Position Paper Intesi on W3C MMI workshop

Filip Van Gool
Software Architect for Intesi Group Belgium
fvangool@intesigroup.com

Introduction

Intesi Group Belgium is part of Intesi Group. The main activity of Intesi Group Belgium consists in research and development. The latter is focused on security related issues within emerging technologies. The term security is used in a broad sense and covers issues as authentication and identification. From this perspective, our scope includes parts of access management and identity management that are strongly interwoven with authentication and identification.

At present, Intesi Group Belgium participates in the ITEA[1] project AURORA. The project is entirely focused on providing solutions within the field of multimodality, taking into account its complexity and context. The aim of the project and its position on multimodality will be covered below, together with the role, interest and focus of Intesi Group Belgium within the project.

The AURORA project by definition is closely related to the standards and frameworks proposed by the W3C regarding multimodality. In our opinion, the project could contribute to the future of standards and frameworks by coping with the full complexity and context of multi modality. In particular, the intention of Intesi Group Belgium is to address issues related to the security issues raised by the concept of multimodality. In our view, the nature of multimodality itself creates new challenges to security (in a broad sense). Intesi Group Belgium intends to contribute to the MMI framework by charting

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[1]ITEA (Information Technology for European Advancement) stimulates and coordinates industry-driven, pre-competitive R&D by bringing together partners from industry, universities and research institutes in strategic, pan-european projects. ITEA provides the link between funding, technology and software engineering skills.

these issues and expressing how these issues might affect the MMI framework as well as the standards used by the latter.

Position

The AURORA project was conceived to address and overcome current limitations encountered in interaction. Current means of interactions with applications are almost exclusively limited to devices as mouse and keyboard. The limitation of this form of interaction and the need to overcome these limitations are clearly stated by the way we live, work and interact. Nowadays, a user uses multiple different devices (PDA, Smart Phone, PC, etc.). Each of these devices provides specific and, in most cases, multiple modes of interaction.

The AURORA project aims to develop a software platform extending the user interface in a way as to allow multiple modes of interaction. As such, offering the user the choice of using voice or an input device such as a keypad, keyboard or other input device. For output, user will be able to listen on audio devices, and to view information on graphical displays. AURORA claims that there is a need to integrate more or less independent unimodal-processing input and output devices in such a way that it enables true multimodal interaction.

The intention is to provide solutions that are not limited to sequential multimodality (although the latter will be encompassed), but to embrace a truly concurrent multimodality enabling the end user to take full advantage of the hardware and network resources of his environment to optimise his navigation and daily work.

Intesi Group Belgium's role within the AURORA project is to develop a component which is responsible for handling security related topics within concurrent multimodal interaction. The core of the component is responsible for authentication, authorization and identification. The component is intended to be as open as possible, using standards proposed by the W3C (EMMA, XML Encryption, XML Signature, etc.) as well as standards from other open standard bodies as OASIS (SAML, etc). The component's main focus is not limited to authentication, authorization, identification as present in a non-multimodal environment. As such the component is not conceived to provide interfaces to a multimodal environment by coupling multimodality with a classical security component. Intesi Group Belgium's R&D is mainly focused on innovation and the idea behind the development of this component is thus to address specific security related issues that are proper to the nature of multimodal interaction itself. In our opinion multimodal interaction, by its very nature, challenges the present way security related issues (authentication, identities, federation, sessions, etc.) are presently handled. Moreover, we think that these challenges, when properly addressed, could contribute to the maturity and granularity of the MMI Framework.

Perspectives on the MMI Framework

The MMI Framework as described by the W3C, identifies the major components proper to every multimodal system. It must be clear that the AURORA project, given its intention to address true multimodal interaction, reflects a framework very similar to the framework proposed by the MMI framework. The components as described by the W3C can easily be mapped to the components encompassed by the AURORA project. The relevance of the MMI Framework for Intesi Group Belgium cannot be stressed enough.

Moreover Intesi Group Belgium has closely followed the development of MMI within the W3C. As a result Intesi Group Belgium, based on its know-how, claims to be able chart issues raised by the very nature of multimodal interaction that are, at this moment, not or only partial addressed by the MMI Framework. Intesi Group Belgium aims at expressing these issues and proposing possible refinements of the MMI Framework. These refinements cover not only the components but also the necessary attributes of such components as well as the presentation of these attributes as reflected in the W3C note of the MMI Framework. It is Intesi's intention to contribute in this way to the future development of the MMI Framework in close collaboration with the W3C.

Conclusion

We hope that the issues raised by Intesi Group Belgium could contribute to quality of the workshop and that by its participation, other participants might benefit of the issues addressed by Intesi Group Belgium. Moreover, we hope that our ideas, suggestions and feedback could contribute to the future progress of the MMI Framework.