

**Telecommunications and Internet Converged Services and  
Protocols for Advanced Networking (TISPAN);  
Requirements for Customized Originating and Terminating  
Multimedia Information Presentation (COMIP/CTMIP) and  
Customized Originating and Terminating Multimedia  
Information Filtering (COMIF/CTMIF)  
Requirements Analysis**

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Reference

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## Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

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## Introduction

TISPAN NGN allows originating and terminating parties providing much multimedia information during session establishment (communication presentation until the off hook state). This information can be composed of several items and can be use by several services.

Thus, it is important to define requirements on multimedia information presentation and filtering during communication presentation.

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# 1 Scope

The study identifies requirements for:

- originating and terminating party multimedia information presentation and filtering during session establishment (e.g. name, alias, picture, card, ring, video, etc.);
- interoperability.

The results of this study will be used as a new service capability defined in a new document or as an update of the document "Service and capability requirements" concerning multimedia information presentation and filtering services.

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# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to an EP SCP document, a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

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NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

- [1] ETSI TS 181 002: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Multimedia Telephony with PSTN/ISDN simulation services".
- [2] 3GPP TS 22.182: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Customized Alerting Tones (CAT) Requirements; Stage 1 (Release 8)".
- [3] ETSI TS 101 323: "Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON); Interoperable security profiles".
- [4] ITU-T Recommendation E.182: "Operation, numbering, routing and mobile services -International operation - Tones in national signalling systems".
- [5] ETSI TS 102 334-2: "Network Address Book on fixed network; Part 2: Service description".
- [6] ETSI TS 183 004: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services: Communication Diversion (CDIV); Protocol specification".
- [7] ITU-T Recommendation Y.101: "Global Information Infrastructure terminology: Terms and definitions".



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## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

**Address Book:** entity that contains a number of records describing contacts of the user  
(see HF [EG 202 325 V1.1.1](#))

**Alerting Tone:** An indication that is played to the originating subscriber during establishment of a communication or during an established communication session indicating one of the following:

- that the terminating subscriber is being alerted.
- the progress of communication request (Call Forward, Call Wait etc.).
- any alerting event during a communication session".

**Alias:** alternative name for an object (individual). An individual may have many different aliases  
(see [EG 201 940 V1.1.1](#))

**Authentication:** property by which the correct identity of an entity or party is established with a required assurance  
(see TS 101.323)

**Avatar:** graphical (human) representation (see [TR 102 274 V1.1.2](#))

**Black list:** list of identity information whom parties are identified as with malicious information. This list is managed by the user or the service provider

**Card:** includes details on a user. The purpose of a card is to accompany the user's communications (or exchanges) towards his contacts. It can be private, professional or public

**Communication waiting tone:** tone advising the user of the call waiting supplementary service who is engaged on a call that someone is attempting to call his number (from ITU-T Recommendation E.182 [4])

**Confidentiality:** avoidance of the disclosure of information without permission of its owner (see TS 101 323)

**Customized Originating Multimedia Information:** multimedia information that is customized either by the terminating party or the originating party and presented to the terminating party

**Customized Terminating Multimedia Information:** multimedia information that is customized either by the originating party or by the terminating party and presented to the originating party

**Customized Alerting Tone:** See 3GPP TS 22.182 [2].

**Identity information:** See TS 181 002 [1].

**Integrity:** avoidance of the unauthorized modification of information (see TS 101 323)

**Logo:** symbol made of graphic signs representing a brand, an organization

**Name:** string of limited characters, asserted (network generated) or unasserted (user generated), indicating a registered user

**Network Address Book:** address book stored in the network (see TS 102 334-2 [5] (V1.1.1))

**Picture:** visual representation which could be an image, photo or logo

**Photo:** photograph of a people

**Ring:** sound of bell indicating an incoming call

**Rink back tone:** audible ringing that is heard by the originating party after dialling and prior to the call establishment

**Transferee:** party being transferred to the transfer target (see TS 183 004 [6])

**Transferor:** party initiating the transfer (see TS 183 004 [6])

**Transfer target:** party that the existing communication is transferred to (see TS 183 004 [6])

**Unknown party:** party who is unknown by the other party (e.g. not in his Address Book), different from "anonymous"

**Video:** electronic image with the capability to reproduce movement (see ITU-T Recommendation Y.101 [7])

## 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GPP	3G Partnership Project
ACR	Anonymous Communication Rejection
AOC	Advice of Charge
CAT	Customized Alerting Tone
CB	Call Barring
CCBS	Completion of Communication sessions to Busy Subscriber
CD	Communication Deflection
CDIV	Communication Diversion
CFB	Communication Forwarding Busy
CFNL	Communication Forwarding on Not Logged-in
CFNR	Communication Forwarding No Reply
CFU	Communication Forwarding Unconditional
CLIP	Calling Line Identification Presentation
CLIP	Calling Line Identification Restriction
COLP	COnnected Line identification Presentation
COLR	COnnected Line identification Restriction
COMIF	Customized Originating Multimedia Information Filtering
COMIP	Customized Originating Multimedia Information Presentation
CONF	CONFerence
CTMIF	Customized Terminating Multimedia Information Filtering
CTMIP	Customized Terminating Multimedia Information Presentation
CW	Communication Waiting
ECT	Explicit Communication Transfer
HOLD	Communication HOLD
ICB	Incoming Communication Barring
IMS	IP Multimedia Subsystem
ISDN	Integrated Service Data Network
MCID	Malicious Communication IDentification
MWI	Message Waiting Indication
NAB	Network Address Book
NGN	Next Generation Network
OCB	Outgoing Communication Barring
OIP	Originating Identification Presentation
OIR	Originating Identification presentation Restriction
OMA	Open Mobile Alliance
PSTN	Public Switch Telephone Network
R1	Release 1
TIP	Terminating Identification Presentation
TIR	Terminating Identification Restriction
UCI	Universal Communication Identifier

---

## 4 Ongoing studies

### 4.1 TISPAN R1

OIP and OIR services defined in TISPAN Release 1 [1] are similar to legacy network services: CLIP (Calling Line Identification Presentation) and CLIR (Calling Line Identification Restriction). However, NGN allows providing multimedia information via SIP protocol.

Information presentation enhanced capabilities could supply not only the identity information defined in TISPAN Release 1, but also multimedia information.

#### 4.1.1 3GPP IMS

The Technical Specification [2] specifies the requirements and technical implements for Customized Alerting Tone (CAT) service in CS domain, and the developments in PS domain. It presents for example interactions between CAT and IMS Multimedia Telephony services.

Multimedia information presentation and filtering capabilities should be compliant with this TS.

### 4.2 OMA

A work item on Identity Management Framework had been open in OMA. Its aim was to answer to the following issues:

- How identities or personal information from other parties may be discovered?
- How identities or personal information may be transferred from one party to another?
- How availability, visibility, and use of identities or personal information is controlled by owner of the information?

However, this Work Item has been stopped.

In addition, OMA Push to Talk over Cellular System Description document (draft) in OMA provides SIP URI, TEL URI, Nick Name or combination SIP URI-Nick Name to the terminating party. For example, "Alice's name or PoC number/URI is displayed on Bob's handset via Caller ID format."

However, this OMA service is only applied to PoC and does not allow the user to receive multimedia information.

A work item for a customized alerting tone service has been proposed in OMA. The objective of this Work Item is to specify a "Customized Multimedia Alerting over IMS service". The calling party will experience a piece of composed medium including audio, text or video instead of the monotony of alerting tone or some single music.

Another work item has been proposed in OMA for specifying a "Customized Multimedia Ringing function". This work is motivated by the following 3 points:

- The gradual evolution of user requirements calls for individuation and specialization. There is a need from the subscriber to customize his/her service flexibly and particularly, including an absorbing ringing such as a piece of music, an image representing the calling party.
- The development of multimedia terminals provides the capability to recognize and process various media files. The IP-based network supplies enough bandwidth to transmit multimedia files.
- The Customized Multimedia Ringing is a general function that can be specified as a common reusable capability. The Customized Multimedia Ringing function can be used to build a single service or a complicated service combined with other enablers defined in OSE.

At present, these work items have not been accepted.

## 4.3 UCI

Multimedia information presentation capability is a subset of the Universal Caller Identifier (UCI) concept which is used to provide a unique identifier to the customer.

UCI should be used to provide asserted multimedia information to users.

## 4.4 Liberty alliance

Liberty Alliance is a project concerning identification/authentication and federated network identity. This project takes into account especially single-sign-on.

Multimedia information presentation and filtering capabilities should be compliant with Liberty Alliance such as the user could find his same identity whatever the network.

---

# 5 General Description

Multimedia information presentation services allow an application server on behalf of a subscriber to present to the other party with Customized Originating Multimedia Information Presentation (COMIP) or Customized Terminating Multimedia Information Presentation (CTMIP) during communication setup. For example the terminating party will be notified of an incoming communication with a personalized ringing tone and a picture of the originating party thanks to the COMIP service. Other example, the originating party will receive the alerting tone selected by the terminating party, like a picture of the terminating party thanks to the CTMIP service.

A user can configure the multimedia information presentation service by setting rules that select the preferred media (e.g. audio, video, text, card, etc.) based on conditions, for example the originating party.

Multimedia information presentation filtering services allow an application server on behalf of a subscriber to remove incoming COMIP or CTMIP.

A number of items included in multimedia information should allow the service provider to define different services.

Example of possible multimedia information can be:

- name and/or alias;
- text;
- picture (e.g. photo or avatar);
- card;
- web site link;
- ring;
- video.

Multimedia information can be provided, for example, by:

- the content provider or;
- the operator or;
- the user himself.

The service configuration settings storage is service implementation dependent and might be integrated with a Network Address Book. The storage and format of the service settings are outside the scope of the present document.

---

## 6 Use cases

### 6.1 Multimedia information presentation

#### 6.1.1 Multimedia information presentation to the terminating party B

##### 6.1.1.1 Use case 1: Customized Originating Multimedia Information Presentation (COMIP) provided by the originating party when there is no specific rule configured for the terminating party identity

The originating party (Anna) has subscribed to the COMIP service.

Anna configures her Customized Originating Multimedia Information Presentation (COMIP) service to the following default values:

- the alias "Anna";
- the avatar "Anna at work".

The following information should be provided to the terminating network during the session establishment when Anna is calling him, the information may then be rendered to the terminating user:

- the alias "Anna";
- the avatar "Anna at work".

##### 6.1.1.2 Use case 2: Customized Originating Multimedia Information Presentation (COMIP) provided by the originating party when there is a specific rule configured for the terminating party identity

The originating party (Anna) has subscribed to the COMIP service.

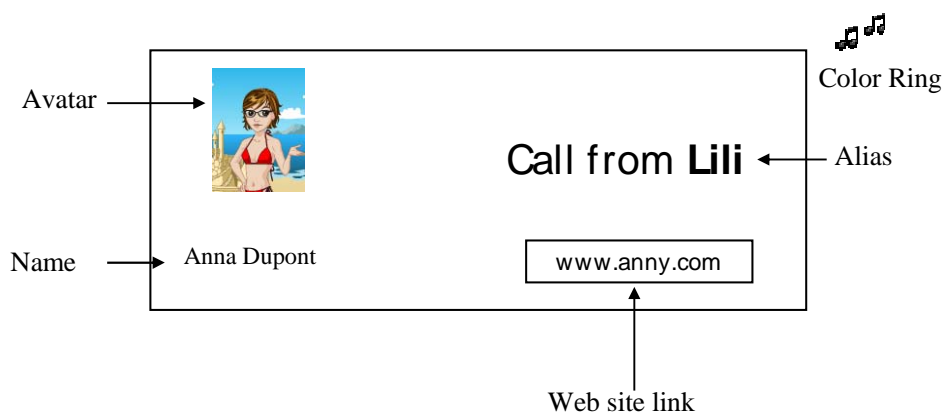
Anna configures her COMIP service to the following values associated to the Bob's identity. The configured rule might be stored for example in the Anna's Network Address Book (NAB):

- the alias "Lili";
- the avatar "Anna on the beach";
- the music "Samba";
- her personal web site link "www.anny.com".

The following information should be provided to the terminating network during the session establishment when Anna is calling Bob, the information may then be rendered to the terminating user:

- Anna's names ("Lili" and "Anna Dupont");
- Anna's avatar;
- Anna's audio;
- Anna's Web Site Link.

When Anna is calling Bob, the following screen is presented to Bob on his terminal if he has accepted to display information (use case 13).



**Figure 1: Presentation of multimedia Information as defined in the originating party's NAB**

In this case, the multimedia information presented to Bob is chosen and personalized by Anna according to the terminating party identity.

Advantages:

- even if Bob does not know Anna, Bob receives Anna's information;
- the information is sent automatically via Anna's NAB.

Drawbacks:

- Bob is not able to control information presented on his terminal.

### 6.1.1.3 Use case 3: Customized Originating Multimedia Information Presentation (COMIP) provided by the terminating party when there is a specific rule configured for the originating party identity

The terminating party (Bob) has subscribed to the COMIP service.

Bob configures his COMIP service to the following values associated to the Anna's identity. The configured rule might be stored for example in Bob's NAB:

- the alias "Anna";
- the avatar "Anna at work";
- the music "Mozart".

The following information should be provided to the terminating party during the session establishment when Anna is calling Bob, the information may be then rendered to the terminating user:

- Anna's names ("Anna" and "Anna Dupont");
- Anna's avatar;
- Anna's audio.

Advantages:

- Bob keeps control of the presented information on his terminal;
- the information is sent automatically via Bob's NAB.

Drawbacks:

- if no information is link to Anna's identity in Bob's NAB, only network standard information is presented on Bob's terminal.

#### 6.1.1.4 Use case 4: Customized Originating Multimedia Information Presentation (COMIP) provided by both parties

Both the originating party (Anna) and the terminating party (Bob) has subscribed to the COMIP service.

Anna configures her COMIP service to the following values associated to the Bob's identity. The configured rule might be stored for example in Anna's NAB:

- the alias "Anna";
- the avatar "Anna at work";
- the music "Mozart";
- her personal web site link [www.anny.com](http://www.anny.com).

Bob configures his COMIP service to the following values associated to the Anna's identity. The configured rule might be stored for example in Bob's NAB.

- the alias "Lili";
- the avatar "Anna on the beach";
- the music "Samba".

Bob should be allowed to choose which multimedia information is presented to his terminal when Anna is calling him, between information provided by himself or information provided by Anna. By default, multimedia information provided by the terminating party is the one to be presented to the terminating party himself.

#### 6.1.1.5 Use case 5: Customized Originating Multimedia Information Presentation (COMIP) provided by the originating party per call basis

##### 6.1.1.5.1 Use case 5.1: Instantaneous

The originating party (Anna) has subscribed to the COMIP service.

Anna is on holiday in the mountains. She takes a picture with her mobile phone of the landscape, writes the text "Wonderful holiday!" and she uses these two pieces of information to call her mother. Her mother's phone rings. She looks at the photo and the message and picks up.

##### 6.1.1.5.2 Use case 5.2: Via a service

The originating party (Anna) has subscribed to the COMIP service.

Anna chooses an avatar among several, also chooses the text "I'm too pretty!" and uses it to call her mother. Her mother's phone rings. She looks at the photo and the message and picks up. This avatar and text are sent only for this current communication.

### 6.1.2 Multimedia information presentation to the originating party A

#### 6.1.2.1 Use case 6: Customized Terminating Multimedia Information Presentation (CTMIP) provided by the terminating party when there is no specific rule configured for the originating party identity

The terminating party (Bob) has subscribed to the CTMIP service.

Bob configures his Customized Terminating Multimedia Information Presentation (CTMIP) service to the following default values:

- the alias "Robert";
- the avatar "Robert at work".

The following information should be provided to the originating network during the session establishment when the originating party is calling Bob, the information may be then rendered to the originating user:

- the alias "Robert";
- the avatar "Robert at work".

#### 6.1.2.2 Use case 7: Customized Terminating Multimedia Information Presentation (CTMIP) provided by the originating party when there is a specific rule configured for the terminating party identity

The originating party (Anna) has subscribed to the CTMIP service.

Anna configures her CTMIP service to the following values associated to the Bob's identity. The configured rule might be stored for example in Anna's NAB:

- the alias "Bob";
- the avatar "Bob at work";
- the video "Madonna".

The following information should be provided to the originating network during the session establishment when Anna is calling Bob, the information may be then rendered to the originating user:

- Bob's names ("Bob" and "Robert Dupont");
- Bob's avatar "Bob at work";
- Bob's Video back "Madonna".

In this case, the multimedia information presented to Anna is chosen and personalized by Anna according to the terminating party Bob.

Advantages:

- Anna keeps control of the presented information on her terminal;
- the information is sent automatically via Anna's NAB.

Drawbacks:

- If no information is link to Bob's identity in Anna's NAB, only network standard information is presented on Anna's terminal.

#### 6.1.2.3 Use case 8: Customized Terminating Multimedia Information Presentation (CTMIP) provided by the terminating party when there is a specific rule configured for the originating party identity

The terminating party (Bob) has subscribed to the CTMIP service.

Bob configures his CTMIP service to the following values associated to the Anna's identity. The configured rule might be stored for example in Bob's NAB:

- the alias "Boby";
- the avatar "Boby on the beach";
- the video "Robbie Williams";
- his personal web site link [www.bob.com](http://www.bob.com);



The following information should be provided to the originating network during the session establishment when Anna is calling Bob, the information may be then rendered to the originating user:

- Bob's names ("Boby" and "Robert Dupont");
- Bob's avatar "Boby on the beach";
- the video "Robbie Williams";
- his web site link [www.bob.com](http://www.bob.com).

Advantages:

- even if Anna does not know Bob, Anna receives Bob's information;
- the information is sent automatically via Bob's NAB.

Drawbacks:

- Anna is not able to control information presented on her terminal.

#### 6.1.2.4 Use case 9: Customized Terminating Multimedia Information Presentation (CTMIP) provided by the originating party per call basis via a service

##### 6.1.2.4.1 Use case 9.1: Instantaneous

The terminating party (Bob) has subscribed to the CTMIP service.

Anna calls Bob who is on the beach.

Bob has configured his default CTMIP (see use case 7). Meanwhile Bob sees that Anna is calling him (could be for example thanks to Bob's Customized Originating Multimedia Information Presentation service), instead of sending his default CTMIP, he chooses to take a picture with his mobile phone of the sea, writes the text "Look at this!". Then Anna watches the photo and the message.

##### 6.1.2.4.2 Use case 9.2: Via a service

The terminating party (Bob) has subscribed to the CTMIP service.

Anna calls Bob. Bob has configured his default CTMIP (see use case 7). Meanwhile Bob sees that Anna is calling him (could be for example thanks to Bob's Customized Originating Multimedia Information Presentation service). Instead of sending his default CTMIP, he chooses another CTMIP for Anna among several "Video of Bob's holiday". Then Anna watches this video.

#### 6.1.2.5 Use case 10: Customized Terminating Multimedia Information Presentation (CTMIP) provided by both parties

Both the originating party (Anna) and the terminating party (Bob) has subscribed to the CTMIP service.

Anna configures her CTMIP service to the following values associated to the Bob's identity. The configured rule might be stored for example in Anna's NAB:

- the alias "Bob";
- the avatar "Bob at work";
- the video "Madonna".

Bob configures his CTMIP service to the following values associated to the Anna's identity. The configured rule might be stored for example in Bob's NAB:

- the alias "Boby";
- the avatar "Boby on the beach";
- the video "Robbie Williams";
- his personal web site link "www.bob.com".

Anna should be allowed to choose which multimedia information is presented on her terminal when she is calling Bob, between information provided by herself or information provided by Bob. By default, multimedia information provided by the originating is the one presented to the originating party himself.

#### 6.1.2.6 Use case 11: Advertising Customized Terminating Multimedia Information Presentation

The terminating party (a DVD seller Bob) has subscribed to the CTMIP service.

Bob configures his advertising CTMIP service to the following default values:

- the text " Download the last DVD of Mozart!";
- the image "Jacket of Mozart";
- Web Site Link to buy the DVD presented.

Anna accepts to receive advertising CTMIP. She calls Bob who is not in her NAB. She looks at Bob's CTMIP above. She clicks on the link to buy the DVD.

## 6.2 Multimedia information filtering

### 6.2.1 Multimedia information filtering to the terminating party B

#### 6.2.1.1 Use case 12: automatic filtering when there is a specific rule configured for the unknown originating parties

The terminating party (Bob) has subscribed to the Customized Originating Multimedia Information Filtering service (COMIF).

The Anna's identity is not in the Bob's Network Address Book (NAB). Bob has configured his Customized Originating Multimedia Information Filtering service in order to not receive multimedia information from unknown originating parties.

When Anna is calling Bob, her multimedia information is not presented to Bob. Bob does not receive any multimedia information related to Anna.

#### 6.2.1.2 Use case 13: Customized Originating Multimedia Information Filtering (COMIF): request permission to the terminating party before presenting multimedia information from the originating party

The originating party (Anna) has subscribed to the COMIP service.

Anna, a car seller, configures her COMIP service to the following default values:

- the alias "Anna Parker";
- the image "Logo of the garage";
- Web Site Link of the Anna's garage.

Bob has the following options for receiving multimedia information customized by originating party:

- accept all multimedia information presentation every time;
- accept multimedia information presentation for known parties and reject all others;
- reject multimedia information presentation for parties identified as with malicious information in a black list and accept all others;
- ask to present multimedia information only for unknown originating parties and accept multimedia information presentation from known parties (default);
- ask what to do each time (e.g. to present multimedia information, to reject the multimedia information, etc.);
- reject all multimedia information.

Bob has chosen to be asked to present multimedia information only for unknown originating parties and accept multimedia information presentation for known parties (default).

The Anna's identity is available but is not in the Bob's Network Address Book (NAB).

When Anna is calling Bob the following steps applies:

- 1) Certified information (e.g. Anna's identity or other) and alert requesting permission to present Multimedia Information related to Anna "Accept additional information?" are presented to Bob.
- 2) Bob accepts and her multimedia information is presented to him: her name "Anna Parker", the logo of the garage and her web site link.
- 3) Bob picks up the phone. During the communication, Anna's information remains displayed and Bob can browse the web site "Parker's garage", store Anna's information, etc.

## 6.2.2 Multimedia information filtering to the originating party A

### 6.2.2.1 Use case 14: automatic filtering when there is a specific rule configured for the unknown terminating parties

The originating party (Anna) has subscribed to the CTMIF service.

The Bob's identity is not in the Anna's Network Address Book (NAB). Anna has configured her Customized Terminating Multimedia Information Filtering service in order to not receive multimedia information from unknown terminating parties.

When Anna is calling Bob, Bob's multimedia information is not presented to Anna. Anna does not receive any multimedia information related to Bob.

### 6.2.2.2 Use case 15: Customized Terminating Multimedia Information Filtering (CTMIF): request permission to the originating party before presenting multimedia information from the terminating party

The terminating party (a car seller Bob) has subscribed to the CTMIP service.

Bob configures his CTMIP service to the following default values:

- the alias "Bob Dupont";
- the image "Logo of the garage";
- Web Site Link of the Bob's garage.

Anna has the following options for receiving multimedia information customized by terminating party:

- accept all multimedia information presentation every time;
- accept multimedia information presentation for known parties and reject all others;
- reject multimedia information presentation for parties identified as with malicious information in a black list and accept all others;
- ask to present multimedia information only for unknown originating parties and accept multimedia information presentation for known parties (default);
- ask what to do each time (e.g. to present multimedia information, to reject the multimedia information);
- reject all multimedia information.

Anna has chosen to be asked to present multimedia information only for unknown terminating parties and accept multimedia information presentation for known parties (default).

The Bob's identity is available but is not in the Anna's Network Address Book (NAB).

When Anna is calling Bob the following steps applies:

- 1) Certified information (e.g. Bob's identity or other) and alert requesting permission to present Multimedia Information related to Bob "Accept additional information?" are presented to Anna.
- 2) Anna accepts and his multimedia information is presented to her: his name "Bob Dupont", the logo of the garage and his web site link.
- 3) Bob picks up the phone. During the communication, Anna's information remains displayed and Bob can browse the web site "Parker's garage", store Anna's information, etc.

## 6.3 Summary

Associated to **B**'s identity, **A** is able to configure 3 services:

- COMIP (multimedia information presented to **B**);
- CTMIP (multimedia information presented to **A**);
- CTMIF (filtering of multimedia information from terminating party).

Associated to **A**'s identity, **B** is able to configure 3 services:

- COMIP (multimedia information presented to **B**);
- CTMIP (multimedia information presented to **A**);
- COMIF (filtering of multimedia information from originating party).

Table 1: Summary of use cases

Service	Use case number	Service subscribed by	Summary
COMIP	1	A	No customization, a default COMIP chosen by <b>A</b> is presented to <b>B</b> whatever <b>B</b> .
	2	A	COMIP is customized by <b>A</b> according to <b>B</b> and presented to <b>B</b> .
	3	B	COMIP is customized by <b>B</b> according to <b>A</b> and presented to <b>B</b> .
	4	A and B	By default COMIP is customized by <b>B</b> according to <b>A</b> and presented to <b>B</b> .
	5.1	A	<b>A</b> customizes a COMIP per call basis instantaneously.
	5.2	A	<b>A</b> customizes a COMIP via service per call basis.
CTMIP	6	B	No customization, a default CTMIP chosen by <b>B</b> is presented to <b>A</b> whatever <b>A</b> .
	7	A	CTMIP is customized by <b>A</b> according to <b>B</b> and presented to <b>A</b> .
	8	B	CTMIP is customized by <b>B</b> according to <b>A</b> and presented to <b>A</b> .
	9.1	B	<b>B</b> customizes a CTMIP per call basis instantaneously and presented to <b>A</b> .
	9.2	B	<b>B</b> customizes a CTMIP per call basis via service and presented to <b>A</b> .
	10	A and B	By default CTMIP is customized by <b>A</b> according to <b>B</b> and presented to <b>A</b> .
COMIF	11	B	CTMIP is customized by <b>B</b> according to <b>A</b> and presented to <b>A</b> . <b>A</b> is able to buy <b>B</b> 's CTMIP.
	12	B	<b>B</b> filters multimedia information for unknown originating party.
	13	B	<b>B</b> is asked to present multimedia information of the originating party.
CTMIF	14	A	<b>A</b> filters multimedia information for unknown terminating party.
	15	A	<b>A</b> is asked to present multimedia information of the terminating party.

## 7 Interaction use cases

### 7.1 Interaction between CDIV and COMIP

Anna and Bob have subscribed to Customized Originating Multimedia Information Presentation service (COMIP). Bob has also subscribed to Communication Diversion (CDIV). When Anna calls Bob, Colin would experience the COMIP set by Anna, or the COMIP set by Bob depending on the operator choice and the reason of the CDIV.

#### 7.1.1 Use Case 16.1: Interaction between CFU and COMIP

Bob has activated Communication Forwarding Unconditional (CFU) service to Colin.

When Anna calls Bob, Colin would experience:

- Case 1: the COMIP selected by Bob if Bob's operator has chosen to send the COMIP from the forwarding party with the following settings for CDIV: Bob's number can be presented to the forwarded-to user.
- Case 2: no COMIP if Bob's operator has chosen to send the COMIP from the forwarding party with the following settings for CDIV: Bob's number can NOT be presented to the forwarded-to user.
- Case 3: if Anna receives the indication that the communication has been forwarded, she can allow Colin to experience her COMIP. This only in case that Bob's operator has chosen not to send the COMIP from Bob.

Bob has subscribed to the CFU option which allows him to receive notification that the communication has been forwarded. So he receives the COMIP selected by Anna.

**Table 2: Summary of use cases in case of CFU and COMIP invocation**

Case	Anna's side	Bob's side	Side of Bob's operator	Colin's side
1	Anna has a COMIP or not.	Bob has a COMIP. He experiences Anna's COMIP if he has subscribed for receiving notification of communication forwarding.	The operator has chosen to send COMIP from Bob to Colin with the following settings for CDIV: Bob's number can be presented to the forwarded-to user.	Colin experiences Bob's COMIP.
2	Anna has a COMIP or not.	Bob has a COMIP.	The operator has chosen to send COMIP from Bob to Colin with the following settings for CDIV: Bob's number can NOT be presented to the forwarded-to user.	Colin does not experience Bob's COMIP nor Anna's COMIP.
3	Anna has a COMIP. She allows the network to send her COMIP to forwarded-to party in case of CDIV invocation.	He experiences Anna's COMIP if he has subscribed for receiving notification of communication forwarding.	The operator has chosen to: <ul style="list-style-type: none"> <li>inform Anna of communication forwarding</li> <li>not send Bob's COMIP to Colin.</li> </ul>	Colin experiences Anna's COMIP.

In the table above, all the COMIPs that Colin experiences in the column "Colin's side" may be replaced by Colin's COMIP, if he has decided to experience his own COMIP (see use case 10), for case 1 his COMIP associated to Bob and for case 3 his COMIP associated to Anna.

### 7.1.2 Use Case 16.2: Interaction between CFB and COMIP

Bob has activated Communication Forwarding on Busy (CFB) service to Colin.

When Anna calls Bob, Bob is busy. He experiences his COMIP with audio information replaced by the default communication waiting tone (see use case 19). Anna's communication is forwarded to Colin.

Colin would experience (see use case 16.1):

- Case 1: the COMIP selected by Bob if Bob's operator has chosen to send the COMIP from the forwarding party with the following settings for CDIV: Bob's number can be presented to the forwarded-to user.
- Case 2: no COMIP if Bob's operator has chosen to send the COMIP from the forwarding party with the following settings for CDIV: Bob's number can NOT be presented to the forwarded-to user.
- Case 3: if Anna receives the indication that the communication has been forwarded, she can allow Colin to experience her COMIP. This only in case that Bob's operator has chosen not to send the COMIP from Bob.

### 7.1.3 Use Case 16.3: Interaction between CFNL and COMIP

See use case 16.1.

### 7.1.4 Use Case 16.4: Interaction between CFNR and COMIP

Bob has activated Communication Forwarding No Reply (CFNR) service to Colin.

When Anna calls Bob, Bob does not reply. He experiences Anna's COMIP. After the timer response expires, Anna's communication is forwarded to Colin.

Colin would experience (see use case 16.1):

- Case 1: the COMIP selected by Bob if Bob's operator has chosen to send the COMIP from the forwarding party with the following settings for CDIV: Bob's number can be presented to the forwarded-to user.
- Case 2: no COMIP if Bob's operator has chosen to send the COMIP from the forwarding party with the following settings for CDIV: Bob's number can NOT be presented to the forwarded-to user.
- Case 3: if Anna receives the indication that the communication has been forwarded, she can allow Colin to experience her COMIP. This only in case that Bob's operator has chosen not to send the COMIP from Bob.

## 7.2 Use case 17: Interaction between CDIV and CTMIP

Bob has subscribed to Customized Terminating Multimedia Information Presentation (CTMIP) service and to CDIV. He has activated CFU service to Colin. Colin has also subscribed to CTMIP. When Anna calls Bob, she would experience:

- Case 1: the CTMIP selected by Bob associated to Anna if the Bob's operator has chosen to send the CTMIP from the forwarding party.
- Case 2 (by default): the CTMIP selected by Colin for Anna if the Bob's operator has chosen to send the CTMIP from the forwarded-to party.

**Table 3: Summary of use cases in case of CDIV and CTMIP invocation**

Case	Anna's side	Bob's side	Side of Bob's operator	Colin's side
1	Anna experiences Bob's CTMIP.	Bob has a CTMIP.	The operator has chosen to send CTMIP from Bob to Anna.	-
2	Anna experiences Colin's CTMIP.	-	The operator has chosen to not send Bob's CTMIP to Anna in case of CFU.	Colin has a CTMIP. He allows the network to send his CTMIP to original originating party in case of CDIV invocation.

In the table above, all the CTMIPs that Anna experiences in the column "Anne's side" may be replaced by Anna's CTMIP, if she has decided to experience her own CTMIP (see use case 10) for case 1, her CTMIP associated to Bob and for case 2 her CTMIP associated to Colin.

## 7.3 Use Case 18: Interaction between ECT, COMIP and CTMIP

Anna and Bob have subscribed to COMIP and to CTMIP.

Anna is in active communication with Bob. Bob invokes ECT between Anna and Colin (blind ECT).

Before the transfer establishment, Colin would experience:

- Case 1: the COMIP selected by Bob if the Bob's operator has chosen to send the COMIP from the transferor.
- Case 2: if Anna receives the indication that the communication has been transferred she can allow Colin to experience her COMIP. This only in case that Bob's operator has chosen not to send the COMIP from Bob.

**Table 4: Summary of use cases in case of ECT and COMIP invocation**

Case	Anna's side	Bob's side	Side of Bob's operator	Colin's side
1	-	Bob has a COMIP.	The Bob's operator has chosen to send COMIP from Bob to Colin.	Colin experiences Bob's COMIP.
2	Anna has a COMIP. She allows the network to send her COMIP to transfer target party in case of ECT invocation.	-	The Bob's operator has chosen to not send Bob's COMIP to Colin.	Colin experiences Anna's COMIP.

Before the transfer establishment, Anna hears a waiting music. After a time, she experiences the CTMIP of Colin. Then, Colin picks up the phone and the communication between Anna and Colin is set up.

## 7.4 Use Case 19: Interaction between CW and COMIP

Anna has subscribed to COMIP.

She has configured her COMIP service to the following values associated to the Bob's identity:

- the alias "Lili";
- the text "My car is broken down!";
- the avatar "Anna on the beach";
- the music "Samba";
- her personal web site link [www.anny.com](http://www.anny.com).

Bob has subscribed to Communication Waiting (CW) but not to COMIP. He is in communication with Colin. When Anna calls Bob, in order to not much disturb Bob during his current communication with Colin, Bob would experience:

- Case 1: the default communication waiting tone if the Bob's operator has chosen to send it.
- Case 2: the COMIP set by Anna whom her ring "Samba" is replaced by the default communication waiting tone if Bob's operator has chosen to send COMIP to Bob in case he is busy with audio information of the COMIP replaced by the default communication waiting.

**Table 5: Summary of use cases in case of CW and COMIP invocation**

Case	Anna's side	Bob's side	Side of Bob's operator
1	Anna has a COMIP. She experiences the busy tone.	Bob experiences the default communication waiting tone.	The Bob's operator has chosen to send the default communication waiting tone
2	Anna has a COMIP. She experiences the busy tone.	Bob experiences the COMIP set by Anna whom her ring "Samba" is replaced by the default communication waiting tone.	The Bob's operator has chosen to send COMIP to Bob in case he is busy with audio information of the COMIP replaced by the default communication waiting tone.

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## 8 Multimedia information service

The present clause provides the description of the multimedia information presentation service.

For each service, the following is provided:

- a short service definition;
- a description of the normal operation with successful outcome.

And when applicable also:

- a description of exceptional operation or unsuccessful outcome;
- descriptions on interaction with other PSTN/ISDN simulation services.

Each service is optional.



## 8.1 Multimedia information presentation service

### 8.1.1 Definition

During the session establishment, a party (both the originating and terminating party) should receive information provided:

- by the network (e.g. identity of the party) or
- via service platform.

Multimedia information presentation service is able to present multimedia information:

- to the terminating party. This service is the Customized Originating Multimedia Information Presentation service (COMIP) (use cases 1 to 5);
- to the originating party. This service is the Customized Terminating Multimedia Information Presentation service (CTMIP) (use cases 6 to 11).

The audio information of CTMIP shall override the default alerting tone towards the originating party.

The audio information of COMIP shall override the default ringing tone towards the terminating party.

During the session establishment, the originating party with the COMIP and the terminating party with CTMIP should be allowed to send multimedia information per call basis:

- instantaneously (use cases 5.1 and 9.1) or
- via service platform (use case 5.2 and 9.2).

A party should be allowed to choose which multimedia information is presented to her/his during session establishment, between information provided by her/himself or information provided by another party. By default, multimedia information provided by her/himself is the one to be presented to her/himself (use case 4, 10).

The party who receives multimedia information should be able to distinguish information provided via service platform and information provided by the network.

The party that has a subscription to the service should be allowed to customize his/her multimedia information presentation based on several rules. Thus the party does not need to choose per call basis multimedia information. Each subscriber has a personal library with all his/her Multimedia Information. During communication setup, the service can be chosen from the user's library according to a lot of rules, such as originating party identity, anonymous, external list, validity, media, presence status, etc. (use cases 2, 3, 4, 7, 8, 10, 11).

The content of the COMIP/CTMIP services may be dynamically created, possibly taking into account information available in the network, e.g. originating and/or terminating party's location and/or presence information.

When the terminating party is notified about an incoming communication, the terminating party can send an indication to the CTMIP service which CTMIP to play to the originating party.

When an outgoing communication is invoked, the originating party should have an indication to the COMIP service which COMIP to play to the terminating party.

The party who receives multimedia information should be allowed to store this multimedia information (use case 11) if he is authorized by the operator, the other party or by the service platform.

When the terminating party answers the communication, the session is set up and the Multimedia information presentation service stops.

When the CTMIP is playing, the originating party can stop it for instance by pressing a specific button, then he shall experience the default alerting tone.

When the CTMIP chosen by the terminating party is playing, the terminating party can stop it for instance by pressing a specific button, the originating party shall experience another CTMIP.

When the COMIP is playing, the terminating party can stop it for instance by pressing a specific button, then he shall experience the default ringing tone.

When the COMIP chosen by the originating party is playing, the originating party can stop it for instance by pressing a specific button, the terminating party shall experience another COMIP.

As an option, the content of the Multimedia information presentation service (COMIP or CTMIP) may be deployed by operator to continue playing (use case 11).

The subscriber should be able to override the customized multimedia information that will be provided by the service. The subscriber wants in some situation to change the default customized multimedia information that has been chosen. This is applicable for COMIP and CTMIP (use case 5 and 9).

The network should provide the capability for the user to select a COMIP/CTMIP, which content is provided by a COMIP/CTMIP content provider, which does not have to be the service provider.

## 8.1.2 Service interactions with other PSTN/ISDN simulation services (NGN)

### 8.1.2.1 Multimedia information presentation to the terminating party: Customized Originating Multimedia Information presentation (COMIP)

Interaction between Customized Originating Multimedia Information presentation service and each simulation service defined in [1] should be compliant with interaction between OIP service and each simulation service.

#### 8.1.2.1.1 OIP

No impact. The OIP service is performed independently of the COMIP, the COMIP will use the information provided by OIP.

#### 8.1.2.1.2 OIR

The OIR service takes priority over the COMIP service subscribed by the originating party **A** or by the terminating party **B**. In this case it means that if the OIR is invoked, then the COMIP is not invoked.

**A** has activated the OIR service. If **B** has a COMIP associated to **A**, it will not be invoked, except if **B** has the override category.

The COMIP service subscribed by the terminating party **B** can take precedence over the OIR service when the terminating party has an override category, such as the police, for which the OIR is not applied. They have to know what is exactly the originating party connected.

#### 8.1.2.1.3 TIP

No impact.

#### 8.1.2.1.4 TIR

No impact.

#### 8.1.2.1.5 MCID

No impact.

#### 8.1.2.1.6 ACR

No impact.

### 8.1.2.1.7 CDIV

A communication has been forwarded by **B**. The forwarded-to party **C** has been provided with the COMIP service.

#### 8.1.2.1.7.1 CFU

**B** has activated CFU service to **C**.

**C** shall receive the multimedia information of:

- Case 1: the original originating party **A** if **A** receives the indication of communication forwarding and if **B**'s operator has chosen not to send the COMIP from **B** or,
- Case 2: the forwarding party **B** if **B**'s operator has chosen to send the COMIP from **B**.

This is in case the party whom the COMIP is sent to the forwarded-to party has not subscribed to or invoked the OIR simulation service.

If **B** has subscribed to the CFU option which allows him to receive notification that the communication has been forwarded, he will receive the COMIP selected by Anna, except if **A** has activated the OIR.

#### 8.1.2.1.7.2 CFB

**B** has activated CFB service to **C**. **B** has not activated CW.

When **A** calls **B**, **B** is busy.

**A**'s communication is forwarded to **C**. **C** shall receive the multimedia information of:

- Case 1: the original originating party **A** if **A** receives the indication of communication forwarding and if **B**'s operator has chosen not to send the COMIP from **B** or,
- Case 2: the forwarding party **B** if **B**'s operator has chosen to send the COMIP from **B**.

This is in case the party whom the COMIP is sent to the forwarded-to party has not subscribed to or invoked the OIR simulation service.

If **B** has subscribed to the CFB option which allows him to receive notification that the communication has been forwarded, he will receive the COMIP selected by Anna, except if **A** has activated the OIR.

#### 8.1.2.1.7.3 CFNL

See interaction between COMIP and CFU.

#### 8.1.2.1.7.4 CFNR

**B** has activated CFNR service to **C**.

When **A** calls **B**, **B** does not reply. **B** experiences **A**'s COMIP.

After the timer response expires, **A**'s communication is forwarded to **C**. **C** shall receive the multimedia information of:

- Case 1: the original originating party **A** if **A** receives the indication of communication forwarding and if **B**'s operator has chosen not to send the COMIP from **B** or,
- Case 2: the forwarding party **B** if **B**'s operator has chosen to send the COMIP from **B**.

This is in case the party whom the COMIP is sent to the forwarded-to party has not subscribed to or invoked the OIR simulation service.

If **B** has subscribed to the CFNR option which allows him to receive notification that the communication has been forwarded, he will receive the COMIP selected by Anna, except if **A** has activated the OIR.

### 8.1.2.1.8 Communication Waiting (CW)

**A** has subscribed to COMIP and **B** to CW. **B** is already in communication with **C**. Then **A** calls **B**. In order to not much disturb **B** during his current communication with **C**, **B** shall receive:

- Case 1: the default communication waiting tone if the **B**'s operator has chosen to send it.
- Case 2: the COMIP set by **A** whom audio information from ring and video is replaced by the default communication waiting tone if **B**'s operator has chosen to send COMIP to **B** in case he is busy with audio information of the COMIP replaced by the default communication waiting tone.

This is in case **A** has not subscribed to or invoked the OIR simulation service.

NOTE: See use case 19.

### 8.1.2.1.9 HOLD

No impact.

### 8.1.2.1.10 CB

No impact.

### 8.1.2.1.11 CCBS

No impact.

### 8.1.2.1.12 MWI

No impact.

### 8.1.2.1.13 CONF

No impact.

### 8.1.2.1.14 AOC

No impact.

### 8.1.2.1.15 ECT

**A**, **B** and **C** have subscribed to the COMIP service.

**A** is on hold. **B** invokes the ECT service between **A** and **C**. The COMIP service associated to **B** should be invoked to **C** before the transfer establishment between **A** and **C**, if **B** has not subscribed to or invoked the OIR simulation service. Then a new communication is established between **A** and **C** (see use case 18). **C** shall receive the multimedia information of:

- **B** if **B**'s operator has chosen to send the COMIP from the transferor or,
- **A** if **A** receives the indication of communication transferring, if **A** has allowed **C** to experience her COMIP and if **B**'s operator has chosen not to send the COMIP from **B**.

This is in case the party whom the COMIP is sent to **C** has not subscribed to or invoked the OIR simulation service.

### 8.1.2.1.16 Reverse Charging

No impact.

### 8.1.2.2 Multimedia information presentation to the originating party: Customized Terminating Multimedia Information Presentation (CTMIP)

Interaction between Multimedia information presentation service to the originating party and each simulation service defined in [1] should be compliant with interaction between TIP [1] service and each simulation service.

#### 8.1.2.2.1 OIP

No impact.

#### 8.1.2.2.2 OIR

The OIR service takes precedence over the CTMIP service subscribed by the originating party **A** or subscribed by the terminating party **B**.

**A** has activated the OIR service.

If **B** has a CTMIP associated to **A**, it will not be invoked.

If **B** has a CTMIP by default (without rule according to the originating party, see use case 6), no impact.

#### 8.1.2.2.3 TIP

The CTMIP completes and uses the TIP service.

#### 8.1.2.2.4 TIR

The TIR service takes precedence over the CTMIP service subscribed by the originating party **A** or subscribed by the terminating party **B**.

**B** has activated the TIR service.

If **A** has a CTMIP associated to **B**, it will not be invoked, except if **A** has the override category.

The CTMIP service can take precedence over the TIR service when the originating user has an override category, such as the police, for which the TIR is not applied. They have to know what is exactly the terminating party connected.

If **A** has a CTMIP by default (without rule according to the originating party, see use case 6), no impact.

#### 8.1.2.2.5 MCID

No impact.

#### 8.1.2.2.6 ACR

No impact.

#### 8.1.2.2.7 CDIV

If forwarding party **B** chooses to restrict the presentation of the forwarded-to party **C**'s identity, the originating party **A** shall not receive the terminating party **C**'s multimedia information irrespective of whether the terminating party **C** has TIR activated or not.

NOTE: see use case 17

A communication has been forwarded by **B**. The forwarding party **B** and the forwarded-to party **C** have been provided with the CTMIP service. The original originating party **A** shall receive the multimedia information of:

- Case 1: the forwarding party if **B**'s operator has chosen to send the CTMIP from the forwarding party **B** or,
- Case 2: the forwarded-to party **C** if **A** receives the indication of communication forwarding and if **B**'s operator has chosen not to send the CTMIP from **B**.

This is in case the party whom the CTMIP is sent to the original originating party has not subscribed to or invoked the TIR simulation service.

If **A** has decided to experience its own CTMIP, see use case 10.

#### 8.1.2.2.8 Communication Waiting (CW)

If the terminating party is busy, as a default the originating party will receive an indication that the communication is waiting, not CTMIP.

There should be a possibility to configure a specific CTMIP to be played to the originating party who is waiting.

#### 8.1.2.2.9 HOLD

No impact.

#### 8.1.2.2.10 CB

No impact.

#### 8.1.2.2.11 CCBS

No impact.

#### 8.1.2.2.12 MWI

No impact.

#### 8.1.2.2.13 CONF

No impact

#### 8.1.2.2.14 AOC

No impact.

#### 8.1.2.2.15 ECT

**A**, **B** and **C** have subscribed to the CTMIP service.

**A** is on hold. **B** invokes the ECT service between **A** and **C**. Before the transfer establishment, **A** stays on hold.

If the ECT is:

- blind, after a time, **A** should experience the CTMIP of **C**.
- consultative, **A** should not experience the CTMIP of **C**.

Then a new communication is established between **A** and **C** (see use case 18).

This is in case the party whom the CTMIP is sent to **A** has not subscribed to or invoked the TIR simulation service.

#### 8.1.2.2.16 Reverse Charging

No impact.

## 8.2 Multimedia information filtering service

### 8.2.1 Definition

The user who receives multimedia information should be able to ignore the multimedia information according to some rules (e.g. use cases 12 and 14 for unknown parties).

Multimedia information filtering service allows the user to filter multimedia information:

- If the user is the terminating party, this service is the Customized Originating Multimedia Information Filtering service (COMIF) (use cases 12 and 13);
- If the user is the originating party, this service is the Customized Terminating Multimedia Information Filtering service (CTMIF) (use cases 14 and 15).

The party who receives multimedia information should be allowed to accept or not during communication set up presentation of multimedia information provided by another party (use cases 2, 13 and 15).

The party who receives multimedia information should be allowed to handle acceptance of multimedia information presentation (use cases 13 and 15) according to his/her rules defined for the service:

- accept all multimedia information presentation every time;
- accept multimedia information presentation for known parties and reject all others;
- reject multimedia information presentation for parties identified as with malicious information in a black list and accept all others;
- ask to present multimedia information only for unknown parties and accept multimedia information presentation all others (default);
- ask what to do each time (e.g. to present multimedia information, to reject the multimedia information, etc.);
- reject all multimedia information.

In case the party is asked to present multimedia information of the other party during the communication establishment, he shall receive at least certified information of this other party (e.g. the other party's identity or other).

### 8.2.2 Service interactions with other PSTN/ISDN simulation services (NGN)

#### 8.2.2.1 Customized Originating Multimedia Information filtering (COMIF)

##### 8.2.2.1.1 OIP

No impact.

Even if the COMIF has been subscribed by the terminating party, the OIP is invoked.

##### 8.2.2.1.2 OIR

No impact.

The terminating party has subscribed to the COMIF and the originating party has subscribed to the OIR. Since OIR has priority over COMIF, the COMIF is not performed since there is no multimedia information sent from the originating party to the terminating party (see clause 8.1.2.1.2).

##### 8.2.2.1.3 TIP

No impact.

**8.2.2.1.4 TIR**

No impact.

**8.2.2.1.5 MCID**

No impact.

**8.2.2.1.6 ACR**

The terminating party has subscribed to the ACR and the COMIF. The ACR service has priority over the COMIF service.

**8.2.2.1.7 CDIV**

The terminating party **B** has subscribed to the CDIV service and the COMIF service. The CDIV service has priority over the COMIF service, so the CDIV is invoked.

If the forwarded-to-party **C** has subscribed to the COMIF service, the COMIF service is invoked.

**8.2.2.1.8 CW**

No impact.

If a party has the COMIF service active and is notified that an incoming communication is waiting, then this party shall receive the identity information of the originating party, if this originating party has not subscribed to or invoked the OIR simulation service and the COMIF is invoked.

**8.2.2.1.9 HOLD**

No impact.

**8.2.2.1.10 CB****8.2.2.1.10.1 ICB**

The terminating party has subscribed to the ICB and the COMIF. The ICB service has priority over the COMIF service.

**8.2.2.1.10.2 OCB**

No impact.

**8.2.2.1.11 CCBS**

No impact.

**8.2.2.1.12 MWI**

No impact.

**8.2.2.1.13 CONF**

No impact.

**8.2.2.1.14 AOC**

No impact.



8.2.2.1.15 ECT

No impact

8.2.2.1.16 Reverse Charging

No impact

8.2.2.2 Customized Terminating Multimedia Information filtering (CTMIF)

8.2.2.2.1 OIP

No impact

8.2.2.2.2 OIR

No impact

8.2.2.2.3 TIP

No impact.

8.2.2.2.4 TIR

No impact.

The originating party has subscribed to the CTMIF and the terminating party to the TIR. Since TIR has priority over the CTMIF, the service CTMIF is not performed since there is no multimedia information sent from the terminating party to the originating party.

8.2.2.2.5 MCID

No impact

8.2.2.2.6 ACR

No impact

8.2.2.2.7 CDIV

The CTMIF is performed regardless of the fact that **A** receives the indication of communication forwarding. It just depends on how the filter is set. For example if **A** has decided to filter any incoming multimedia information, the information will not be presented regardless of the CDIV.

8.2.2.2.7.1 CD

The CTMIF is performed regardless of the fact that **A** receives the indication of communication deflection. It just depends on how the filter is set. For example if **A** has decided to filter any incoming multimedia information, the information will not be presented regardless of the CDIV.

8.2.2.2.8 CW

No impact

8.2.2.2.9 HOLD

No impact.

#### 8.2.2.2.10 CB

##### 8.2.2.2.10.1 ICB

No impact.

##### 8.2.2.2.10.2 OCB

The originating party has subscribed to the OCB service and to the CTMIF service. The OCB service has priority over the CTMIF service.

##### 8.2.2.2.11 CCBS

No impact

##### 8.2.2.2.12 MWI

No impact

##### 8.2.2.2.13 CONF

No impact

##### 8.2.2.2.14 AOC

No impact

##### 8.2.2.2.15 ECT

No impact

##### 8.2.2.2.16 Reverse Charging

No impact

## 8.3 Interaction between presentation services and filtering services

### 8.3.1 Interaction with COMIP

#### 8.3.1.1 COMIP

If the originating party **A** has configured the COMIP service according to **B** and terminating party **B** has configured the COMIP service according to **A**, the operator can choose which multimedia information will be provided to the terminating party. By default the terminating party's COMIP has priority over the originating party's COMIP (see use case 4).

#### 8.3.1.2 CTMIP

No impact.

#### 8.3.1.3 COMIF

The COMIF is invoked on the COMIP set by **A** only.

The COMIF service has priority over the COMIP service set by the originating party.

**A** and **B** have subscribed to COMIP. The one to be invoked multimedia information decided as described in 8.3.1.1 Interaction between COMIP and COMIP, i.e. by default the COMIP set by **B** is invoked, the COMIF is not invoked.

If the COMIP to be experienced by **B** is the one set by **A** then the COMIF is invoked.

#### 8.3.1.4 CTMIF

No impact.

### 8.3.2 Interaction with CTMIP

#### 8.3.2.1 COMIP

No impact.

#### 8.3.2.2 CTMIP

If the originating party **A** has configured the CTMIP service according to **B** and terminating party **B** has configured the CTMIP service according to **A**, the operator can choose which multimedia information will be provided to the originating party. By default the originating party's CTMIP has priority over the terminating party's CTMIP (see use case 10).

#### 8.3.2.3 COMIF

No impact.

#### 8.3.2.4 CTMIF

The CTMIF is invoked on the CTMIP set by **B** only (similar to what is described in 8.3.1.3, interaction between COMIP and COMIF).

The CTMIF service has priority over the CTMIP service set by the terminating party.

**A** and **B** have subscribed to CTMIP. The one to be invoked multimedia information decided as described in 8.3.1.1, i.e. by default the CTMIP set by **A** is invoked, the CTMIF is invoked on the CTMIP set by **B** only. If the CTMIP to be experienced by **A** is the one set by **A** himself then the CTMIF is not invoked.

### 8.3.3 Interaction with COMIF

#### 8.3.3.1 COMIP

The COMIF is invoked on the COMIP set by **A** only.

The COMIF service has priority over the COMIP service set by the originating party (see 8.3.1.3).

**A** and **B** have subscribed to COMIP. The one to be invoked multimedia information decided as described in 8.3.1.1, i.e. Interaction between COMIP and COMIP, by default the COMIP set by **B** is invoked, the COMIF is invoked.

If the COMIP to be experienced by **B** is the one set **A** then the COMIF is invoked.

#### 8.3.3.2 CTMIP

No impact

#### 8.3.3.3 COMIF

Not applicable.

#### 8.3.3.4 CTMIF

No impact.

### 8.3.4 Interaction with CTMIF

#### 8.3.4.1 COMIP

No impact

#### 8.3.4.2 CTMIP

The CTMIF is invoked on the CTMIP set by **B** only (similar to what is described in 8.3.1.3, interaction between COMIP and COMIF).

The CTMIF service has priority over the CTMIP selected from the terminating party (see 8.3.2.4).

**A** and **B** have subscribed to CTMIP. The one to be invoked multimedia information decided as described in 8.3.1.1, i.e. by default the CTMIP set by **A** is invoked, the CTMIF is invoked on the CTMIP set by **B** only. If the CTMIP to be experienced by **A** is the one set by **A** himself then the CTMIF is not invoked.

#### 8.3.4.3 COMIF

No impact.

#### 8.3.4.4 CTMIF

Not applicable.

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## 9 Interworking considerations

### 9.1 Interworking with existing PSTN/ISDN networks

An NGN should support the interoperability of the COMIP/CTMIP and COMIF/CTMIF services with PSTN/ISDN services and vice-versa. This includes interworking PSTN/ISDN supplementary services with the services defined in the present document and vice-versa. The scope of this interworking may result in a limited service capability.

#### 9.1.1 Service interactions with PSTN/ISDN services

##### 9.1.1.1 COMIP

###### 9.1.1.1.1 CLIP

See interaction between COMIP and OIP.

No impact. The CLIP service is performed independently of the COMIP, the COMIP will use the information provided by CLIP.

###### 9.1.1.1.2 CLIR

See interaction between COMIP and OIR.

**A** (PSTN/ISDN) calls **B** (NGN). **B** has subscribed to the COMIP and **A** has activated the CLIR.

The CLIR service takes priority over the COMIP service subscribed by the terminating party **B**. In this case it means that if the CLIR is invoked, then the COMIP is not invoked.

**A** has activated the CLIR service. If **B** has a COMIP associated to **A**, it will not be invoked, except if **B** has the override category.

The COMIP service subscribed by the terminating party **B** can take precedence over the CLIR service when the terminating party has an override category, such as the police, for which the CLIR is not applied. They have to know what is exactly the originating party connected.

#### 9.1.1.1.3 CDIV

See interaction between COMIP and CDIV.

#### 9.1.1.2 CTMIP

##### 9.1.1.2.1 CLIR

See interaction between CTMIP and OIR.

The CLIR service takes precedence over the CTMIP service subscribed by the originating party **A** or by the terminating party **B**.

**A** has activated the CLIR service. If **B** has a CTMIP:

- associated to **A**, it will not be invoked.
- by default (without rule according to the originating party, see use case 6), no impact.

##### 9.1.1.2.2 COLP

See interaction between CTMIP and TIP.

The CTMIP completes and uses the COLP service.

##### 9.1.1.2.3 COLR

See interaction between CTMIP and TIR.

**A** (NGN) calls **B** (PSDN/ISDN). **A** has subscribed to the CTMIP and **B** has activated the COLP.

If **A** has a CTMIP associated to **B**, it will not be invoked, except if **A** has the override category.

The CTMIP service can take precedence over the COLR service when the originating user has an override category, such as the police, for which the COLR is not applied. They have to know what is exactly the terminating party connected.

If **A** has a CTMIP by default (without rule according to the originating party, see use case 6), no impact.

##### 9.1.1.2.4 CDIV

See interaction between CTMIP and CDIV.

#### 9.1.1.3 COMIF

##### 9.1.1.3.1 CLIR

See interaction between COMIP and OIR.

No impact.

**A** (PSDN/ISDN) calls **B** (NGN). **B** has subscribed to the COMIF and **A** has activated the CLIR

Since CLIR has priority over COMIP, the COMIF is not performed since there is no multimedia information sent from the originating party to the terminating party.

#### 9.1.1.3.2 CDIV

See interaction between COMIF and CDIV.

#### 9.1.1.4 CTMIF

##### 9.1.1.4.1 CDIV

See interaction between CTMIP and CDIV.

## 9.2 Interworking with other IMS

An NGN should support the interoperability of the COMIP/CTMIP and COMIF/CTMIF services defined in the present document with other NGN if the services are supported by both NGN.

## 9.3 Interworking with PSTN/ISDN emulation services

An NGN shall support the interoperability of the multimedia telephony with PSTN/ISDN Simulation Services with the services provided by the NGN PSTN/ISDN Emulation subsystems where both are deployed. The scope of this interworking may result in the same limited service capability as interworking with an existing PSTN/ISDN network.

For service interactions, see 9.1 Interworking with existing PSTN/ISDN networks

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# 10 Security

## 10.1 Privacy of information

### 10.1.1 Access to multimedia information

Confidentiality and integrity of the COMIP/CTMIP shall be provided for the duration of the communication session establishment and the session itself.

The originating party should be able to decide who is authorized to access the COMIP.

The terminating party should be able to decide who is authorized to access the CTMIP.

### 10.1.2 Limit the content of the multimedia information

The Service may provide the receiving party with means to control and limit the content of the multimedia presentation.

The receiving party may wish to prevent presentation of e.g. obscene or offending content.

For more clarification on unsolicited communication, see ETSI DTR 187 025: "Feasibility study of prevention of unsolicited communication in the NGN".

### 10.1.3 Authentication of the multimedia information

Data origin authentication of the COMIP shall be provided.

The authenticity of the COMIP shall be ensured from the beginning of the connection establishment until connection release.

## Annex A (informative): Interactions between pairs of COMIP/CTMIP/COMIF/CTMIF services and PSTN/ISDN simulation

Table A.1 summarizes the service interactions between pairs of COMIP/CTMIP/COMIF/CTMIF services, as identified in clause 8.

Each case of the table represents the scenario where services on the horizontal row heading are invoked when services on the vertical column heading are already active.

The case is filled with one of three possible options: character "Y" indicates interaction has been identified between the corresponding service pair and described in the present document, character "N" indicates no interaction has been identified and no information is provided in the present document, grey colour filling is for scenarios which are not applicable.

**Table A.1: Identified service interactions between pairs of  
COMIP/CTMIP/COMIF/CTMIF services and PSTN/ISDN simulation services**

	COMIP	CTMIP	COMIF	CTMIF
OIP	N	N	N	N
OIR	Y	Y	N	N
TIP	N	Y	N	N
TIR	N	Y	N	N
MCID	N	N	N	N
ACR	N	N	Y	N
CDIV	Y	Y	Y	Y
CW	Y	N	N	N
HOLD	N	N	N	N
CB	N	N	Y	Y
CCBS	N	N	N	N
MWI	N	N	N	N
CONF	N	N	N	N
AOC	N	N	N	N
ECT	N	Y	N	N
Reverse charging	N	N	N	N
COMIP	Y	N	Y	N
CTMIP	N	Y	N	Y
COMIF	Y	N		N
CTMIF	N	Y	N	

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## Annex B (informative): Bibliography

- OMA-RD-Identity-Management-Framework-V1-0-20050107-D: "Identity Management Framework Requirements".
- OMA-RD-PoC-V1-0-20060609-A: "Push to Talk over Cellular Requirements" - Approved Version.0 - 09 Jun 2006.
- OMA-WID WI proposal 0142: "Customized Multimedia Alerting over IMS" V1.0 2006-08-14.
- OMA-WID WI proposal 0143: "Customized Multimedia Ringing" V1.0 2006-10-11.
- ETSI DTR 187 025: "Feasibility study of prevention of unsolicited communication in the NGN".



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## History

<b>Document history</b>		
V2.0.1	August 2007	Publication