

Enriching Community Networks by Supporting Deliberation

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1. Introduction: Constraints to the Diffusion of E-Participation

Community Networks (CNs), as conceived in the 1990s (Silver 2000; Bishop 1994; Schuler 1994) are virtual (or online) communities, strongly rooted in a specific territory, whose shared focus of interest is ‘public affairs’. Community networks have provided a framework for gathering *civic intelligence* (Civille 2000; Schuler 2001), for supporting the development of people’s projects (De Cindio, 2004), and for promoting public dialog among citizens and between citizens and local institutions (De Cindio and Ripamonti 2005; Ranerup 2000; Osborne and Gaebler 1992).

The outcomes of the evolution of these socio-technical systems over the last two decades are twofold: on one hand, Community Networks succeeded in fostering citizens’ participation becoming a sort of online “public square”; on the other hand, they often failed in having a real impact on the local institutions’ decision-making process (Miani 2002). The reasons for this failure seems to be linked both to social and technical aspects. Actually, it is fairly evident that, in a good number of cases, local bodies prefer to design city sites or portals as a parallel media for distributing information and offering interactive services (*e-government*), rather than as a shared platform for supporting and enhancing a direct relation with citizens and for involving them in the decision-making process. As a consequence, since participation is burdensome and time-consuming, citizens get frustrated (and consequently tends to become de-motivated and give up) if

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their civic commitment is not adequately rewarded in terms of actual impact on the local bodies activities and decisions. A quite frequent people's disposition to carry on ideological discussions, without supporting opinions with verifiable arguments is also enforced by a low impact on real life. These problems are worsened by the fact that, in most cases, technical solutions underpinning participation are inadequate, as they are not expressly conceived and designed with that aim.

Because of all these factors, many community networks declined (Luisi 2001; Schuler 2007). However they undeniably remain landmarks, providing noteworthy input for the design of participatory socio-technical system aimed at involving citizens in deliberative processes.

In fact, theoretical studies, as well as empirical evidence, more and more motivate the necessity of shifting from government (and *e-government*) to governance (and *e-governance*), since the complexity of modern society cannot be managed – even at the local level – without the direct involvement of all the components of the society (see, among the others: Kavanaugh et al. 2005; OECD 2001; Riley and Riley 2003; Censis 2003; Bobbio 2004).

In this perspective, although a strong political commitment in actively involving citizens in the deliberative processes still remains the key factor for the success of any participatory process¹, the role that an effective use of appropriate software tools can play should not be neglected. Actually, it seems that, up to now (see, e.g. EC e-govUnit 2004; De Cindio and Sonante 2005) the complex social process that regulates people's participation in public decision-making has typically been supported by software solutions generally conceived and designed - in many cases adopting a top-down "technocratic" design approach - for different purposes and for a different audience (namely quite skilled with computers and web-based applications).

As a result, the support ICT might offer for managing participation often gets lost, and the vision that the net could support a sort of 'contamination' of representative democracy with elements of direct democracy is, consequently, questioned (see, e.g.: Maldonado 1991; Janssen and Kies 2005).

We believe that, to fulfill the request for local governance, it is necessary to put at stake the background accumulated by CNs for undertaking the development (the design, implementation and testing) of a socio-technical, computer-enabled, trusted environment for e-participation en-

¹ This was the plain clear outcome of the field research performed in preparation of the "Call for selecting projects to promote digital citizenship (e-democracy)" issued in 2004 by the Italian Ministry for Innovation and Technology (De Pietro et al. 2004).

riched with deliberative tools. We have therefore called this environment *Deliberative Community Network* (DCNs), in order to stress that its main goal is to overcome the intrinsic limits of community and civic networks, by introducing deliberative facilities that provide support to the decision-making processes. DCNs are designed to foster the evolution of the classic e-participation concept, essentially based on a community-network driven environment, into a new consultative-deliberative paradigm, designed to finalize the discussion to produce a shared position among the participants.

To design such an environment on a sound basis, one should consider the fundamental issues concerning participation and democracy and the lessons coming from participatory budget, local Agenda 21 and participatory urban planning projects running in various parts of the world. Moreover one should keep in mind, and take into account, that participatory processes are context dependent, in the sense that they strongly rely on the cultural background and on the social and political settings of a territory. The amount of resources and the mix of competences that such a study would require, suggested us, instead of undertaking an ad hoc study, as for instance done by (Kavanaugh et al. 2005), to build our conceptual framework (Step.1 and 2 in Fig.1) on the basis of the huge collection of participatory processes which have taken place in recent years in Italy that Bobbio has investigated both from the theoretical and the empirical point of view (Bobbio 2004). This framework and the resulting identification of the key features of any participatory process are presented in the next section. This has been the basis for defining the logical architecture (Step 3 in Fig.1) of the dedicated software platform we intend to develop – adopting a *Participatory Design* approach (Blomberg and Kensing 1998, Schuler and Namioka 1993) – for managing Deliberative Community Networks in support of local governance (Section 3). Section 4 presents a first prototype we have developed and used for supporting the dialog between citizens and candidates in the occasion of the Municipal elections that took place in Milan during Spring 2006. This experience offers feedbacks (discussed in Section 5) to be used as input for the next release of the system, currently under development in the framework of the project “e21 for the development of digital citizenship in Agenda 21” funded under the above mentioned national e-democracy Call (De Pietro et al. 2004), whose goal is to create a social environment inclined to using online deliberative spaces for enhancing the well established local Agenda 21 participatory processes.

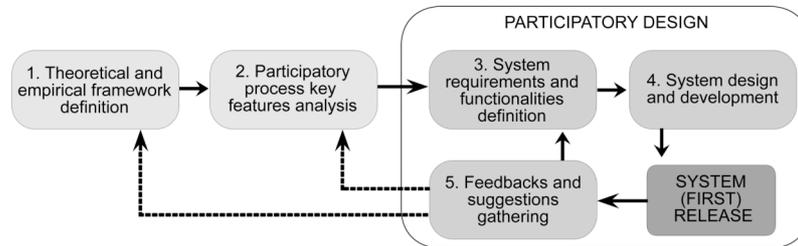


Figure 1 - Iterative development of a software system supporting participatory processes

2. The Theoretical Framework: Participatory Processes Key Features

Bobbio (2004) examines a huge collection (different dozens of case studies, inclusive of a large number of detailed interviews to public managers) of projects and experiences of participatory processes which have been promoted by several Italian governmental institutions (mainly Municipalities, but also Provinces and Regions) in the last 5 years or so.

The analysis of these experiences – where citizens are involved in *deliberative processes* promoted by the public administrations – suggests that, to be successful, such involvement needs to rely at least on a careful and clear definition of three fundamental aspects:

- *selection of participants*
- *issue-framing*
- *choice of the participatory modality.*

The *selection of participants* is a very “delicate” phase, whose aim is to build a map of the stakeholders that are to have a role in the participatory process, in such a way that no stakeholder feels excluded and all the different interests are represented. How participants are chosen will vary depending on the participatory context: in particular, the choice of the actors who represent the different needs of the territory (citizens’ associations, neighborhood committees, and so forth) can be achieved through a *top-down selection* (i.e., through selection by an authority) when the situation and the interests at stake are very clear.

On the other hand, if it is difficult to clearly gauge what stakeholders need to be brought in (as is often happens) or if there is reason to believe

that individual private citizens also need to be involved in the participatory process, citizens may be asked to show their interest and to take part in the participatory process as part of a *bottom-up approach*.

The second critical aspect of a participatory process is the drafting the informational background: actually, every participatory process, to be effective, needs to be built on a strong informational basis. There should be a stage, generally at the outset of activities, dedicated to what is known as *issue framing*. Generally, in real participatory experiments, issue framing is completely up to the organizers of the event. In such a situation, there is obviously great risk that information will be partial, biased or even manipulated. For this reason, top-down issue framing needs to be complemented by bottom-up issue framing, where the people have a concrete opportunity to shape the informational background, as part of a declared policy of inclusion. Failure to provide mechanisms for bottom-up input will almost inevitably result in the failure of the participatory process.

Finally, the core of a participatory experience is the method chosen to reach a shared vision of the issue. To design an effective and concretely useful ICT instrument to support participation, we must rely upon the way in which participation is achieved in the real world. There is a vast number of different methods that Bobbio (2004) classifies in three main categories:

- *Listening techniques*: they play a fundamental role in getting the participatory process rolling because they activate strategies of inclusion that allow for potential stakeholders and issues to be identified. The most widely used listening techniques are *focus groups* and *brainstorming*.
- *Methods for constructive interaction*: are techniques designed to allow the participatory process to reach a shared position. This is what occurs with *Action Planning* and *Search Conferences*. The feature these techniques share is the importance given to how the participants are called upon to act. The way problems are presented, timing and deadlines, the presence of facilitators, and the distribution of tasks among small groups in clearly distinct stages, and other such procedural specifications become vital to improving the quality of interaction and to allowing concrete decisions or positions to be reached. The variety of interaction modalities calls for a variety of deliberative tools.
- *Methods for conflict resolution*: in most cases conflicts arise from a direct counter-position of the different sides, creating a situation comparable to a zero-sum game. Techniques for resolving conflicts –

such as *Integrative Negotiation*² – start from the premise that conflicts can be resolved only if the object of contention is transformed so that the game has a positive net sum: all participants gain some advantage from the result attained.

Choice of the participants, issue-framing and the above participatory modalities are the key features of participatory processes which should be supported by the software system.

3. Deliberative Community Networks

The distinguished feature of Deliberative Community Networks (compared to traditional community networks) is that they allow citizens – that spontaneously gather in discussion groups with a well defined topic – to debate a particular issue or a specific problem with the aid of tools belonging to different spaces, as sketched in Fig.2, that outlines the logical architecture of a Deliberative Community Network.

The *community space* is aimed at supporting communication and open-ended discussions, with the side goal of favouring the rise of mutual trust, as typically happens in community networks. The *informational space* provides tools collecting and sharing information, in order both to enforce the issue framing and to keep track of the pieces of information (e.g. documents, photographs, multimedia materials, etc.) provided by the citizens to document a specific issue, this facilities have the effect of supporting group activities. The *deliberative space* supplies tools and functionalities supporting the creation of a shared vision among the group members.

Anyway, we think that these three spaces should not be seen as separate objects, but – more appropriately – as three different *dimensions* concurring in the creation of a whole *participatory space*: therefore, the relative weight of each dimension may vary to match the characteristics of any specific deliberative process.

² Integrative negotiation, developed in the 1970s by the Harvard Negotiation Project and perfected by Roger Fisher and William Ury (Fisher and Ury 1983) starts from the idea that the sides must forsake a positional confrontation because this leads, in the best case, to a compromise. Fisher and Ury's solution consists of working on the interests that underlie the positions. This requires shifting the confrontation to what interests are at stake by seeking to determine why each side desires a given outcome. This method makes it surprisingly easy to discover that, even if the respective positions are in opposition and divided by a broad gulf, this does not mean they are motivated by what is at stake.

We briefly analyze each “dimension” in the following paragraphs.

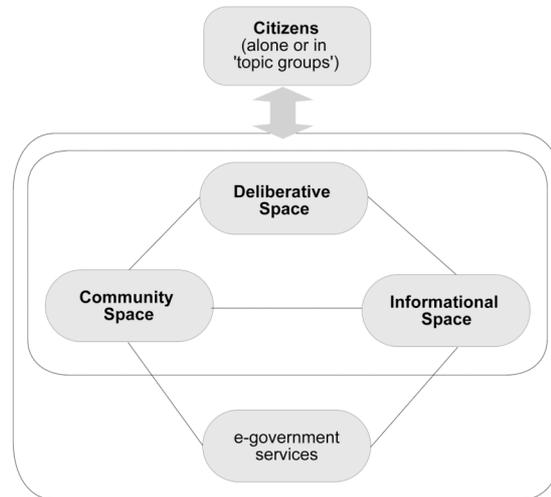


Figure 2- Logical architecture of a DCN

3.1 The Community Space

The system’s community area plays a crucial role because its features foster the emergence of the sort of *civic intelligence* that characterizes community networks (Schuler 2001). These features not only enable people to come into contact with one another and exchange ideas and opinions, but also help achieving the sense of community that can establish a climate of mutual trust among participants.

Another important function of the community space is allowing people to communicate freely³ outside the confines of the different deliberative contexts. Furthermore, the free exchange of differing points of view provides fertile terrain to germinate ideas and projects that can later attain more precise definition when the proper deliberative tools are applied. Community tools can thus be considered catalysts for deliberative and informative processes.

In addition to *public forums* which are the kernel of any virtual community, DCN include features to manage a variety of ancillary functions, such

³ As a matter of fact Bannon (1997) points out that one among the most serious shortcomings of platforms designed to produce shared positions is the lack of support for interaction among participants due to such platforms’ rigid and schematic structure. This lack of communication may cause isolation and leads to a gradual loss of interest in the deliberative process.

as *announcements*, *calendar*ing, *newsletters*, *e-petitions* and *blogs*. The two last tools were not included in the initial design, but their usefulness in the community area of the deliberative environment comes from the first implementation and experience using DCN that we will briefly present in the section 4 of the paper.

3.2 The Informational Space

The purpose of the informational space is to manage the knowledge gathered by users so as to support both communication and deliberation⁴. Gathering informational material represents a delicate aspect of any participatory process because, if this task is left exclusively to the organizers or facilitators, a concrete risk of biased selection or even manipulation arises (see section 2). Furthermore, failing to involve participants in information gathering leads to a passive attitude toward debate that decreases the level of participation. Allowing users to pitch in while setting up the informational background by applying a bottom-up approach thus reduces both kinds of risks.

Setting aside an area for framing the issues also aids participants in properly distinguishing the realm of opinion from the domain of factual information. Arguments based on easily accessible documents are more likely to lead to a productive debate that comes to a logical conclusion, thus partially curtailing the danger of polemics and self-serving discussion. An additional advantage of a dedicated information-gathering area is that this frees the user to make an informational contribution unburdened of the perceived need to express an opinion when the purpose of the contribution is actually just to inform others. The informational tools enable the following tasks:

- *Collecting materials*, through document upload and/or the submission of links and information;
- *Producing new materials* using tools for collaborative content creation;
- *Classifying the material collected* so as to facilitate research and management;
- *Assigning a degree of relevance* to the collected materials.

⁴ Hobbes (1651) states: “deliberation is nothing else but a weighing, as it were in scales, the conveniences, and inconveniencies of the fact we are attempting”, that is to say through deliberative processes it is possible to reach a shared position on a specific issue by debating its pros and contras.

The set of this tools makes the informational area not a mere repository of documents. In particular, thanks to the functionality that enable participants assign the degree of approval – and thus visibility – of a given item of information, the set of informational tools becomes an outright support system for opinion making.

3.3 The DCN Core: The Deliberative Space

The deliberation tools represent the core of the participatory system. A good way to obtain coherent tools likely to produce consistent results is to design them with inspiration drawn directly from the methods of actual experience. In many of the examples of enacting inclusive policies reported by Bobbio (2004), it was apparent that local government was having trouble bringing to fruition a participatory process in a single polling of citizens. It is indeed much more common for participatory processes to consist of a series of deliberation stages, each relying on a different technique and involving different participants. It is therefore necessary to have the chance to create outright *structured participatory processes*, divided into clearly distinct phases, each of which relies on a specific deliberation tool. What sets the different tools apart is thus the methods used to arrive at a shared policy or position. There are many different deliberation methods, each of whose specific features meet the needs of different participatory contexts, such as expressing a preference or drafting a proposed accord. Each tool must therefore be designed for the requirements of a specific stage of the participatory process and has to offer functionalities that complement those of the other tools. The choice of tool for a given deliberation process will depend on the organizers. It is therefore necessary to provide tools with explicit differences in method and functionality so as to simplify the choice of the tool best suited to the task. Anyway, all these tools should have the following constituents in common:

- *Defining the actors*, i.e. the citizens who are to take part in the deliberative process;
- *Framing the issue* by collecting informational material to support the deliberative process;
- *Producing a shared position* that summarizes the outcome of the deliberative process.

The DCN platform consists of four deliberative tools, i.e. four deliberation modules, each of which has its own participatory features designed to meet different needs:

- *Deliberative brainstorming* fosters the germination, the refining, and the selection of ideas and proposals;
- *e-Consultation* polls the opinion of a relevant number of people allowing them to choose among a set of pre-established alternative possibilities;
- *Online deliberation* is used for structured debate that is regulated by a pre-established protocol suitable for formats such as a consensus conference;
- *Group-decision support* supports group decisions with mathematical algorithms for choosing a proposal within a set of alternatives under consideration.

In particular the first two tools (*deliberative brainstorming* and *e-consultation*) are intended to support *listening techniques*, while the last two (*online deliberation* and *group-decision support*) are intended to support *constructive interaction* (Section 2).

These four modules are complemented by the *News board* module, that keeps track of the participatory process when it ‘leaves’ the system (e.g. when the final version of a petition is printed and given to the Local Council for debating it).

This set of tools is not exhaustive: the identification of the four modules has been driven by the mandatory needs, goals and resources available in the context of the above mentioned e21 project and by the existence of running prototypes to be reused or considered for detailed specifications. A more comprehensive participation environment, fully supporting any participatory process, should include, for instance, tools for *conflict resolution*. Our approach is to design and implement this comprehensive environment incrementally, as far as we learn from the actual experiences.

4. Developing and Testing a DCN Prototype: ComunaliMilano2006

A first implementation of a subset of the functionalities provided by DCN has been used for supporting public discussion in the occasion of the Municipal elections scheduled in Milan (Italy) during Spring 2006.

We have exploited that occasion to develop a prototype (that we called “ComunaliMilano2006”, see: www.comunalimilano2006.it) that was not indeed aimed at supporting deliberation (in the electoral period no deliberation can realistically take place), but only public discussions and candidates visibility. This means that “ComunaliMilano2006” is a particular in-

stance of the *participatory space* (as we defined it in section 3), including a subset of the tools a DCN can have, and emphasizing mainly the community and informational dimensions (cfr. Fig.2) – nevertheless it contains also tools for fostering deliberation.

4.1 ComunalMilano2006 Features and Characteristics

Basically ComunalMilano2006 was designed as a public (virtual) square – organized in public moderated forums (see Fig.3) – where citizens and candidates meet each other to debate issues of public interest – surrounded by areas owned and managed by the candidates, plus a set of common facilities, among which the most relevant are the brainstorming area and the events agenda.

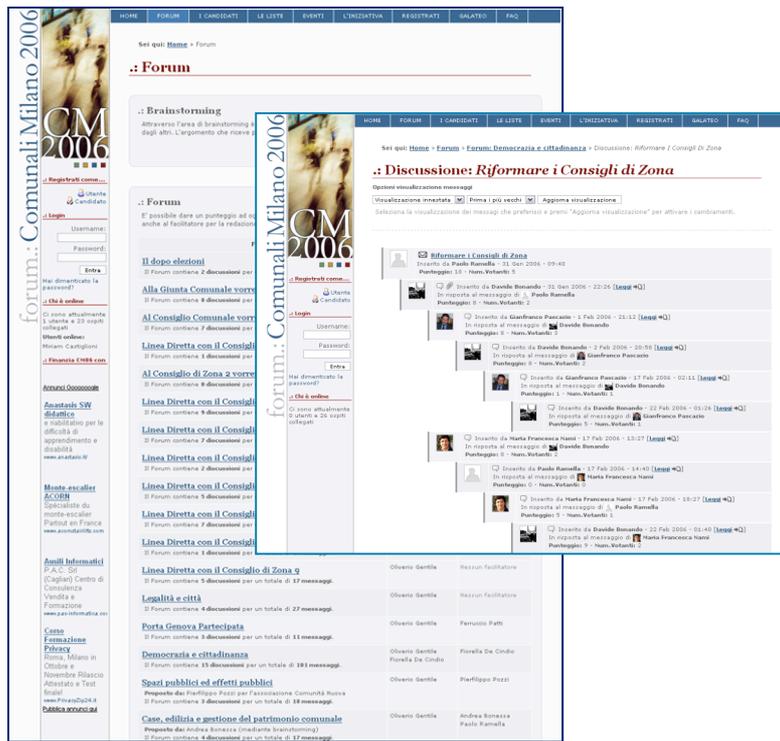


Figure 3 - Public Forums list and Discussion visualization in a public forum

Public moderated Forums

Public moderated forums have been designed to enhance *informed discussions*, and thus they provide some distinguished features and facilities, such as:

- documents attached to messages posted by users (citizens or candidates) are also collected in an *informational area*. This means that all materials related to a specific discussion, let's say, on traffic and pollution, are eased to a specific discussion, let's say, on traffic and pollution, are easily reachable, and the discussion can be grounded into these materials. Posts and materials can be read both by visitors and registered users;
- if they wish, registered users (citizens and candidates) may express their *degree of preference* on a specific message or document by assigning to it a numerical value (from 1 to 5). The need of supporting such a kind of "weak" (or quick, or implicit) participation was suggested us by the experience carried on by the employees of the Province of Milan who manage public forums with citizens hosted by the Milan Civic Network (see De Cindio and Ripamonti 2005). The correctness of this suggestion is reflected by the fact that the 41% of the citizens who participated to the initiative did it by expressing preferences over a position (a message) of somebody else. Last but not least, this weak participation offers the advantage of preventing from having a huge sequence of messages just saying things like: 'Oh yes, I agree/disagree with Tom' (as often happens in forums);
- the constant support of a *moderator* to assure that users respect an appropriate netiquette ("Galateo");
- the constant support of a *facilitator* of the discussion, endowed with a deep expertise in the topics under debate, in order to further foster an informed debate;
- some visualization facilities (e.g. the organization in *threads*, to simplify the flowing of the discussion).

Brainstorming Area

Another distinguished feature of ComunalMilano2006 is the way in which the topic of forums is decided. Citizens can make proposals (e.g.: let's discuss on 'mobility in Milan' or on 'the city seen from a women perspective') in a *brainstorming area*, that is to say a "simplified public forum" (it does not support replies) collecting citizens' suggestions for new topic to

discuss. Other citizens can rate the proposals, again by assigning a numerical value (from 1 to 5 – see Fig.4), or can post a new proposal. Among all the proposals, the ones ranked better are then “promoted” as topic for discussion in new dedicated forums.

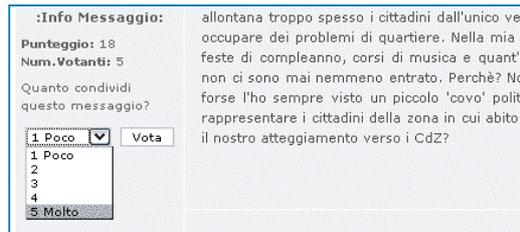


Figure 4 - Expressing preferences (rating messages and/or proposals)

Candidates' Areas

The *candidates' areas* (see Fig.5) contain a personal page organized into three sections (a personal profile, the motivation, the program), a link to the candidate's personal website (if any), or, on demand, to a personal blog (also provided by the *ComunaliMilano2006* system). As we had foreseen, many candidates (not only the ten candidates to the chair of Major, but also the candidates to the City Council and to the district councils) considered the development of their own website (and the registration of the corresponding domain) as an obvious piece of their electoral stuff. However, their sites were scattered across the net, thus increasing the difficulties for citizens in finding information about candidates and in comparing their



Figure 5 - Candidates list and a personal blog of one of them

electoral programs. Candidates seemed to be aware of these difficulties and of the importance of simplifying the research of information about them for citizens. As a result, one of the success factors of *ComunaliMilano2006* resides in the creation of a single place collecting information about a large number of candidates: *ComunaliMilano2006* gathered 557 candidates belonging to 26 different political lists, among which 7 candidates to the chair of Mayor, 239 candidates to the City Council and 311 candidates to the 9 District Councils.

The Events Area

Furthermore, each registered citizen (candidate or not) can introduce items in the *event section* of the site (see Fig.6): in the final period of the electoral campaign, close to the election days, this possibility resulted very attractive for candidates and useful for citizens wishing to be informed about meetings and debates not signalled by other media (such as local newspapers, radio and TVs). Globally 398 “electoral events” have been inserted into the event agenda, among which 169 were inserted by the candidates themselves, 147 by the *ComunaliMilano2006* staff and 82 by private citizens.

We believe this is a simple but relevant proof that citizens can collect and share *civic knowledge* more than traditional media (Schuler, 2001). Moreover, we noticed how the possibility of becoming “information providers” induces into citizens a non-passive aptitude, thus further encouraging participation.



Figure 6 - Example of event provided by users

Technical Choices

We will not go into details here about the technical choices underpinning ComunalMilano2006 web-based implementation. Anyway we think that supplying just few hints on this topic would be of interest.

The ComunalMilano2006 prototype has been built adopting exclusively Open Source technologies. Basically it has been developed using the Content Management Platform Drupal (<http://drupal.org>) on a LAMP (Linux – Apache – MySQL – PHP) architecture. In the vast panorama of Content Management Systems (CMSs) we have selected Drupal mainly for these reasons: it is largely popular⁵, and easily customizable, scalable and extensible, it is endowed with a modular architecture and offers a very good groups management. The customization of Drupal for ComunalMilano2006 required a complete revision of around the 40% of the functionalities (with a special attention for uploading, preferences, blog, forums, events and comments posting) supplied by the original CMS.

4.2 Some Data about ComunalMilano2006

Due to the fact that, at this stage of our research, no theoretical framework as yet been selected and defined for effectively measuring the degree of participation, we are able only to offer – mainly to (welcomed) sociologists wishing to further investigate the outcomes of the “experiment” – some qualitative rough data extracted from the logging system of ComunalMilano2006.

Several relevant figures, for example, can be derived from the analysis of the page views along the time dimension (Fig.7). ComunalMilano2006 website opened in the second half of November 2005, but the actual relevant time interval to consider are the six months between January 2006 and May 2006, that is to say the electoral period (the Municipal election took place in May). Moreover data are a little bit “polluted” by the fact that on April 9 and 10 the National Elections for the Italian Parliament took place: as a consequence people – till that date – were less concerned with Municipal elections.

It is also worth noticing that the accesses to the site continued also after the elections (after the physiological pause of the summer holidays that involves the vast majority of Italians in July and August) and have began to grow again during the Autumn.

Besides page-views, relevant data about the *participants* are:

⁵ We have selected Drupal in Summer 2005, when alternative solutions such as Mambo and its forking Joomla were not as diffused and “stable” as today.

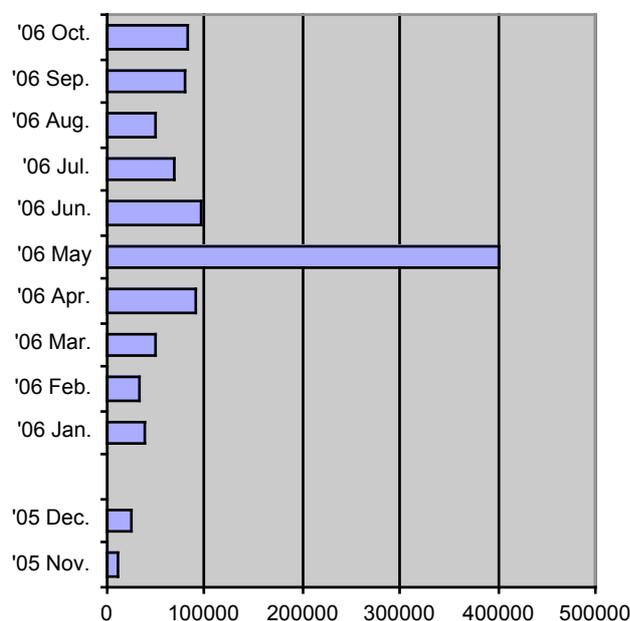


Figure 7 - ComunalMilano2006 web site: monthly page views (different users)

- more or less 1000 users registered to ComunalMilano2006, among which 7 (out of 10) candidates to the chair of Mayor, 239 candidates to the City Council and 311 candidates to the nine District Councils (for a total of 557 candidates belonging to 26 different political lists);
- 550 users, among the 1000 registered, actively participated, that is to say they have done at least one thing among the following: prepared their personal page, written one message in a forum, written one post in a blog, provided one event;
- the 81% of the registered candidates (454, among which 112 women) created their personal page, and 100 among them also opened a personal blog;
- 24 out of 60 elected members of the City Council (that is to say around the 40% of the total) participated to ComunalMilano2006;

and about the *activities in public forums and in candidates' areas*:

- 21 public forums have been opened, among which the most active have been “Democracy and citizenship”, “Mobility in Milan” and “About the city” (101, 83 and 154 posts respectively);

- public forums have totalized 660 messages in 6 months, among which 225 were provided by candidates and 435 by citizens;
- in the same period, users have produced 770 posts and comments in the personal blogs (532 posts by candidates, 238 comments by citizens);
- also in the same period, users have provided 398 electoral events (169 by the candidates, 147 by the ComunalMilano staff, 82 by the citizens).

These figures call for some reflections to explain, e.g., the apparently small number of citizens actively participating. Although the issue deserves a deeper analysis – whose focus would go beyond the confine of this paper –, several considerations could be done straight away. The focus of the project was offering to candidates an online environment useful for supporting the generation of a synergic interplay between the offline and online dialogue with electors; this implicitly means that candidates would have been in charge of effectively involving citizens in carrying on discussion started offline (e.g. during public meetings and debates) in the online environment. We have noted that this happened with some difficulties, since candidates seemed quite scarcely aware on the possibilities intrinsic in the new media. In spite of this fact, citizens-inspired online discussions have covered practically the whole set of the offline “hot topics” that were mesmerizing the attention during the election period.

A final intriguing hint can be derived from the data about users’ activities. Fig.8, shows the relevance of the mechanism that allows users to express a preference (as described in § 4.1.1 and § 4.1.2) on the messages and documents posted in ComunalMilano2006 by other users. The 41% of them simply expressed preferences, without ever posting messages. This is consistent with theories that have investigated the rate of participation in communities (Wenger et al. 2002), and seems to suggest that it is crucial for successful participation to provide (technological) support for what Edward (2006) calls *different styles of citizenship*: one “stronger”, more active and another apparently “weaker”. Supporting these different participation styles would guarantee a more inclusive and “democratic” environment for deliberative processes.

We think that this apparently weaker style of citizenship is relevant also because it implies a sort of *peripheral participation*, whose importance in learning processes has been investigated and underlined by several scholars (including Lave and Wenger, 1991). Supporting weaker styles of participation may therefore reveal as an effective tool for diffusing and refining civic participation among citizens (and their representatives), and for promoting mutual trust and incremental learning about these themes.

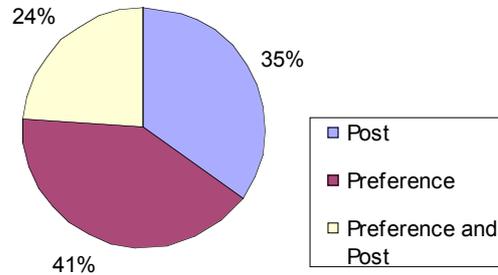


Figure 8 - Percentage of activities among participating users

4.3 Some Insights about Usability and Usage Patterns

The issue of understanding if and how the technical and design choices may have affected (positively or negatively) the usage patterns of citizens and candidates accessing the system would deserved sociological and psychological investigation not available in the framework of the project. Nevertheless we were well aware of these aspects, and we created in *ComunaliMilano2006* a forum where participants could ask for explanations and help and discuss problems arising from technical or usability aspects. The goal of this forum was also collecting precious suggestions, consistently with the phase 5 of the approach to the iterative development of the system sketched in Fig.1.

Some rough observations we derived from the comments and posts in the forum and from the analysis of what actually happened online can be summarized as follows:

- both citizens and candidates did not encountered relevant difficulties while using the system. The only exception was the navigation among the items (messages) of a discussion thread, that seemed not enough intuitive and simple, and thus requires redesign;
- the candidates encountered some difficulties while preparing their personal pages, but this was mainly due to some problems related to the fact that the system was a prototype (e.g. the WYSIWYG⁶

⁶ WYSIWYG stands for “What You See Is What You Get”. This acronym is mainly used in computing to describe a system in which content during editing

editing interface was not fully functioning yet); they managed to overcome such difficulties thanks to the help of the ComunalMilano2006 staff;

- an interesting hints that calls for reflection in the design of the forthcoming DCN platform is related to the use of the brainstorming area. Actually both candidates and citizens underused it, seeming that its potentialities have not been completely understood.

5. Conclusion and Future Work

The experience presented in Section 4 has two main fallouts.

In the Milan local community, it might open the doors to a new stage of participation of the citizens to public affairs. Several of the candidates participating to the online discussions have been elected: namely, 24 (of 60, i.e. the 40%) have been elected in the City Council and 82 have been elected in the 9 District Councils (each one consisting of 40 members). Most of them, especially those elected in the District Councils, expressed the strong intention to keep open the online channel with citizens, to make the activity of these Councils more transparent and effective while facing with people's real problems. Since October 2006 (i.e. four month after the installation of the new assemblies) the site hosts a distinguished forum for eight of the nine District Councils. Although more laborious, we also succeeded in accompanying 5 of the elected in the City Council to participate to a forum called "To the City Council I would like to say..." where citizens ask questions and discuss the hot topics in the Milan public agenda and City Council members answer and present their activity in the Council. What is more encouraging is that one of the candidates participating to the initiative has been designated President of the City Council and he look really interested in exploiting this channel for involving citizens in the activities of the City Council.

A second release of the Deliberative Community Network will be soon implemented and then experimented by the ten municipalities in the Lombardy Region which are partners of the project called "e21 for the development of digital citizenship in Agenda 21" funded under the "Call for selecting projects to promote digital citizenship (e-democracy)" issued by Ministry for Innovation and Technology. e21 aims at overcoming some of the typical limits in participation often arising in local Agenda 21 proc-

appears very similar to the final product. It is commonly used for word processors, and Web (HTML) authoring tools.

esses (some of which are described and discussed in Evans and Theobald 2003) by offering support to each phase of the Local Agenda 21 participatory process through suitable technological solutions, namely some of the tools described in section 3. e21 activities began in September 1st, 2006, and in the first two months a survey of the state of participation and e-participation in the ten municipalities took place. During the local meetings, we have been asked to present the site www.ComunaliMilano06.it and the lessons learned in this experience, to envisage the kind of online environment we have to develop within the e21 project. In this context, www.ComunaliMilano06.it is actually playing the role of a throwaway prototype (Gomaa 2001) helping public servants as well as town councillors of the ten municipalities and some selected local stakeholder to provide suggestions on the software environment to be developed. In this way the second release is being designed with the direct involvement of some of the prospective users of the system and, because of this, it will be probably significantly different from the one we had initially in mind – roughly presented in (De Cindio, De Marco and Sonnante 2005, 2006) – so substantiating the idea that the process presented in Fig.1 actually supports a kind of participatory design of the system.

Last but not least, we intend to pursue further on the idea of supporting – not only – different styles of citizenship, but also different abilities in interacting with digital technologies (as described, e.g., in Kavanaugh et al.2005) through a careful design of the interfaces (see, e.g.: Esichaikul and Komolrit 2005), and the use of technologies such as SMSs (for keeping citizens up-to-date with new information) and visualization techniques (Macintosh 2006).

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