

Volunteer Management in Open Source Communities

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ABSTRACT

Open source community management is largely ad-hoc and relies on practitioner guides. Yet there is a great deal of information about volunteer management in the general volunteering literature, open source literature and general volunteering guides which could be relevant to open source communities if it were categorized and validated. Bringing these different sources of information together also reveals gaps in our understanding of volunteer management in open source which I hope to address.

Categories and Subject Descriptors

D.2.9 [Software Engineering]: Management—*programming teams*; K.6.1 [Management of Computing and Information Systems]: Project and People Management—*staffing*

General Terms

Human Factors

Keywords

Best Practices, Community Management, Free Software, Open Source, Volunteers, Volunteer Management

1. INTRODUCTION

Community open source projects, which make up the majority of open source projects [4], rely on volunteer labor and need to understand how to attract, retain and motivate their volunteers. The current understanding of the practices which can be used to successfully manage volunteers in open source communities is based largely on practitioner publications such as Fogel [3] and Bacon [1]. Meanwhile, the general

volunteering literature from outside of open source contains many theories which have not been examined in open source communities. In this research I propose to bring together these four sources of information, to add to the knowledge where there is a gap, and to validate a group of practices.

2. RESEARCH QUESTION

The primary research question is: *what are effective practices for the attraction and retention of open source volunteers?*

3. WORK IN PROGRESS

There are three main phases to the work: collecting recommendations, identifying unstudied community management practices, and the selection and validation of practices.

3.1 Collecting Recommendations

In the first phase of the work I expect to create a comprehensive collection of community management observations abstracted into theories of community management and expressed as a handbook of patterns of best practices. This will expose gaps in our existing knowledge of open source community management and identify points where open source volunteer management may present challenges which are different from those seen in traditional volunteering. The work has been divided into a number of distinct tasks.

- Task A1: Collect Recommendations from Practitioner Guides and Literature
- Task A2: Distill Best Practices into Patterns
- Task A3: Distill Relationships Between Patterns
- Task A4: Structure Relationship Graph into Domains

I have started Task A1 with reading general volunteering literature and guides, open source literature and open source practitioner guides. Based on this, I have identified an area of investigation for section 3.2 so that these two components can be worked on in parallel.

3.2 Identifying Unstudied Community Management Practices

In the second phase, I intend to perform original research to fill a gap identified in the previous phase. Our preliminary work suggests that episodic volunteering is a phenomenon which is present in open source [5], but is not addressed in existing open source research or practitioner

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OpenSym '15, Aug 19–21, 2015, San Francisco, CA, USA
ACM 978-1-4503-3706-9/15/08.
<http://dx.doi.org/10.1145/2789853.2806212>

guides. Episodic volunteers are individuals who prefer short term volunteering assignments or specific tasks [2] over a sustained commitment to a project or organization. The tasks are:

- Task B1: Gather Community Knowledge on Managing Episodic Volunteers
- Task B2: Determine the Extent of Episodic Volunteering

I have collected interviews from community managers which I am currently analyzing (Task B1). I supervised a student thesis which analyzed a portion of the interviews to determine if episodic volunteering is present and recognized by open source community managers [5]. Together with two students, I have begun an analysis of code repositories to identify how prevalent episodic volunteering is (Task B2).

3.3 Selection and Validation of Practices

In the final phase, I will select a group of best practices and validate them. The practices will be selected based on the extent to which they have been previously studied in the open source context. I believe that I can provide the greatest value to researchers and practitioners by adding validation where none exists. This will be broken into the following tasks:

- Task C1: Select Practices for Validation
- Task C2: Conduct a Pilot Diary Study
- Task C3: Conduct an Experiment of Recommended Practices
- Task C4: Analyze the Diary Study

No work has gone in to this section beyond creating a research plan. Input on this section would be especially valuable.

4. EXPECTED CONTRIBUTIONS OF DISSERTATION

This work will deliver the following unique contributions:

- I will identify general volunteering theories which may fit unexplained open source phenomena, identify points of divergence between open source volunteer management and general volunteering management, and identify areas of open source volunteer management which are not addressed in the literature.
- I will describe the management of and quantify the extent of episodic volunteering in open source communities.
- I will empirically validate a group of related practices which have been observed by open source practitioners and which are not backed by existing open source literature.

References

- [1] Jono Bacon. *The art of community: Building the new age of participation*. "O'Reilly Media, Inc.", 2012.
- [2] Leonie M Bryen and Kym M Madden. *Bounce-Back of Episodic Volunteers: What makes episodic volunteers return? Working Paper No. CPNS 32*. Tech. rep. 2006.
- [3] Karl Fogel. *Producing open source software: How to run a successful free software project*. "O'Reilly Media, Inc.", 2005.
- [4] Dirk Riehle. "The economic motivation of open source software: Stakeholder perspectives". In: *Computer* 40.4 (2007), pp. 25–32.
- [5] Thilo Voigt. "Episodic Volunteering in Open Source". Bachelor thesis. 2015. URL: <http://osr.cs.fau.de/2015/01/12/final-thesis-episodic-volunteering-in-open-source/>.