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D12 – User profiling module

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Glossary

Acronym	Meaning
API	Application Programming Interface
CRUD	Create, Read, Update and Delete
RBAC	Role-Based Access Control
REST	Representational State Transfer
RPC	Remote Procedure Calls
SOAP	Simple Object Access Protocol
UPM	User Profiling Module

References

1. MyGuardian D6 – User requirements report
2. MyGuardian D7 – Use Cases definition
3. MyGuardian D10 - MyGuardian Architecture and Interfaces
4. MyGuardian D13 - Localization Module
5. MyGuardian D14 - Knowledge Discovery Module

1. Introduction

Seniors with mild cognitive impairments are (to a certain degree) dependent on caregivers such as family careers and home care. The support and care by caregivers enables these seniors to continue living in their own home for as long as possible. However, these seniors might experience barriers towards moving around in outdoor environments when their caregivers are absent. The MyGuardian project aims for a product or service that facilitates safe and secure mobility of seniors with mild cognitive impairments. Not only seniors, but also caregivers are likely to be users of this future product or service.

This document aims to show a general scheme of the composition of profiles of Senior User, Informal Caregiver and Formal Caregiver. The document describes the main features that users can set, such as the user's personal data, the privacy settings or zones to be marked as safe.

The D12 – User Profiling Module deliverable describes the module that provides user profiles creation and edition, authorization and authentication modules and the personalization features.

2. User Information and Service Settings

This section describes all the information that has to be stored related to the user profile and the service personalization features.

On the basis of the D10 - MyGuardian architecture and D6 - User requirements report, the following user information has been identified.

2.1. User details

Contacts Details

- Account Name (e.g. “Barack”)
- Full name (e.g. “Barack Obama”)
- Description (e.g. “neighbor”)
- Password
- Email address
- Mobile phone number
- Profile picture

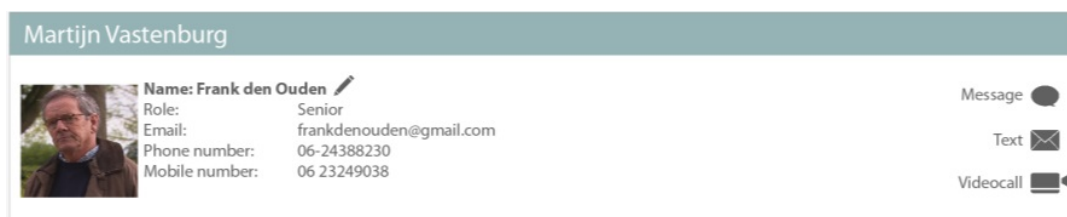


Figure 1 – Example of User Contact Details

Contact List

- Actual availability

Circle Settings

- List of contacts. Contacts have to be added to the care circle (searching among the list MyGuardian users) via contact invitations and confirmation procedure.
- Role between the user and his/her contact.
- Contact invitation status (pending, confirmed).
- Actual display order (based on rules and manual overrides)



Figure 2 – Example of Caregivers circle

Look & Feel Settings for MyGuardian Senior Application

Look & Feel settings for MyGuardian Senior Application can be only configured for seniors users

- Image/Pictures Repository
- Font configuration (two configurations with different font sizes)
 - "Normal font" configuration
 - "Large font" configuration
- Color configuration (two configurations with different color combinations)
 - "Normal style" configuration with typical colors used for the font, background and borders at the User Interface.
 - "High contrast" configuration with a color combination that stands out the font color over the other colors.

User Status

- Status of senior assessed by State Assessment Module

Localization

- Localization data of senior (latitude and longitude) collected by Localization Module.

Context

- Reference to the user status
- Reference to the location
- Additional contextual information generated by Contextual Information Generation Module

Privacy Settings

Privacy settings configured by senior user or administrator, specifying the roles that have access to them, such as:

- To allow/disable access to localization data
- To allow/disable access to localization data in case of alarm
- To allow/disable access to the history in the database

The screenshot shows a 'Privacy settings' window with a teal header. It contains three rows of settings, each with a label and a dropdown menu:

- Access to localization data: Close caregivers ▼
- Access to localization data in case of an alarm: All caregivers ▼
- Messages set as Private accessible for: Close caregivers ▼

Figure 3 – Example of Privacy Settings

2.2. Service Settings

Alarms

Alarms raised by Knowledge Discovery Module (Rules Engine) according to the rules previously configured by senior user or administrator.

- Alarm type (unsafe zone, duration of presence, frequency of visit, attendance, low battery, alert button, reminder)
- Alarm status (pending, closed)
- Reference to the rule that has raised the alarm
- Time stamps when alarm has been opened and closed
- Caregiver responsible for managing the alarm

Notifications

Notifications related to each alarm that are sent to different caregivers according to the escalation order previously configured by senior user or administrator

- Reference to the associated alarm
- Notification status (pending, accepted, rejected)
- Caregiver who the notification has been sent to.
- Time stamps when notification has been opened and closed

Alarm Settings

For each alarm type, senior user or administrator can configure the following alarm settings:

- The way of escalation procedure, such as:
 - Contact all caregivers based on contact order
 - Contact all close caregivers at same time
 - Other ways of escalation procedure configured by senior user or administrator
- Response time per user in case of alarm

Alarms/Notifications Preferences

Contact preferences in case of alarm can be configured by all caregivers selecting the following modalities:

- email,
- SMS,
- push notification,
- automated or manual phone (voice) request from care centre.

Report Preferences

Report preferences can be configured by all caregivers, such as:

- Frequency of reports

Unavailability

Unavailability times can be configured by caregivers, specifying the following parameters:

- Start date
- Start time
- End date
- End time
- Repetition frequency (daily, weekly, ...)
- Days of the week when the unavailability is active (Monday, Tuesday, ...)

Area Management

Safe zones can be only configured for seniors users (in collaboration with the administrator or some caregiver)

- Name (market, home, Marta's house)
- Coordinates (latitudes and longitudes of those points which form the safe area). In principle, the safe zones are defined in a rectangular shape.
- Description
- Area colour

For further details, see the D13 - Localization Module, which has been conducted in parallel with this deliverable.

Known Places

Known places can be only configured for seniors users (in collaboration with the administrator or some caregiver)

- Name (market, home, Marta's house)
- Address

- Coordinates (latitude and longitude)
- Description
- Icon
- Colour

Other Settings (configured by senior user or administrator)

- Communication settings or predefined text messages
 - Text message
 - Recipient user
- History settings
 - Retention period for messages/alarms/actions
- Battery Alert settings
 - % level (under, 20, 10 or 5%)
 - Recipient user
 - Text message

Rules Settings

Rules settings can be created by all caregivers by selecting:

- The risk to be covered:
 - Unsafe location risk
 - Risk related to duration of presence in a zone
 - Risk related to frequency of visit to specific zone
 - Risk related to non-attendance of a place/time required event
- The location where it is likely to be a problem. Each type of risk has its specific page listing all zones defined as relevant for the senior (see "Zones" on page 11), with a parameter field next to it.
- The time criteria

For more details about Rule Settings, see the D14 - Knowledge Discovery Module, which has been conducted in parallel with this deliverable.