



Contribution ID: 23

Type: **not specified**

Quality Control in EMI

Thursday, 29 March 2012 12:00 (30 minutes)

Description of the Work

The principal goal of the quality activity is that all EMI components, before being included in a stable release, satisfy well-defined quality standards. In general, the adoption of quality standards must be sufficient to guarantee, to a high degree of confidence, that all EMI products (software components, documentation, etc.) meet stakeholders requirements, in terms of acceptance criteria, and do not contain defects or bring new security vulnerabilities. According to ISO 9001 (2000), the quality of something can be determined by comparing a set of inherent characteristics with a set of requirements. If those inherent characteristics meet all requirements, high or excellent quality is achieved. If those characteristics do not meet all requirements, a low or poor level of quality is achieved. Through the periodic measurement of quality metrics, the Quality Control activity verifies which is the degree of compliance for those selected characteristics and subcharacteristics in the EMI software. It also controls that internal procedures are correctly implemented, verifying that any released product satisfies the defined quality policies (i.e. release, change management, packaging, testing, etc.). Any change to internal procedures are put in evidence and communicated to project's bodies that, on the base of project's priorities and objectives, determine which of them are indispensable to apply.

The Quality Control activity is also responsible of controlling that all EMI products, starting from EMI 2, will comply with EPEL (<http://fedoraproject.org/wiki/EPEL>) policy.

Conclusions

The Quality Control (QC) pertains with the monitoring of project outcomes to see whether they comply with quality standards set out in the EMI Quality Model or within internal procedures, such as those concerning the release and packaging of software components. Operating throughout the project, its aim is to identify unacceptable or non-conformable results and inform project executive boards about their existence so that corrective actions can be undertaken to eliminate, or mitigate, future negative impacts on project's results.

Impact

The adoption of quality controls has a direct impact on the ability of EMI to release stable, reliable software, and satisfy user requirements. Considering the volume and complexity of developed software, the risks associated with low software quality need to be mitigated.

Poor quality can increase the maintenance cost, lead to schedule overruns and negatively impact user satisfaction. To improve the quality of the developed software, adequate quality policies must be adopted as well as the means to control and improve quality should be well propagated among developers.

URL

<https://twiki.cern.ch/twiki/bin/view/EMI/TSA27>

Overview (For the conference guide)

The purpose of this presentation is to give an overview of the Quality Control activity in EMI, which is concerned with the verification of released software products, and the monitoring of internal procedures. The Quality Control (QC) pertains with the monitoring of project outcomes to see whether they comply with quality standards set out in the EMI Quality Model or within internal procedures, such as those concerning the release and packaging of software components. Operating throughout the project, its aim is to identify unacceptable or non-conformable results and inform project executive boards about their existence so that corrective actions can be undertaken to eliminate, or mitigate, future negative impacts on project's results.

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Session Classification: EMI: Software Quality Assurance

Track Classification: Middleware services