Innovation Cockpit: A Dashboard for Facilitators in Idea Management

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Abstract

We present the design of a dashboard for facilitators in Idea Management Systems (IMS), an emerging class of collaborative software for business organizations or local geographic communities. In these systems, users can generate, share, judge, refine, and select ideas as part of a grassroots process. However, a class of users that lacks adequate support in current IMS are the facilitators. Their role is to help the best ideas to emerge and grow, while balancing the judgments of the crowd with those of the managers or the community leaders. We show how the dashboard helps facilitators in making more efficient and effective decisions in situations where the selection and judgment become prohibitively lengthy and time consuming.

Keywords
Idea Management, Deliberation, Collective Intelligence

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms
Design, Human Factors

Select section. It allows the facilitator to: i) efficiently filter and relate ideas, ii) cluster related ideas, iii) organize the ideas in relation to the areas of interest for the organization, iv) and explore the space using a visual representation based on areas and topics. The user can relate ideas to areas (or archive duplicates) either manually via a drag & drop interaction or by validating recommendations from the system. The system learns from user's action to filter out the noise, relate ideas, suggest areas, discover topics, and (over time) capture the decision model.

Assess section. It allows the facilitator to define the areas of interests for the organization (e.g., ideas on support for minorities), and to reflect its priorities by providing a relative assessment of areas on the basis of evaluation criteria relevant to the organization (e.g., revenue).

Deliberate section. It allows the facilitator to assign reviewers to ideas. As the reviews are completed the facilitator is provided with an idea profile that aggregates the *idea in context* with related ideas, reviews, and a *side-by-side* summary of the judgments from both the crowd and the organization. The system recommends relevant reviewers for each ideas and learns from the facilitator's feedback.

Problem

The facilitators in Idea Management Systems (IMS) face cognitive overload because existing IMS are limited in their support for filtering, organizing, and relating ideas to the priorities of the organization. Current IMS tend to present crowd-based views only (e.g., [2]), that display categories exposed to the crowd and feedback provided by the crowd. Also, the judgments (e.g., votes) can only be expressed and compared at the level of single ideas and not groups.

Facilitator's Cockpit: User Interface

We based our user interface on a multi-view / multi-value design of the workspace of the ideas. These can be analyzed from the point of view of the *crowd* that generates the ideas and the *organization* (managers or leaders) that ultimately selects the ideas. We argue that a multi-view / multi-value design can provide facilitators with a better understanding of the value residing in the large pool of ideas, which in turn will promote better collective deliberations. The design supports alternative ways to rank ideas (by votes from the crowd, organizational or business values, time) and includes features to organize the ideas (group, relate, archive duplicates), relate them to organizational values, and facilitate deliberations based on reviews. In the cockpit, the features are packaged in three main sections: *Select*, *Assess,* and *Deliberate*. This organization was derived from our understanding of the innovation process and our evaluation of a mockup prototype. Figure 1 illustrates the interface. The design introduces *Areas* of interest (e.g., ideas on support for minorities) and *topics* (e.g., automatically inferred via topic modeling) as a new level of representations that are more general than the single ideas. These help the facilitator not only to manage more efficiently the

content but also to easily express and compare judgments in relation to the evaluation criteria relevant to the organization (or for Business).

Using a mixed-initiative approach [1], several of the new function offered such as the multi-faceted filtering via multiple types of metadata, the semi-automatic organization and association of ideas, and the assignments of reviewer to ideas, are augmented with machine learning functions.
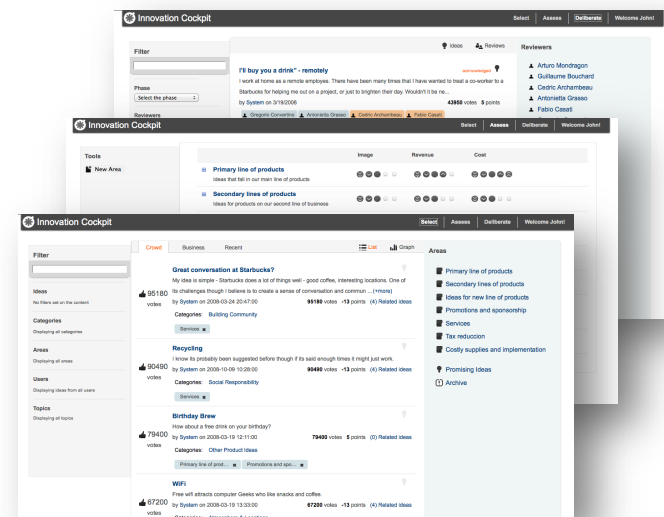
figure 1: Screenshots of the three main sections of the cockpit

Citations

[1]. Horvitz E.. Principles of Mixed-Initiative User Interfaces. Proceedings of ACM CHI '99.

[2]. Klein, M. (In Press). Using Metrics to Enable Large-Scale Deliberation. Journal of CSCW (In Press).