Key Processes Enabling Designers to Design with a Community

Nomothetic Research on Design Implementation in Open Source Software Development Communities

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1. Introduction
The Internet has enabled people to gather, share their interests and form communities virtually, regardless of their physical location, geographical limits or cultural backgrounds. Online communities of users and collaborators gathered around open source software development (OSSD) projects share a common collaborative and pro-active ethos. Through various modes of correspondence, community members are able to take on project tasks of interest and submit their solutions back to the project community for assessment and possible acceptance and implementation [1]. As the project succeeds, the community will grow and the inclusion of design issues, such as usability, user interaction, user experience or overall identity, becomes increasingly relevant. It has been observed that providing design solutions in OSSD communities is challenging and various design approaches have been attempted with inconsistent success. For comparison, conventional, closed organizations often plan, implement and manage design early on. Successful implementation in a conventional paradigm depends on a well structured environment where defined methods, skills, roles, needs, goals, schedules, etc. play key roles. In contrast, activities in OSSD communities are distributed, asynchronous, unmanaged and concurrent [2]. Therefore, application or emulation of conventional design methodologies often fails. As a part of an effort to work towards a design methodology appropriate for the open source paradigm, this paper aims to discern processes that would facilitate the designer’s ability to contribute design solutions to OSSD communities with a positive outcome.

2. Methodology
Nomothetic field research was conducted to explain the circumstances that influence design implementation in OSSD projects. The research approach relied on triangulation employing grounded theory, case studies and participatory action to allow investigative refocusing and hypothesis testing from the level of an observer to an active participant [figure 1].

The main portion of this research was conducted over a period of 18 months, from April 2010 through February 2012. Data sources included but were not limited to: online documentation and correspondences (over 11,000 messages) from four OSSD project communities [3], blogs, news portals, academic papers, etc.

3. Findings
The initial field research allowed the encoding of six categories representing the typical social circumstances that either hinder or facilitate the implementation of design in OSSD. These categories provided a basis to propose three positive processes that designers [4] should undergo to be able to address the specific demands of designing for OSSD communities [figure 2]. Special emphasis is placed on a designer’s understanding of cultural framework when ‘collaborating, contributing and designing with a community’. The three key processes are presented in the following sub-points.

3.1. Designer’s Socialization
Designer’s socialization is a process of acquiring and using social patterns, techniques and jargon of the OSSD community. Furthermore, to understand the appropriate modes of contributions an OSSD community needs, designers need to become familiar with the ideology and cultural framework of the specific community they intend to contribute to.

Socialization is achieved through a form of voluntary, often independent apprenticeship [5]. Here, a designer is involved in an OSSD community and learns skills and habits necessary for effective collaboration within an OSSD community, gradually gaining the trust of community members.

3.2. Designer’s Cultivation
The process of a designer’s cultivation is an ongoing process of acquiring and persistently improving a designer’s capacity to filter and articulate relevant information such as data and ideas, and communicate them to the community.
OSSD communities are information-based communities where an immense amount of information is openly communicated by contributors and users. It is essential that a designer is able to make sense from all of this (i.e. filter relevant information); and also, to express ideas in a way that will be heard (i.e. articulate relevant information) so that their contribution makes sense to the community. The cultivation process is not a normative process. Rather, it instills a designer with the sense, ability and experience to connect and correlate ideas; to act and design creatively and imaginatively 'with the community'.

3.3. Designer's Initiative

Designer’s initiative refers to a designer’s ability to openly initiate or communicate on any aspect of the design process independently and autonomously. This initiative should be understood as a part of a designer’s broader design strategy; a methodological practice of allowing open access to design information in general. Open access allows design ideas to evolve and combine. By becoming a subject for public discussions, contributions, adaptations, modifications and applications an idea becomes a core for a new community.

4. Conclusions

This paper proposes three fundamental processes necessary to improve a designer’s ability to collaborate, contribute and design with an OSSD community. These processes were referred to respectively as: Designer’s socialization, designer’s cultivation and designer’s initiative, and are based on six categories of social circumstances that were found to hinder or facilitate design implementation in OSSD during 18-months of field research. This research presents two implications. First, the role of the designer in an OSSD community will include the abilities to contribute design solutions, be an active member of the community in general and be a catalyst for the wider implementation of design by opening access to the design process. Second, the emergence of a ‘designing commons’ - an open source for design, seems inevitable considering the nature of the open source paradigm. The results of this research, represent a part of an ongoing effort to explain and methodologically address the implementation of design in OSSD. Furthermore, it is hoped that the insights and explanations proposed here can be transferred and applied to communities both online and offline, and social research in general.

References and Notes

3) Four OSSD communities gathered around following projects: Syner (www.syner.org), Inkscape (www.inkscape.org), GIMP (www.gimp.org), Mozilla Thunderbird (www.mozilla.org/projects/thunderbird/)
4) In the context of this paper, it is assumed that a ‘designer’ is an individual or legal entity that creates, or contributes to the creation of, design solutions in OSSD. This definition is a paraphrase of ‘a collaborator’ definition from “Mozilla Public License Version 2.0”, n.d., ch. “1.1. Contributor”, Retrieved from http://www.mozilla.org/MPL/2.0/