

3GPP2 S.R0012

Version 1.0.0

Version Date: December 13, 1999



3RD GENERATION
PARTNERSHIP
PROJECT 2
"3GPP2"

Rejection of Undesired Annoying Calls (Stage 1)

Revision: 0

COPYRIGHT

3GPP2 and its Organizational Partners claim copyright in this document and individual Organizational Partners may copyright and issue documents or standards publications in individual Organizational Partner's name based on this document. Requests for reproduction of this document should be directed to the 3GPP2 Secretariat at secretariat@3gpp2.org. Requests to reproduce individual Organizational Partner's documents should be directed to that Organizational Partner. See www.3gpp2.org for more information.

Revision History

Revision		Date
Rev. 0	Initial Publication	December 1999

Note

This specification is an extract of TIA TR45.2 PN-4289.2, November 1999.

CONTENTS

CONTENTS.....	3
1 Introduction.....	4
1.1 Objective.....	4
1.2 Scope.....	4
1.3 Organization.....	4
2 References.....	4
2.1 Normative References.....	4
2.2 Informative References.....	4
3 Definitions and Concepts.....	5
3.1 Definitions.....	5
5.C Rejection of Undesired Annoying Calls (RUAC).....	7
5.C.1 Normal Procedures With Successful Outcome.....	7
5.C.2 Exception Procedures or Unsuccessful Outcome.....	9
5.C.3 Alternate Procedures.....	10
5.C.4 Interactions With Other Wireless Services.....	10

1 Introduction

1.1 Objective

This specification presents Stage-1 for supporting the Rejection of Undesired Annoying Calls feature for use in the Wireless Radiotelephone Service.

1.2 Scope

This document specifies the wireless intersystem network operation enhancements required for supporting roaming subscribers with the Rejection of Undesired Annoying Calls (RUAC) feature.

1.3 Organization

This document is organized as per TIA/EIA-41-D and TIA/EIA-664-A.

2 References

2.1 Normative References

(TIA/EIA-664, Page 2)

[I.251.7] *Recommendation I.251.7, Integrated Services Digital Network (ISDN) General Structure and Service Capabilities, Malicious Call Identification*; International Telecommunication Union.

[T1.667] *ANSI T1.667-1997, American National Standard for Telecommunications – Intelligent Network*; American National Standards Institute, Inc.; 1997.

2.2 Informative References

(TIA/EIA-664, Page 3)

[TTC1] *TTC II-1 JT-I251, ISDN User-Network Interface*; Telecommunications Technology Committee; 1994.

3 Definitions and Concepts

3.1 Definitions

(TIA/EIA-664, Page 4)

AOC Advice Of Charging

See 5.D

CAC Carrier Access Code

See Carrier Access Code.

Carrier (Commercial Telecommunications)

The organization whose function is to provide the particular service, e.g., an agent of a private network/facility, intra-serving area, or a specific inter-exchange carrier or international carrier (Refer to T1.667).

Carrier Access Code (CAC)

A code used to select a carrier (Refer to T1.667).

Carrier Identification Code (CIC)

A code that identifies a carrier (Refer to T1.667).

CIC Carrier Identification Code

See Carrier Identification Code.

FPH Freephone

See 5.B

PRC Premium Rate Charging

See 5.A

Rejection Treatment

A call to a subscriber who rejects the call shall be indicated to the calling party with an announcement stating that the call has been rejected¹.

¹To encourage the caller to stop making annoying calls to the subscriber, the caller may be charged for the rejected call.

RUAC Rejection of Undesired Annoying Calls

See 5.C

5.C Rejection of Undesired Annoying Calls (RUAC)

(New for TIA/EIA-664 Section 5)

Rejection of Undesired Annoying Calls (RUAC) is a call screening service that allows a subscriber to reject calls from parties whose Calling Party Numbers (CPNs) are in a Undesired Annoying Calls (UAC) screening list. Calls from CPNs in the UAC screening list are given call rejection treatment while RUAC is active, even if presentation of the calling party's CPN to the called party is restricted (CNIR). The called subscriber does not receive notification of a rejected call.

The UAC screening list is a set of CPNs that are not permitted to terminate to the called subscriber. The subscriber can:

- add a specific CPN to the list,
- add the “last calling party” CPN to the list,
- delete a specific CPN from the list,
- delete the most recent CPN added to the list,
- delete all the entries in the list.

RUAC does not impact a subscriber's ability to originate calls.

Applicability to Telecommunications Services

RUAC is applicable to voice telecommunications services.

5.C.1 Normal Procedures With Successful Outcome

Authorization

RUAC may be generally available or may be provided after pre-arrangement with the service provider.

De-Authorization

RUAC may be withdrawn at the subscriber's request or for administrative reasons.

Registration

RUAC Specified Rejection Number Registration

To register a CPN or add a CPN to the UAC screening list, a subscriber enters the RUAC number registration feature code and a CPN , as in:

FC + calling party number + .

If the registration is accepted, the system shall indicate success with feature confirmation treatment.

RUAC “Last Calling Party” UAC Number Registration

To register the CPN of the last incoming call (including calling party numbers restricted from presentation) to the UAC screening list, an authorized RUAC subscriber enters the RUAC registration feature code and the “last calling party” Modifier Digit “9,” as in:

FC + 9 + .

The subscriber registers the calling party CPN immediately after the call from the “last calling party” is released, and the MS is in the idle state.

If the registration is accepted, the system shall indicate success with feature confirmation treatment.

De-Registration

RUAC screening list numbers shall be de-registered upon de-authorization.

RUAC Specified Screening Number De-Registration

To de-register a CPN or delete a particular CPN from the UAC screening list, a subscriber enters the RUAC de-registration feature code and the CPN to be affected, as in:

FC0 + calling party number + .

If the de-registration is accepted, the system shall indicate success with feature confirmation treatment.

RUAC Most Recent Screening Number De-Registration

To de-register the most recent CPN added to the UAC screening list, a subscriber enters the RUAC de-registration feature code and the Modifier Digit “9,” as in:

FC0 + 9 + .

If the de-registration is accepted, the system shall indicate success with feature confirmation treatment.

RUAC All Screening Numbers De-Registration

To de-register all numbers from the UAC screening list, a subscriber enters the RUAC de-registration feature code and the Modifier Digits “99,” as in:

FC0 + 99 + .

If the de-registration is accepted, the system shall indicate success with feature confirmation treatment.

Activation

RUAC is activated upon authorization.

De-Activation

RUAC is de-activated upon de-authorization.

Invocation

When RUAC is active, RUAC is invoked for incoming calls, including calls arriving through the Roamer Port.

Normal Operation With Successful Outcome

When RUAC is invoked, the CPN of the incoming call is checked against the UAC screening list. If there is a match, the call is rejected and the call is given an rejection treatment. The called subscriber is not notified of a rejected call.

Call Detail Record

The system should record call detail information for the following:

- a. RUAC registration activities and events.
- b. RUAC de-registration activities and events.
- c. Calls rejected by RUAC.

See *IS-124* for the specific information to be included for each element.

5.C.2 Exception Procedures or Unsuccessful Outcome

Registration

The network provides notification of registration failure to an authorized subscriber who requested registration. However, the network does not guarantee message delivery without errors at the received terminal as it depends on radio environment.

De-Registration

If the subscriber is not authorized for the request, the system shall apply feature denial treatment when de-registration is attempted.

Activation

None identified.

De-Activation

None identified.

Invocation

None identified.

Exceptions While Roaming

None identified.

Exceptions During Intersystem Handoff

None identified.

5.C.3 Alternate Procedures

None identified.

5.C.4 Interactions With Other Wireless Services

Advice Of Charging (AOC)

None identified.

Asynchronous Data Service (ADS)

None identified.

Call Delivery (CD)

RUAC is invoked prior to CD. If an incoming call arrives for a subscriber with RUAC and CD active, the call is screened by RUAC first. If RUAC accepts the call, CD is attempted. If RUAC blocks the call, the call is given RUAC refusal treatment.

Call Forwarding—Busy (CFB)

RUAC is invoked prior to CFB. If an incoming call arrives for a subscriber with RUAC and CFB active, the call is screened by RUAC first. If RUAC accepts the call, an attempt is made to deliver, or terminate the call to the subscriber. If the subscriber is busy, then CFB is invoked.

Call Forwarding—Default (CFD)

RUAC is invoked prior to CFD. If an incoming call arrives for a subscriber with RUAC and CFD active, the call is screened by RUAC first. If RUAC accepts the call, an attempt is made to deliver, or terminate the call to the subscriber. If the subscriber does not or cannot answer the call, then CFD is invoked.

Call Forwarding—No Answer (CFNA)

RUAC is invoked prior to CFNA. If an incoming call arrives for a subscriber with RUAC and CFNA active, the call is screened by RUAC first. If RUAC accepts the call, an attempt is made to deliver, or terminate the call to the subscriber. If the subscriber does not or cannot answer the call, then CFNA is invoked.

Call Forwarding—Unconditional (CFU)

RUAC is invoked prior to CFU. If an incoming call arrives for a subscriber with RUAC and CFU active, the call is screened by RUAC first. If RUAC accepts the call, the call is redirected by CFU.

Call Transfer (CT)

None identified.

Call Waiting (CW)

RUAC is invoked prior to CW. Incoming calls to the subscriber with RUAC and CW active shall be screened by the RUAC feature before being considered for CW.

Calling Name Presentation (CNAP)

None identified.

Calling Name Restriction (CNAR)

None identified.

Calling Number Identification Presentation (CNIP)

None identified.

Calling Number Identification Restriction (CNIR)

If the calling number indicates *presentation restricted*, the calling number shall not be presented to the called subscriber. Such a calling number may be stored into an RUAC screening list by the subscriber using the “last calling party” number feature, but the number shall not be presented to the subscriber or the subscriber station even when reviewing the list.

Conference Calling (CC)

None identified.

Do Not Disturb (DND)

RUAC is invoked prior to DND. That is, incoming calls shall check for RUAC first. If the CNI is on the RUAC list, the call is given RUAC refusal treatment. If the CNI is not on the RUAC list, the call is given DND refusal treatment.

Emergency Services (9-1-1)

Emergency Services takes precedence over RUAC. A call from an authorized emergency service bureau should not be refused by RUAC. The RUAC subscriber should not be able to add an emergency service bureau directory number to the UAC screening list.

Flexible Alerting (FA)

Interaction between FA and RUAC is beyond the scope of this Specification. The following describes a possible implementation:

RUAC of the FA Pilot Directory Number is invoked prior to FA. That is, calls to the FA Pilot Directory Number with RUAC active are checked for the CPN on the RUAC

screening list first. If the CPN is on the RUAC screening, the call is refused. If the CPN is not on the RUAC screening list, the call is given FA treatment.

RUAC may apply for individual FA members for calls to the FA Pilot Directory Number. FA calls destined to a particular FA member may, after screening against the FA Pilot Directory Number, be screened against an RUAC member's screening list to prevent the unintended delivery of a call to a member. If the second screening blocks the call, the member should be considered inaccessible and the call should be attempted to be delivered to another member. The screening of all the members pertaining to an FA group shall be done so that all members are alerted at nearly the same time.

Freephone (FPH)

None identified.

Group 3 Facsimile (G3 Fax)

None identified.

Incoming Call Screening (ICS)

RUAC is invoked prior to ICS. If an incoming call arrives for a subscriber with RUAC and ICS active, the call is screened and treated by RUAC first. ICS is attempted after RUAC accepts the call.

Message Waiting Notification (MWN)

None identified.

Mobile Access Hunting (MAH)

Interaction between MAH and RUAC is beyond the scope of this Specification. The following describes a possible implementation:

RUAC of the MAH Pilot Directory Number is invoked prior to MAH. That is, calls to the MAH Pilot Directory Number with RUAC active are checked for the CNI on the UAC screening list first. If the CNI is in the UAC screening list, the call is refused. If the CNI is not on the UAC screening list, the call is given MAH treatment.

RUAC may apply for individual MAH members for calls to the MAH Pilot Directory Number. MAH calls destined to a particular MAH member may, after screening against the MAH Pilot Directory Number, be screened against an RUAC member's UAC screening list to prevent the unintended delivery of a call to a member. If the second screening fails, the member should be considered inaccessible and the call should be attempted to be delivered to another member.

Network Directed System Selection (NDSS)

None identified.

Non-Public Mode Service (NP)

None identified.

Over-the-Air Service Provisioning (OTASP)

None identified.

Password Call Acceptance (PCA)

RUAC is invoked prior to PCA. If an incoming call arrives for a subscriber with RUAC and PCA active, the call is screened and treated by RUAC first. PCA is attempted after RUAC accepts the call.

Preferred Language (PL)

None identified.

Premium Rate Charging (PRC)

None identified.

Pre-Paid Charging (PPC)

Interaction between PPC and RUAC is beyond the scope of this Specification. The following describes a possible implementation:

PPC is invoked prior to RUAC. If the PPC subscriber's account balance allows call terminations, then RUAC is invoked. If the PPC subscriber's account balance does not allow call terminations, the calling party is given subscriber inaccessible treatment.

Priority Access and Channel Assignment (PACA)

None identified.

Rejection of Undesired Annoying Calls (RUAC)

Not applicable.

Remote Feature Control (RFC)

None identified.

Selective Call Acceptance (SCA)

RUAC is invoked prior to SCA. If an incoming call arrives for a subscriber with RUAC and SCA active, the call is screened by RUAC first. SCA is attempted after RUAC accepts the call.

Service Negotiation (SN)

None identified.

Short Message Services (SMS)

None identified.

Subscriber Confidentiality (SC)

None identified.

Subscriber PIN Access (SPINA)

None identified.

Subscriber PIN Intercept (SPINI)

None identified.

Three-Way Calling (3WC)

None identified.

User Group ID (UGID)

Interaction between UGID and RUAC is beyond the scope of this specification.

Voice-based User Identification (VUI)

None identified.

Voice Controlled Dialing (VCD)

None identified.

Voice Controlled Feature Control (VCFC)

None identified.

Voice Message Retrieval (VMR)

None identified.

Voice Privacy (VP)

None identified.