



E-Care @ Home

WP1: Functional Requirements Specification

D1.2.13C: WT 'Synchronised functionality':

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ABSTRACT
<p>This document describes functionality and nomenclature which is common to all 'measures' (previously referred to as tests) integrated into the WT system. This document is to be used in conjunction with 'test specific' functional requirement documents and wireframes.</p>

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ECH, WP1, UX specifications, Functional Spec, common, WT

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1) Overview:

The WellTogether Service system allows users of different software portals to share common access to a range of functionality and information items. This document describes

2) List of Synchronised Functionality types:

These control basic ability to view and change records associated with 'synchronised functionality' between 2 WT users on different portals such as 'messages', 'calls' or 'meeting invitations. The main items on this list are:

- 2.1. **Multimedia messaging**
- 2.2. **Audio and Video calling**
- 2.3. **WT-Contact cards**
- 2.4. **Presence (availability)**
- 2.5. **Diary entries**
- 2.6. **'smart link' reminders/notifications**
- 2.7. **Internal and external WellTogether invitations**
- 2.8. **Measures**
- 2.9. **Data from measures**
- 2.10. **Alerts**
- 2.11. **Permissions**
- 2.12. **Service user private record**
- 2.13. **Service user full record**
- 2.14. **WellTogether Formatted multi-media Information**
- 2.15. **Device status**
- 2.16. **Remote screen access**

3) Multimedia messaging

A multimedia message is an information packet containing a header, a text field and/or file attachments and/or 'embedded controls' and/or URL links. Message storage rules vary according to service user license terms.

3.1. Headers

These contain: Name of sender, (as per WT card – see 5.0 WT card), time and date of sending and a subject line.

3.2. Text

This field can contain the full character set supported by chrome. It should also support limited formatting e.g tabs.

3.3. Photo attachments

When received, photo files become part of the receiving service user's hosted data set. Photo file caching policy is to be agreed, portal by portal. The photos are searchable according to the meta data information in the message header.

3.4. URL links

If a document, measure or reminder etc.. has been pushed to a portal it shall be possible to embed a direct link to this information item into a message.

3.5. Embedded controls

It shall be possible to create 'questionnaire forms' on the CMP and Service Management portals which can be completed directly in a message. Use case examples: menu selections, wellbeing or service quality ratings.

4) Audio and Video calling

The system will support audio and video calling between WT service users only using the available WT portals.

4.1. Routing

This shall be hosted within the WT controlled VPN environment so as to allow communications within the data privacy and security requirements of EU Health Care Institutions.

4.2. Multiple 2-way callers

The system will support up to 6 users on a single 2 way conference call

4.3. Multiple 'narrow cast' calls

The system will support 'incoming video & audio only' multiparty calls (see public managed groups).

4.4. Call quality

The benchmark for image quality and latency will be Skype.

4.5. Audio levels

The call audio signal quality should support the high audio levels needed by hard of hearing users.

4.6. Far end caller image size

When in-call, with video, the image of the far-end party will be displayed as large as the portal format allows.

4.7. In call Controls: (receiving portal)

In call, the following controls must be viewable at all times:

- view full screen/back to
- audio + / -
- mic. Off
- camera on/off
- add a contact
- end/leave call
- 'self view screen

4.8. Call progress information

Both calling parties must be given active information during the set up and ending of a call: ----

- 'connecting'
- 'ringing at the other end'
- no reply

- call ended
- In call

4.9. Incoming calls

4.9.1. Normal ringing

An audio 'ringing sound' will play (unless disabled) and an 'incoming call pop up' will appear in a format to be tailored to each portal – this will notify the call recipient of the caller and give the recipient the option to accept or ignore the call. Accept transitions to the 'in call' screen on each portal.

4.9.2. Auto answer modes.

It shall be possible to give selected service users the ability to connect without a far end party needing to answer the call. In these situations the 'incoming call' ring will sound for 5 seconds after which the call will be automatically answered, either as an audio only call or as a full video call, depending on permissions.

4.9.3. Multi portal service users

Where a single service user has multiple portals in simultaneous use, all will be expected to ring, but once the call has been accepted on one portal, the others will display a 'call in progress on another portal' message with a 'transfer call to this portal' button.

4.9.4. Unavailable recipients

If a call connection request is received outside of the 'availability' permissions set by the receiving party, the party setting up the call receives a pop up message that (variable=name of far end party) is not available for a call right now, please try calling (variable = availability settings of the receiving party).

4.10. Missed call indication

If a receiving party doesn't answer a call after 30 rings or before the calling party ends the call, the receiving party will get a missed call alert. Pressing the alert will access a missed calls list. Pressing any name on the list will set up a connection. The list will be limited to the last 30 callers. The missed calls list can also be accessed from the contacts area on each portal (e.g the control bar on the Homepad).

4.11. Call termination

4.11.1. Single party termination.

In the event all parties bar one have terminated their involvement in a call, the connection of the sole remaining party will be automatically terminated.

4.11.2. Call logging

After a call, the information record of both service users will contain a record of the call: name of both parties, time and date as well as duration. Access to this information will depend on the functionality of the access portal.

5) WT-Contact cards

When 2 service users connect on WellTogether, they exchange WT contact cards which appear in the contact detail view. Service users manage their own WT cards.

5.1. Information display:

5.1.1. First & last name

5.1.2. Phone number – fixed / mobile

5.1.3. Current Address

5.1.4. Home address (if different)

The maintenance of a 'home' address, even if the house isn't occupied is psychologically very important to older users.

5.1.5. Not displayed, past current addresses

This will allow users to keep a record of alternate current addresses they may be staying at, for example a relative's home or a care institution.

5.1.6. User self photo.

5.1.7. Availability

This records when an individual service user is available to receive incoming calls and / or provides an automatic forwarding link to an alternate WT contact for incoming calls.

5.2. Information update

When a service user changes their WT card, they shall be given the option to 'share the update'. When this option is selected, all the other service users who have that WT card in their contacts will receive the update and a notification to the update with a 'smart arrow' link to the new WT card.

6) Presence (availability)

This is information regarding the availability for contact of any service user. The information is a binary yes or no. Value is determined in 2 ways: either by the availability setting on the WT card or via 'online / logged in' status.

7) Diary event entries

Each 'event entry' consists of a text header, a start time, end time, and associated 'event invitees' along with their current status (not replied, tentative, confirmed). Event entries exist in the service records of all service users on the invitation list. (default is only in the record of the service user who created the event.)

8) 'smart link' reminders/notifications

Reminders can be set up by service users (e.g for events or measures) or created automatically (e.g. low power or missed calls). They appear as 'actionable tiles' as specified in the UX of each portal. (e.g as smartlink arrows on the Homepad). Each instance contains a smart hotlink to the information content that triggered the notification. Notifications appear simultaneously on the portals of all service users who have been selected to receive them. For FFP 'guest' users the

9) Internal and external WellTogether invitations

Within the WellTogether system, ‘invitations’ are the data sets that enable different communication paths to be set up. They are typically manifested to users as ‘invitation’ messages but these are part of a broader web-services enrolment functionality.

9.1. Invitation types:

9.1.1. External – connect as a guest (via FFP)

WellTogether Service users can invite non-WT contacts to communicate with them and give them access permission to specific information from the invitor’s full data record. The invitation takes the form of an automatic external e-mail with embedded smart reply links. (see HomePad V2 – contacts functionality specifications and wireframes).

9.1.2. Internal – client ‘enrolment’ (via CMP)

Organisations with a CMP license can ‘enrol’ individual service users as clients. This sets up a range of preset permissions for the organisation. As part of the process a ‘client care record’ is set up under hosting rules controlled by the CMP licensing care organisation. This record will include all the necessary links to the individual service user record. For ease of use and where enrolment consent has been obtained by other means, CMP users can send ‘invitations’ that are automatically accepted.

9.1.3. Internal – peer to peer (HP to HP + FFP members)

WellTogether Service users (excluding guest users) can invite other service users to connect with them via exchange of WT message and WT cards. (see HomePad V2 – contacts functionality specifications and wireframes). The connection key is the Service user’s unique ‘find me’ code.

9.1.4. Internal – public group recruitment

In addition to creating their own personal group sets of contacts (which require no invitation), WellTogether Service users can invite each other to connect via public groups. The contact mechanism is the same type of message with embedded smart reply controls. There are 2 types of public groups: peer to peer and managed. (see HomePad V2 – contacts functionality specifications and wireframes).

9.1.4.1. Peer to peer public groups are for social events among friends and involve automatic permission to manage events that can be managed interchangeably by any member. P2P event invitations allow information sharing to make it easier to find diary slots that all can manage.

9.1.4.2. Managed public groups have an originating 'owner' and assigned 'co-administrators' who have total control over the timing of events. Invitees either accept or not.

9.1.5. Internal – Event participation

The invitation communication process is also applied to diary events. Invitees receive a message with embedded smart reply controls

9.2. Invitation key states and transitions

9.2.1. Pending

Once an invitation has been sent and before a response or time-out rule has been established the invitation will be said to be 'pending'. When invitations are sent 'placeholders' of different types are displayed in a clear and unique way. E.g. a 'pending' contact or event'.

Invitees will receive a smart message with 2 embedded 'auto response' controls: 'accept' or 'decline'.

9.2.2. User Accepted

If a user selects the 'accept' option, an automated 'acceptance' message is sent to the inviting service user and when all rules have been met, placeholder entries are changed to fully completed entries. The information architecture needs to allow for conversion of incoming automatic e-mail into WT message format.

9.2.3. User Declined

If a user selects the 'decline' option an automated 'your invitation has been declined' message is sent to the inviting service user. Placeholders are automatically deleted.

9.2.4. **Auto accepted**

Trusted users and/or guest users will have permission to schedule events in a service user's diary without requiring acceptance from that service user. This can be achieved by granting direct access to the service user record from a different portal.

9.2.5. **Cancellation**

Any individual contact relationship or multiparty event can be cancelled at any time by a service user. Diary events can only be cancelled unilaterally by the user responsible for sending the original invitation. This applies to individual to individual invitations, private group invitations and peer to peer group events. In managed group event situations this can only be a group administrator. After an event has been cancelled it no longer exists in any form in any user data record. When a user cancels a contact or event, they receive a message and all 'shared' data references disappear. (e.g. WT cards are removed – and user is left as 'info only' user).

9.2.6. **Withdrawal**

Any individual can 'withdraw' from a previously accepted group event without affecting the overall event.

10) Measures

This refers to the data exchange processes that relate to the deployment of a measure, from a library to a service user. See Common Functionality – measures.

11) Data from measures

This refers to data readings and user customisations collected for individual measures after their initial deployment. See Common Functionality – measures

12) Alerts

Alerts are displayed to all users on the 'alert recipient' list whenever a reading changes the alert status of a specific measure for an individual service user. See Common Functionality – measures

13)Permissions

When any portal seeks access to the service record data of any service user It's right to access individual portions of the record needs to be established. The exact architecture for managing these access rights needs to be agreed with HOAS. The database object is likely to be some sort of permission profile. (see WT- Permissions). Access permissions apply to both functionality that needs to be shared for obvious communication reasons (as defined above) and to access for the purpose of addition 'IT support' for a service user.

14)Service user private record

This refers to user information that can only be accessed via login, even by the service user on their own homepad. (See Homepad V2 functionality spec) The information includes:

14.1. Service User WellTogether 'WT' calling card>

This appears in other people's contacts when a WT contact connection is made. Each card contains the following information:

- 14.1.1. First & last name
- 14.1.2. Phone number – fixed / mobile
- 14.1.3. Current Address
- 14.1.4. Home address
(The maintenance of a 'home' address, even if the house isn't occupied is psychologically very important to older users.)
- 14.1.5. (Not displayed), past current addresses
This will allow users to keep a record of alternate current addresses they may be staying at, for example a relatives home or a care institution. This reduces the need for data entry.
- 14.1.6. Photo
- 14.1.7. Availability
This records when an individual service user is available to receive incoming calls and / or provide and automatic alternate contact for incoming calls.
- 14.1.8. (optional) day and month of birth.

14.2. Service user 'find me code'

This is the number you give to other WellTogether users – to allow them to invite you to connect etc. (see wireframes for definitive text).

14.3. My security key options:

These are:

- 14.3.1. 4 digit pin
- 14.3.2. Password
- 14.3.3. Personal Question and answer
- 14.3.4. Self picture

14.4. Money (minimum spec for ECH)

(exact UX to depend on selected payment module)

- 14.4.1. List of payment options (credit/debit card profiles:
User name, card no. expiry, cvc code etc.. billing address)

14.5. Service user ID numbers

- 14.5.1. Unique encrypted WT user ID.
This can't be edited by the user and may not actually be viewable to the service user, it is the unique database header for each individual service user.

- 14.5.2. Other service user IDs

Affiliations with other care organisations will usually involve a number – for example BUPA, National Health or numbers assigned by other WT organisations with a care contract or relationship.

14.6. Permission profiles / roles of individuals.

These are accessible from 'Contacts' but are behind a privacy wall.

15)Service user full record

This refers to all items and implies full access. For examples the ‘full record’ needs to contain all the information required to totally replace one HomePad tablet with another after a breakage or failure.

16)WellTogether Formatted multi-media Information

This refers to individual document files in the supported formats : pdf – e-book – html – and daisy.

17)Device status (if available from ‘deep HW integration).

This refers to data defining dynamic Tablet status. It forms part of the full service user record. E.g battery level, wireless status, audio levels etc.. See V2 Homepad Functionality specification – ‘settings’. This also includes fundamental device ID information e.g. MAC address etc..

18)Remote screen access

The user requirement is for an informal carer to be able to provide real time usability support. If access to the full service record is insufficient for this task, the development needs to investigate other means of achieving full remote device management capability.