



STI 2

Edition 5 / March 2004

Interface Technical Specifications *for France Telecom's network*

As required by Directive 1999/5/EC

Supplementary Services accessible from analogue lines

Summary: This document describes supplementary services accessible from France Télécom's network simple analogue lines.

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1. timer values are indicative and can be subject to modification,
2. due to various technical constraints, some services or service options may not be available on some interfaces,
3. the fact that a service not yet commercially open is described in this document can in no case be considered as a binding commitment on France Telecom part to actually open this service.

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1. INTRODUCTION

This document describes supplementary services accessible from France Télécom's network simple analogue lines. Line groupings are not taken into account.

Supplementary services accessible from analogue lines

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It consist of 3 parts:

- explanation of supplementary services implementation general principles (clause 2),
- supplementary services description (clause 3),
- compatibility between supplementary services (clause 4),

and an annex:

- table summarising service controls.

The following supplementary services are described:

Technical name	Commercial name
Malicious call barring (*)	
Call forwarding unconditional	Transfer d'appel (<i>Call Transfer</i>)
Three party call	Conversation à trois (<i>Three party conversation</i>)
Completion of calls to busy subscriber	AutoRappel (<i>Auto recall</i>)
Call waiting	Signal d'appel (<i>Call signal</i>)
Last caller call back (vocal)	Le 3131
Restricted Service user controlled	Accès sélectif modulable (<i>Modulable selective access</i>)
Privacy Code Modification by the user	
Calling Line Identification at call set-up time	Présentation du numéro® (<i>Calling number presentation</i>)
Calling Line Identification on call waiting	
Calling Line Identification restriction	Secret Permanent (<i>Permanent secret</i>), Secret appel par appel (<i>Call by call secret</i>)
Caller's Name Presentation	Name presentation (<i>Présentation du nom</i>)
Caller's Name Presentation Restriction	Secret Permanent, Secret Appel par Appel
Message information, deffered or instant	
Automatic wake up	Mémo call (<i>Call memo</i>)

Tones referred to in this document are defined in specification [1].

2. SUPPLEMENTARY SERVICES IMPLEMENTATION GENERAL PRINCIPLES

2.1 SUPPLEMENTARY SERVICES ACCESSIBILITY

Supplementary services may be provided on subscription (e.g. Call waiting service), or systematically (e.g. Last caller recall service).

Some supplementary services, taking into account the necessary procedures, are only accessible to lines provided with vocal frequency keyboard telephone sets, allowing for * and # signals transmission.

2.2 FONCTIONS ASSOCIATED TO SUPPLEMENTARY SERVICES

For some supplementary services the following managing functions are provided:

- activation and deactivation of service,
- registration, erasure, and data interrogation.

For some services, all or part of these functions is implicit or non-existing.

2.3 DEFINITIONS OF ASSOCIATED FUNCTIONS

2.3.1 ACTIVATION

Activation of service marks the moment in time from which a service, granted to the subscriber, becomes usable.

2.3.1.1 When is activation possible?

It is necessary that a subscriber may, as necessary, activate a service:

- in numbering phase: common case (e.g. following a typical *xy... procedure),
- after determination of the calling line status (e.g. after occupation in the case of a service of the Call completion busy subscriber type),
- in conversation phase.

2.3.1.2 Usable signals

Usable signals for operations mentioned above (ref. § 2.3.1.1) are, respectively, the following:

- numbering signals,
- calling back signal on activation of the " R " key of the telephone set.

2.3.1.3 Acknowledgement

The subscriber is kept informed of the follow up of his request:

- by a positive acknowledgement in case of acceptance,
- by a negative acknowledgement in case of refusal.

An acknowledgement may be a tone or a record.

2.3.1.4 Early hang up

If the subscriber hangs up before reception of an acknowledgement, his activation request shall be considered as cancelled. However, if hang-up happens when his activation request has been taken into account and before the acknowledgement is received, the cancellation cannot be achieved.

2.3.2 DEACTIVATION

Service deactivation is, for the subscriber to which it was granted, the end of the possibility of using this service.

2.3.3 REGISTRATION, ERASURE, AND DATA INTERROGATION

Implementation of supplementary services may imply storing of data that can be modified, either by the operator, by the subscriber, or by the local exchange.

2.3.3.1 Registration

Data registration is the order given to the local exchange to memorise information necessary to service use.

2.3.3.2 Erasure

Data erasure is the order given to the local exchange to erase the information memorised during registration.

2.3.3.3 Interrogation

Interrogation about data is the operation allowing a subscriber to know if previously registered data are valid or not.

Interrogation may also relate to the activation status of a service, and so doing, allows the subscriber to know if this service is or not activated.

2.3.4 SERVICE INVOCATION

The use of a service, or invocation, is the achievement by the local exchange of the typical operations of this service, according to the requests of the subscriber or operator, and to the recorded data.

The use of a service may be subject to charges.

2.4 SUPPLEMENTARY SERVICES CONTROL MESSAGES

Note: This subclause refers only to DTMF controls dealt with by local exchanges. It does not refer to specific controls achieved by vocal or videotext servers.

When the service implementation implies control provision by the subscriber, the following principles apply.

2.4.1 CONTROL MESSAGES GÉNÉRAL FORMAT

The general format of control messages for services is as below:

prefix	SC	*	1st bloc	*	2nd bloc	#
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where in turn:

prefix	has a functional signification according to the prefix scheme (ref. to § 2.4.4),
SC	the Service Code indicates the designated service,
*	indicates the character used as information blocs separator,
1^{er} bloc	indicates a first information (or data) bloc,
2^{ème} bloc	indicates, as necessary, a second information (or data) bloc,
#	is the mandatory character, used as a suffix, or end of message signal.

2.4.2 SIMPLIFIED MESSAGE

In case there is no need to include an information bloc in the control message, the control message is simplified according to the following format:

prefix SC #

2.4.3 TAKING INTO ACCOUNT CONTROL AND ACKNOWLEDGMENT MESSAGES

If the message sent by the subscriber is correct and the requested service can be provided, as soon as the prefix is received, the local exchange achieves the operations corresponding to the accepted request, then sends the positive acknowledgement. If the message sent by the subscriber is incorrect or if the requested service cannot be provided, as soon as the local exchange acknowledges this situation, it sends the negative acknowledgement.

The positive acknowledgement (accepted move) consist in a record sending. This record may, in some occasions, be replaced by the standard numbering tone.

The negative acknowledgement (refused move) consists in sending a different record following the cause of the failure. This record may, in some case, be replaced by the busy tone.

These tones or records are sent during at least 15 s.

2.4.4 PREFIXES

The principle of use of the prefixes is as follows:

Prefix	Function
*	service activation or storage of registered data
#	service deactivation or stored data erasure
* #	interrogation on the state of a service or stored data

2.4.5 ACTIVATION TYPES

Some services are normally activated by the subscriber and control procedures are defined for that purpose. Some other services are automatically activated within the local exchange when granted by the operator (e.g. Three party call service).

2.5 SERVICE CONTROL

It is to be noted, below in this document:

DC	Line pick-up by the user
IN	Numbering Invitation
ACR	Acknowledgement
RC	subscriber hang-up
R	recall key (R key)
ND	subscriber designation number

3. SUPPLEMENTARY SERVICES

3.1 MALICIOUS CALL IDENTIFICATION

Trade name: **Call Barring** (*Blocage d'appel*)

3.1.1 DEFINITION

Malicious call identification (MCI) aims at being an answer to malicious calls victims.

It allows tracing malicious calls and includes two options:

- Barring of Secret Calls (BSC) allowing for secret calls filtering,
- Marking of Malicious Calls through keying **R** (BAR) that allows the user to filter some incoming calls.

3.1.2 DESCRIPTION

3.1.2.1 General description

This service allows tracing of malicious calls and includes two usage options activable and deactivable independently on demand by the subscriber, and allowing to filter some calls before they reach him:

- Call barring with secret (BAS) option allows filtering calls with secret. This option enables the subscriber to keep away from calls for which privacy of the number was invoked (permanent or call by call secret), except for those coming from clearly subscriber-identified lines, whose number is listed on a "white list".
- Malicious call barring option made by the use of the **R** key on the terminal allows the subscriber constituting a black list of numbers, and so, filtering calls emanating from the black list numbers. The content of this list is not to be seen by the subscriber.

For BAS option, international calls are filtered if secrecy was invoked.

For BAR option, an international number cannot be added to the black list.

3.1.2.2 Specific terminology

BAM: Malicious call barring.

BAS: Secret calls barring

BAR: Malicious call barring marked with **R** keying.

3.1.3 PROCEDURES

Note: management controls (activation, white list management, etc.) for this service are vocal or videotext mode controls, supported by servers accessible via telephone calls.

3.1.3.1 Provision and withdrawal

Service provision is a subscription option.

As soon as implemented, the subscription enables the user:

- to install in the black list calls he considers malicious, keying **R**,
- to activate if necessary (then deactivate or reactivate as wanted) usage option BAR, offering the possibility to mark particular calls considered malicious in order to filter them when calling again (constitution of a black list),
- to activate if necessary (then deactivate or reactivate as wanted) usage option BAS, offering the possibility of filtering calls with non disclosure of identity, except for those coming from numbers on the white list.

Note 1: The "BAM" service excludes any other service using the "R" key: that are "Three party call" and "Call waiting" services.

Note 2: On subscription of the BAM service, the BAS option is non-active and BAR option is active.

The service shall be withdrawn on subscriber's request.

3.1.3.2 Activation

BAR and BAS options are activated via a dialogue accessible through 3175 in vocal mode, and through 08 36 05 31 75 in Videotext mode.

3.1.3.3 Deactivation

BAR and BAS options are deactivated via a dialogue accessible dialling 3175 in vocal mode, and 08 36 05 31 75 in Videotext mode.

3.1.3.4 Registration

Registration of a number in the white list is achieved via a dialogue accessible dialling 3175 in vocal mode, and dialling 08 36 05 31 75 in Videotext mode.

Registration of a number in the black list is achieved via an implicit control ("R" key) which provides for registration of the calling number of the current call.

3.1.3.5 Erasure

Erasure of a white list number is achieved via a dialogue accessible dialling 3175 in vocal mode, and dialling 08 36 05 31 75 in Videotext mode.

Erasure of a black list number is achieved via a dialogue accessible dialling 3175 in vocal mode, and dialling 08 36 05 31 75 in Videotext mode.

Consultation of the black list numbers is not possible. The black list numbers erasure controls allow:

- erasure of the last registered number on the list,
- erasure of all the registered numbers on the list,
- erasure of the numbers registered on a given date on the list,

- erasure of a given number on the list (given by the subscriber).

3.1.3.6 Interrogation

Listing the white list numbers is achieved via a dialogue accessible dialling 3175 in vocal mode, and dialling 08 36 05 31 75 in Videotext mode.

3.1.3.7 Invocation and implementation

During an incoming call, if the served subscriber operates the "R" key on his terminal, the exchange registers the following information:

- called party directory number,
- hour and minutes of operating the recall key,
- calling party number if available. This number is then registered in the black list of the served subscriber (marked by means of the called party number).

On an incoming call with non-disclosure of the calling number:

a) If the BAS option is active:

- if the calling number is not part of the white list, the call is not presented to the BAM subscriber;
- if the calling number is part of the white list, the call is presented to the BAM subscriber.

b) If the BAS option is not active and if the BAR option is active:

- if the calling number is not part of the black list, the call is not presented to the BAM subscriber;
- if the calling number is part of the black list, the call is presented to the BAM subscriber.

c) If BAS and BAR options are not active, the call is presented to the BAM subscriber.

On calling party hang up, the call is liberated and the called subscriber receives the false call tone. However, if he has not operated the recall key during the call, he keeps the possibility to do so during the whole duration of the false call tone, in which case the previous information is edited. At expiration of the time allowed, or if the called party hangs up, the information may be erased and operation of the recall key is ineffective.

3.2 CALL FORWARDING UNCONDITIONAL

Trade name: Call Transfer

3.2.1 DEFINITION

A call from subscriber **A** to a subscriber **B** who has activated the Call forwarding unconditional service, is automatically re-routed by the local exchange of **B** to another subscriber **C**.

3.2.2 DESCRIPTION

3.2.2.1 General description

When a customer subscribes to this Call forwarding service, the service is not activated. It will be activated when the subscriber invokes it by means of the activation procedure described below.

Activation of call forwarding does not modify the conditions of use of the line for outgoing calls by subscriber **B**.

For his outgoing calls, as subscriber **B** picks up the receiver, he receives a special numbering tone (reminder tone).

3.2.2.2 Specific terminology

Subscriber A: calling subscriber for this call.

Subscriber B: subscriber of the Call forwarding unconditional service.

Subscriber C: forwarded-to subscriber (to which the call is forwarded).

ND: Destination number of the forwarded call (number of subscriber **C**).

3.2.3 PROCEDURES

3.2.3.1 Provision - Withdrawal

The service is provided to subscriber **B** on subscription.

The service shall be withdrawn on subscriber **B** request.

3.2.3.2 Activation

For subscriber **B** this request consists of registering in the network the transfer destination number and activating the service. This number is provided by subscriber **B** as for an outgoing call to the transfer destination:

DC IN *21*ND# ACR RC

When the request is accepted, the network indicates it:

- either by means of the standard numbering tone,
- or by means of a recorded message.

When the request is not accepted, the network indicates it:

- either by means of the busy tone,
- or by means of a recorded failure message.

Subscriber **B** may modify the forwarded-to number. To do that, B goes through the activation procedure again, with the new number.

3.2.3.3 Deactivation

Unconditional forwarding may be deactivated by subscriber **B** according to the procedure below:

DC IN #21# ACR RC

When the request is accepted, the network indicates it:

- either by means of the standard numbering tone,
- or by means of a recorded message.

When the request is not accepted, the network indicates it:

- either by means of the busy tone,
- or by means of a recorded failure message.

3.2.3.4 Registration

Ref. "Activation".

3.2.3.5 Erasure

Ref. "Deactivation".

3.2.3.6 Interrogation

It is in fact a checking command: it enables subscriber **B** to request the local exchange to check if transfer to number ND is activated:

DC IN *#21*ND# ACR RC

The network indicates that service is activated or deactivated in the following way:

- if there is an activated unconditional forwarding towards ND: standard numbering tone or recorded message up to the local exchange,
- if there is no activated unconditional forwarding towards ND (deactivated service or service activated towards another destination): busy tone.

3.2.3.7 Invocation and implementation

When subscriber **A** calls subscriber **B** who forwarded his calls to subscriber **C**, whatever the status of **B**, free or busy, the call is established between **A** and **C**.

In case of cascade forwarding barring, as it is the case currently, a call cannot be forwarded more than once. If **B** has requested forwarding to **C**, the latter may himself have activated a transfer to **D**, but any call to **B** leads to **C**.

3.3 THREE PARTY CALL

Trade name : Conversation à trois

3.3.1 DEFINITION

A subscriber engaged in a call with another party might call a third party from his terminal, and establish a Three party call.

3.3.2 DESCRIPTION

3.3.2.1 General description

Subscriber **A** engaged in a call with subscriber **B** (incoming call or outgoing call), wishes to establish a Three party call between subscribers **A**, **B** and **C**. For this purpose, he operates the recall key, and composes subscriber **C** number; on **C** answering, the communication **A-C** is established. The double call situation is thus established. **A** may then come back to **B**, or establish a Three party call. Detail of these procedures is given below.

3.3.2.2 Specific terminology

Subscriber A: subscriber who benefits from the Three party call service.

Subscriber B: first correspondent of **A** in the Three party call (correspondent of the initial simple call).

Subscriber C: second correspondent of **A** in the Three party call (correspondent called by **A** after call to **B** is in put in call hold state).

Double call: configuration where served subscriber **A** is engaged in two calls at the same time, one in active call state and the other in call hold state.

3.3.3 PROCEDURES

3.3.3.1 Provision - Withdrawal

The service is provided to subscriber **A** on subscription.

The service shall be withdrawn on subscriber's request.

3.3.3.2 Activation

Not applicable.

3.3.3.3 Deactivation

Not applicable.

3.3.3.4 Registration

Not applicable.

3.3.3.5 Erasure

Not applicable.

3.3.3.6 Interrogation

Not applicable.

3.3.3.7 Invocation and implementation

Call from C: subscriber **A** engaged in a call with subscriber **B** operates his recall key; on reception of the standard numbering tone he dials the number of **C**. Operating the recall key causes call hold state of **B**. While on call hold, **B** receives a record. During the establishment of the call to **C**, subscriber **A** receives normally tones and vocal announcements relating to that call.

If **A** does not dial or dials incompletely, at expiration of a 2 to 10 s timer, **A** is reconnected to **B** if **B** is still in line (re-establishment of the initial simple call **A-B**). If **B** hanged up, **A** receives a false call tone and any following action from **A** except hanging up shall be ignored.

C answering: on **C** answering, the call **A-C** is established. The double call situation is thus established. **A** may then come back to **B**, or establish a Three party call.

If **C** does not answer, or if **C** is not accessible following busy state, congestion, transfer to an answering machine or for any other reason, **A** may come back to **B** by operating the recall key and dialling any 0 to 9 number.

Back to B in case C does not answer: to come back to **B**, **A** operates the recall key, receives the operating tone and dials 1.

The call **A-B** is re-established, call **A-C** is terminated.

If **A** is late in providing a number after operating the recall key, at expiry of the 2 to 10 s timer, the **A-B** call is re-established.

If, after operating his recall key, **A** dials a number different from 1, **A** comes back automatically to subscriber **B**. The call **A-B** is then considered as a normal call.

In any case, if **B** hanged up, **A** receives the false call tone and any further action from **A** except hanging up shall be ignored.

If **A** does not operate the recall key, call **A-C** is treated normally (loop back, tone, busy tone, record...) and normal timing mechanisms operate. **A** keeps however the possibility to operate, in these various cases, the recall key and dials 1 to come back to **B**.

Return to B after C answered: after the answer of **C**, the double call situation is established. **A** may then return to **B** by applying the procedures described below.

Passage to Three party call: to establish a Three party call, when **C** answered, **A** operates the recall key, receives the standard numbering tone, and dials number 3. All three subscribers **A**, **B** and **C** are engaged in the call.

Generally speaking, in a double call state (2 correspondents : one is engaged in the call and the other in call hold state) served subscriber **A** may modify the configuration by means of request typically "R-x" (x being a number 1, 2 or 3):

a) command "R-1" results in the liberation of the call to which **A** was connected and reset of the call with the subscriber on hold. The call maintained is then a simple call;

b) command "R-2" results in a permutation of both correspondents situation: the one communicating with **A** goes on hold and reciprocally, and the one that was on hold moves to communicate with **A**. Therefore, this command is also called "Come and go";

- c) **command "R-3"** results in passing to Three party call position. Then, it is not possible to return to the double call situation;
- d) **dialling a number different from 1, 2 or 3** brings subscriber **A** back to the last correspondent;
- e) **expiry of the 2 to 10 s timer** brings back subscriber **A** to the last correspondent.

3.4 COMPLETION OF CALLS TO BUSY SUBSCRIBER

Trade name: AutoRappel

3.4.1 DEFINITION

Completion of calls to busy subscriber (ROC) service enables a subscriber **A** whose call reaches correspondent **B** busy, to be alerted when this correspondent **B** becomes available to obtain an automatic renewal of the call attempt without redialling.

3.4.2 DESCRIPTION

3.4.2.1 General description

Subscriber **A** calls subscriber **B**, and **B** is found busy: it is the initial call. In this case, if subscriber **A** subscribed to the service and if ROC is possible between both subscribers, the network will send a vocal announcement to subscriber **A** to inform about the busy status of the correspondent and invite **A** to activate the ROC service. It is the only case where the calling party can activate the service.

When subscriber **B** becomes available, the network leaves him a few seconds to initialise an outgoing call. If subscriber **B** does not initialise a call in the meantime, the network calls back subscriber **A**: it is the "ROC recall". If subscriber **A** answer this ROC recall, the network starts automatically a call setting to subscriber **B**: it is the "ROC call".

For a single line, it is necessary to distinguish "right to outgoing ROC" and "incoming ROC barring":

- "right to outgoing ROC" allows the calling subscriber to activate ROC, if this service is possible with his correspondent,
- "incoming ROC barring" allows the called subscriber to forbid ROC invocation by the calling party.

3.4.2.2 Specific terminology

Initial call: Call initiated by **A**, and for which **B** is found busy.

Subscriber A: Subscriber who has the profit of ROC service, having made a call attempt to a busy called party.

Subscriber B: Subscriber called by the initial call.

ROC recall: Procedure designed to signal to **A** the liberation of **B**.

ROC call: call from **A** to **B** established by the network, when **A** has accepted the ROC recall.

Roc recall ringing: specific ringing sent to **A** within the "ROC recall".

ROC active: information memorised in the local exchange of **A** when a ROC activation by subscriber **A** has been accepted.

ROC waiting: information memorised in the local exchange of **B** when a ROC activation by subscriber **B** has been accepted.

ROC inhibited: state of active ROC and of waiting ROC when, following the failure of a "ROC recall" due to **A** busy; for the duration of this inhibition, the ROC recall procedure is suspended.

ROC queue: FIFO file (first in, first out) set up in the incoming local exchange, and in which are memorised the waiting ROCs on a subscriber **B**.

ROC activation delaying timer: it is the time let to subscriber **A** after being informed that ROC is possible, to achieve ROC activation. The value of this timer is between 15 and 30 s; for now, it is fixed at 20 s.

ROC recall timer: it is the maximum time duration during which recall is proposed to subscriber **A** when subscriber **B** becomes available. The value of this timer is between 10 and 20 s; for now, it is fixed at 20 s.

ROC service validity timer: it is the maximum time duration during which a ROC service instance is active in the network: the value of this timer is between 15 and 45 min; for now, it is fixed at 30 min.

Hold timer on B available: it is the time duration between the moment subscriber **B** becomes available and starting the "ROC recall". The value of this timer is between 0 and 15 s; for now, it is fixed at 5 s.

3.4.3 PROCEDURES

3.4.3.1 Provision - Withdrawal

Provision of this service implies granting the outgoing ROC right.

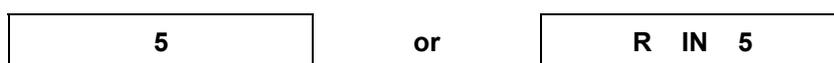
The service shall be withdrawn on subscriber's request.

Note: for a single line, "outgoing ROC right" and "incoming ROC barring" may be granted or not, independently.

3.4.3.2 Activation

When the network encounters subscriber **B** busy, and if service is possible, the network proposes the ROC service to subscriber **A** by means of a musical tone (ref. [1]) followed by a record. The subscriber has then a duration equivalent to "ROC activation delaying timer" to achieve the activation command. If he does not achieve this command within the requested delay or if he hangs up, the command is no more possible.

Subscriber **A** activates the ROC service according to one of the following procedures (according to the type of exchange on which the subscriber is attached):



Subscriber **A** can activate the service as soon as the ROC proposal record has been cast and before expiry of the ROC activation delaying timer.

When the command is accepted, the network casts an acknowledgement record.

A subscriber may have n active ROCs and n' ROCs waiting. Waiting ROCs are memorised in the ROC queue. The values of n and n' are, depending on the exchange between 1 and 5.

A ROC having been activated, subscriber **A** may initiate and receive calls normally.

Subscriber **B** having a ROC waiting, may initiate and receive calls normally.

If the network cannot accept a ROC activation by subscriber **A**, the network informs A by means of a negative acknowledgement (busy tone).

If subscriber **B** is found available at ROC activation, and if this activation is accepted, the ROC recall normal procedure apply.

3.4.3.3 Deactivation

Note: commands described in this clause are not available on all exchanges.

A subscriber **A** may request deactivation of all the ROCs A activated; the sequence used is:

DC IN #37# ACR RC

It is also possible to request ROC deactivation about a particular called subscriber **B**; the sequence used is:

DC IN #37*number of B# ACR RC

where "number of **B**" is the number dialled by subscriber **A** in the initial call, service prefix and suffix excluded.

If deactivation succeeds, information necessary to ROC service is erased.

Subscriber **A** is informed of deactivation success or failure by an acknowledgement.

A ROC will be automatically deactivated by the network:

- on expiry of the ROC validity timer, or
- if subscriber **A** does not accept ROC recall before the end of the ROC recall timer.

In case of deactivation by the network, subscriber **A** is not informed.

3.4.3.4 Registration

Not applicable.

3.4.3.5 Erasure

Not applicable.

3.4.3.6 Interrogation

Not applicable.

3.4.3.7 Invocation and implementation

3.4.3.7.1 Hold timer on B available

The network starts the Hold timer on **B** available:

- when subscriber **B** becomes available, and when there is at least one waiting ROC, which has not been suspended or
- when subscriber **B** is available and a ROC activation on him is accepted and no ROC is in operation.

During this timer, subscriber **B's** line is considered as busy for any incoming call.

Note: during this timer, outgoing calls initiated by subscriber **B** are always allowed.

3.4.3.7.2 ROC Recall on A

If:

- subscriber **A** is available and
- subscriber **A** is not being recalled, and
- no subscriber's recall having a ROC activated on **A** is going through,

then, subscriber **A** is recalled by means of the ROC recall specific ringing (ref. [1]).

3.4.3.7.3 ROC call to B and ROC recall timer

If subscriber **A** accepts ROC recall (A picks up the receiver) before expiry of the ROC recall timer, the network initiates the ROC call to subscriber **B**. When this call succeeds (reaching **B**), ROC service is considered achieved.

ROC call has priority on non-ROC calls: the line stays available to incoming ROC calls during ROC recall timer. During this timer, on reception of a non-ROC call, subscriber **B** is considered busy; the non ROC call calling party receives the busy tone with a possible ROC service proposal (ref. § 3.4.3.2).

Note: during ROC recall timer, outgoing calls initiated by subscriber **B** are always allowed.

3.4.3.7.4 Queues managing rules

This clause applies only to lines connected to an exchange allowing a more than one element queue.

Waiting ROCs are dealt with in the order in which they were received. Operating the queue, suspended ROCs shall be ignored.

Following failure of a "ROC recall", this ROC is erased, then the first non-suspended waiting ROC (i. e. the following ROC) is selected.

3.4.3.7.5 Exceptional situation on subscriber B's side

If, on expiry of the hold ROC timer on **B**, the subscriber is found busy, the network shall monitor him again.

3.4.3.7.6 Exceptional situation on subscriber A's side

If, on expiry of the ROC recall timer, subscriber **A** has not taken the line, or if subscriber **A** picks up and hangs up during the ROC recall procedure, the ROC request is deactivated.

If, during ROC recall:

- subscriber **A** is found busy, or
- subscriber **A** is being recalled, or
- the recall of a subscriber having activated a ROC towards **A** is on going,

the ROC request is suspended until subscriber **A** becomes available.

When subscriber **A** becomes available, **A's** local exchange starts a recovering procedure of the suspended ROCs.

3.5 CALL WAITING

Trade name : Call Signal (*Signal d'appel*)

3.5.1 DEFINITION

A subscriber **A** engaged in a call with subscriber **B** (outgoing or incoming call) receives an indication that a calling party **C** is trying to reach him. The subscriber **A** may then either stay in communication with **B**, or initiate a communication with **C**, keeping or not the possibility to come back to the conversation with **B**.

3.5.2 DESCRIPTION

3.5.2.1 General description

When granted (when the customer subscribes to the service), this service is initiated in active state. The customer can deactivate it later, then reactivate it as convenient.

A call can be offered to a subscriber **A**, on behalf of the Call waiting service, only if the call **A-B** is in the conversation phase. The call is offered to the served subscriber (and can be accepted by it) as long as the calling correspondent **C** does not hang up for a maximum duration of 45 s. In the following text this configuration is called "offer period".

During the offer period, two procedures may be used to accept the call:

- the R I T N type procedure (where the value of N may be 1 or 2),
- to hang up.

Details of these Procedures are given below.

The offer is forbidden in any call phases other than the simple communication phase (specially, a new call instance cannot be presented if the called party subscriber **A** is already in an offer situation). It is also forbidden if **A** is already in a double call situation or in a Three party call. In any of the cases where the offer is forbidden, subscriber **A** is considered busy.

3.5.2.2 Specific terminology

Subscriber A: subscriber who benefits from the Call waiting service.

Subscriber B: subscriber engaged in a conversation with **A**.

Subscriber C: calling subscriber whose call terminates on busy subscriber **A**.

Offer period: configuration where served subscriber **A** has at the same time an ongoing communication (with **B**) and an instance of call (coming from **C**) being presented.

Double call: Configuration where served subscriber **A** is simultaneously engaged in two calls, one on in conversation and the other on hold.

3.5.3 PROCEDURES

3.5.3.1 Provision - Withdrawal

The service is provided to subscriber **A** on a subscription basis.

The service shall be withdrawn on subscriber's request.

3.5.3.2 Activation

Subscriber **A** activates the Call waiting service according to the following procedure:

DC IN *43# ACR RC

When the command is accepted, the network indicates this by means of a tone or a record.

When the command is not accepted, the network indicates this by means of a tone or a recorded failure message.

3.5.3.3 Deactivation

Call waiting may be deactivated by subscriber **A** according to the following procedure:

DC IN #43# ACR RC

When the command is accepted, the network indicates it by means of a tone or a recorded message.

When the command is not accepted, the network indicates it by means of a tone or a recorded failure message.

3.5.3.4 Registration

Not applicable.

3.5.3.5 Erasure

Not applicable.

3.5.3.6 Interrogation

Not applicable.

3.5.3.7 Invocation and implementation

In this clause, it is assumed that the Call waiting service is activated.

A and **B** being engaged in a call, if **C** calls **A**, a particular audible signal sent only to **A**, gives notice of the arrival of the call. This signal is repeated 10 s later if the waiting call is still in the same situation at that time. This signal is described in document [1].

On sending this signal, the call route between subscriber **A** and **B** is cut for a duration less or equal to 400 ms (this is a single call signal; ref. § 3.9.2 for the case where the call signal is followed by calling party identity transmission).

Calling subscriber **C**, whose call terminates on busy subscriber **A** in a simple call, having the Call waiting service in active state, receives during the whole time duration where the called party is able to accept the call, a call return tone as if the called party were not busy, or a record, (the choice between tones and record is a service option).

If **A** does not accept the waiting call, the offer is maintained for 45 seconds and, after that time, the waiting call is discarded and calling party **C** receives the busy tone.

Two procedures may be used to accept the call:

1) Procedure type: R IN N with the following meanings for N:

N = 1: answer to a waiting call (establishment of **C-A** call) and liberation of the initial call. No return to connection **A-B** is possible.

N = 2: answer to a waiting call (establishment of **C-A** call) and holding the initial call. While on hold, subscriber **B** receives a record. There is no limit to the hold duration. Continuity with **A** is reset as soon as hold is finished.

If **A** dials a number different from 1 or 2, or if **A** does not dial a number after operating the recall key, on expiry of a 2 to 10 s timer, subscriber **A** comes back to initial correspondent **B**. As long as the waiting call presentation timer does not expire, he may attempt to take the waiting call operating the controls described before.

The waiting call is also refused if **A** does not operate one of the acceptance controls within the prescribed time (45 seconds).

After the offer period, **A** comes back to a simple call. Specially, **A** may establish a conference, or receive another Call waiting. Subscriber **C** receives busy tone transmitted from the local exchange of **A**.

If the waiting call is accepted and **A** dialled 2, he is in a double call situation and may use the following procedures:

- R IN 1, to liberate the ongoing communication and re-establish the communication on hold,
- R IN 2, to put on hold the ongoing communication and re-establish the communication on hold. This back and forth procedure may be used as many times **A** wishes to.

2) Hang up from subscriber A during the offer period:

The call **A-B** is then released, and then **A** line is rung on behalf of the **C** call, which will now be treated as an ordinary incoming call presentation.

If subscriber **A** is called for the first call (**B-A**), the immediate ringing occurs only after normal liberation of that call, i.e., after reception of the hang-up of the first calling party **B** or after expiry of called party **A** hang-up timer.

3.6 LAST CALLER RECALL

Trade name: Le 3131

3.6.1 DEFINITION

Last caller recall service allows a subscriber to the service to acknowledge the last unanswered call's calling party identity, and gives him the possibility to automatically establish the recall.

3.6.2 DESCRIPTION

3.6.2.1 General description

Information relating to the last call presented to the called for access that remained unanswered is registered (excepted in some cases, as e.g., calls coming from a public phone, or calls on which presentation barring was invoked). This information is the date and hour of the attempted call, and the calling subscriber's number.

Recall is not possible if calling line identification restriction (secret) has been invoked.

The subscriber may delete this information or invoke the service.

On invocation, (after dialling "3131"), a vocal message delivers the subscriber information related to the last call and proposes to achieve an automatic recall to this number.

A number is stored until:

- a new incoming call erases the last registration, or
- a successful recall was establish, or
- an explicit erasure procedure is invoked.

3.6.2.2 Specific terminology

last calling party: it is the calling party of the last presented call (ringing or call waiting signal), which ended neither in a communication with the called subscriber, nor in a call forwarding.

NAR: Number to Recall.

3.6.3 PROCEDURES

3.6.3.1 Provision - Withdrawal

The service is provided without subscription.

The service shall be withdrawn on subscriber's request.

3.6.3.2 Activation

This service is activated implicitly on granting the service. Following activation, the NAR is set to non initiated state.

3.6.3.3 Deactivation

Not applicable.

3.6.3.4 Registration

Not applicable.

3.6.3.5 Erasure

Explicit erasure

The stored NAR may be erased by the subscriber by means of the following control:

#92#

The network confirms the erasure command via a recorded message or a tone.

No error message is provided within the erasure procedure if no NAR is registered. The normal erasure message is transmitted.

Implicit erasure

The stored NAR is erased:

- on reception of a new unanswered call (the former NAR is thus replaced by the one of this call, or set to non initiated state if the registration conditions are not met), or
- on establishing a successful recall.

Note: an efficient incoming call does not erase the last NAR; as well, an ordinary outgoing call (no "3131" procedure) has no effect on the stored NAR.

3.6.3.6 Interrogation

No interrogation procedure is designed. However, on invocation (dialling "3131"), the subscriber receives a vocal announcement that includes the number to recall, as well as receiving date and time of the corresponding call.

3.6.3.7 Invocation and implementation

The subscriber dials the service code:

3131

or

*92#

A vocal message indicates if a recall number is registered. If such is the case, the announcement details the registered number, as well as the date and time of the attempted call, then the subscriber is proposed to operate an automatic recall of this number.

If the subscriber does not dial the invocation number of Recall of the last calling party within 5 seconds after the reminder message ends, the call is discarded after casting a message indicating the impending call interruption, and stored information remains unchanged.

If the subscriber dials an incorrect invocation number for Recall of last calling party service in answering the vocal message, he then receives an announcement inviting him to dial key 5 on his telephone set.

In case where, following an invocation, the last calling party number is not present or available (e.g. call whose calling party invoked secrecy, call from a public phone, international call), the subscriber will receive a record.

3.7 RESTRICTED SERVICE MONITORED BY THE USER

Trade name: Modularly selective access

3.7.1 DEFINITION

Restricted service monitored by the user consists in preventing the related line from access to some geographical areas or some services. Several levels of restriction exist (local, national restriction, with access barring to some services, ...).

This service also allows the subscriber to choose the wanted level of restriction (either if he wishes to use the line for his own needs, or, as an example, to protect the line against possible misuse by third party).

3.7.2 DESCRIPTION

3.7.2.1 General description

The subscriber entitled to this service may modify the level of service restriction of the line by means of a service command operated from his telephone set.

Various levels of restricted service monitored by the user only apply to calls directly transmitted from the served line.

Currently, there are 6 levels of restricted service monitored by the user.

If a call is allowed, it is transmitted normally. If a call is forbidden by the restricted service level in force on the line, it is not transmitted and the calling party receives a record.

Use of this service is protected by a privacy code dialled by the user on every command.

This privacy code may be modified by the user (ref. § 3.8).

3.7.2.2 Specific terminology

CO: privacy code. It is a four-digit number.

i: number referring the requested restriction level ; it includes one or two digits between 0 and 15 (the # closing character enables a clear format identification).

Current values for i are:

i = 0	: available
i = 1	: locked
i = 2	: local calls
i = 3	: trunk calls
i = 4	: Audiotel
i = 5	: Telematics

Some values for i being not assigned, any command with a non-assigned value for i is without effect and gives way to a negative acknowledgement.

3.7.3 PROCEDURES

3.7.3.1 Provision - Withdrawal

The service is provided on a subscription basis.

The service shall be withdrawn on subscriber's request.

3.7.3.2 Activation

The activation command is the following:

DC IN *34*CO*i# ACR RC

When the command is accepted, the network indicates it by transmitting to the subscriber:

- either a standard numbering tone,
- or a recorded message.

The network also operates an error count's reset to zero (ref. § 3.7.3.2.2).

3.7.3.2.1 Failure case

To be quoted among failure cases:

- time-out of the waiting command timer,
- incorrect command,
- no right to the service,
- interaction with other services (e.g., activated unconditional forwarding present),
- access to service barred by the privacy code protection mechanism (ref. § 3.7.3.2.2),
- wrong privacy code,
- dialling of a non assigned i-parameter value.

For all these cases, the network transmits to the subscriber a negative acknowledgement, with no modification to the restricted service.

As soon as the privacy code is locked, any attempt to modify the restricted service (be the privacy code dialled by the user exact or not) is rejected with a record indicating explicitly the cause of the failure as an acknowledgement.

If the privacy code is not locked, failure indication is done through busy tone.

Note: In case failure is only due to "wrong privacy code", the exchange operates also an incrementation of the failure count (ref. § 3.7.3.2.2).

3.7.3.2.2 Protection against fraudulent search of the privacy code

Monitoring is based on the use of a counter dedicated to the line.

The principle consists in counting the number of attempted commands with an erroneous privacy code and to bar service access when this number reaches 3.

The counter shall be reset to zero each time the user operates with a correct privacy code and if this code is not locked, excluding any other circumstance.

3.7.3.3 Deactivation

There is no command. When the user wishes no more restriction to his line, he dials the activation command with option
 $i = 0$.

Remark: the special aspects relating to line grouping are not dealt with in this document.

3.7.3.4 Registration

Not applicable.

3.7.3.5 Erasure

Not applicable.

3.7.3.6 Interrogation

Not applicable.

3.7.3.7 Invocation and implementation

If a call is allowed, it is normally transmitted. If a call is barred by the level of service restriction in force on the line, it is not taken into account and the calling party receives a recorded message.

3.8 MODIFICATION OF PRIVACY CODE BY THE USER

(This service is currently offered in the "modulable selective access" offer)

3.8.1 DEFINITION

The use of some services like the barring service modification requires user authentication by means of a privacy code.

This function aims to offer the user the possibility to select and modify as he likes his privacy code.

3.8.2 DESCRIPTION

3.8.2.1 General description

While subscribing one of the services requiring user authentication, an "initial privacy code" is granted and reported to the subscriber.

The user may then change this code using a registering procedure (ref. § 3.8.3.4).

3.8.2.2 Specific terminology

AC: Former privacy code (The value to be modified).

NC: New privacy code (the new value the user wants to allocate).

3.8.3 PROCEDURES

3.8.3.1 Provision - Withdrawal

Provision and withdrawal are achieved by France Télécom.

3.8.3.2 Activation

This service is activated implicitly by France Télécom during the subscription contractual period.

3.8.3.3 Deactivation

Not applicable.

3.8.3.4 Registration

Registration consists in replacing the privacy code AV value stored at the given time by the new NC value dialled in the command:

DC IN *03*AC*NC*NC# ACR RC

Note 1: the privacy codes used (AC and NC) always consist in 4 digits. Any character other than digits from 0 to 9 is forbidden.

Note 2: registration of the new code depends on provision of the same value in both NC fields. If the new code is provided only once or if the second NC is different from the first one, the former code still applies.

Remark: peculiarities relating to line grouping are not detailed here.

When the command is accepted, the network reports it by transmitting towards the subscriber:

- either the standard numbering tone,
- or a recorded message.

The network also operates an error count reset to zero (ref. § 3.8.3.4.2).

3.8.3.4.1 Failure case

Among failure cases it is to quote:

- command waiting timer time-out,
- incorrect command,
- no right to service,
- service access barred by the privacy code protection mechanism (ref. § 3.8.3.4.2),
- the AC privacy code dialled does not match the code registered on the line.

For all these cases, the network sends a negative acknowledgement towards the subscriber, without modifying the restricted service.

As soon as the privacy code is blocked, any attempted invocation or activation with this privacy code or with a non existing code is rejected with as acknowledgement a record indicating explicitly the cause of the failure.

If the privacy code is not blocked, the failures are indicated by the busy tone.

Note: Where failure is only due to "erroneous privacy code", the local exchange increments also the failure count (ref. § 3.8.3.4.2).

3.8.3.4.2 Protection against fraudulent attempts on the privacy code

This paragraph is identical to § 3.7.3.2.2

3.8.3.5 Erasure

Not applicable.

3.8.3.6 Interrogation

Not applicable.

3.8.3.7 Invocation and implementation

Not applicable.

3.9 CALLING PARTY IDENTIFICATION BY THE NUMBER

Trade name: Number presentation®

3.9.1 CALLING PARTY IDENTIFICATION IN CALL PHASE (IDPA)

3.9.1.1 DEFINITION

Calling party identification in call phase service allows a called subscriber to receive the calling party identity, whatever be its nature (non ISDN, ISDN), as well as additional information (e.g.: date and time).

3.9.1.2 DESCRIPTION

3.9.1.2.1 General description

This service is offered within the incoming call presentation in call phase (id est, for the presentations achieved when the line is available).

Transmission of information on the served line, which occurs during the first silence phase included between the preliminary ringing pulse and the rhythmical ringing, is via a coded message according to ITU-T Recommendation V.23 (ref. [2]).

3.9.1.2.2 Specific terminology

Call Identity (calling party identity): it includes a designation number preceded by the prefix, the rule being to provide the terminal equipment with directly usable information.

ND: National designation number (numbering plan of the public network) and international. The national ND is associated to the calling subscriber equipment or to the directory number of the grouping in which dwells the calling line, when this line is said to be a non designable line.

NDI: installation designation number. This term is used for ISDN attachments: it designates the number allocated to the whole attachment.

NDS: supplementary designation number. This term is used for ISDN attachments: it designates a number allocated to one of the terminal equipment behind this ISDN attachment. This number may be provided by the calling station (if an ISDN station) and forwarded by the network (complement to the NDI).

3.9.1.3 PROCEDURES

3.9.1.3.1 Provision - Withdrawal

The service is provided on a subscription basis.

The service shall be withdrawn on subscriber's request.

3.9.1.3.2 Activation

This service is activated implicitly when granting the service.

3.9.1.3.3 Deactivation

Not applicable.

3.9.1.3.4 Registration

Not applicable.

3.9.1.3.5 Erasure

Not applicable.

3.9.1.3.6 Interrogation

Not applicable.

3.9.1.3.7 Invocation and implementation

This service is implemented by the incoming local exchange in the establishment phase of the call.

The following operations are achieved on an incoming call:

- implementation of the signalling message transmission procedure, at the beginning of the call phase,
- transmission of the preliminary ringing pulse followed by the sending of the message with monitoring of the calling and called party status,
- at the end of the message transmission, sending of call signalling according to usual incoming call presentation procedures,
- transmission of a call return tone to the calling party during the whole phase of the message and the call current sending,
- during the all message sending phase, called party pick-up monitoring is active and has priority on message transmission operation. As soon as pick up is acknowledged, the local exchange shall stop the on-going identity transmission procedure and establish the incoming call.

Following information is always provided to the subscriber:

- call identity (consisting in the calling party designation number and the prefix), or the cause of absence corresponding to the following cases: "Secrecy invoked", "Unavailable",
- date and time (always transmitted, even in the case where call identity is replaced by the cause of absence).

Note: if the call comes from an ISDN installation, it may carry 2 origin numbers: NDI and NDS (ref. § "Terminology"). In this case, the NDS is provided as the call identity.

Following information is optional. It is provided on the access only in case where it is effectively available in the called subscriber local exchange:

- origin of the calling party (not transmitted in the case of an unknown or unavailable origin and in the case of a non defined value),
- the number of the first called party (if the received call has been forwarded),
- the type of the transfer (if the received call was transferred).

Numbers, for the call identity as well as for the first called party, are provided in a shape directly usable by the terminal equipment (e.g. to achieve recall), that is to say as a 10 digits number in the case of national calling party (with 0 as first digit), or as a number preceded by 00 in the case of an international calling party. The case of subscribers of the "Atout RPV" service is out of the scope of this document.

The called subscriber may meet the following exceptions:

- the Non identification of a call by the number service has been invoked on the call (refer to Non identification of a call by the number service),
- in some interworking situations, where signalling does not allow the call identity transfer.

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In such cases, the called subscriber shall receive an indication to say:

- in the first case, that the calling party identity as well as origin, are not to be communicated on calling party initiative.
- in the second case, that the calling party identity is not available. However in this case, the calling party origin is transmitted if available at the local exchange.

3.9.2 CALLING PARTY IDENTIFICATION ON WAITING CALL (IDAI)

3.9.2.1 DEFINITION

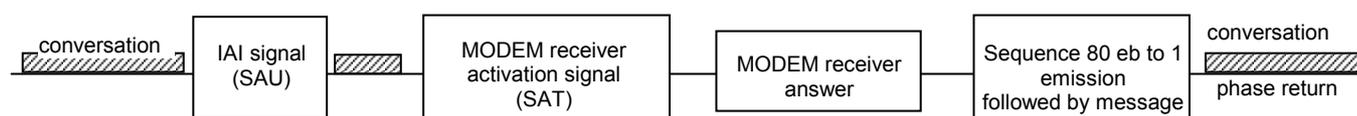
"Calling party identification on waiting call" service allows the called party subscriber who already enjoys "Call waiting" service, the possibility to receive, besides the waiting call signals, the calling party identity on the waiting call.

The transfer of the calling party identity to the called party is achieved during the call, after the Call waiting first signal.

3.9.2.2 DESCRIPTION

3.9.2.2.1 General description

After transmission of the call signal to the user (SAU) during the call, the local exchange transmits a call signal towards the terminal equipment (SAT) which receives the message. The terminal equipment, after reception of this SAT signal, transmits a signal (DTMF "D") to the local exchange, meaning thus its availability to receive the calling party identity message. Following signal "D" detection, the local exchange transmits the message. In case the terminal equipment does not answer (absence of signal "D"), the message is not forwarded. For a detailed description of this procedure, see ref. [2]



3.9.2.2.2 Specific terminology

IAI: Call waiting service

IDAI: Calling party identification on call waiting service

IDPA: Calling party identification in call phase service

SAU: User call signal

SAT: Terminal call signal

3.9.2.3 PROCEDURES

3.9.2.3.1 Provision - Withdrawal

This service is provided on a subscription basis.

This service is withdrawn on subscriber's request.

3.9.2.3.2 Activation

The IDAI service is under command of the existing IAI service. Thus, IDAI service is implicitly activated where the IAI service is also activated.

Activation procedure is the same as IAI service activation.

3.9.2.3.3 Deactivation

The IDAI service is implicitly deactivated when the IAI service is deactivated.

Deactivation procedure is the same as the IAI service deactivation.

3.9.2.3.4 Registration

Not applicable.

3.9.2.3.5 Effacement

Not applicable.

3.9.2.3.6 Interrogation

Not applicable.

3.9.2.3.7 Invocation and implementation

Information presentation rules at the interface are identical to those specified for IDPA services (secret, choice of NDI/NDS, etc.).

On arrival of an incoming call towards busy subscriber **A**, who has subscribed to the IAI service, and whose IAI service is active, the local exchange of the called party subscriber:

- enters the IAI procedure alone, if subscriber **A** did not subscribe IDAI service;
- enters the IAI procedure with waiting call calling party identity presentation, if subscriber **A** is also entitled to IDAI service.

Note: No specific disposition is taken to prevent disturbing "reverse V23" mode communications.

Two cases are to be considered, depending on the IAI service being activated or not by subscriber **A**:

1st Case: subscriber A is entitled to the IAI and IDAI services and has activated the IAI service

If a call is received by a subscriber **A** engaged in a call, the called party subscriber **A** attachment local exchange implements the call waiting presentation procedure together with the calling party identity presentation procedure (ref. § 3.9.2.2.1).

Calling party's identity presentation offer is attempted only once by the called party attachment local exchange. If, during this attempt, the local exchange does not receive the signal coming from the terminal equipment which allows calling party identity transmission (DTMF "D" signal), the call identification procedure is given up but the mode IAI call presentation goes on normally.

Any called party operation (recall key, hang-up) detected during the calling party identity offer procedure or during the calling party identity transmission has precedence and causes the on-going treatment to be given up, and the IAI procedure goes on normally.

In case **A** hanged up during waiting call presentation, the network will present once more the call to **A**.

Calling party **B** hang-up detection during the calling party identity offer procedure or during calling party identity transmission has precedence and causes the on-going treatment to be stopped and the IAI procedure to be given up.

2nd Case: subscriber A is entitled to the IAI and IDAI services and did not activate the IAI service

In this case, calling party **B** receives busy tone.

3.10 CALL IDENTIFICATION RESTRICTION BY THE NUMBER

Trade name: Permanent Secret, Call by Call Secret

3.10.1 DEFINITION

Call identification restriction by the number service enables a calling subscriber to prevent the presentation of his number to the called subscriber, the calling subscriber can be an analogue or digital subscriber.

3.10.2 DESCRIPTION

3.10.2.1 General description

When this service is implemented, the origin exchange provides the destination exchange with the information of restriction presentation to the called subscriber of the calling party designation number.

In this case, the calling party number is not provided on the incoming call presentation on the called party side.

3.10.2.2 Specific terminology

No subject.

3.10.3 PROCEDURES

3.10.3.1 Provision - Withdrawal

This service exists in two different forms:

1) Call identification restriction in “permanent mode not modifiable by the subscriber”

This mode enables a subscriber to obtain call identification restriction for any outgoing call.

This service is provided on subscriber's request. Withdrawal is also achieved on subscriber's request.

2) Call identification restriction in “call par call mode”

This mode enables a subscriber to request call identification restriction for a given outgoing call.

This service is offered without subscription.

There is no incompatibility between permanent mode and call by call mode even in case of information redundancy.

3.10.3.2 Activation

1) Call identification restriction in “permanent mode not modifiable by the subscriber”

This service is activated implicitly by France Télécom as soon as the service is granted according to this mode.

2) Call identification restriction in “call par call mode”

This service is activated implicitly.

3.10.3.3 Deactivation

1) Call identification restriction in “permanent mode not modifiable by the subscriber”

Not applicable.

2) Call identification restriction in “call par call mode”

Not applicable.

3.10.3.4 Registration

1) Call identification restriction in “permanent mode not modifiable by the subscriber”

Not applicable.

2) Call identification restriction in “call par call mode”

Not applicable.

3.10.3.5 Erasure

1) Call identification restriction in “permanent mode not modifiable by the subscriber”

Not applicable.

2) Call identification restriction in “call par call mode”

Not applicable.

3.10.3.6 Interrogation

Not applicable.

3.10.3.7 Invocation and implementation

3.10.3.7.1 Calling party side:

1) Call identification restriction in “permanent mode not modifiable by the subscriber”

Call identification restriction by number service applies to any outgoing call.

2) Call identification restriction in “call par call mode”

The subscriber dials a particular prefix preceding without tone announcement the called party number.

Two prefix have been defined:

DC IN *31* called party number

or

DC IN 36 51 called party number
--

Remark: if the line is already in permanent mode, this call by call mode activation is accepted but useless. Identification restriction applies to any outgoing call.

3.10.3.7.2 Called party side:

If the calling party invoked the Call identification restriction by number service, the analogue subscriber, entitled to the Calling party identification by the number service, receives the indication "secret", to inform him/her of the reason why the identity is not presented.

3.11 CALLING PARTY'S NAME PRESENTATION

Trade name: Name presentation

3.11.1 DEFINITION

The calling party's name presentation service enables the called subscriber to receive the calling party's name on the call presentation. Provision of the name is, for the destination subscriber, a supplement to the calling party identity provision.

Information transmission occurs on incoming call presentation, in the call message, in call phase or after a waiting call.

3.11.2 DESCRIPTION

3.11.2.1 General description

The service is provided on analogue lines on incoming calls.

On an incoming call, if the called party is entitled to the Calling party's name presentation service, the called party's attachment local exchange forwards the NOM information (see below).

3.11.2.2 Specific terminology

Calling party identity: it consists of a designation number preceded by the prefix, the rule being to provide the terminal equipment with directly usable information.

NOM Information: it consists of a string of characters (maximum 50), containing the calling party name, and possibly other information (first name, commercial name).

NDI: installation designation number. This term is used for ISDN attachments: it designates the number allocated to the whole connection.

NDS: supplementary designation number. This term is used for ISDN attachments: it designates a number allocated to one of the terminal equipments behind the ISDN connection. This number may be provided by the calling installation (if ISDN) and forwarded by the network (complement to NDI).

3.11.3 PROCEDURES

3.11.3.1 Provision - Withdrawal

The service is provided on a subscription basis.

The service shall be withdrawn on subscriber's request.

3.11.3.2 Activation

This service is implicitly activated as soon as the service is granted.

3.11.3.3 Deactivation

This service is implicitly deactivated as soon as this service is withdrawn.

3.11.3.4 Registration

Not applicable.

3.11.3.5 Erasure

Not applicable.

3.11.3.6 Interrogation

Not applicable.

3.11.3.7 Invocation and implementation

If NOM is accompanied by the "divulgate allowed" indication, the NOM is presented to the called party.

If NOM is accompanied by the "divulgate forbidden" indication, the NOM is not presented and the information "secret invoked" is provided.

If NOM is not available, the NOM is not presented and the information "unavailable" is provided.

For transmission to the called subscriber, the information NOM, if possible, is added to information forwarded on a calling party identification by the number.

Note: if the call comes from an ISDN installation, it may carry 2 origin numbers: NDI and NDS (ref. § "Terminology"). In this case, the NOM associated to the NDS is provided, if available. If there is no NOM associated to the NDS, the NOM associated to the NDI is provided.

3.12 CALLING PARTY'S NAME PRESENTATION RESTRICTION

Trade name: Permanent Secret, Call by call secret

3.12.1 DEFINITION

Calling party's name presentation restriction service enables a calling subscriber to bar his name (NOM) presentation to the called party subscriber.

3.12.2 DESCRIPTION

3.12.2.1 General description

This service enables a subscriber to bar his NOM presentation (ref. § 3.11) on an outgoing call.

The service is provided to all subscribers.

The NOM divulgence is submitted to number divulgence (invocation of the Call identification restriction by the number service).

3.12.2.2 Specific terminology

No subject.

3.12.3 PROCEDURES

3.12.3.1 Provision - Withdrawal

Provision and withdrawal procedures are identical to those of the Call identification by the number service (ref. § 3.10).

3.12.3.2 Activation

Not applicable.

3.12.3.3 Deactivation

Not applicable.

3.12.3.4 Registration

Not applicable.

3.12.3.5 Erasure

Not applicable.

3.12.3.6 Interrogation

Not applicable.

3.12.3.7 Invocation and implementation

The invocation procedures are identical to those of the Call identification by the number service (ref. § 3.10.3.7)

3.13 MESSAGE ADVICE, DEFERED OR INSTANT

3.13.1 DEFINITION

The Message Advice function, also known as notification, enables the subscriber who is a customer of a client server (e.g. an electronic mail service), the possibility to be informed of a particular event (e.g., deposit of a message).

Two modes of message advice exist:

- deferred mode, corresponding to Deferred Message Advice (ADM),
- instant mode, corresponding to Instant Message Advice (AIM).

3.13.2 DESCRIPTION

3.13.2.1 General description

1) Deferred Message Advice

This message advice mode may be provided on any line irrespective of the subscriber's equipment.

It is forwarded to the user as a specific dialling tone provided on receiver pick up (replacing other dialling tones). This tone informs the user that at least one of the client servers to whom he subscribed has activated a notification request to his intention (e.g. when a message has been deposited in his vocal mailbox). The user is thus invited to achieve a number of operations (e.g. call his various mail boxes and message consultation). When all of these operations are achieved, the client servers transmit Deactivation requests and the specific tone is no longer transmitted (lower priority tones are then provided).

Service is activated in the network for a subscriber as soon as the first activation is received by the client server, and is deactivated in the network with the last deactivation received from the client server.

When the service is no longer active, when the receiver is picked up for an outgoing call, the network delivers the standard dialling tone (or the omission tone if unconditional forwarding is activated, ref. § 3.2.2.1).

2) Instant Message Advice

This message advice mode requires a specific equipment at the subscriber's premises.

This notification corresponds to data transmission on the served subscriber's line.

These data contain the following information, which may be dealt with by the terminal equipment:

- activation/deactivation information ,
- client server recall identity (optional),
- date and time informing when notification information was forwarded to the terminal equipment,
- alphanumeric supplementary information (optional).

The complete list of optional information is given in ref. [2].

On reception of these data, the terminal equipment may indicate by means of a particular signalization (blinking light, on the screen,...), that a notification request has been activated or deactivated.

3.13.2.2 Specific terminology

Client Server: Server offering a particular application or service (e.g. a messaging system).

ADM: Deferred Message Advice.

AIM: Instant Message Advice.

3.13.3 PROCEDURES

3.13.3.1 Provision - Withdrawal

1) Deferred Message Advice

This notification is implicitly provided.

2) Instant Message Advice

This notification is implicitly provided, however the line must be able to receive the data mode signalling.

3.13.3.2 Activation

Not applicable.

3.13.3.3 Deactivation

Not applicable.

3.13.3.4 Registration

Not applicable.

3.13.3.5 Erasure

Not applicable.

3.13.3.6 Interrogation

Not applicable.

3.13.3.7 Invocation and implementation

1) Deferred Message Advice

On request of a "client server", the network transmits the served subscriber a specific tone (ADM tone) delivered on receiver pick up (ref. [1]).

2) Instant Message Advice

On request of a "client server", the network transmits the served subscriber a V23 notification message. This is transmitted on hang up phase not associated to a ringing string (ref. [2]).

3.14 AUTOMATIC WAKE-UP**Trade name: Memo call****3.14.1 DEFINITION**

The Automatic Wake-up service enables a subscriber to be automatically called at a fixed time he fixed himself.

3.14.2 DESCRIPTION**3.14.2.1 General description**

A wake-up request may be registered 24 h in advance maximum and 15 min in advance minimum.

A subscriber may request any amount of wake-up calls.

3.14.2.2 Specific terminology

No subject.

3.14.3 PROCEDURES**3.14.3.1 Provision - Withdrawal**

This service provided without subscription.

3.14.3.2 Activation

The activation procedure is dialled as follows by the subscriber:

DC IN *55*HHMM# ACR RC

HH = 00 to 23, MM = 00 to 59, the combination HHMM = 2400 is accepted and equivalent to HHMM = 0000.

When the command is accepted, the network indicates it by means of a record.

Several wake-up may be registered simultaneously: it is enough to reiterate the activation command.

To modify a wake-up command, the subscriber must cancel the command to be modified (Deactivation - ref. next §) and register the new one.

3.14.3.3 Deactivation

The subscriber may cancel a wake-up request indicating the time of the requested wake-up:

DC IN #55*HHMM# ACR RC

HH = 00 to 23, MM = 00 to 59.

When the request is accepted, the network indicates it by means of a record.

3.14.3.4 Registration

Not applicable

3.14.3.5 Erasure

Not applicable

3.14.3.6 Interrogation

It is in fact a check request: the subscriber may verify if a previous wake-up request is actually registered or cancelled, providing the expected time of the wake-up command:

DC IN *#55*HHMM# ACR RC

HH = 00 to 23, MM = 00 to 59.

The network indicates the service activation or deactivation in the following way:

- if a wake-up command is activated at the time indicated in the command: standard dialling tone or record according to the local exchange characteristics,
- if no wake-up command is activated at the time quoted in the command (no wake-up activated or wake-up activated for a different time): busy tone.

3.14.3.7 Invocation and implementation

At the time indicated by the subscriber, maximum plus or minus 5 minutes, he is connected with a recorded message.

If the wake-up call fails (busy subscriber without waiting call activated, no answer after one minute duration ringing, etc.), a recall is attempted five minutes later.

After operation of the wake-up procedure (be it success or failure), the wake-up request is cancelled automatically.

The wake-up call is only achieved on the line that made the request, even if a temporary transfer was activated on this line.

3.15 SMS (SHORT MESSAGE SERVICE)

This service is described in the STI27.

4. COMPATIBILITIES BETWEEN SUPPLEMENTARY SERVICES

	Malic. call barring	Call forward. unconditional	Three party call	Comple. of call on busy subscr.	Call waiting	Last caller recall (vocal)	Call barring user control.	Calling party Identific.: call by call.	Identif. Restrict by no. perman. service	Identif. Restrict by no. call by call sce	Deffered message advice	Instant message advice	Automat. wake-up	Name presentation and restriction
Malicious call barring		Y ¹	N	Y	N	Y ²	Y	Y	Y	Y	Y	Y	Y	Y
Call forwarding unconditional			Y	Y	Y ³	Y ⁴	Y ^{5, 17}	Y ⁶	Y	Y	Y ⁷	Y ⁸	Y ⁹	Y
Three party call				Y	Y ¹⁰	Y ¹¹	Y ⁵	Y	Y	Y	Y	Y	Y	Y
Comple. of call on busy subscr.					Y	Y	Y ⁵	Y	Y	Y	Y	Y	Y	Y
Call waiting						Y	Y	Y	Y	Y	Y	Y ¹³	Y ¹²	Y
Last caller recall (vocal)							Y ⁵	Y	Y	N	Y	Y	Y ¹⁴	Y
Call barring user-controlled								Y	Y	Y	Y	Y	Y ¹⁵	Y
Calling party Identific.: call by call.									Y	Y	Y	Y	Y ¹⁶	Y
Identif. restriction by no. permanent service										Y	Y	Y	Y	Y
Identific. restriction by no. call by call sce											Y	Y	Y	Y
Deffered message advice												Y	Y	Y
Instant message advice													Y	Y
Automat. wake-up														Y
Name presentation and restriction														

Y: Yes, compatible services.

N: No, incompatible services.

The text of the notes is on next page.

- ¹ When the incoming call is filtered by the Malicious call barring service, the call forwarding is ignored.
- ² When the incoming call is filtered by the Malicious call barring service, the call is not presented to the BAM subscriber and is not stored in the NAR on behalf of the Last caller recall service.
- ³ When the Call forwarding unconditional service is activated, the Call waiting becomes hidden: any incoming call is transferred and consequently not presented.
- ⁴ When the Call forwarding unconditional service is activated, the Last caller recall service does not memorise the calling party number of the transferred calls.
- ⁵ The level of restriction in force at the time of invocation of the transfer is applied to the destination of the transfer.
- ⁶ The calling party number is routed towards the transfer destination.
- ⁷ For a subscriber profiting both from ADM and forwarding unconditional, the dialling tone delivered at line pick-up can be of three types: "ADM" tone (if "ADM" notification is activated), reminder tone (if forwarding unconditional is activated) and ordinary tone (if none of the quoted service is activated). When the "ADM" notification and forwarding unconditional are simultaneously activated, the "ADM" tone is provided.
- ⁸ If notification applies only to the line associated to the destination number of this notification, this, irrespective of an activated forwarding service on this line.
- ⁹ The automatic wake-up call is only sent to the line on which this service was activated, this, irrespective of an activated forwarding service on this line.
- ¹⁰ During a three party call, as well as in a "double call" configuration, a new call to the served line cannot be presented according to the "Call waiting" service.
- ¹¹ The automatic recall by the Last caller recall service cannot be used for the call of the 2nde correspondent of a Three party call.
- ¹² Wake-up invocation is not achieved if the line is busy (including first grade business) at the selected time (IAI presentation does not apply to the Wake-up service).
- ¹³ In case the line to be notified is busy (including first grade business), the "AIM" mode notification is not achieved by the local exchange (IAI presentation does not apply to the "AIM" mode notification service).
- ¹⁴ An unanswered wake-up is not registered in the Last caller recall service: following such a call, the previous registration still goes on.
- ¹⁵ The Call barring user controlled service level 1 "locked" does not allow the use of the Automatic wake-up service.
- ¹⁶ While presenting a wake-up call (at the subscriber's selected time), no number is transmitted on the destination line.
- ¹⁷ Modifying the Call barring service level is not possible while a forwarding unconditional is activated.

Remark:

- The Privacy code modification service does not appear in this table as in the commercial offer, it is not separated from Call barring user controlled service.

5. GENERAL REFERENCES

- [1] STI 3 : Ringing and tones on France Télécom network's analogue lines
 [2] STI 4 : User-network interface characteristics for modem (V.23) data transmission

6. GLOSSARY

AC	Previous privacy code (<i>Ancien Code confidentiel</i>)
ACR	Acknowledgement (<i>Accusé de réception</i>)
ADM	Deferred message advice (<i>Avis différé de Message</i>)
AIM	Instant message advice (<i>Avis Immédiat de Message</i>)
BAM	Malicious call barring (<i>Blocage des Appels Malveillants</i>)
BAR	Malicious call barring keying R (<i>Blocage des Appels Malveillants marqués par l'appui sur la touche R</i>)
BAS	Call barring with Secret (<i>Blocage des Appels avec Secret</i>)
CO	Privacy code (<i>COde confidentiel</i>)
DC	receiver picked-up by the user (<i>DéCroché de la ligne par l'utilisateur</i>)
DTMF	Dual Tone MultiFrequency (<i>Multifréquence bitonalité</i>)
Record	Vocal message (<i>film</i>)
IN	Invitation to Numbering (<i>Invitation à Numéroté</i>)
NAR	Number to recall (<i>Numéro A Rappeler</i>)
NC	New privacy code (<i>Nouveau Code confidentiel</i>)
ND	Subscriber's Designation Number (<i>Numéro de Désignation d'abonné</i>)
NDI	Installation Designation Number in the ISDN public network numbering plan (<i>Numéro de Désignation de l'Installation dans le plan de numérotage du réseau public RNIS</i>)
NDS	Supplementary Designation Number (<i>Numéro de Désignation supplémentaire</i>)
R	Recall key (key R) (<i>bouton de rappel (touche R)</i>)
RANR	Call forwarding No Answer (<i>Renvoi d'appel sur Non Réponse</i>)
RC	Subscriber's hang-up (<i>RaCcroché de l'abonné</i>)
ISDN	Integrated services digital network (<i>Réseau numérique à intégration de service</i>)
ROC	Completion of calls to busy subscriber (<i>Rappel automatique sur abonné Occupé</i>)
ITU-T	International Telecommunications Union, Telecommunications standardisation sector

7. HISTORY

Edition	Date	Remarks
1	March 2000	Initial version
2	October 2000	Document revision as a result of commercial opening of Malicious call barring and AutoRecall services, and various editorial corrections.
3	February 2002	Corrections to § 3.11 and 3.12 relating to Name presentation and Name presentation restriction services as a result of commercial opening of these services by the end of March 2002, and editorial modifications on Call barring.
4	September 2002	Short Message Service has been added.
5	March 2004	Update of the MESSAGE ADVICE, DEFERED OR INSTANT service

		description.
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Annex: Service controls summary table

Service	Meaning	Controls
Malicious calls barring	Invocation	R
	Activation/Deactivation/registration/ Erasure/Interrogation	31 75 (vocal mode) and 08 36 05 31 75 (Videotext mode)
Unconditional call forwarding	Activation	* 21 * ND #
	Deactivation	# 21 #
	Interrogation	* # 21 * ND #
Three party call	Initiating 2 nd call	R + ND
	Liberation of the ongoing communication Activation of the other communication	R 1
	Hold of the ongoing communication Activation of the other communication	R 2
	Passing to three party call	R 3
Completion of calls to busy subscriber	Activation of recall on finding called party busy	5 or R 5
	Deactivation of all the ROCs	# 37 #
	Deactivation of a particular ROC	# 37 * ND #
Call waiting	Activation	* 43 #
	Deactivation	# 43 #
	Answer to the waiting call + liberation of the ongoing communication	R 1
	Hold of the ongoing communication Activation of the other communication	R 2
Last caller recall	Invocation	3131 or * 92 #
	Erasure of memorised number	# 92 #
Restricted service under user command	Activation	* 34 * CO * i #
Privacy code modification by the user	Invocation	* 03 * AC * NC * NC #
Calling party identification during call phase	-	-
Calling party identification on call waiting	-	-
Call by call secret	Invocation	* 31 * ND or 3651 + ND
Permanent secret	-	-
Immediate notification	-	-
Automatic wake-up	Activation	* 55 * HH MM #
	Deactivation	# 55 * HH MM #
	Interrogation	* # 55 * HH MM #