



**Rich Communication Suite
Release 1**

**Functional Description
1.2
February 25, 2010**

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1 INTRODUCTION

1.1 Overview

The Rich Communication Suite (RCS) Initiative is an effort of a group of industry players for the rapid adoption of mobile applications and services providing an interoperable, convergent, rich communication experience. The RCS Initiative includes network operators, network and device vendors.

The RCS Initiative is using an iterative, agile methodology to deliver a consistent feature set, implementation guidelines, example use cases as well as demonstrations and trials around interoperable reference implementations based on profiling of existing standards and specifications.

The RCS Initiative work is divided into a sequence of phased efforts published as releases. The RCS Release 1 effort focuses on a core service set comprising of enhanced phonebook, enhanced messaging and enriched call.

This document details the functional description of service features that define RCS Release 1.

Please refer to the RCS Technical Realization [TECHREAL] for detail regarding the technical realization of these service features.

1.2 Scope

The scope of the document includes only the RCS Release 1.

The functional description of RCS service features is provided in section 2 of this document.

Associated high level technical description and referenced standards specification is provided in section 3.

A non-exhaustive list of potential service features for future RCS releases and an overview of some key device based recommendations serving best RCS User Experience are provided as informative appendixes.

Please refer to the RCS Technical Realization [TECHREAL] for detail regarding the technical realization of these service features.

1.3 Definition of Terms

Term	Description
EAB	Enhanced Address Book
RCS	Rich Communication Suite

1.4 Document Cross-References

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Document	Name
[OMADS]	DS Protocol, 1.2.1, http://www.openmobilealliance.org/
[IMAGESHARE]	PRD IR.79 Image Share Interoperability Specification, 1.0, http://www.gsmworld.com/
[PRESENCE]	Presence SIMPLE 1.1, http://www.openmobilealliance.org/
[SIMPLEIM]	Instant Messaging using SIMPLE, 1.0, http://www.openmobilealliance.org/
[VIDEOSHARE]	PRD IR.74 Video Share Interoperability Specification, 1.0, http://www.gsmworld.com/
[TECHREAL]	RCS Technical Realization https://infocentre.gsm.org/cgi-bin/grp_details.cgi?RD&group
[XDM1.1]	XML Document Management, Version 1.1, http://www.openmobilealliance.org/

2 FUNCTIONAL DESCRIPTION OF RCS SERVICE FEATURES

The following service features are part of this RCS Release:

1. Enhanced Address Book
2. Content Sharing
3. File Transfer
4. Enhanced Messaging

These areas are described further in detail below.

2.1 Enhanced Address Book

2.1.1 Overview

The Enhanced Address Book (EAB) is an evolution of the usual address book. It provides enriched information to existing contacts capitalizing on legacy details information (for example name and MSISDN).

The EAB is the core element of RCS and must enable users to discover and make use of the following functionalities:

- Make use of service capability information for contacts. In other words indicate which communication capabilities are available at a given point in time to interact with your contacts
- Start communications
 - Voice call
 - Video call
 - File Transfer
 - Messaging
 - Publish Social Presence Information with text and multimedia attributes, defined in section 2.1.3
- Emit a time limited hyper-availability alert to authorized contacts (with the possibility for the user to deactivate it)
- Ability to include multimedia elements for example picture of a user's contact
- Publish own Social Presence Information to authorized contacts (with a timestamp of the last update generated automatically)
- Invite users to share their Social Presence Information in a reciprocal way
- Authorize users to share their Social Presence Information in a reciprocal way
- Enable user to add a contact to a list of blocked contacts (blacklist) to avoid Social Presence Information sharing with contacts in the blacklist and stop receiving new invitations for sharing Social Presence Information with them
- Enable user to easily access enriched contacts
- Display Social Presence Information and content related to each of one's enriched contacts (this information will have to remain available on the device in any case : even if the device is disconnected from the network, contact's device is switched off, and so on)

- Be notified of updates and hyper-availability alerts made by enriched contacts
- Benefit from an history per contact including all communication types (unified view of the inbox/outbox/call log for a given contact)
- Allow searches both locally on the user's own address book and on external resources such as yellow/white pages, corporate directories, and so on
- Ensure back-up/synchronization of the Address Book with the Network Address Book, which may be performed automatically, allowing a transparent synchronization across the different devices of the user.

The Network Address Book is key to provide the EAB functionalities, since it provides a network repository for the storage of contacts of the user, which is accessible from multiple devices.

2.1.2 Social Presence definition

Social presence can be seen as a piece of information for buddies to let them know about what you are doing, your mood, status, and so on. The user is given the possibility to publish personal data, which configures the users Social Presence Information, or “personal profile”.

As an illustration, the group of contacts with whom a presence relationship has been established can be seen as the closest contacts of a certain user (friends, family, colleagues, and so on.).

Social Presence Information (included in the personal profile) does not replace the legacy contact's vCard in the address book of the user (for example. the contact name and other contact details shall not be impacted).

The Social Presence Information shall be controlled by the end user and easily configurable. In order to achieve this, a prioritized access to the own Social Presence Information shall be provided in the *list mode* view (as described in section 2.1.6) of the EAB.

Having established a Social Presence Relationship with a certain contact, the Social Presence Information shall be visible from the EAB. Moreover it should also be visible from other places in the phone, like for example the communications log or message folders.

2.1.3 Social Presence attributes

Social Presence Information includes the following attributes:

- **Hyper-availability**, temporary “*contact me*” status, as described below in this section.
- **Portrait icon**, depicting the user (priority: photo or image provided by the user himself, nice to have: avatar chosen by the user in an avatar library). The portrait icon can be any type of image or photo, obtained either from a library in the phone but also for example taken directly from the camera of the phone.
- **Free text**, including **textual note** and possibility to add **emoticons** (automatic translation of some specific characters into smileys).
- **Favourite link**, to publish hypertext link of personal and/or favourite site as described below in this section.
- **Timestamp**, date of the last update of the profile, generated automatically.

2.1.3.1. *Hyper-availability ("Need to communicate" or "contact me" status):*

This status allows a certain user to inform those contacts with which a Social Presence Relationship has been established, that users are currently in a situation where it is possible to communicate more freely (for example in a waiting room), and that they are willing to communicate "right now".

This status has following characteristics:

- This status is *temporary*: it is set for a short, limited period of time (for example a couple of minutes) which is operator configurable on presentity's device, after which it automatically switches off.
- It is a *positive* status: it does not interfere negatively with the basic mobile status (for example available anywhere/anytime).
- It is *controlled by the user*: it can be set manually or be programmed but it is always initiated by the end user.

Regarding the "*contact me*" status, on the presentity's side (user who publishes the "*contact-me*" status):

- A specific action shall allow the user to set the "contact me" status on, with easy access for the user. This action shall be accessible for users when updating their Social Presence Information.
- Once this status is on, the user shall always have the ability to deactivate it. If he does not, the status will automatically be deactivated after a certain, limited period of time (for instance, after 5 minutes).
- An indicator shall inform the user that their "contact me" status is on.

On the watcher's side (contact that is informed of the "*contact me*" status), an activation of the "*contact me*" status is followed by:

- A **notification** on the handset. This notification shall be associated with a distinctive signal based on any multimedia means (for example sound, blinking screen, vibration, and so on.). This notification shall be treated as any already existing notification (incl. the ability to deactivate it) for other communication means (for example new SMS, missed calls, etc.), and respect the various modes of the handset (for example silent = blinking screen, normal = short ring tone). This notification shall also be personalized by the user.
- A **distinctive change** of the concerned contact in the EAB. The materialization of this change shall be rather different from the existing standards of web availability (for example no red or green dots), in order to avoid any confusion on its meaning. For instance, a blinking picture of the contact, a distinctive pictogram, or a lightened frame around the contact's picture may be used. This distinctive change shall last as long as the "contact me" status is activated.

After the "contact me" status has been deactivated, it shall be possible to access the information that at a certain date and time a contact set his/her "contact me" status (for instance, from the communication history).

2.1.3.2 Favourite Link

One of the attributes in the Social Presence Information allows the user to edit one hypertext link, which may redirect, for instance, to an extension of the user's Social Presence Information (for example mobile blog, and so on).

The user shall be able to edit the hypertext link via two modes:

- Manual mode, where the user types in manually the URI
- Automatic mode, where the user selects one URI in a predefined list.

The operator shall be able to choose whether to offer its customers only manual mode, only automatic mode, manual and automatic modes, or no mode at all.

Clickable link is displayed in a *detailed view mode* (as described in section 2.1.6) of the Social Presence Information, where shared information about the user (portrait icon, free text and URI) can be seen in larger size than in the EAB itself (*list mode*).

When the user edits a new hypertext link, those contacts, which the user has established a Social Presence Relationship with, are notified, that is a visual change of value of favourite link attribute, just like when the user updates their portrait icon or free text.

When a user clicks on the link of a presence enriched contact, the appropriate native handler for linked content (for example browser) shall be launched.

When the user closes the handler, he/she comes back automatically to the presence enriched contact's *detailed view mode* (as described in section 2.1.6) of the Social Presence Information, from where the handler was launched.

A revoked contact shall not be able to click on the hypertext link. However, it has to be noted that nothing may prevent the watcher from being able to save the URI in its browser and further access to this URI.

2.1.4 Social Presence Authorization

RCS users shall feel confident in publishing their Social Presence Information, and be guaranteed that their privacy is respected. Therefore, mechanisms are defined below that allow users to accept/reject an invitation to establish a Social Presence Relationship, since this may imply sharing certain potentially private information, such as portrait icon or free text.

2.1.4.1 Social Presence Information sharing request principles

Reactive authorization shall be used, that is when user A invites user B to share Social Presence Information, B receives an authorization request.

When receiving an invitation to share Social Presence Information from user A, user B can¹:

- a. **Accept** the invitation.
- b. **Ignore** the invitation, which requires an explicit action by user B.
- c. **Block** user A from sending more invitations.
- d. **Not answer**, that is do nothing with that request

Invitation to share Social Presence Information automatically implies the authorization of the requesting user, that is. when user A invites user B to share Social Presence Information, user A automatically authorizes user B to see his/her Social Presence Information.

If user A's MSISDN is associated with a contact in user B's address book, the name given to that contact shall be displayed within the invitation to share Social Presence Information.

Symmetric authorization shall be used. The publication of Social Presence Information shall be bidirectional.

User A shall not receive any notification whether user B has not answered, blocked or ignored his/her invitation to share Social Presence Information.

Once a Social Presence Relationship has been established, the user can stop that relationship via the following action²:

- e. **Revoke** the Social Presence Relationship.

2.1.4.2 *Accept*

If user B accepts user A's invitation to share Social Presence Information, A will see B's Social Presence Information, as well as B will see A's Social Presence Information.

If user A is not an existing contact in user B's address book, it shall be facilitated that user B stores the contact details of A in his/her address book.

2.1.4.3 *Ignore*

If user B ignores user A's invitation to share Social Presence Information, neither A nor B shall be able to see each other's Social Presence Information.

Ignoring an invitation to share Social Presence Information shall not mean blocking the contact that has sent the invitation, i.e. it shall still be possible to receive more invitations from that contact.

In case user B ignores user A's invitation, if later on user B decides to share Social Presence Information with user A, it shall not be necessary that a new authorization request is sent to user A. Simply adding user A to his/her Enriched Contacts List shall complete the

¹ These actions are further described later in this section.

² These actions are further described later in this section.

symmetric authorization process and user A and B will be able to see each other's Social Presence Information.

2.1.4.4 Block (refuse to receive any further invitation)

In order not to receive more invitations from a certain contact, the user shall be given the possibility to add that contact to a list of blocked contacts (blacklist).

The blocking mechanism shall be transparent to the blocked user, that is if user B blocks user A, user A shall never be notified that he/she has been blocked by user B.

The possibility shall be given to remove a certain contact from the blacklist, i.e. user A shall be able to see in his/her Enhanced Address Book that user B has been blocked, and to remove him/her from the blacklist.

2.1.4.5 Not answer (pending invitation)

If user B does not answer user A's invitation to share Social Presence Information, the invitation shall be in a pending state, for which an action is expected by user B.

Pending invitations to share Social Presence Information with user A, for which an answer has not yet been provided, shall be accessible for user B, so that user B can at any time choose to answer the invitation that is Accept, Ignore or Block.

During the time a pending invitation exists, user A shall be able to send new invitations to user B. This invitation would substitute the previous one, and would act as a reminder for user B that an action is expected regarding user A's invitation to share Social Presence Information, that is user B needs to choose between Accept, Ignore or Block.

2.1.4.6 Revoke

Once a Social Presence Relationship has been established, the possibility shall be given to stop the sharing of Social Presence Information with a certain contact, while at the same time removing your Social Presence Information from that contact's Enhanced Address Book (*revoke*).

If user A revokes the Social Presence Relationship with user B, both users shall no longer receive any more updates of their Social Presence Information, according to the symmetry principle.

When user A revokes the Social Presence Relationship with user B, B shall no longer be displayed as a presence enriched contact.

- a. User B's Social Presence Information shall not be shown to user A
- b. Only user B's contact details (vCard) shall remain visible in user A's address book (for example name, MSISDN, e-mail, and so on).

If user A revokes the Social Presence Relationship with user B, B shall no longer have access to A's Social Presence Information.

Before actually performing the revoke, user A shall see a notification alert in the client informing him about consequences of this action. These are:

- a. A's Social Presence Information will be removed from user B's Enhanced Address Book, so user B will notice the revoke
- b. After a certain period of time (for example several hours/days), it will be possible for user A and user B to invite each other again.

After a Social Presence Relationship has been revoked for a given period of time (for example several hours/days), both users can reinitiate the process of social presence authorization, that is user A shall be able to invite user B to share Social Presence Information, and vice versa.

Actually, it has to be noted that user A may immediately re-invite user B to share Social Presence Information.

In case user A deletes user B's vCard from his/her address book, all contact information is deleted from user A's address book. If a Social Presence Relationship between user A and B exists at the moment of deleting the contact, this relationship shall be revoked.

2.1.5 Contacts in Address Book

In order to enable a seamless transition to RCS and increase service adoption, it shall not be necessary that users manage/create a specific contact list in order to use RCS functionalities. that is it shall be possible to continue using the contacts in the traditional address book (for example. contact name + telephone number), making it possible to interact with them using the RCS service features.

2.1.6 Enriched Contacts List

In order to facilitate control on which contacts have access to your Social Presence Information, it shall be possible to have a direct, differentiated access to those contacts with which a Social Presence Relationship has been established (Enriched Contacts List).

There shall be an access to the Enhanced Address Book that displays both presence enriched contacts and regular contacts (*list mode*). Presence enriched contacts shall be clearly identified in this view, for example by showing some attributes of the contact's Social Presence Information (for example portrait icon, free text).

It shall be possible to sort out the contact list in a way that presence enriched contacts are prioritized, for example by a filtered access to only presence enriched contacts as a separate tab in the address book, or as a menu option.

It shall be possible to have a detailed view of a presence enriched contact (*detailed view mode*), where relevant attributes of the user's Social Presence Information are displayed with for example a bigger size (portrait icon, free text).

The *detailed view mode* shall provide access to Social Presence Information not accessible from the *list mode* (favourite link).

2.1.7 Service capability indication (referring to user experience rather than to specific technologies)

The list of capabilities to be shown to the user for RCS Release 1 shall include:

- Video Call (3G CS video call)
- Image Sharing (GSMA IR 79 based) and Video Sharing (GSMA IR 74 based)
- File Transfer
- Chat

Subject to service provider policy, service capability indication may be made available for every contact in the address book, without the need of establishing a Social Presence Relationship. For example, a certain contact in the address book may not be one of my buddies, but if he/she has an RCS phone, this fact may be known in order to be able to establish richer communications with this contact. This information would also let users know which contacts can be invited to share Social Presence Information:

- The operator shall be able to control whether an RCS phone may send request for retrieving capabilities of other contacts, with whom no Social Presence Relationship has been established, and whether the information regarding ability of other contacts to share Social Presence Information may be displayed or not to the end-user.
- The operator shall be able to control whether capabilities are published or not, in order to address regulatory constraints and service provider policy.

2.1.8 Communication History per Contact

The communication history with a certain contact shall be easily accessible from the Enhanced Address Book. By selecting this option, it shall be possible to have a filtered access to the communications log, where the different communications with that specific contact shall be available (messages, calls, content sharing, etc.).

From this communication register, the user shall be able to start any type of communication with the given contact.

Also, a pure chronological communication history log shall be provided. This log shall include all kinds of communication, allowing a filtered view per communication type (e.g. voice calls only).

Messages deleted in the communications history shall also be deleted in the legacy views (e.g. messaging inbox).

2.2 Content Sharing

Content sharing is the ability for users to exchange different types of content while on a session, typically a voice call, but not exclusively. The main requirements include:

- Content can be shared while on a circuit switched voice call, thus it must be possible to have a voice and a data stream running simultaneously. Each time a voice call is established, the user shall be offered the possibility to share content whenever possible
- Service can be initiated by either end point (e.g. the caller or the receiver). When a user initiates content sharing, an invitation is automatically sent to the other contact, which may be accepted or rejected. An acceptance shall stand for all the contents shared during the call
- End of communication (case of content sharing while on a voice call):
 - Content sharing session termination does not lead to voice termination
 - Voice termination automatically terminates content sharing session
- The receiver shall have the possibility to save the shared content on his/her device

Shared content can be video and still images.

2.3 File transfer

File Transfer is the ability for users to exchange different types of content (files), during an ongoing session or without having an ongoing session.

- Files can be exchanged during a session (for example: circuit switched voice call or message conversation)
- Files can be exchanged without having an earlier established session (e.g. from multimedia gallery).
- Service can be initiated by either end point while having an ongoing session (e.g. the caller or the callee)
- End of file transfer shall not lead to termination of an simultaneous ongoing session
- End of a voice call shall not lead to termination of ongoing file transfer
- The receiver must be able to accept or reject offered files. The acceptance procedure shall include an indication to the receiving party concerning file size and type.
- The receiver shall have the possibility to save the transferred files.
- It shall be possible to assign an operator configurable maximum file size allowed for File Transfer.

2.4 Enhanced Messaging

RCS Messaging leverages the strength of the global addressing community of telephone numbers (MSISDN for mobiles), in contrast to the internet messaging services. In addition to SMS and MMS services, an RCS enabled device also provides the end user with a Chat service.

MMS and specially SMS are well established services that exist in the core awareness of the consumer. Therefore, initially the Chat service is not a replacement of the existing legacy messaging services but rather a parallel service with its own values. These values can be exemplified by group chat, vibes, multimedia content, "is typing" and embedded file transfer.

2.4.1 Conversational Messaging

The convergence within the realm of messaging systems is to provide the user with a simplified, unified and at the same time compelling user experience with regards to the messaging services. This can be achieved with the help of a conversational messaging client that encompasses the supported messaging technologies transparently to the user. The basic set of messaging technologies to be supported is SMS and MMS.

It has to be noted that in the long term, IMS based messaging (OMA IM SIMPLE 1.0) is seen as the desired evolution and can also be supported on packet-only devices to provide the existing SMS, MMS services while maintaining backwards compatibility with these.

Ultimately the benefits for the end user are a simple, richer and transparent user experience and a total reach.

Also the convergence between the messaging realm and the interactive communications realm (e.g. voice/video calls, content share, etc) is provided with help of a user interface that facilitates the transition from pure messaging communications to richer ones.

2.4.1.1 Unified Composer for SMS/MMS

Ideally, only a single, common message composer should be available for SMS/MMS, i.e. no separate/specific composers shall be provided.

The unified composer for SMS/MMS shall support options and functionality for adding multimedia content to the message.

During message composition, the bearer technology, i.e. SMS or MMS, shall be selected automatically by the device, depending on the message characteristics. Rules for selecting the bearer technology are based on the recipient, addressing criteria, content and length of the message.

The user shall have control over which bearer is used to send the message (from those that support sending its content without quality or information loss). Therefore, the proposed bearer shall be displayed, in order to inform the user.

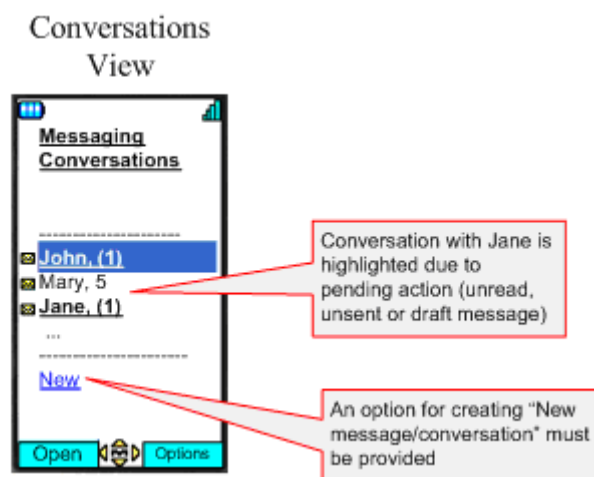
2.4.1.2 Conversations (Threaded view of SMS/MMS messages)

RCS shall provide a conversational experience in the user interface when using SMS/MMS. This means that sent and received messages shall be presented in a threaded mode, ordered by interlocutor, while offering a composer in the same window where messages exchanged with a given contact are shown:

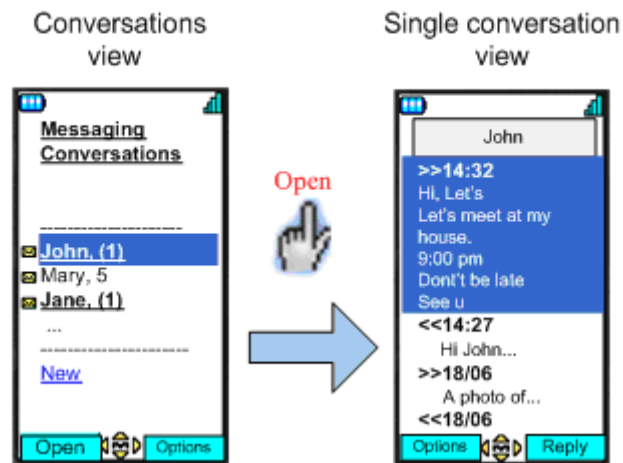
- A “*Traditional*” view shall still be provided, where messages are organized in the usual folders (Inbox, Sent, Draft), as well as a mechanism to easily toggle between the “*Traditional*” view and the “*Conversations*” view.
- The “*Conversations*” view shows messages sorted by sender/recipient. Messaging conversations consist of all the messages exchanged with a particular interlocutor(s).
- If a contact in the Enhanced Address Book has several addressing fields, all the messages sent to and received from these addresses shall be considered as belonging to the same conversation.

- The "*Conversations*" view is the presentation of the list of messaging conversations stored in the handset. Each line/element in the view will correspond to a particular conversation, identified by the interlocutor(s) that have exchanged messages with the handset owner. The conversations list shall be ordered chronologically, starting from the conversation with the most recent activity (sent/received message). Those conversations with pending actions (e.g. new messages) shall be highlighted.

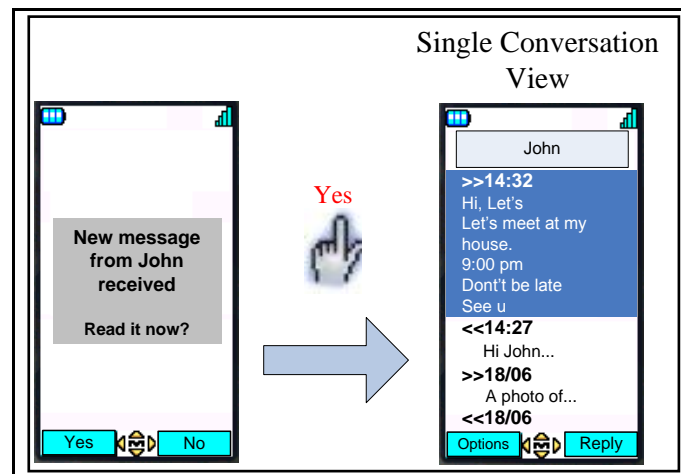
The following figure shows messages in the "*Conversations*" view (for illustration purposes only).



- When the "*Conversations*" view is activated, upon the selection of the Messages option in the main handset menu, a direct access to the "*Conversations*" view shall be provided.
- When an element from the list is selected, a "*Single conversation*" view shall be opened. The "*Single conversation*" view provides a threaded-style view of all the messages exchanged with an interlocutor. The messages list shall be ordered chronologically, starting with the most recent one. Messages with pending actions (e.g. new message) shall be highlighted.
- In the "*Single conversation*" view, a mechanism for creating/replying to a message within the conversation shall be provided.
- In case that the user receives a message from the interlocutor, whose messaging conversation is open at the moment, the message shall directly appear in the "*Single conversation*" view.



- When the “Conversations” view is activated, and from the idle screen the user selects the option to read new message(s) from the same interlocutor, the “Single conversation” view shall be opened.



- Upon the reception of several messages from different interlocutors, when the customer selects the option to read the messages, the “Conversations” view shall be opened.



The single conversation view shall also be reached from other locations such as the Enhanced Address Book (when on a contact), the inbox and outbox (from a message).

2.4.1.3 Conclusion

Summarizing, the user interface shall:

- offer a unified composer offering the possibility to add multimedia content to the message
- offer a 'conversations' view per contact, in other words, a compelling conversational user experience by sorting the communications in conversations (i.e. based on the interlocutor)
- maintain a 'traditional' view (inbox, sent, draft)
- facilitate communication continuation with another communication means

2.4.2 Chat Service

An RCS enabled device shall in addition to the legacy messaging methods also provide the end user with a separate Chat service.

The Chat service shall be available for 1-to-Many (Group Chat) as well as 1-to-1.

The operator shall be given the possibility to configure whether to offer the Chat service or not.

It is only possible to establish a successful Chat towards other RCS enabled devices (or other IMS enabled devices supporting OMA IM session mode).

Messages exchanged within the Chat Service can contain text as well as Multimedia content.

The Chat service shall provide a near real-time interactive experience adopted for mobile behaviour, i.e. service shall allow for the case when chat invitations are not immediately responded to.

No Social Presence Relationship is required to be able to invite or receive Chat requests.

2.4.2.1 1-to-1 Chat

The devices shall as a default setting accept incoming 1-to-1 Chat requests. The phone may have a configuration parameter that sets the device to manual acceptance of incoming chat requests.

Multimedia content above a certain operator configurable size (e.g. 50Kbyte) shall require an acknowledgment before being transferred.

During the Chat a clear indication shall be given that the other party is typing/composing.

If an attempt to Chat fails, the device may ask the end user whether legacy messaging should be used instead.

Either user shall be able to add participants to an ongoing 1-to-1 Chat. The other user shall receive a clear indication that an additional participant has been invited.

2.4.2.2 Group Chat (1-to-Many)

To enter a Group Chat a manual acceptance shall be required.

This applies to:

- New Group Chat invites, and
- 1-to-1 Chats being expanded. That is as the parties in a 1-to-1 Chat invite another participant it shall be required for the additional participant to manually accept the incoming Chat request.

It shall not be possible to send Multimedia content larger than an operator configurable size.

No specific accept/acknowledgement for Multimedia Content is required within Group Chat.

Only the user that established the group chat shall be able to add participants to an ongoing Chat.

As a new participant enters a Group Chat the already participating users shall receive a clear indication that a new participant entered.

In order to save screen space it is not recommended to use "is typing/composing" indications when in a Group Chat.

It shall at any time be possible for a Chat participant to check who is participating in the ongoing Group Chat.

A Group Chat shall not be terminated when the originator leaves the Chat. (*Under the assumption that each Group Chat participant is charged for their own participation*)

It shall not be possible to invite a participant to the Chat in a "CC", "BCC" or "anonymous" manner.

A Group Chat shall automatically be terminated after being idle for 30 minutes. This time interval shall be operator configurable.

The operator shall have the possibility to disable the Group chat service functionality in the RCS client, while still enabling the 1-1 chat service.

2.5 Service Interaction

The goal of this section is to provide some illustrations and examples of service interactions which will allow the user, using his device, to better switch or interact from one service to another in a seamless way.

These interactions only deal with the devices. Some examples of service interactions are described below:

- Ability to create a contact and to enhance contact information (e.g. name, MSISDN, multimedia elements...) in the EAB following any communication means established with this contact
- Ability to visualize the Social Presence Information of the contact from communications log or message folders once a Social Presence Relationship is established with a contact
- Following Image Share session, creation of the contact in the EAB and storage of the shared image (for instance contact's picture)
- Ability to switch from one communication means to another within the same session with one user.
- From the EAB, ability to start communications, e.g.:
 - Voice call
 - Video call
 - File Transfer
 - Messaging

Please refer to Appendix B for further details regarding key device-based recommendations serving the best RCS User Experience.

3 HIGH LEVEL TECHNICAL DESCRIPTION AND REFERENCED STANDARDS SPECIFICATIONS

This section provides a high level technical description and referenced standards specification regarding service features that are part of this RCS Release.

Please refer to RCS Technical Realisation document ([TECHREAL]) regarding detailed technical realisation of service features in this RCS Release.

3.1 Enhanced Address Book

In this RCS Release, Enhanced Address Book is based on OMA Presence SIMPLE 1.1 ([PRESENCE]) and OMA XML Document Management ([XDM1.1]) and includes following features:

- Social Presence information integrated into address book interface, including the Social Presence attributes defined in section 2.1.3
- Social Presence Authorization : Accept, Ignore, Block, Not answer, Revoke, as described in section 2.1.4
- Contacts in Address Book, as described in section 2.1.5
- Enriched Contacts List, as described in section 2.1.6
- Service Capability indication (referring to user experiences rather than to specific technologies) as described in section 2.1.7
- Communication History per Contact, as described in section 2.1.8
- Backup/restore of contacts on network repository based on ([OMADS]), as described in section 2.1.1
- Search in yellow/white pages, corporate directories. (basic functionality based on browsing plus vCard download), as described in section 2.1.1

3.2 Content Sharing

In this RCS Release, Content Sharing includes:

- Video Share as in GSMA IR.74 Video Share Interoperability Specification ([VIDEOSHARE])
- Image Share as in GSMA IR.79 Image Share Interoperability Specification ([IMAGESHARE])
- Service capability indication in the call UI according to the Video Share and Image Share Interoperability Specifications ([VIDEOSHARE] and [IMAGESHARE])

3.3 File Transfer

In this RCS Release, File Transfer is based on:

- File Transfer as in OMA IM SIMPLE 1.0 ([SIMPLEIM])
 - Only 1 to 1 file transfer
 - Always as a separate (SIP) session
 - Only send one file per session (i.e. set up - send - tear down)
- File Transfer service capability indication in the client according to the OMA IM SIMPLE 1.0 specifications ([SIMPLEIM])

3.4 Enhanced Messaging

In this RCS Release, Enhanced Messaging includes:

- Unified composer for SMS/MMS as described in section 2.4
- User Interface enhancements based on existing services (i.e. conversational user interface for legacy (SMS/MMS) messaging communication) as described in section 2.4
- Chat service, based on Session Mode messaging as in OMA IM SIMPLE 1.0 ([SIMPLEIM])

INFORMATIVE APPENDIX A

POTENTIAL SERVICE FEATURES FOR FUTURE RCS RELEASES

This informative appendix aims at providing a non-exhaustive list of potential service features for future RCS releases, e.g.:

- **Multimedia ID Presentation**
This feature enhances the communications user experience and facilitates that users keep in touch. It consists of enriching the classical caller ID (i.e. the MSISDN) with much richer multimedia information such as text, photos, music, etc.
- Legacy message interworking
- Ability for the user to manage more than one Social Presence Profile
- Additional attributes to Social Presence Information such as:
 - Display name,
 - Contextual icon, illustrating or completing the free text (photo or image).
 - Communication addresses, enabling the user to provide his e-mail address for instance.
 - Important event, enabling the user to communicate about a coming event (e.g. birthday, etc.).
 - Support for labels and multi URI(s) via favourite link attribute
- Support for suspend use case in Social Presence authorization, according to the following requirements:
 - If user A suspends the Social Presence Relationship with user B, both users should no longer receive any more updates of their Social Presence Information, according to the symmetry principle.
 - When user A suspends the Social Presence Relationship with user B, B should no longer be displayed as a presence enriched contact.
 - User B's Social Presence Information should not be shown to user A
 - Only user B's contact details (vCard) should remain visible in user A's address book (e.g. name, MSISDN, e-mail, etc.).
 - It should be transparent for user B that user A has suspended the Social Presence Relationship with him/her. This should be done by showing, in user B's Enriched Contacts List, the last version of the Social Presence Information user A had before suspending the Social Presence Relationship with user B.

INFORMATIVE APPENDIX B

OVERVIEW OF SOME KEY DEVICE BASED RECOMMENDATIONS SERVING BEST RCS USER EXPERIENCE

This informative appendix highlights some key device requirements which are identified as of most importance in order to offer RCS users with the best user experience and quality of service. These requirements will contribute to the best RCS service adoption and customer satisfaction towards both operators and manufacturers.

1. Tight Integration and Service Discovery

RCS services should be easily discovered by the end user.

RCS functionalities should be tightly integrated into the device, and make use of the phone's native capabilities, such as the address book or the multimedia gallery (e.g. by making it possible to share a file directly from the gallery).

RCS services should start automatically when the device is switched-on, so their functionalities are always available (if allowed by network coverage).

RCS services should be integrated with the event handler. This means e.g. that an incoming message will appear in the idle screen of the device, when it is in standby mode, notifying the end user of its reception.

RCS services should be positioned at a first level in device menus, like other basic phone functionalities such as voice or SMS. I.e. it should not be necessary for the end user to access e.g. an application in a third level menu of the device (such as "Applications" or "Games") in order to use RCS.

RCS services should be accessible from the address book, i.e. it should be possible to select a certain contact in the address book and start a messaging conversation or share a file with him/her.

2. Battery Consumption

Use of RCS should not quickly lead to battery drain³, i.e. the battery consumption of an RCS device should be comparable to that of a regular legacy device⁴.

3. Multitasking

RCS services should transparently coexist with other services and applications, i.e. it should be possible to use other applications simultaneously with RCS. For example, while having a

³ This will depend, of course, on the intensity of usage of certain RCS functionalities which are most battery consuming (such as continuous media applications).

⁴ When being in standby mode, the RCS device should not consume more resources than any other device (e.g. battery, memory, etc.).

messaging conversation with another RCS user, it should be possible to attend an incoming call and continue with the messaging conversation once the call has ended.

4. Handset Configuration

It should not be necessary for the end user to manually configure any settings in order to use RCS services (i.e. IP, access point, IMS, etc. should be made transparent for the end user).

DOCUMENT MANAGEMENT

Document History

Version	Date	Brief Description of Change	Approval Authority	Editor / Company
0.1	4 Dec 08	First version using the official GSMA template Document "RCS Functional Description v1_041208" used as a basis, including the following CRs: <ul style="list-style-type: none"> • 2008-FN 006, • 2008-FN 008, • 2008-FN 009, • 2008-FN 012R1, • 2008-FN 023 R1, • 2008-FN 042 	RCS Programme	Thibaud Mienville /Orange
0.2	15 Dec 08	Update based on comments received in Consistency Review	RCS Programme	Thibaud Mienville /Orange
0.3	16 Dec 08	Grammatical updates in preparation for GSMA QA for DAG approval	Mark Hogan	Mark Hogan/GSMA
1.0	20 Jan 08	Approved by DAG and EMC and updated version to v1.0	DAG & EMC	Mark Hogan/GSMA
1.0.1	2 June 09	Incorporation of agreed bug fix CRs: <ul style="list-style-type: none"> • RCS1_BF_004_R02 • RCS1_BF_007 • RCS1_BF_013 	RCS Programme	Thibaud Mienville /Orange
1.0.2	22 June 09	No Comments received during consistency review R1 : Review report : SPEC DOC RCS SPEC R1_006 https://infocentre.gsm.org/cgi-bin/docindex.cgi?33476 Page 2 added, needed for DAG approval	RCS programme	Dirk Raeymaekers /NSN
1.0.3	25 June 09	Accept changes front pages & grammar/spelling check	RCS Programme	Dirk Raeymaekers /NSN
1.0.4	12 August 09	Removed reference to Release 2 in Tracking Page	RCS Programme	Mark Hogan/GSMA
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1.1.2	11 th December 09	Update 1.1.1 (Approved at Plenary 3/12/09) with front pages for DAG approval. No review comments received during consistency review See SPEC DOC RCS SPEC R1_016 in https://infocentre.gsm.org/cgi-bin/docindex.cgi?33476	RCS Programme	Dirk Raeymaekers /NSN
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