Academic Keynote

"Crowdsourcing Software Development: Silver Bullet or Lead Balloon"

Brian Fitzgerald

Lero, University of Limerick IRELAND

Abstract

Crowdsourcing is emerging as an alternative outsourcing strategy, which is gaining increasing attention in the software engineering community. However, crowdsourcing software development involves complex tasks which differ significantly from the micro-tasks that can be found on crowdsourcing platforms such as Amazon Mechanical Turk - the latter are much shorter in duration, and typically very simple and do not involve any task interdependencies.

To achieve the potential benefits of crowdsourcing in the software development context, companies need to understand how this strategy works, what challenges arise, and what factors might affect crowd participation. Research to date on crowdsourcing software development has tended to focus on the 'crowd' or the technical platform, with little research from the perspective of the customer who is seeking to leverage the crowdsourcing development model.

The findings from an in-depth case study of crowd-sourcing software development in a Fortune 500 company are augmented with an analysis of over 13,000 crowdsourcing competitions over a ten-year period on the Topcoder crowdsourcing platform, one of the most popular platforms for software development, are drawn on to evaluate the effectiveness of crowdsourcing in a software development context.

Bio for Brian Fitzgerald

Professor Brian Fitzgerald is Director of Lero – the Irish Software Research Centre, where he previously held the role of Chief Scientist. Prior to that he served as Vice-President Research at the University of Limerick. He also holds an endowed professorship, the Krehbiel Chair in Innovation in Business & Technology, at the University of Limerick.

His research interests lie primarily in software development, encompassing open source and inner source, crowdsourcing software development, agile and lean software development, and global software development. His publications include 15 books, and over 150 peer-reviewed articles in the leading international journals and conferences in both the Information Systems and Software Engineering fields, including MIS Quarterly (MISQ), Information Systems Research (ISR), IEEE Transactions on Software Engineering (TSE) and ACM Transactions on Software Engineering Methodology (TOSEM).

Prior to taking up an academic position, he worked in the software industry for about 12 years, in a variety of sectors (including finance, telecommunications, manufacturing, bespoke software development) in a number of countries (Ireland, Belgium, Germany).