

Asynchronous Brainstorm: An Intranet Application for Creativity

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Abstract: Informed by field observations of how proposals are handled in an organisation and inspired by the theoretical framework of organisational learning, I argue in favour of, and present design implications for, a web-based tool that facilitates organisational creativity through asynchronicity, anonymity, and persistency. However, early user feedback indicates that reward mechanisms must be addressed alongside the introduction of such IT artefacts.

1. Introduction

Many organisations encourage their members to submit improvement proposals. Often, these proposals are submitted to local Proposal-Handling Committees (PHC) that review the ideas. Good suggestions are usually rewarded in some way, while not so good proposals are rejected. However, I have noticed a few serious shortcomings with this traditional way of handling suggestions. First, the suggestions are seldom communicated sufficiently within the organisation: good ideas may be implemented locally but never heard of in other parts of the organisation. Other ideas may be prematurely rejected due to the PHC's limited cognitive capacity, the proposer's poor communication skills, bad timing, or being proposed in the wrong context. These ideas, good and bad, could have started other creative ideas elsewhere in the organisation, had only they been made public.

Second, many ideas are never proposed at all. We may feel that our idea is not worthy of being submitted as an official proposal, or we may be reluctant to present "silly" ideas if we risk losing face in front of our colleagues. Instead, we keep our potentially revolutionary ideas to ourselves.

I seek to develop mechanisms that better support organisational creativity, and this paper describes ongoing work with a web application that addresses the above shortcomings by enabling asynchronous brainstorming.

2. Related Theory

[March 1999] observes that most new ideas are actually bad ideas. Thus, to generate something useful, many suggestions must be encouraged. Further, inspiration should be gathered from a variety of disciplines. [Kanter 1996] refers to such cross fertilisation as kaleidoscopic thinking. This is exactly what happens in a brainstorm session, where people from cross-disciplinary fields interact. Though each idea in itself may not be so bright, the associative process that each idea feeds generates many and often creative results. Another success factor for creativity is the absence of early critique. New ideas must be given sufficient time to mature and to be explored, says [March 1999], since good ideas look identical to bad ideas until they are tried. New ideas should therefore be shielded from criticism during their early stages, and given sufficient time to linger after the brainstorming has finished.

Anonymity needs also be considered. An authority, e.g. a manager or an expert, can kill an idea simply by contributing to the debate, explaining "how things are". This, sometimes old, wisdom is then never challenged. However, if there is no telling whom the proposer is, the suggestions are judged from their content only, without unnecessary prejudice or bias, giving new ideas a better chance of surviving. [Poole et al. 1988] has shown that anonymity also leads to better results since social barriers to contributing are lowered.

It seems to have been established that generating many ideas and letting these be visible, possibly inspiring further thoughts, has a positive influence on the generating of good ideas. Further, all these ideas should be allowed to mature and to be explored without initial criticism. They should be both submitted and approached with an open and unbiased mind, which can be achieved through anonymous submitting. Informed by these theories I worked out some design principles from which I implemented a prototype.

3. Design Principles

Brainstorm is a prototype system that mimics the creative atmosphere often found in brainstorm sessions, where no suggestions are turned down but used to spawn new and possibly even better ideas. Unlike ordinary, real life brainstorm meetings, the prototype supports asynchronous, networked "brainstorming", eliminating the time and space restrictions that otherwise exist. Ideas are, often only very briefly, sketched in an email and submitted to an SMTP mailbox, from where *Brainstorm* adds them to a web page. The web was chosen for several reasons: a) it is accessible from all platforms; b) there are many tools available to help users find information, e.g. search engines and agent-based applications; c) asynchronicity is added to the sharing process, i.e. users do not have to be active simultaneously which removes the temporal restriction present in e.g. chat forums; d) the persistent nature of the web page allows the idea to linger long enough for it to be found by many different people in different locations and contexts.

Brainstorm lacks the possibilities to add comments directly to the proposal, as is otherwise the case in Usenet Newsgroups. This helps shielding the idea from public negative critique. While *Brainstorm* allows for anonymity by withholding the return address of the proposer and not showing it on the web page, it is possible to contact the proposer either to ask for or to provide information. This is achieved by clicking a hypertext link next to the proposal and typing in a message. A CGI-script will forward the comment to the original proposer, who remains unknown. Though such comments may contain criticism, the original idea remains publicly available and can serve as a seed for others, while the critique is not displayed.

4. A Discussion Regarding Future Work

I have tested an early beta version of *Brainstorm* in a large organisation, and discussed the problems with proposal handling, and the suggested design of *Brainstorm*, with PHCs and individual members. One question raised was what will happen if an initial idea, proposed by A, inspires B to generate a better idea, which then is modified by C to the great IDEA that receives acknowledgement by the PHC and renders a gratification? Should not A and B have some credit? If not, they are instead encouraged to keep their ideas to themselves to try to develop them into what C managed to come up with. Such a behaviour would be very unfortunate, since chances are that neither A, B, nor C would managed to create the IDEA on their own. The IDEA was probably the result of the interaction of A, B, and C - a social knowledge creation process that required the input from all three parties. The question is thus legitimate because without proper incentive, technology, if ever so user-friendly, will not be used. The problem is how to create the incentive system because. As [March 1999] points out, we do not want to reward mistakes but we should encourage the creativity that sometimes lead to them.

In the future, I intend to study conventional brainstorm sessions in more depth, and I further plan to implement a full version of *Brainstorm* to answer the above and other questions. Brainstorming is normally only one aspect of group creativity, and for the whole process to work, other factors such as shared knowledge, commitment to common goals, and mutual trust must also be established [Bennet & Karat 1994]. It can be argued that this cannot be accomplished in an anonymous environment. However, *Brainstorm* is intended for an intra-organisational web where a minimum level of common objectives may be assumed to be in place. Further, the objective of *Brainstorm* is not to deliver a full environment for collaboration and co-operation, but to serve as a catalyst for creativity. The purpose is only to get ideas out in the open for the community to share and move forward with whatever seems useful.

5. References

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