

Revealing Semantic Quality Characteristics of Free and Open Source Software

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Abstract

The increasing contribution to FLOSS¹ development and the amplified use of its products during the past decades has proved to be a viable alternative to proprietary (closed source) software, not just by technically-aware developers, but also by non-developers. The target of FLOSS is mainly public administration bodies and industrial organisations, in particularly Small and Medium Enterprises (SMEs).

Different quality models, such as ISO 9126, have been developed for defining quality characteristics and metrics aiming to evaluate the process and the products of proprietary software development [10, 11]. The absence of a common quality model in FLOSS causes confusion regarding Floss quality characteristics. To raise awareness to help potential users to distinguish between different quality level products the quality aspects should be explicit.

A research project at the department of Informatics, Alexander Technological Education Institute of Thessaloniki², Greece investigates the quality of FLOSS considering underlying human factors that affect the six high level quality characteristics according to ISO-9126. The correlation of the quality characteristics described in ISO-9126 with measurable aspects and underlying factors of FLOSS collaborative development is useful for moving beyond superficial evaluation. A more scientific, rational and structured tool for FLOSS product assessment is introduced aiming to be used for further research on a large scale. The final objectives of this research project are to increase the comprehension of FLOSS quality attributes and the awareness of the dynamics that influence the development process.

This paper describes the initial stage of the research project by introducing a new approach to determine quality level of FLOSS products.

¹ Free/Libre Open Source Software

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