Designing Digital Infrastructures for Community Volunteering

Theme: Human Computer Interaction and Ubiquitous Computing

School of Computing Science and Newcastle University Business School

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Key Words

Overview

Over the last decade there has been a growing interest in how technologies can support and foster civic engagement. Critical to much civic activity is volunteerism—the activation of the will of people to give up their time, for free, to do activities that might benefit others. In the UK alone, it is suggested that the value of ‘formal’ volunteering to the economy is approximately £23.9 billion [2]. With volunteering also comes potential wellbeing and wellness benefits—both to those who volunteer their time, and for those who may participate in events and activities run as a result of volunteer action [1]. It is perhaps unsurprising then that successive governments across the globe are promoting the benefits volunteering can have for individuals, communities and the economy.

Despite the huge numbers of volunteering, and its growing importance to community care and wellbeing, there is a surprising lack of research into the role technologies can play in supporting either organisations or individuals in the pursuit of their volunteering ambitions. Those platforms that do exist primarily focus on the matching of willing volunteers with volunteering opportunities (e.g. VolunteerMatch) or streamlining record keeping processes within organisations (e.g. Google Apps for non-profits). However, it has been highlighted how digital tools and platforms could also play an important role in enabling the formation of sustained relationships between volunteer organisations and their volunteers [5], or in mapping and making visible the resources and facilities within communities that enable volunteer initiatives to occur in the first place [3], or in helping broker new relationships between different voluntary organisations so they can share resources and better promote what they do together [6]. Yet thus far these potentials and more have not yet been practically explored, not least studied in research.

This studentship will explore these opportunities for using digital technologies in the context of volunteerism. It will focus on designing new tools and platforms that provide communities with These will be evaluated through a series of case studies conducted in collaboration with non-profit and public sector organisations based in the North East of England. Thus, in response to these overall aims, this studentship has the following objectives:

1. To review existing literature on volunteerism, motivations and barriers for doing so, and the technological state of the art;
2. To conduct user-centred design activities with non-profits and existing volunteers to scope the design of new technologies for volunteering;
3. To develop novel and robust digital tools and platforms that incrementally contribute to a community volunteering infrastructure;
4. To rigorously evaluate and assess the efficacy of these new tools, providing new knowledge to the fields of human computer interaction and community technologies, and to deliver scalable, open source tools that can be accessed and used by others.
Methodology

The studentship will follow a case study approach where a series of digital tools and platforms will be developed and evaluated through real-world, 'in the wild', field trials. To begin with, the student will conduct a systematic review of literature across the fields of human computer interaction, computer supported collaborative work, community technology design, community psychology and voluntary sector studies. Alongside this, the student will be forming relationships with voluntary sector and community organisations (drawn from collaborators the supervisory team are already working with as part of the Digital Civics Research Centre at Newcastle University). These activities will shape initial user-centred design (UCD) and scoping fieldwork conducted with collaborating organisations and their volunteers.

The findings from these initial activities will inform a set of requirements and concept designs to be explored in three case studies. Each case study will follow a research through design approach, led by the iterative design and implementation of a digital volunteering tool, which will be incrementally tested and then evaluated via field trials with non-profit collaborators. Evaluations will be conducted through a combination of qualitative fieldwork (interviews with participants, collaborating organisations) and quantitative measures of system success (via system generated use data and metadata). Each case study will provide discreet knowledge and insight to specific opportunities and barriers to the use of technology to infrastructure volunteering, which through a process of comparative analysis will be synthesised into a conceptual framework for digital volunteering.

Timeline

Year 1: Literature survey; building relationships with public, voluntary and community sector collaborators, initial scoping empirical research, year 1 annual progression report and presentation.

Year 2: Case study 1 (design and development); Case study 1 (field trial and evaluation); Case study 2 (design and development).

Year 3: Case study 2 (field trial and evaluation); Case study 3 (design and development); Case study 3 (field trial and evaluation).

Year 4: Conceptual framework development; Writing up thesis; ACM SIGCHI publication; PhD viva.

Training & Skills

The student will be based within Open Lab, an interdisciplinary School of Computing Science research group at Newcastle University. The student will be a regular contributor to Open Lab's social and community care for digital civics research meetings, which will provide a space to share their work in progress and form collaborations that will form the basis of their case studies. They will participate in a selection of skills development courses provided by the University’s Postgraduate Researcher Development Programme, which will provide a foundation of basic research skills that will enable them to become an independent researchers. Furthermore, the student will participate in a programme of research training provided within Open Lab for all new doctoral students, which will include domain specific skills development around qualitative and quantitative methods, the history of human-computer interaction, the use of novel prototyping platforms and design methods. As well as this skills training, the student will be working with existing community and public sector partners, which will aid the development of the skills required for this type of collaborative research.

References & Further Reading


Further Information

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