

Using an XML Based System in Group Psychotherapy

Luís Duarte, Luís Carriço, Marco de Sá

LaSIGE & Department of Informatics, Faculty of Sciences University of Lisbon
Edifício C6 Campo Grande, Lisboa, Portugal
lduarte@lasige.di.fc.ul.pt, {lmc, marcosa}@di.fc.ul.pt

On the course of group psychotherapy sessions, both therapists (it is common to find more than one therapist in a group psychotherapy session taking on an observer role) and patients perform various activities. Therapists deliver paper artifacts which patients have to fill-in during the sessions and then deliver them again to the former to discuss the results. Our system aims at delivering computational support to these activities by offering a set of tools and functionalities to perform them with the aid of small mobile devices, laptops and large public displays. Among the exchanged artifacts we can distinguish questionnaires, questionnaire filling-in logs, thought registries and personal notes shared by the therapists. These artifacts are generated with the aid of our XML specification, oriented to handle questionnaire and log construction and interpretation. Although the system uses an XML specification to handle data, a central relational database is also used to store it, as the system may be part of a large clinical facility.

A Communication Server is responsible to ensure the flow of communication in the system, receiving and forwarding messages from / to the correct senders / recipients. The Server is complemented by an important feature which enables session workload distribution: a message subscription system. With this module, therapists are allowed to configure which message types they want to receive or whose messages are forwarded to them. The Communication Server is therefore responsible for keeping an updated table with the current subscription settings for the session. When it receives a message, the subscription table is consulted in order to correctly forward the message to the desired recipients. The subscription table can be modified at run time during a session.

The exchanged XML messages follow a simple structure comprised by 'From', 'To', 'Session', 'Operation', 'Extra' and 'Body' fields. While the first two fields' purposes are self explanatory, the 'Session' tag refers to the identification number of the session the messages belong to. The 'Operation' tag describes the message's type (e.g. a database request). This field can be complemented by the 'Extra' tag which can offer additional information about the message (e.g. the forwarding of a questionnaire or log file). Finally, the 'Body' field contains the actual payload of the message which can be plain text or full XML questionnaires, result files or log files. Some variations of this schema can be used in setting up the subscriptions. This XML message and file based approach promotes flexibility and mobility to handle different group therapy scenarios, despite the presence of a central database.