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**Åke Walldius and Yngve Sundblad**



**CID, CENTRE FOR USER ORIENTED IT DESIGN**

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**E-mail of author:** yngve@nada.kth.se, aakew@nada.kth.se

### **Reports can be ordered from:**

CID, Centre for User Oriented IT Design

NADA, Department of Numerical Analysis and Computer Science

KTH (Royal Institute of Technology)

SE- 100 44 Stockholm, Sweden

Telephone: + 46 (0)8 790 91 00

Fax: + 46 (0)8 790 90 99

E-mail: [cid@nada.kth.se](mailto:cid@nada.kth.se)

URL: <http://cid.nada.kth.se>

## **User-driven software quality labelling**

Åke Walldius and Yngve Sundblad , CID (Centre for user-oriented IT Design)  
KTH (Royal Institute of Technology), SE-10044 Stockholm, Sweden  
Email: aakew@nada.kth.se / yngve@nada.kth.se

### ***Background – enraged software users to form a new political party?***

In his Circuits column of February 28, 2002, David Pogue of The New York Times reported about the several hundred emails he had received in response to an earlier column about "Lousy tech support". He quotes 12 of them, enraged users who testify about: simple tasks that fail, online help that does not help, online help numbers that get erased by software companies being drowned in complaints, and the Boston Tea Party as a model for how a new "support party" may be formed. David Pogue sums up his feeling with these words: "Clearly, there is enough anger in these messages to merit a Web site, a book, a political party. Just tell me where to sign."

### **Proposition – expand the scope of successful quality labelling!**

This pattern proposal is formulated within the UsersAward project [5], an initiative taken in 1998 by the Swedish Trade Union Confederation in cooperation with a consortium of interdisciplinary research groups at four Swedish universities – The Royal Institute of Technology in Stockholm (coordinator), Uppsala University, Gävle university college, and Luleå Technological University.

The UsersAward project is inspired by the successful TCO label for computer hardware, TCO'92, TCO'95 and TCO'99 [4]. These standards were developed by the TCO, the Swedish Confederation for Professional Employees. Today they certify environmental quality measures for about 200 million users of personal computers worldwide. The pervasive power of the TCO labelling programme stems from its strategy *to articulate environmental demands of end-user* and to couple these demands with existing ISO-standards and recent research findings. Thereby, the TCO labelling program has managed to raise both the level of competition and the environmental standards in the hardware market.

Through the UsersAwards project, the two Swedish Confederations now want to expand the scope of quality labelling into the realm of workplace planning software (e.g. ERP, Enterprise Resource Planning software). This pattern proposal describes some of the social interactions that underpin the UsersAward project, i.e. interactions that may enhance the level of competition in the ERP software market. A key motivation for all our proposed patterns is that they *help articulate shared demands* of professional users in offices and workshops.

### **Patterns complement research and policy statements**

The reason the project members want to complement traditional report formats with a set of design patterns is that the pattern formalism provides an opportunity to address *quality of life issues* in a concise way. In this respect, our pattern approach coincides with approaches applied by architects, software programmers and human-computer interface designers who use design patterns in order to articulate value issues in close dialogues with end-users.

All trade unionists and researchers active in the UsersAward movement have direct experiences of well designed IT systems that have the potential to enrich all kinds of jobs, thereby *enhancing communication between people*. A precondition for IT to have this empowering effect is that the system deployment is managed according to proven principles for how work processes should be organised in the modern enterprise. A high level of *autonomy* for

individuals and work teams, work processes that embrace a *broad spectrum of skills*, rich opportunities to *learn new skills at work*, a good *overview of the history and prospects* of the enterprise – these are some of the principles that the UsersAward movement wants to promote.

The UsersAward project claims that there is an urgent need for trade unions to articulate an IT policy that promotes *IT as a means for communication* between people. This proactive stance has to complement the traditional trade union negotiations for fair rationalisation programmes which only regards *IT as a means for substituting manpower for machines*.

### **Outline of pattern set – sub patterns described in poster section**

The pattern proposed here, *User-driven software quality labelling*, is presented with reference to two supporting sub-patterns described in the poster section of these proceedings:

*Interdisciplinary usability research centre* and, included in that presentation, *User satisfaction measurements*. The "owners" of these patterns, in terms of what groups of people we hope will adopt the patterns, are creative and critical end-users in workshops and offices, trade unions and professional associations, interdisciplinary IT researchers, and suppliers of enterprise software who recognise satisfied customers as their best strategy for long-term success.

### ***Pattern description: User-driven software quality labelling***

#### **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.

#### **Context**

The competition between suppliers of communication 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 to other users who have already invested in that platform. This is one of the reasons why products and services which are proven to be more advanced in terms of usability still do not make it in the marketplace. That there are other economic forces which tend to decrease competition in the software market makes it even more important to support the articulation of end-user quality demands.

#### **Examples**

The TCO Quality and Environmental Labelling Programme (TCO'92, 95, and 99; <http://www.tco-info.com>) is an example of a user-driven hardware labelling programme which today also includes a proposed certification standard for mobile phones (TCO'01, recently endorsed by Volvo Car Corporation). UsersAward Enterprise Software Labelling Programme (<http://www.usersaward.com>) is an initiative to label enterprise software products based on end-user participation. Krav Organic Farming Labelling Programme (<http://www.krav.se>) is a third example of labelling programmes that engage broad groups of stakeholders.

#### **Forces**

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* [2]: "People Propose, Science Studies, Technology Conforms." This is a sharp criticism of what Norman claims to be the dominant



imbedded "labels" on T-shirts, cups, and "events" of many sorts. What popular movements, such as trade unions, consumer organisations and professional associations, may add is a permanent network that establishes firm ties between the respective organisation and *the university*. Thereby the quality aspects behind the individual innovation process can become public and possible to trace for the media.

The diverse array of practical activities in which the interaction above can manifest itself may be exemplified by the UsersAward project. Since 1998, this project has arranged five regional *User Conferences* where critical user groups, user oriented suppliers, and researchers have gathered to discuss shared demands; a national *User panel*, made up of (today) 12 experienced users of workplace planning systems, has met once a month to arrange conferences and discuss with researchers; a yearly national *IT Prize* is awarded to the supplier who has been nominated by its end-users (!) and who has received the most favourable ratings in questionnaires and interviews with end-users; an *IT Satisfaction Map* has been compiled from more than one thousand questionnaires to employees in industry and health care; several *Pilot studies* have been carried out covering topics such as "User-driven Enterprise Application Integration (EAP)", "Visual requirement specifications", "Simulation in daily workshop planning" etc.

## Dependencies

Much of the interaction described above entail research and learning activities in different forms. Therefore, at least two of the socio-economic patterns presented in Christopher Alexander et al seminal book *A Pattern Language* [1] have to be named as supportive patterns: *Network of learning*, and *University as a marketplace*. The former describes to what extent learning activities are spread out into the society at large, the latter describes to what extent the acute problems of society at large is studied in the formal settings of the university.

In the poster section of these proceedings [6], we have described two more patterns that support *User-driven software quality labelling*: *Interdisciplinary usability research centre* provides a meeting place for researchers whose interests go beyond disciplinary borders, and *User satisfaction measurements* provides systematic empirical data on user quality preferences.

## Solution

Create or support initiatives in which research-based organisations (research departments within corporations, universities, NGOs etc.) and user organisations (trade unions, professional associations, consumer organisations etc.) work together in order to label software products or services on grounds of publicly declared measurements open for scientific scrutiny and media inspection.

## References

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3. Pogue, David, *Software Rage*, Circuits column, The New York Times, February 28, 2002.
4. TCO Quality and Environmental Labelling Programme, <http://www.tco-info.com>.
5. UsersAward Software Quality Labelling project, <http://www.usersaward.com>.
6. Walldius, Åke and Yngve Sundblad, *Interdisciplinary usability research centre*, poster presentation in the poster section of these proceedings.