



COGKNOW

D3.5.1

Interfaces to support
multi modal interfaces

Version 1.0

WP 3 Technical Development, Platform and
Network

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Context

WP 3	This WP aims to develop the platform and services that will be used to control the COGKNOW technical solution as developed in WP2. The technical solutions will act as the vehicle through which the developments within WP2 will run.
WPL	Angele GIULIANO (AcrossLimits)
Task T3.5	Multi-modal acquisition interfaces <i>This task focuses on the systems that allow carers to be able to interact with an Internet based system to record the reminder messages including in them audio, video and text elements</i>
TL	Adrian Porter (AcrossLimits)
Dependencies	This deliverables uses specifically the input of the deliverables D3.1.1 (Technical Specification of Systems and services) , D2.4.2 (Development of multi-modal interfaces) and D 1.4.1 (Functional requirements specifications)
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Reviewers	Chris Nugent (UU), Johan E. Bengtsson (CDH)
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History

Version	Date	Authors	Sections Affected
0.0.1	01/05/2008	Angele Giuliano	Structure of the document
0.0.2	25/05/2008	Adrian Porter	First version of content
0.0.3	12/06/2008	Adrian Porter	More content
0.0.4	30/06/2008	Keith Cassar	Images and diagrams
0.0.5	17/07/2008	Angele Giuliano	Editing and extended content
0.1	07/08/2008	Angele Giuliano	Finalisation
0.2	08/09/2008	Johan E. Bengtsson	Review, minor comments and suggestions.
0.3	25/09/2008	Angele Giuliano	Editing post review comments, removing technical descriptions and placing in D3.1.2, finalisation
1.0	20/10/2008	PSG	PSG approval

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1. Summary

This deliverable describes the background and ideas behind the technology solutions related to multi-modal functionalities combined to reminders that are configured in the back-end Cogknow server by the carers and then implemented in the Cogknow Day Navigator – both on the stationary and the mobile device.

It needs to be stated that the meaning of “multi-modal” in this context and also as intended within the Description of Work is taken to be – various forms of input and output formats – whether text, audio or video, and therefore quite similar to the meaning of multi-media.

This document gives both technical details as well as showcases the different developed components of the Cogknow configuration web interface that is used by the carers, and should therefore be accompanied by a demonstration of the software suite itself, since the real deliverable is in fact the solution and not a report.

2. Background and Rationale

2.1. Functional requirements

The 4 areas of functional requirements for the development of the Cogknow Day Navigator are displayed in the following diagram, together with some horizontal and over arching requirements like ease of use and personalisation

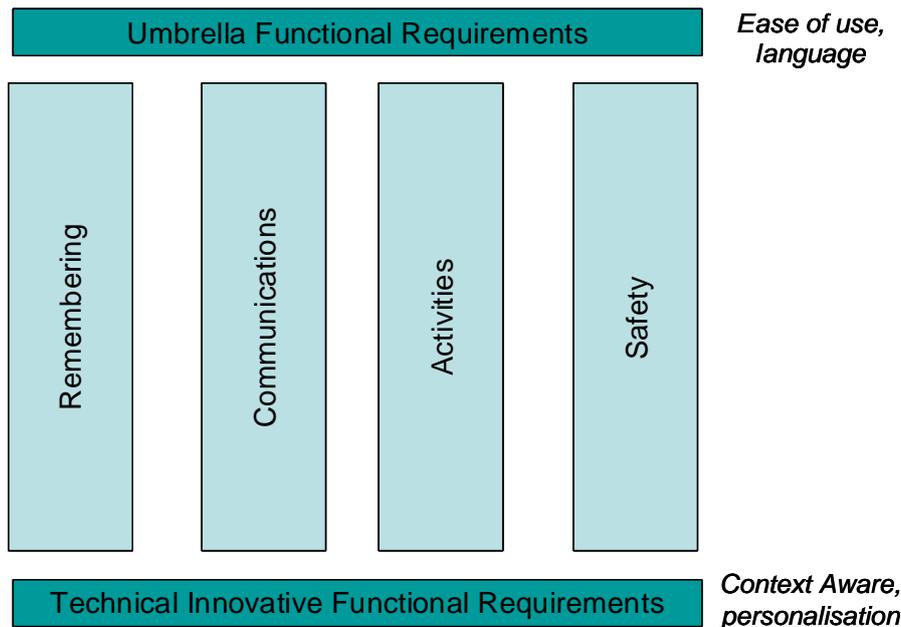


Figure 1. Schematic Diagram of Functional Requirements

All of these requirements translate into actions that are done either on the CHH (stationary device - the flat screen) or else the CCA (mobile device). Whether it's a reminder for making lunch, or a communication service (like picture dialling) or even an assistive step by step help on how to make tea, the carer is able to configure the required triggers and corresponding outputs via the configuration web interface that resides on the Cogknow Server.

Within the functional requirements (see D1.4.1) that were used to plan and build the system, it was explicitly mentioned several times that the outputs on the different devices could be of several formats, including audio, video and text.

2.2. Results from the first field trial

Moreover, from the results of the first field trial (see D1.4.2) it was directly mentioned within the interviews with both carers and PwDs that many persons wished to see reminders that were more personalised and this included also the addition of more audio and video.

Notable to mention as well are the new scenarios that were built by the medical partners after the first field trial in order to explain more about the "context awareness" and "activity assistance" that were required to be developed. In all scenarios there is an output of videos that can be streamed to the different stationary devices (for example a touch screen in the kitchen that shows step by step videos on how to make a cup of tea) or else on the mobile device.

3. Configuration Screens on Carer website

This section explains how the multi-modal interface configuration screens work and shows screenshots showing examples for files uploaded for several formats.

3.1. Cogknow Carer website

The Cogknow Carer website and all configuration screens can be found at:

<http://acrosslimits2.exigy.com/Cogknow/>

Detailed instructions on how to use these screens can be found within the user manual, <https://cdh.project.ltu.se/main.php/ServerManual.doc?fileitem=5472473>

3.2. Configuring multi-modal reminders

The payload screens can be found by clicking on “Manage Actions” within the main event management area.

Manage Event

Description *
(This is for Internal use) Eat Lunch Event

* indicates a required field

Save Close

Schedule Condition Manage Schedule Condition

02/07/2008 at 13:00 +/- 15 Minutes

Actions Manage Actions

WARNING : Reminder to eat lunch

Figure 4: Manage Event screen on Cogknow carer website

Then the following screen will be displayed (see Figure 5) and the user will be able to choose whether the visual component of a reminder is an image or a video and upload accordingly. There is also the option of including an audio component with the same reminder and it is possible to choose on which device all these are displayed by opening the list next to “Choose the output device”

Action Details Screen

Choose the Output Device:	HUB Touch Screen ▾
Action Description <i>(This is for Internal use)</i>	Reminder to eat lunch
Message <i>(Displayed to PWD)</i>	Its time to eat your lunch.
Number of Repeats	<input type="text"/>
Time in minutes between repeats	<input type="text"/>
Delay in seconds of message	<input type="text"/>
Visual Component	<input type="radio"/> Image <input checked="" type="radio"/> Video
	Enter Video location: <input type="text"/> <input type="button" value="Browse..."/>
	<input type="button" value="Upload Video"/> <input type="button" value="Clear Video"/>
	
	Enter Audio location: <input type="text"/> <input type="button" value="Browse..."/>
Audio Component	<input type="button" value="Upload Audio"/> <input type="button" value="Clear Audio"/>
	

Figure 5: Configuring the payload for a particular reminder

Up until FT#2, external files that need to be displayed together with reminders, need to be uploaded for each reminder.

References

- [1] Marike Hettinga, Anna-Lena Andersson, Rose-Marie Dröes, Franka Meiland, Eilish Armstrong, Birgitta Bergvall-Kåreborn, Marino Bresciani, David Craig, Stefan Sävenstedt, Richard Davies, Ronald van Eijk, Angele Giuliano, Hazel Johnston, Chris Nugent, Johan E. Bengtsson. (2007). *Functional Requirements Specification [COGKNOW deliverable D1.4]*. Retrieved from https://cdh.project.ltu.se/main.php/DEL-1.4.1-CDH-Functional_Requirements%20Specification.doc?fileitem=15548562
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