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E-Councils - Systems, Experiences, Perspectives

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Abstract

City councils have not yet benefited as much from modern information systems as the other administrations. In the Cuparla project, members of the Stuttgart city councils were each equipped with a networked Notebook and a special information system – the Cuparla software was developed. This paper describes the software design, usage experiences and the organizational implementation process. The information and collaboration features of the Cuparla Software cover the core functionality of Electronic Council (= E-Councils). Further areas requiring computer support are meetings, knowledge management, controlling and political portal sites.

1 Introduction: The Working Situation of German City Council Members

Germany is a federal republic; most local matters are therefore handled by local administrations. City councils are elected by the local citizenship to decide important local matters and to control the administrations. Traditionally, membership of a city council is an honorary post. While this post has a workload of about 7 hours per week in small villages, the workload in larger cities is about 24 hours per week [1]. If one includes the travel time to and from city council work and other activities connected with council work (e.g. work for the party) the average workload reaches more than 40 hours per week plus an average of more than 20 hours for the primary job [2]. While computer systems have dramatically increased the productivity of office work in private companies and have also changed the face of administrative work in public administrations, council work has remained largely unchanged. Computers are regarded as too intrusive for this unstructured and sensitive political work. Furthermore, most council members are in their 50s and therefore belong to a "computer resistant" generation. This paper argues that this is not the case and shows where and how computers can be fruitfully used in council work. The first section of the paper summarizes the concepts and experiences encountered in introducing computer support in the Stuttgart city council in the Cuparla project from 1996 to 1998. The Cuparla-System covers the core of electronic

city council – in short: E-Councils. The second section then sketches out further components of E-Councils.

2 Supporting Council Work in Stuttgart

Just like in other towns, members of the Stuttgart city council have a large workload: in addition to their primary profession (e.g. as an engineer at Daimler Benz) they devote more than 40 hours a week to local politics. This extra work has to be done under fairly unfavorable conditions. Only council sessions and party meetings take place in the city hall; the deputies of the local council do not have an office in the city hall to prepare or coordinate their work. This means, for example, that they have to read and file all official documents at home. In a city with more than 500,000 inhabitants they receive a very large number of documents. Furthermore, council members feel that they could be better informed by the administration and better use could be made of their time. Therefore the Cuparla project was launched to improve the information access and collaboration of council members.

A detailed analysis of their work revealed the following characteristics of council work:

- Since council members are very mobile, support has to be available to them at any time and in any place.
- Council members collaborate and behave differently in different contexts: while they act informally and fairly openly in the context of their own party, they behave in a more controlled and formal manner in official council sessions.
- A closer investigation of council work reveals a low degree of process structure. Every council member has the right of initiative and can inform and involve other members and members of the administration in any order.
- Council members are rarely computer experts. Computer support for them has to be very straight-forward and intuitive.

When designing computer support we initially had to decide on the basic orientation of our software. We soon abandoned a workflow model as there are merely a few steps and there is little order in the collaboration of local politicians. Imposing a new structure onto this situation would have been too restrictive for the council members.

To provide an intuitive and easy-to-use interface the working context was chosen as a basis for the Cuparla design. Each work-

ing context of a council member can be symbolized by a "room". A private office corresponds to the council member working at home; there is a party room, where he collaborates with his party colleagues, and a committee room symbolizes the place for committee meetings. In addition, there is a room for working groups, a

private post office and a library for filed information. All rooms therefore have an electronic equivalent in the Cuparla software. When a council member opens the Cuparla software, he sees all the rooms from the entrance hall (figure 1).

Figure 1: Entrance Hall

The council member creates a document in one room (e.g. his private office) and then shares it with other council members in other rooms. If he moves a document into the room of his party, he shares it with his party colleagues; if he hands it on to the administration, he shares it with the mayors, administration officials and all council members etc.

The interface of the electronic rooms resembles the setup of the original rooms. Figure 2 shows the example of the room for a council party. On the left hand side of the screen there are document locations, whereas on the right hand side, the documents of the selected location are presented. Documents that are currently worked on are displayed on the 'desk'. These documents therefore have the connotation that they need to be worked on, without an additional outside trigger. If a document is in the files, it belongs to a topic that is still on the political agenda. However, a trigger is necessary to move it out of the shelf. If a topic is not on the political agenda any more, all documents belonging to it are moved to the archive.

The other locations support collaboration within the party. The conference desk contains all documents for the next (weekly) party meeting. Any council member of the party can put documents there. When a council member gets prepared for the meet-

ing, he or she merely has to check the conference desk for relevant information. The mailbox for the chairman contains all documents that the chairman needs to make a decision about. In contrast to other Email accounts, all members have access to this mailbox. Double work is avoided since every council member is aware of the chairman's agenda. The assistant's mailbox contains tasks for the party assistants, the mailbox for the secretary contains assignments for the secretary (e.g. a draft for a letter). The inbox contains documents that have been moved from other rooms into this one.

Thus, in the electronic room all locations correspond to the current manual situation. Council members do not have to re-learn their work. Instead, they collaborate in the shared environment they are accustomed to with shared expectations about other people's behavior. Feedback from the pilot users indicates that this approach is appropriate.

Furthermore, software design is not restricted to building an electronic equivalent of a manual situation. If one wants to truly benefit from the opportunities of electronic collaboration support systems, one has to include new tools that are not possible in the manual setting.

Figure 2: Party Room

For example, additional cross-location and room search features are needed to make it easy for the council member to retrieve information. The challenge of interface design is to give the user a starting point that is close to the situation he is used to. The next step is to provide the user with options to improve and adjust his working behavior to the opportunities offered by the use of a computer.

Building the appropriate software is only one success factor for a groupware project. Organizational implementation is typically as least as difficult. Groupware often has a free rider problem: all want to gain the benefit and nobody wants to do the work. Furthermore many features are only beneficial if all participate actively. For example, if a significant part of a council faction insists on using paper documents for their work, providing and sharing electronic documents actually means additional work for the others. This can easily lead to the situation in which groupware usage never really gets started. To "bootstrap" usage we started with the (socially) simple activities and ended with the (socially) complex activities. (Figure 3). As a first step we provided the basic council information in digital form. The city council has the power to demand this initial organizational learning process from the administration. Once there is sufficient information, the individual council member can already benefit from the system without relying on the participation of his fellow councilors. The usage conventions are therefore socially simple.

Figure 3: Steps of groupware implementation

As better information is a competitive advantage for a council member, there was an incentive for the individual to make an effort to learn to use the system. Communication support (E-Mail, Fax) is a more complex process, because its success depends on reliable usage patterns by all communication partners. The usage patterns are straight-forward and easy to learn. We therefore implemented them in a second phase. Co-ordination activities (sharing to-do-lists, sharing calendars) and co-operation activities (sharing documents and room locations, electronic meetings) depend on the observance of socially complex usage conventions.

tions by all group members. For example, the council member had to learn that her activities had an effect on the documents and containers of all others and that "surprises" typically resulted from the ill-coordinated activities of several group members. The council has to go through an intensive organizational process in order to benefit from the features. For example, the party's business processes had to be re-organized.

We offered collaboration and co-ordination support in the same phase to the council members. Their appropriation depended on the party's culture: a hierarchically organized party preferred to use the co-ordination features and requested to get rid of many collaborative features. In another party most councilors had equal rights. This party preferred the collaborative features [3].

There is one important resume that covers both software design and organizational implementation: it is not as important to provide as much functionality as possible; it is important rather to provide the right and only the right functionality. As we built our software on the basis of Lotus Notes, we spent most time in getting rid of unnecessary functionality. The councilors would otherwise have been overwhelmed by the complexity of the application. Similar lessons were learned about the complexity of the hardware equipment and the information provision. By the end of 1997 the Cuparla project had equipped almost all Stuttgart councilors, and the support is still in place in 2000 although the research project ended in 1998.

3 Issues and Components of E-Councils

This section describes further components of E-Councils. Meeting support, knowledge management, controlling and a political portal site have been experimented with in the Cuparla project (see e.g. [2]), but have not yet been introduced into the daily working practice of the Stuttgart city council.

3.1 Meeting Support

Council members spend most of their time in meetings: plenary sessions, committee meetings, party meetings and other formal and informal meetings. Many meetings have more than 10 participants and become unproductive if run by conventional means. While political meetings have very sophisticated and elaborate rules and procedures to allow for fair participation and to assign responsibilities to individual members and parties, they have not taken up modern means of communication to make meetings more productive. There are three levels of meeting support for council members:

Level 1 - Visualization of information and co-ordination of meeting activities: In a modern, image-oriented world, sole reliance on the power of the word increasingly becomes an illusion. Some information is communicated more easily with figures, pictures or films. Equipping council halls not only with overhead projectors, but also with modern beamers and computers can lead to more focused and interesting meetings. Simple

networked microphone systems can support the assignment of speaking rights and record meeting contributions for the official meeting minutes.

Level 2 - Electronic information and participation with small changes to the traditional meeting procedures: If the individual council members are equipped with networked computers, they can individually access information during the meeting. This leads to a much more well-informed and rational meeting process as many meeting activities are currently triggered by lack of or unequal distribution of information (e.g. the postponement of decisions).

Council politics strives for compromise. Reaching a compromise requires fine-tuning the wording of decisions – frequently even during the meeting. If only the original wording of a decision is available in writing, synchronizing all requests for changes becomes increasingly difficult. In Stuttgart, council members frequently became so confused that it was left to the minute-takers to decide on what decision the council had made. If the individual councilors' computers are connected to large shared displays, the fine-tuning of decisive texts can be finished during the meetings. Each member publically displays his or her version or changes the publically displayed text until the council converges to a shared decision.

Controversial decisions require taking a written ballot. Taking a ballot and counting the votes is time intensive, particularly if the sum of the votes does not add up to the number of participants (sometimes the Stuttgart council had to take more than two votes, because miraculously there were more ballot papers than council members!). Automatic voting systems automatically collect the votes and instantly display the results.

Level 3 - Electronic information and participation with significant changes to the traditional meeting procedures:

Research on Group Support Systems and Electronic Meeting Systems (EMS) has shown since the late 1980s that computer systems can significantly increase meeting productivity (see e.g. [4]). The larger the group and the more frequent the meetings, the larger the potential for an increase in productivity, because EMS replace sequential communication by parallel communication. However, EMS are mainly useful for workshop-like collaboration and less useful for communication oriented meetings. Furthermore, they require moderation and facilitation of the meeting process and the application of structured problem solving techniques. There are two kinds of traditional activities that can be transformed into electronic meetings: first, there are ample meetings in which council members openly strive for good, creative solutions, e.g. in their party meetings, in working groups or in collaboration with citizens (e.g. as part of the Agenda 21 process). Furthermore, there are many activities that are currently performed by individual council members because collaboration seems to be too much effort, e.g. the draft of important proposals or strategic papers.

Currently we see a significant increase in level one meeting support, but little level two and level three support, except for some pilot projects (besides Cuparla for example [5]).

3.2 Knowledge Management and Controlling

Councilors complain both about too much information and too little information, i.e. they do not get the right information at the right time: whenever the administration wants to pass a proposal through their council they tend to hide important aspects in piles of unimportant details, leading to a flood of long proposals. However, when council members want to take the political initiative themselves, they lack access to qualified information. They have neither the qualifications to address many of the difficult questions themselves, nor the knowledge about where to find the information within the administration. Therefore,

- the knowledge available in the administration needs to be made transparent to council members, e.g. using knowledge maps,
- council members need to be continuously re-qualified,
- council processes, from the inception of an idea to the controlling of outcomes, need to be managed as knowledge processes (for details see [6]).

Controlling is a particularly urgent and sensitive issue. Although the council members are entitled to receive all necessary information to control the administration, they have difficulties enforcing those rights. Administrations tend to "forget" council motions and requests for information, forcing the council members to keep track of the status of their motions and requests for information themselves. If the council makes a formal decision, it can be the last time it hears about this issue. There is no formal process of informing the council about the implementation of a decision. If, for example, the council decides to build a new toilet block in the city center, the individual council members have to later go out and check on whether the toilet block has really been built. Simple electronic council assignment tracking systems can make the status of each motion and request for information transparent. Professional instruments could further help the council to control the administration. For example, a computerized balanced scorecard system [7] could provide the council with the necessary strategic overview information, give councilors the opportunity to drill down for details, and to always keep the councilors (and the mayors!) up-to-date.

3.3 Political Portal Site

Portal sites provide structured access to information and services on the Internet. Building on the success of successful commercial portals, national administrations e.g. in Austria, Great Britain and Germany, strive to build up integrated administrative portal sites providing the customer "citizen" with information and services from all administrative areas and levels [8]. However, these portals have only limited value for councilors because they need very specific decision-oriented information. Currently,

councilors can hope at most to get this information about their own city in electronic form. A political portal site would provide them with access to (public!) information from many cities (e.g. to compare or synchronize one's own decisions with others') and would provide the cities with an easy and inexpensive means to electronically publish council decision information on the Internet. The portal site should, therefore, contain not only an access framework but also a container to enter the information into. The portal site should also integrate information from all layers of administration (in Germany: local, regional, and state administration and federal government). Such a portal site would not only be useful for all councilors, but for all politically active citizens too.

4 References

- [1] G. Schwabe, B. Vöhringer, H. Krcmar, "Die Arbeitsituation von Gemeinderäten und Möglichkeiten zu ihrer Computerunterstützung – Ergebnisse einer empirischen Untersuchung". Appears in: *Verwaltung und Management*, no. 4, 2000.
- [2] G. Schwabe, *Telekooperation für den Gemeinderat*. Kohlhammer, Stuttgart appears 2000.
- [3] Schwabe, G.; Krcmar, H.: Digital Material in a Political Work Context - the Case of Cuparla. Appears in the Proceedings of the European Conference on Information Systems ECIS 2000 in Vienna.
- [4] J. Nunamaker et al., "Electronic meetings to support group work". *Communications of the ACM*, Vol. 34, No. 7, July 1991, pp. 40 - 61.
- [5] G. Schwabe, "Understanding and Supporting Knowledge Management and Organizational Memory in a City Council", *Hawaii International Conference on System Sciences 1999 (HICSS99)*, CD-ROM, 12 pages.
- [6] R. Watson et al., "Teledemocracy in Local Government", *Communications of the ACM*, Vol. 42, No. 12, Dec. 1999, pp. 58-63
- [7] R. Kaplan, Balanced Scorecard (Aus dem Amerikanischen von Horváth, P. unter Mitwirkung von Kuhn-Würfel, B. und Vogelhübel, C.), Schäffer-Poeschel, Stuttgart 1997.
- [8] H. Reinermann, J. Lucke: *Portale in der öffentlichen Verwaltung*. Speyerer Forschungsberichte Nr. 205, Hochschule für Verwaltungswissenschaften Speyer 2000.