into manageable logical chunks and state the necessary required expertise, internal/external resources to satisfy the requirements and the associated constraints

3.3 DISADVANTAGES

- Many revisions can still arise.
- Harder for the client to specify all requirements at the initial stage.

4. LIMITATIONS OF IEEE SRS

Although IEEE SRS tries to cover most of the bases in requirement analysis, there are few shortcomings in this format. The following are the major limitations in the IEEE Software Requirements Specifications:

4.1 Presence of superior standard

The Software Requirements Specifications was standardized by IEEE 830 in 1998 revision. But this has been replaced by ISO/IEC/IEEE 29148:2011, which covers a wider aspects of Software Engineering like Software lifecycle, attributes and characteristics of requirements, etc. To adapt to the new technologies, new standards have to be used to fully communicate the requirements, but this standard will be unable to fulfill those requirements.

4.2 Excessive System Features

The system features those are included in SRS as "Functional requirements" may be inaccurate and sometimes might be difficult to estimate. As all the features have to be listed and all the dependent features have to be listed, there is a possibility that a feature could have been implemented in a different way, which might have not been realized by the author.

4.3 Time consuming

Preparing the SRS document according to IEEE standards may take time compared to other SRS formats and standards. This is due to long System Feature requirements and detailed explanation of interfaces, some of which cannot be determined in the initial stage.

4.4 Initial interface design requirement

In IEEE standard, the preliminary user interface design is required to be presented. This can cause a delay in preparing the report as the design stage appears after the requirement analysis stage. The design will definitely change after some modifications, and hence it will be a needless use of resource to design the user interface and class diagrams.

5. REFERENCES

- IEEE SRS FORMAT:
    - https://web.cs.dal.ca/~hawkey/3130/srs_template-ieee.doc
- TCS SRS FORMAT:
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