

SHORT TERM SCIENTIFIC MISSION (STSM) WORK PLAN (6th Nov 2005- 20th Nov 2005)

1. INTRODUCTION

This short working paper explains briefly the STSM work plan for Ag. Asri Ag Ibrahim at Bielefeld University, Germany. He is a postgraduate student at University of York, under supervision of Dr. Andy Hunt. The work at Bielefeld University will be under supervision of Dr. Thomas Hermann.

2. RESEARCH PLAN

The researcher interest is focused on usability evaluation for sonification application. The evaluation includes user, tasks and application domain levels; which involve four stages of transformation processes including data, acoustics, temporal and interaction stage.

In this STSM, the focus will be more on evaluating interaction stage. The contribution will be the evaluation of gestural audio systems that make use of a different type of control strategy for relating the gestural activities with the controlled audio system:

- Firstly, there is direct control, like in navigational tasks, that represent a frequently seen strategy also in artistic applications.
- Secondly, there are control strategies that rely on a more physically principled metaphor, like the binding of activation to "effective control activity", or excitory actions as humans use them in everyday interactions with objects.

In sonification (one of the multidisciplinary applications studied in WG3 of ConGAS), the first type of control is often seen in interactive versions of parameter mapping sonification whereas the second type of control is typically the result of a model-based sonification type.

Usability evaluation is not only for the interaction, interface design and how easy it to be used as end product, but it in fact involves a few steps back before the creating of the interaction type itself and also how it can supports the effectiveness of the application. For the evaluation, there are two possibilities involved:

- Looking for causes of error and predicting effects
- Encounter effects from which one can infer causes.

The overall aim is to make progress in creating a set of criteria and characteristics in usability evaluation for interaction stage of sonification application. For this STSM, the focus will be to further investigate the usability evaluation criteria and strategy for interaction provided by Model-based Sonification.

The result will be a taxonomy of interaction characterization in closed-loop auditory interaction loops, and, depending on the available time, first empirical data (about interactions) to analyze the differences in usability between such different interaction paradigms as direct control and reactive feedback through models.

Both models, data and exploratory task will be determined in service of the mission, and will settle after further discussion with Dr. Andy Hunt and Dr. Thomas Hermann.

3. FUNDING REQUESTED

Details	EUROS
Return air ticket (Hannover – Manchester)	
Return Train ticket (York – Manchester)	
Return Train ticket (Hannover – Bielefeld University)	550.00
Accommodation (40 euros x 15 days (6 th Nov 2005- 20 th Nov 2005))	600.00
Subsistence allowance (23 euros x 15 days)	345.00
Total	1495

4. CONCLUSION

This STSM offers the opportunity to combine knowledge on the evaluation criteria and strategies for sonification application especially in terms of interaction which involve several techniques. Usability analysis is no longer an optional development item, but a required step enabling future gestural activities and applications acceptance.