JOINTS
Addressing Group Psychotherapy Requirements

Luís Duarte, Luís Carriço, Marco de Sá and Diogo Luís
LaSIGE & Department of Informatics, Faculty of Sciences
University of Lisbon
Edifício C6 Campo Grande, Lisboa, Portugal

Keywords: Psychotherapy, CSCW, Mobile Devices, Public Displays.

Abstract: Providing computational support to group meetings is a challenge some applications are now addressing. Nonetheless, there are specific areas which need special attention by developers to cover all inherent issues, which can reveal themselves as workflow, interface or context requirements, among other. In the group psychotherapy field of study it is necessary to be careful with both the therapist's and the patient's work, providing both groups with the necessary mechanisms, interfaces and tools to accomplish their tasks. This poster presents a project whose main goal is to address all this challenges in group psychotherapy sessions.

1 INTRODUCTION

Activities which require some collaboration are part of our daily lives. In some cases these can be defined as mere extensions of their individual counterparts However, when we dwell into more specific areas, new challenges can rise which were not foreseen and therefore need to be accounted for (Brignull, 2004).

JoinTS (Joint psychological Therapy Support) is a project which addresses the problems and challenges of group psychotherapy. Individual psychotherapy, although less challenging than the group version, already requires different forms of interaction between therapist and patient. The therapy process includes a series of meetings in which both actors exchange information both by conversations and paper artifacts (Mahoney, 2003).

As other collaborative activities, group psychotherapy can be defined as an extension of individual therapy, supporting not only all the activities performed on the individual counterpart but also bringing several new issues to the process: an increased number of participants and consequent increased amount of exchanged and processed data; the presence (in some occasions) of a second therapist; the management of different communication channels (therapist-therapist and therapist-patients); easy and quick way to retrieve / distribute data from / to patients.

Project JoinTS aims at delivering computational support to all these activities, enhancing the group therapy process and providing therapists with the appropriate tools to perform their tasks.

2 JOINTS

The traditional group psychotherapy scenario is characterized for having a therapist (who leads the session), a group of patients and, occasionally, a second therapist (who acts as an observer towards the group). The main therapist conducts the session as a facilitator. The other tasks are also his/hers responsibility, unless a second therapist is present. Communication between both therapists is avoided, in order not to create awkward moments for the patients. Group therapy session occur in a room with the presence of all the participants. Communication is mainly oral, except for artifacts and artifact fulfillment results (written on paper).

JoinTS considers this basic scenario and extends into several dimensions, taking advantage of technology. First, incorporating the results from SCOPE (Carriço, 2003), it substitutes paper by electronic artifacts, thus facilitating (re)definition, exchange and filling of artifacts, gathering and analysis of results and observation of artifact filling activities. Secondly, it introduces the e-group dimension, thus facilitating group management and group distribution and recollection of artifacts and results, but also the conjunct analysis and collective synchronized monitoring of results.

Duarte L., Carriço L., de Sá M. and Luís D. (2007).
JOINTS - Addressing Group Psychotherapy Requirements.
In *Proceedings of the Ninth International Conference on Enterprise Information Systems - HCI*, pages 306-309
DOI: 10.5220/0002385603060309

This poster addresses these two contributions, and in particular the second one, around a single-room setting with all participants present. Three different arrangements were identified: a traditional one, with computational support for patients and therapists; a similar one, but with the addition of a Large Public Display (LPD); and finally, one with an Interactive Large Public Display (I-LPD).

2.1 System's Architecture

Figure 1 shows JoinTS architecture that deals with a single room scenario setting. A wireless access point allows participants to communicate with each other. Patients use small mobile devices to operate the form-filling tools, while therapists usually recur to more powerful devices (Tablet PCs or Laptops. The communication and database modules are typically supported by dedicated PCs, though they can operate in a therapist's device.

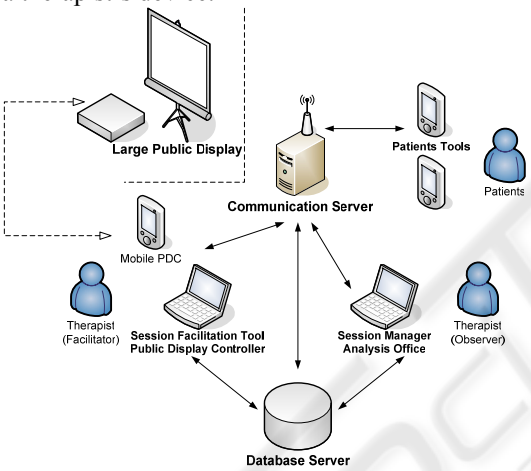

Figure 1: LPD Architecture.

2.1.1 Database Server

The Database Server is responsible for storing records about therapists, patients and their historical progress, all artifacts created, to whom they are assigned and respective results. In the group therapy scenario, session data is also stored, such as its attendees, annotations taken and message's exchanged.

2.1.2 Communication Server

The Communication Server ensures the flow of message's exchanging during a session. Both therapists and patients must login to the server in order to be part of the session. All requests and messages must pass through this component which, in turn, will forward them to their destinations. The Communication Server provides a message subscription mechanism to allow moderators to configure which types of messages are forwarded to them.

2.1.3 Public Display Controller

The Public Display Controller is a small component used in the presence of the LPD (or I-LPD). Its main purpose is to receive, interpret and present the data (previously staged in the Session Facilitation Tool) intended to be shown on the LPD.
In case an I-LPD is used, the Public Display Controller is also responsible for notifying the therapists' monitoring applications about the changes made directly on the presented data.

2.1.4 Session Manager

This component provides a way to manage a therapy session, allowing therapists to explicitly start and finish each session and performing a shallow-configuration of the communication flow in the system. The manager provides a message subscription interface to manage the destinations of the exchanged messages, enabling the therapist to explicitly state which type of operations he / she wants to receive and be notified about.

2.1.5 Session Facilitation Tool

The Session Facilitation Tool is the main monitoring and analysis component for in-session environments. The component provides all necessary mechanisms to have an overall view of what is happening during a therapy session. It also introduces the virtual space notion in this system, providing the therapists with three different areas to work on: the private, shared and public spaces. Besides these work spaces it also provides a tool to register quick annotations, an instant messaging interface to communicate with the second therapist and the necessary tools to stage the data which will be presented in the LPD.

2.1.6 Analysis Office

The Analysis Office's primary goal is to provide a powerful analysis environment for the therapists in off-session settings. It is possible for a therapist to check a patient's progress during his therapy sessions or his homework repertoire. However, this tool can also be extended to group settings, providing ways to visualize entire group's questionnaire-filling results or getting statistics (tables or graphics) about the latter.

2.1.7 Patient Tools

In order for the patients to perform their activities both outside and during sessions, we provide them with form-filling software for PDAs which can be used to answer questionnaires delivered to them as homework or in-session activities. This software is based on the SCOPE project with a few extensions to allow for file transferring via wireless communication (Carriço, 2003).

3 SESSION FACILITATION

The facilitation of the session will be one of the major activities performed by the therapists. Therefore, special care must be taken into account when developing the interfaces to support these activities. The introduction of easy-to-use interfaces as well as the notion of virtual spaces to the system are some of the features presented by JoinTS to help therapists facilitate group sessions.

3.1 Virtual Workspaces

An important challenge in groupware applications is how to manage, visualize and share workspaces. Three different workspaces were identified to stand up to the therapists' needs: a Private Space, a Shared Space and a Public Space (Figure 2).

The Private Space is used to prepare data visualization layouts and to monitor or analyze information. A coupled toolbar allows the therapist to choose which patients he wants to add to the workspace and which questionnaire will be distributed to them. The Shared Space serves both therapists interests by allowing them to exchange or mix the layouts they prepared in their Private Spaces. The Public Space acts as a monitoring area for the patients, corresponding to what is shown on the LPD (if present).

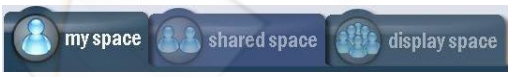

Figure 2: Virtual Workspace tabs.

3.2 Therapists Group

Communication between therapists is crucial for the session. Therefore, a communication sub channel for therapists was created, thus supporting the above mentioned activity without patient's perception (Huang, 2004).

A simple interface (Figure 3) is presented to support this feature, coupled with the Session Facilitation Tool. A single chat panel is used to present both the therapists' chat log and server's notification messages.

Figure 3: Session Facilitator Control Panel.

The shared space can be used by therapists to exchange data among them, promoting discussion and data analysis during the session.

The Listing Tool panel is used to prepare visualization layouts. The therapist can quickly select which form, group (and respective patients) will be presented in the layout. The three buttons below the Listing Tool can be used to transfer the layouts between the different virtual spaces.

3.3 Therapists-Patients Group

A second communication channel is used to provide a way to distribute / retrieve artifacts during the session and to monitor all activities performed by the patients. The before mentioned message subscription system reveals its usefulness in this setting: the main therapist can, for instance, receive thought registries, while the second therapist can receive full questionnaire-filling results for evaluation during the session.

The main activity of the session's facilitator towards the therapy group is to monitor the patients' work (Figure 4). To achieve this task the system provides a desktop-like interface with the capability of being populated with replicas of the Patients' Tools. The therapist can add or remove replicas

(each representing one participant) as well as freely move them in the workspace.

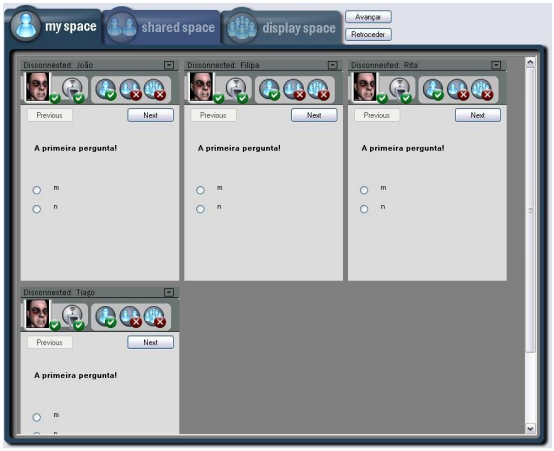

Figure 4: Session Facilitation Tool Monitoring Interface.

The patient's Status can be seen in the Patient Tools toolbar on top of each replica (Figure 5). The first two buttons indicate if the patient is present in the session and if he's being monitored in the LPD. The last group of buttons indicates in which of the virtual spaces the patient is being manipulated. Therapists can quickly remove or add the patient to / from any of the spaces through this interface.

Figure 5: Patients Tools toolbar.

4 FUTURE WORK

For the next phase of the project we will direct our efforts into the development of a Session Facilitation Tool for small mobile devices counterpart. This version requires more care when creating the appropriate interfaces due to the intrinsic constraints of the target platform. Our second focus is to understand how the presented architecture scales to different scenarios, such as multiple room settings and multiple sub-group support.

5 CONCLUSIONS

Traditional group psychotherapy settings, without computational support, tend to be time consuming and consequently, often disregard important aspects in a group therapy session such as monitoring the patients' actions or reviewing their weekly homework and registries. In addition, therapists should feel comfortable working with groupware software, even if they don't have the necessary academic qualifications to do so.

In this paper we present JoinTS, a project whose main goal is to deliver computational support for psychotherapy activities, both individual (Carriço, 2005) and group variants, while not disrupting the traditional therapy workflows. Using emerging mobile technologies and different design approaches, we grant the users the mobility to try different therapy scenarios and by adding a Large Public Display we provide a way to present relevant information to the audience and promote sharing and discussion of experiences among the group.

ACKNOWLEDGEMENTS

This work was partially funded by FCT through project JoinTS and LaSIGE.

REFERENCES

Luís Carriço and Marco Sá. Hand-held psychotherapy artifacts. In Proceedings of the 11th Human Computer Interaction International Conference, HCII05, Las Vegas, USA, 2005.

Luís Carriço and Marco Sá. Proactive psychotherapy with handheld devices. In Proceedings of the 8th International Conference on Enterprise Information Systems, ICEIS2006, Paphos, Cyprus, 2006.

M. Mahoney. Constructive Psychotherapy. The Guilford Press, New York, 2003.

E. M. Huang et al. IM Here: Public Instant Messaging on Large, Shared Displays for Workgroup Interactions. In Proceedings of the SIGCHI conference on Human Factors in computing systems, 2004.

H. Brignull et al. The Introduction of a Shared Interactive Surface into a Communal Space. In Proceedings of the 2004 ACM conference on Computer Supported Cooperative Work, 2004.