Collecting, Storing, and Sharing Memorable Lessons about User Approved Software

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INTRODUCTION

The aim of this position paper is to describe and reflect on the collective memory aspects of a research and development project – the UsersAward project. The aim of the UsersAward project was to initiate and support a user movement for more useful ICT software at work. By setting up a series of mechanism for collecting, storing and sharing good examples of software use, the project exemplifies a quest to collectively document and try to remember what kind of software design that works well for what kind of work communities. A brief account of the project's different recollection mechanisms will be done in the form of a series of design patterns. This will amount to the paper's reporting of concrete work done on (socio-technical) systems for collective remembering. In respect to theoretical approaches to design challenges for collective memories, the paper will discuss what problems of user mobilisation the communication mechanisms has not yet catered for and what could be done about it.

The Background section will very briefly describe the pattern language approach as a framework for design studies. Three design patterns are then presented in order to describe the essence of the UsersAward project. In the section "Problems of media fragmentation", one of the challenges envisioned in the early design phase of the UsersAward project will be described and the outcome of this challenge will be briefly outlined. In the section "Community media design lessons", a candidate design patterns recollected from media studies is presented as an inspiration for dealing with the problem of media fragmentation. Then, the section "Concluding remarks", will discuss how the lessons from earlier community media projects could be applied to the UsersAward project.

BACKGROUND

The pattern language approach was introduced in the late 1970s by the architect Christopher Alexander and his colleagues at the Centre for Environmental Structure at Berkeley [1]. Although the approach was devised for the study and design of the built environment, it was taken up by computer programmers in the mid-90s and has since been applied to interaction design [3], web design [4], as well as game design [2]. Pattern collections from these domains describe recurrent problems in the domains, and known solutions to those problems. The number of patterns vary from 20 to several hundred. But they are all structured in roughly the same way: with general patterns for overarching problems/solutions that refer to more specific patterns that detail crucial, more concrete solutions, that may in turn refer to even more detailed known re-usable solutions. The way a design pattern differ from a typical guideline is that it: 1) contextualize problem and solution through its language-like disposition, 2) that it, at best, makes careful use of photographs, sketches, and diagrams which depict both problem and solution, and 3) that it follows a standardised outline (template) for examples, explanation, consequences, known problems etc.

The author learned about the pattern approach while writing a doctoral thesis in Cinema studies on the documentary project in the era of digital technology. The thesis explores ways in which the new digital tools may help filmmakers in their quest for authenticity [5]. Since the thesis was written at a multidisciplinary centre for user oriented IT design (CID at KTH in Stockholm) it seemed a good idea to analyse these possibilities within a framework that had proven its usefulness in both architecture and interaction design. Some of the insights from the thesis turned out to be helpful in the UsersAward project that had started in 1998 and that had a broad scope of user participation and collective sharing activities which motivated an analysis and presentation in terms of design patterns.

In this context, a note could be made on the relevance of the pattern language method for the workshop on Design for Collective Remembering. Two themes are at the core of all pattern collections. The first is that the design and building of sustainable, living, functional, and beautiful artefacts and environments has been, and needs to become again, collective and participatory to a large extent. The second theme is that the individual's experience of beauty, remembrance, and identity to a large extent is tied to collective efforts that has created and maintained the landscapes, cities, and houses in which we live. Alexander and his colleagues devised the method to help us see the complexities of the (built) society as a series of relatively autonomous wholes. Their aim was to help us participate as citizens in the maintenance and piecemeal (sometimes radical) renewal of this web of sustainable interrelationships. In this sense, the pattern language method seems to qualify quite well as a subject for one of the themes of the workshop: "guidelines for designing systems for collective remembering: collecting, storing and sharing memories". A set of well devised patterns constitute an interactive narrative, a "system" that guides the reader through weeks or months of work-related memories from designing a "staircase as a stage", or planning and building a "courtyard which live".

Incidentally, trying to identify patterns for organising a community of critical IT tool makers and users, as in the case of UsersAward, comes quite close to another of the workshop themes: methods and instruments for the usability of memory technology. The question arises where the line should be drawn between memory technology and well designed workplace information technology. To what extent do we want to have access to our memories when building things or caring for people at our workplaces? What has been demonstrated in the UsersAward project is that the experience of using good tools for planning, simulation, manufacturing, maintenance, communication and sharing at the workplace can be very fulfilling experiences indeed. In that sense, the patterns generalising the UsersAward project can be seen as proposed instruments for how the usability of memory (and enactment at work) technologies could be enhanced.

THE USERSAWARD PROJECT

The UsersAward project will be summarised in the form of four short pattern descriptions. The point of this is to test the above argument, that patterns can be used for collecting, storing, and sharing memorable lessons of common interest. The patterns follow a compressed template including: name, example, problem, forces, solution. (For the first pattern context and related patterns are also supplied here). This version is a rework of a longer version compiled for the DIAC 2002 Conference and is accessible at its web site (http://diac.cpsr.org/cgi-bin/diac02/pattern.cgi/public).

Users' quality assurance network

Context: The competition between suppliers of ICT services is different from that between suppliers of physical goods, since what the former deliver is not just a platform for communication, but the access to service providers and end users who have already invested in that platform. Other forces (economies of scale, media control) tend to further decrease competition in the software market. This makes it very important to support the articulation of end-user quality demands through autonomous user networks.

Example: An example of an emerging Users' Quality Assurance Network is the UsersAward network (www.usersaward.com), originally initiated in 1997 as a research and development project by the trade union central LO (Landsorganisationen) and researchers from four universities in Sweden. The network addresses the problem of expensive and centralistic workplace software. Many such planning and control systems had become a bureaucratic hindrance for both employees and employers in Swedish firms. As of 2005, the network has developed a quality certification method for workplace software, User Certified 2002, and demonstrated its viability by certifying three software packages and by arranging yearly IT Prize Contests based on the certification.

Problem: Software suppliers who want to stay competitive in the long run need demanding customers and users who can articulate sophisticated user requirements for the tools

of their daily work and recreation. However, it takes cooperation between many different user categories to articulate requirements that can meet the needs of specific communities of users. If the contacts between the end-users and the buyers of their software is too loose, then the buyers will only get their information from software suppliers who primarily caters for the buyers, not the end users.

Forces: Donald Norman, the former software design manager at Apple, HP, and UNext, sums up his design philosophy in the epigraph of his book Things that make us Smart, "People Propose, Science Studies, Technology Conforms". This is a sharp criticism of what Norman claims to be the dominant division of roles today, that industry proposes, science studies, and consumers conform. The critique is elaborated in the book The Invisible Computer where Norman argues that 1) the typical computer user the last ten years has been a person with substantial technical expertise, 2) that, due to the fast dissemination of IT services, the typical user in the coming years will be a person without technical expertise, 3) that this will force a fundamental reorientation upon the hardware and software industries, bringing policies of user orientation to the fore.

Donald Normans analysis of the role of end-users has been one of the inspirations for the UsersAward initiative. Another inspiration, that to some extent has proven Norman's point, is the successful TCO environmental certification program of Visual Display Units (TCO'92, TCO'95, TCO'99) that today cover more than half of the global production of VDUs, (see Users' quality certification, below). The following "proactive social forces" can be identified, in order to analyse how end-users can influence the long-term quality of software in workplaces and offices:

- User groups complain about recurrent software problems and point out alternatives,
- national news media inform the general public about complaints and alternative solutions,
- research groups and software suppliers study the complaints and invent solutions,
- trade press scrutinise and comment the research results,
- user oriented software suppliers implement proposed solutions,
- regulators and standards organisations confirm principles behind the solutions.

Solution: Support initiatives in workshops, offices, schools and universities to articulate user requirements for the software you work with. Take part by formulating concrete demands that enhance the quality of the software you use in your group. Participate in experiments with novel solutions that support decentralized teamwork. If a Users' IT quality centre already exist in your region, support it by participating in its many activities. If it does not exist, take part in forming one.

Related patterns: From [1], Network of learning, University as marketplace. From this proposed language: Users' quality centre, Users' software certification.

Users' Quality Centre *

Example: As a result of the UsersAward project, a Users Quality Centre was formed. First as a part of the research and development project, then as a non-profit development company, fully owned by the LO. The centre mobilises local unions and experienced users to take part in its quality activities by joining user panels and by taking on practical tasks. It heads the certification programme for workplace software, User Certified 2002, that was developed within the research project. It arranges yearly IT Prize contest by inviting all interested members to nominate their favourite software at work, it performs web based user satisfaction surveys, and it takes part in research projects that help articulate new criteria for new versions of the certification.

Problem: Employees have a very limited negotiating power as isolated individuals against hardware and software suppliers. The lack of media channels for expression of user preferences further weakens negotiating power when independent measurement and critique is hard to access.

Forces: Local and regional trade union or professional associations can choose to make it a policy to help articulate their members' demands on software. National bodies can then debate and initiate research, in order to study and support those demands. If the policies are met by international interest and acceptance, then international bodies can make these demands subject of negotiations and policymaking.

Solution: Initiate, join, or support national and international professional or union organisations where shared user demands are expressed through coordinated membership activities.

Users' quality certification *

Example: The TCO Labels (TCO'92, TCO'95, and TCO'99) today sits on more than 240 million Visual Display Units, representing more than half of the global market for display units. It was initiated by the white collar workers trade union central, TCO, and is regarded as one of the most important Swedish IT innovations during the 1990's. UsersAward's software certification is a direct follow-up of the successful TCO initiative. It is the most research intensive activity of the Users' quality network.

Problem: Due to the rapid development of information technologies, the public agencies whose role it is to watch over quality performance – journalists, researchers, standards organisations, regulators – have difficulties to reach consensus about quality deficiencies and to validate solutions to common problems in IT software.

Forces: The quality criteria that underpin a software certification have to be based on standards, a long-term research effort and an ongoing dialogue between researchers, software providers, and user panels throughout universities, industry and user networks. Software providers that register a particular package for certification should for example make a self-declaration of their software, go through a hearing with certification staff and get their software-in-use scrutinized at least three independent sites through a standardized interview and questionnaire procedure.

Solutions: Support initiatives in which user organisations such as trade unions, professional associations or consumer organisations work together with research organisations in order to label software products or services on grounds of publicly declared and transparent measurements.

PROBLEMS OF MEDIA FRAGMENTATION

Hopefully, this summary of the UserAward project has given the reader an overall understanding of the problems addressed and the solutions proposed by the project, both its the general aim (Users' Quality Assurance Network) and its key activities (the two supporting patterns). An interesting question is to what extent this kind of problem-solution narratives, devised in order to structure the understanding of a set of socio-technical relationships, can be *negated* by the activities they are meant to describe. Design patterns are useful as "soft standards" as long as they are neither too soft (defies operationalisation and negation) nor to hard (limits the scope of variation and innovation). So a more demanding test would be to ask: to what extent has the project developed along paths not foreseen in the pattern description?

The importance of having "access" to media for a consumer oriented project like the UsersAward was anticipated by the trade union leaders who initiated the project as well as by the researchers. Therefore, the national media and the trade press was identified as important "forces" in the pattern descriptions. It is interesting to note that this even made room for an alternative reading of the famous, and extremely important, epigraph coined by Donald Norman and quoted in the first pattern: "People Propose, Science Studies, Technology Conforms". By extracting the forces in the first pattern, an extended version of this "vision for the future" would read: People Propose, Media Informs, Science Studies, Media Debates, Technology Conforms. The really interesting thing is that this aspect, keeping the doors open for media coverage, also turned out to be one of the most difficult aspect to fulfil in the project. (In this sense reality defied the envisioned pattern, and new useful lessons can hopefully be drawn.) The user surveys, the winners of the IT Prizes, and the software suppliers that has been awarded the User Certified 2002 label have received extensive coverage in the trade press. But the way these events have been covered in the general media confirms Donald Norman's analysis (described in the first pattern), that the concepts of "usability" and "participatory design and deployment" still seems to be questions for specialists. The anticipated coverage in the national press, e.g. in the

form of debates on consumer-user power over our everyday workplace tools, has been very scattered and uneven.

DESIGN LESSONS FROM COMMUNITY MEDIA

What could the partners of the UsersAward network do about the absence of public debates about consumer influence over software tools? How should the network try to deliver its message, that the quality of software tools, especially at work, is not only a question for specialist but for all end-users who are dependent upon them? Obviously the network's own reporting and "sharing of the good news" has to try to reach new audiences. As of now, this reporting has mainly taken the form of a web site that reports on the contests, certifications, surveys and concluded or ongoing research. (The research is reported the usual way, at conferences, workshops, and seminars.) The user surveys have a rather wide circulation within the trade unions and involved user groups. The yearly IT Prize finals have drawn some 150 experts and user representatives for the last four years. Press releases are sent out to a broad spectrum of the national media before the yearly IT Prize final and when surveys or new certifications are presented at press conferences. But at these events only the trade press shows up. Which indicates that the main message has not been brought along.

There are numerous ways to intensify the communication activities through websites and other publishing and media related outlets. The problem is that these activities are time consuming and that they need a strategy or philosophy for how to share community news. Before I conclude with some remarks on new communication mechanisms to be tested, a brief look at one of the candidate media patterns from the earlier mentioned thesis on documentaries could provide for some general principles [1]. (There is only space here for a brief sketch of some key principles. The names in parenthesis are described as candidate sub-patterns in the thesis.)

Media producer as facilitator

From time to time in the history of the documentary, media producers have seen their role more as facilitators of social movements than as impartial interpreters, elevated above the conflicts of current affairs. In this kind of cooperative projects, the role of the director has rested more on the ability to give inspiration and guidance to all persons involved than on the ability to fence off the influence of others, (Director as catalyst). Correspondingly, the team members engaged in individual projects act as much as coordinators of the project as practitioners of the different skills involved, (Media team as coordinator). These kinds of film have circulated within the communities of origin in quite different ways than the films of the traditional marketplace, using universities, schools, clubs, churches, and community forums as screening rooms and distribution channels, (Community as distributor).

CONCLUDING REMARKS

The quick flash-back on the tradition of audience participation in community oriented documentary filmmaking gives some hints for new communication mechanisms that could be tried out at the universities and in the trade unions and consumer organisations involved in the UsersAward network.

Today, a five week course at KTH has user-driven quality assurance as its main theme with students performing and reporting on workplaces software evaluations. This could be expanded into external courses for usability experts, IT managers, and trade unionists in which more focused studies could be carried out. Designing good web interfaces for this kind of courses, and providing for a seamless integration of the university site with the site of the Quality centre (and other partners) could widen the audience for this kind of local, problem-oriented studies substantially. So would a disciplined, yet innovative use of video for capturing the personal experiences of relief and empowerment that typically goes along with the collective use of good workplace software.

The Quality centre and the involved trade unions could initiate similar participatory media development projects. Different formats that would complement the existing evaluation protocols could be tried out, formats that capture the personalities and cooperative styles at the workplaces that has received IT prizes or passed software for labelling. Again, illustrations, diagrams, and videos could provide invaluable insights and memories. Combined with personal and user-group bloggs, lectures, and formal courses, this kind of experiments could, in the long run, even help to initiate a critical discussion on how the news media in general covers the IT quality issues of today and tomorrow.

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