Open Innovation in Software Requirements Engineering: A Mapping Study

ABSTRACT

- when the concept of open innovation (OI) was introduced, OI has been applied in many industrial fields. Previous research indicates that the use of OI in computer science is less diverse than in other fields.
- Especially, the role of OI in software requirements engineering (RE) seems to be little explored. Goals: This study aimed to summarize the body of knowledge about the use of OI in the field of RE.
- More specifically, we analyzed what uses of OI in the context of RE have been reported and how OI has contributed to individual steps of the RE process. Method: We conduct a mapping study on the literature provided in four scientific databases (ISI Web of Science, IEEE Xplore, ACM Digital Library, and Science Direct).

CONTD..

- Results: We identified 20 relevant papers. We found: 1) 20 primary studies from the period 2003-2016 report on resultsabout applying OI in RE. 2) Half of the studies report on the application of OI on RE as a whole. 3) Only one paper each is related to requirement prioritization and validation. 4) None of the primary studies presents a proprietary tool support for OI in RE.
- Only one study presents a method for automatic requirements extraction in OSS projects which can be implemented using standard machine learning tools.
- Conclusions: Acknowledging the lack of published research on the use of OI strategies in specific RE activities, i.e., prioritization and validation, as well as the lack of reported tool support, we see new opportunities for research on automated and thus nonintrusive and low-cost methods for applying OI strategies in RE.

EXISTING SYSTEM

- OI has been applied in many industrial fields. Previous research indicates that the use of OI in computer science is less diverse than in other fields. Especially, the role of OI in software requirements engineering (RE) seems to be little explored.
- Goals: This study aimed to summarize the body of knowledge about the use of OI in the field of RE. More specifically, we analyzed what uses of OI in the context of RE have been reported and how OI has contributed to individual steps of the RE process.

DISADVANTAGES

- Open innovation (OI) is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology.
- OI has been applied in many industrial fields. Previous research indicates that the use of OI in computer science is less diverse than in other fields.

PROPOSED SYSTEM

- The concept of OI was proposed in 2003, OI has been applied in many industrial fields. In the past one and a half decade, OI has become a major element of companies' innovation progress, and the influence of OI in the development and evolution of software products has become significant.
- However, according to recent research, the use of OI in the field of computer science has not been analyzed with regards to the various fields of software engineering

ADVANTAGES

OI ideas and concepts were used in a specific REactivity, we were interested in understanding what tool support exists and to what degree OI has been automatized for the specific activity. conduct a mapping study on the literature provided in four scientific databases (ISI Web of Science, IEEE Xplore, ACM Digital Library, and Science Direct).

HARDWARE REQUIREMENTS

- Processor :Intel Pentium IV 1GHz
- RAM :256MB (Min)
- Hard Drive :5GB free space
- Monitor :1024 * 768, High Color inch
- Mouse :Scroll Mouse(Logitech)
- Keyboard :104 keys

SOFTWARE REQUIREMENTS

- OS : Windows XP/7/8
- Front End : Visual Studio 2010/ netbeans 7.1
- Back End : SQL Server 2005/ heidisql 3.2
- Browser : Any Web Browser

CONCLUSION

- The application of OI strategies in RE is not much researched, especially with regards to using OI in the prioritization and validation steps of the RE process. Summarizing our study results, we found that 20 primary studies found in the period 2003-2016 report on results about applying OI in RE. Half of these studies report on the application of OI on RE as a whole.
- Only one paper each is related to requirement prioritization and validation. None of the primary studies presents a proprietary tool support for OI in RE. Only one study presents a method for automatic requirements extraction in OSS projects which can be implemented using standard machine learning tools.

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