A Web Repository of Lessons Learned from COTS-Based Software Development[1]

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By their natures, commercial off-the-shelf (COTS) software development and in-house software development are very different. Building a body of knowledge of lessons learned in COTS-based development would be very beneficial. Thus the authors have built a Web-based repository of such lessons learned for free use.

The development of commercial off-the-shelf (COTS)-based software is different in many respects from in-house software development. Since COTS requires different activities and skills, we need to build a body of knowledge about COTS-based software development. Thus, the authors have built a Web-based repository of lessons learned, seeded with about 70 lessons extracted from literature, including journal articles [1], workshop presentations [2], and government reports [3, 4]. The authors also organized online eWorkshops [5] and are using these discussions to synthesize new lessons and refine existing ones[2]. They are also consolidating the repository with an unpublished set of lessons learned from the Software Engineering Institute.

The lessons are described in the repository by a set of attributes, the most important describing the context in which the lesson was learned and could be applied (such as type of system, type of company, number and type of COTS). Other attributes refer to type of data (qualitative or quantitative), recommended audience, or pertinent life cycle phase. Most of the attributes were chosen based on a bottom-up effort to characterize and differentiate the lessons learned in the initial repository. Others were added simply because they seemed to reflect issues of interest to potential practitioner users (e.g., impact on cost, quality, and schedule).

Users can interact directly with the main components of the system, the COTS Lessons Learned repository and browse or search and retrieve lessons based on text searches over all attributes. Users are also encouraged to contribute to the community experience by using the online submission form provided on the main page, available at: <http://fc-md.umd.edu/ll/index.asp>.

User feedback is encouraged. Examples of useful feedback are: "this lesson applies differently in my environment because ... ," or "I experienced the same situation in a similar project," etc.

The feedback and new lessons go first to a buffer, and are examined and validated before being uploaded to the repository. An administrator maintains the repository, and an analyst is responsible for the repository's evolution. A component of the system (currently under development and available soon) will allow dialogues between users and experts, providing concrete support for problems. The logs of these dialogues will be captured and used for extracting new lessons.

For guidance on the use of the repository, there is a set of frequently asked questions (FAQs) accessible from the main page.

The repository's content is growing organically by contributions from users and as a result of analysis, synthesis, and refinement of the existing lessons by experts. The attributes used to characterize and classify the records will also evolve over time. The repository has a built-in facility for tracking various metrics related to the repository's usage, which can be used to tune the repository based on usage patterns.

The repository is available at no cost at: <http://fc-md.umd.edu/ll/index.asp>.◆

References

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Notes

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