The Intranet as a Crisis-Information-System

As we've learned the term *crisis* names the condition of a social system like an organization, in which cognitive autonomous participants experience the limits of their action ability through perturbations by the environment and at the same time have to redesign the context of their action. In such a situation the Intranet of an organization may offer a huge potential for rescue, remedy and re-structuring of the social system by integrated crisis-communication. Christian Neuhaus introduced that concept earlier. Now, in this presentation let's start with *The Intranet as Crisis-Information-System*.

First I would like to point out what the term Intranet stands for and then frame the concept by one mayor condition.

Intranet, here, names the technological infrastructure of an organization including servers, storages, networks and all (it-) services that are based on binary code. Thus the service orientated architecture paradigm and the cloud-computing concept get included in the term Intranet.

Following this definition only one mayor condition could be adduced to define the term more precisely: the regulated access to the Intranet, which depends on two aspects:

Basically and most evident the access to all the distributed information and services must be restricted by implementing a roles and rights management. This restricted access is based upon so-called policies that are associated with individual user accounts of the members of an organization that link

a) Affiliation to an organizational unit
   With
b) Specific granted rights of the employee

Further the Intranet must be secured against any unauthorized access from outside the organization. As a result, most organizations have implemented technologies like firewalls, IDS or IPS to ensure granted access for their members from outside the company over the Internet.

To point out the Intranet is a technological infrastructure already deployed within organizations and every member - despite contingent spatial disconnectedness - could be connected to this network and make use of any kind of organizational media the member is allowed to access.

But why is it reasonable to make use of the Intranet for communication in crisis situations.

Well, lets consider two more aspects:

a) First because of standards like TCP/IP (for transmission), HTML/ XML/ PHP/ et cetera (for programming) - summed up under Hypertext as the underlying concept for content structuring - and the platform independent access (browser based) the Intranet could combine heterogeneous information and discrete services in a new way. Every kind of medium like text, video, audio or pictures could be distributed via the Intranet and at the same time bi-directional communication is possible. For example the users have the ability of feedback or posting comments.

b) Second the members of an organization are familiar with the hyper textual structure of the medium and therefore cognitive scripts have already been developed. This is an important fact because in crisis situations - which are often very stressful - members know how to use the medium effectively

Thus, the Intranet is some kind of involving space, a framework for acting and by now it is should be obvious that it has - beside financial reasons - huge potentials as a crisis-information or more precisely crisis-communication system.

Now, following the intervention cycle of crisis management developed in the "Communication For Security"- project I'll present a guideline on how to use the Intranet for crisis-communication within organizations. To make no claim to be complete I'll go through the five resources operation time, operation space, instances, material and know-how and show how the Intranet could positively affect them at the prevention stage. For the reaction stage I'll show on the basis of an example which kind of basic system functions the Intranet could improve.

The first mentioned resources operation- space and time must be taken as one category

of the Intranet because if the operation space is to small designed the availability of the Intranet is endangered and therefore the operation time would be even shortened. Thus the space of the Intranet strongly correlates with the time aspect. So organizations have to secure that even when all stakeholders - even external ones - access the Intranet at the same time the infrastructure could handle all requests without latency or server overload. With such a designed Intranet space is no longer a critical dimension and operation time for communication is adequately assured.

After managing the technological limitations the organization should consider how a communication management could be implemented on the Intranet for crisis-communication and what is to achieve.

Therefore the organization has to identify the entire stakeholders with their appropriate capabilities and skills and how they're related within the organizational structure. Then the standard contact section on the Intranet should be widen to a complete profile page like the ones in social networks on which the interests, capabilities and skills of the stakeholders show off and, due to indexing algorithms, are findable for others. Moreover – according to the enhanced user profile – within a crisis situation the organization is able to map concrete concerns and link stakeholder together. Such enhanced user profiles allow to communicate more accurately, target information more precisely and observe further inquiries.

Beside the fact, that via the Intranet all the stakeholders of an organization could be managed, the intranet could heavily improve information management. Most of the organizations already use the capability of document management via the Intranet but not especially for crisis situations. In practice it has become clear that at the prevention stage organizations should consider which kind of documents or information the stakeholders will need at hand and provide them on the Intranet.

Especially at the reaction stage the Intranet shifts basic system functions. For this let's consider one scenario: a fire within the production hall.

The first to mention system function is observing. Because of the media richness and the thick description of stakeholders the organization could vary messages in depth and amplitude over the Intranet. Further the Intranet offers new ways of visualization like

pictures, charts or even videos that are - in some cases - better to perceive.

To stay within the fire scenario alarming has to be pointed out. But where is a benefit in alarming over the Intranet. Well, by means of the user profiles the organization could send alarming messages to all stakeholders following their individual observing needs. For stakeholders not directly concerned a short text message is adequate but for stakeholder like firefighters the alarming should include pictures or even a live stream from the security camera at the production hall or surrounding area to archive a better situation report.

But there's another opportunity for the Intranet in this scenario. Most organizations, especially industries, use time clocks to log their employees working time. When such a clock gets linked with the user profile on the Intranet an organization is aware on who is working where. Such information could then be distributed to the rescue service to detect the possible amount of injured persons and to plan the assignment.

The second to mention system function is enabling. With the Intranet plant layouts, documentations about hazardous and toxic substances and operating procedures are highly available for the stakeholders and by that their coping capacity increases.

The most important aspect beside earlier quotations is the bi-directional aspect in communicating over the Intranet. Following the non-transferability paradigm of messages the recipient has the opportunity for feedback and queries at any time. That means if a message is not clear to the recipient he's able to get back to the sender and ask for further information to secure understanding and therefore adequate reaction is granted.

Due to time limitations I have now to finish my presentation but there's one aspect that has to be pointed out. Every planning for communication in crisis situations is scenario based and grounds on conditional pre-acceptances. But if a crisis- communication is included and managed over the Intranet all data becomes binary code and therefore is available for subsequent analysis and communication improvement. Then the next crisis is possibly just a disturbance.