Name and number log, centralized

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1 GENERAL

This document describes the soft-key controlled feature centralized Name and Number Log.

1.1 DESCRIPTION

The purpose of the centralized (data stored in the PBX, not in the terminal) Name and Number Log feature is to provide every user of a **SIP terminal** (ODN only) or a **DTS** with display and soft-keys with a log of the unanswered, incoming and outgoing calls related to the user's extension (ODN or ADN).

By using these soft-keys, the user can browse the log, make calls to any stored number and delete the entries the user no longer wants to keep.

The NLOG feature comprises two different functions:

- *NLOG registration* which is different for telephones with graphical display and the rest of them. For telephones with graphical display, DBC 223 and DBC 225, registration of calls is always active. For telephones without graphical display the NLOG registration is initiated after assigning a key with NLOG handling function, by means of an I/O command. Any of the programmable function keys with a LED on the telephone can be programmed with the NLOG handling function. The registration of call is referred to incoming, outgoing and unanswered calls. Telephones with 2 rows alphanumeric displays (other than DBC 222), only store unanswered calls, because they have not enough space to display more information.

- *NLOG handling* which is started once the NLOG key or the soft-key x Missed or CallList are pressed (x represents the number of new missed calls recorded), and offers the possibility for the user to search, delete and dial the stored numbers by using the soft-keys. For DBC 225 telephones there is another way to access the feature, it is through the Top Menu. It has a CallList heading under which four options are offered: Call List, Unanswered calls, Incoming calls and Outgoing calls, in order to access the different lists of calls. Through the soft-key Select the feature can be activated.

1.2 GLOSSARY AND ACRONYMS

1.2.1 GLOSSARY

Unanswered cal	Call towards a DTS, that is ringing and is not answered.
Missed call (DTS)	Call towards a DTS, that is ringing and is not answered. All the unanswered calls that are still not checked by the user are counted and the functionality shows the total number of them as New missed calls.
Missed call (SIPex)	Call towards a SIP extension, that is ringing or busy, and is not answered. Unanswered calls not checked by the user are regarded as new missed calls, but there is no counter (i.e. multiple calls from the same origin are logged separately).

Multiple terminal service	Generic extensions, such as SIPex, can have multiple terminals registered to the same directory number. There are two configurations, Forking and Parallel ringing.
Outgoing call	Call from a DTS to another one, that is answered in the destination. For SIPex also abandoned outgoing calls are logged.
Incoming call	Call towards a DTS, and the call is answered.
Logged call	Call that is stored in the Number Log feature.
Navigation keys	These are the three keys in DBC 225 telephone to deal with the Top Menu: Left, Right and Home (exit).

1.2.2 ACRONYMS

ADN	Additional Directory Number.
DTS	Digital Telephone Set
EDN	Extra Directory Number, for SIP phones.
LED	Light Emitting Diode
NLOG	Name and number log
ODN	Own Directory Number
SIP	Session Initiation Protocol (defined by IETF)
SIPex	SIP extension, supporting the SIP protocol with proprietary XML additions (here only Mitel 6800/6900 SIP phones)

2 FACILITIES

2.1 USER INTERFACE FOR SIP EXTENSIONS

The SIP telephones (Mitel 6800 models, version 4.0.0 SP1 or later, and Mitel 6900 models) control the actual user interface, so the interfaces are not described in detail here.

By using the related key or menu functions, the user can browse the log, make calls to any stored number and delete the entries the user no longer wants to keep.

Per default the local call log function will be active for the Mitel 6800/6900 SIP terminals, so the extension must be actively configured to get the central call log function, in which case the local log becomes deactivated. The end user interface to the log is basically the same, using the "Callers list" key (for incoming calls) and "Redial" key (for outgoing calls) for both variants of logs (except for some minor differences in specific use cases).

See the *Mitel Model 68xx/69xx SIP IP Phone User Guides,* Redial and Caller list sections for details.

2.1.1 MULTIPLE TERMINAL SERVICE

Generic extensions, such as SIPex, can have multiple terminals registered to the same directory number.

This configuration is called Forking. The Central Call Log is common for all those terminals. If one of the terminals answer an incoming call, also the other terminals of the same user will get the call log updated, so the call is not Missed

There is also a Parallel Ringing configuration (with different directory numbers), where the logs are separate, per number. In those cases, even if one terminal answers the call, the others may still log a Missed call, since they were alerting.

2.2 USER INTERFACE FOR DTS

Note: Much of this section really belongs in the User Guides of the concerned DTS models, but has been placed in this description document instead.

The NLOG registration is different for telephones which have graphical display or not. For the telephones without graphical display is initiated after assigning a key with the NLOG handling function, by means of an I/O command (It was recommended that this key had lamp indication.). For telephones with graphical display, DBC 223 and DBC 225, a new pair of soft-key has been introduced in order to be able to enter the NLOG functionality.

These soft-keys are x Missed when there are new missed calls stored or not read missed calls since last time the NLOG was entered, and CallList in case of no new information stored (this last soft-key only for DBC 223). For this new telephones it is also possible to initiate a NLOG key. When a new unanswered call information is logged, an indication (LED blinking) is given on the NLOG key (if the key is defined) and the number x besides the soft-key x Missed is increased.

The time needed to register an unanswered call can be defined in the system by means of an I/O command. Adding to this, DBC 225 telephones have a Top Menu which offers the possibility of entering the functionality, through the section CallList and choosing one the options: Call List, Unanswered calls, Outgoing calls or Incoming calls.

When pressing the NLOG key the NLOG handling is initiated and the indication (LED blinking) on the NLOG function key is cleared. After this, the LED will blink again when a new call is logged. In case of graphical display the NLOG handling can be initiated by pressing the NLOG key if it is initiated, by pressing the soft-key Missed when there are new or not read missed calls, by pressing the soft-key CallList in the DBC 223, or through the Top menu (submenu CallList) in the DBC 225.

For these graphical telephones, the LED indication will be cleared when the NLOG feature is accessed independent on the way of initiating it.

Once the NLOG handling is active it stores all the calls made from the telephone or to the telephone, this means: incoming, outgoing and unanswered. In the different types of telephones the information displayed and the way to indicate the type of call can be different:

Alphanumeric display 2 rows, other than DBC 222 - This is an exception because this telephone can only store the unanswered calls due to there is no space for more information on the display.

Alphanumeric display 3 rows - shows the number of logged call in the list and the type of call indicated with a text. Added to this it is also shown the number of not read unanswered calls.

Alphanumeric display with 4 rows - shows the type of call with a symbol: [-> for outgoing calls, [<- for incoming calls, and [i for unanswered calls. Added to this it is also shown the number of not read unanswered calls (missed calls).

Graphical display - shows information of several logged calls at the same time. Two entries in DBC 223 and four in DBC 225. Every entry shows the type of call with an icon, and the information of the logged call (number, name, date and time).
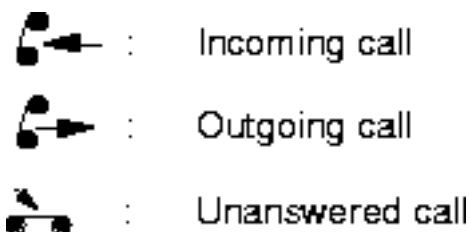

Figure 1: types of call icons

Since the feature is active, the user has the possibility of using the soft-keys. For the DBC 22X family telephones, the texts of the soft-keys can be different from other telephones. The soft-keys are defined as:

Soft-keys for DBC 223 / DBC 225 telephones:

Call	The number corresponding to the displayed logged call information entry is dialed. If no number is being displayed no action is taken.
Up	Let the user go one element up in the list.
Down	Let the user go one element down in the list.
Exit	Exit the function at any time.
Delete	Delete the highlighted entry, and the list shows the next element in its position.
more...	Shows the following soft-keys.
Return	Go back to the previous soft-keys.

Soft-keys for the other telephones:

F1 Next	To see next stored unanswered call information.
F2 Del	Delete unanswered call information shown on display.
F3 Call	Dial number shown on display.
F4 Exit	Exit the NLOG handling.

The function NLOG handling is only available when the DTS has the possibility of initiating a call and it is not locked with an authorization code. That is, in the following situations:

• DTS is idle and unlocked.

• DTS with a parked party and unlocked.

When the NLOG handling function is active and a call is received or initiated, the function is deactivated and all information shown on the display is cleared. The NLOG handling function is activated and the information is recovered and displayed again when the DTS reverts to idle state.

If a new call is received while the NLOG handling function is active, when returning to the NLOG handling function, the display will show the list of logged call for DBC 22X family telephones and the most recent logged call for the other telephones.

The way to exit this function is to press the soft-key labeled Exit, when the NLOG handling is active.

When the DTS is locked with an authorization code the NLOG key, the NLOG soft-keys and the NLOG handling function are disabled, but the NLOG registration is still active. When the DTS is unlocked the NLOG key, NLOG soft-keys and the NLOG handling function are enabled.

The user can access directly the last logged call information by pressing the NLOG key.

The call information in the NLOG is displayed in the reverse order it was logged, the first call information displayed is the latest one, and the last one shown is the oldest one.

Example:

Digital extension 20320 with name P ERIKSSON which has the function NLOG assigned to one of the function keys has no numbers stored in the NLOG. A call is received from analog extension 30310 with name J CARLSSON while P. Eriksson is out. When he comes back, the LED indication is blinking. P. Eriksson accesses the NLOG, calls the stored number and, after finishing the call, deletes the stored numbers and exits the NLOG.

This will give the following result on the display of extension 20320 which is a DBC 661:

AT IDLE

```
┌─────────────────────────────┐
│  12:59   20Dec   1999       │
├─────────────────────────────┤
│                             │
├─────────────────────────────┤
│  P ERIKSSON        20320    │
├─────────────────────────────┤
│                             │
└─────────────────────────────┘
    F1     F2     F3     F4
```

===>

AFTER PRESSIIIG **NLOG key**

```
┌─────────────────────────────┐
│   New missed calls : 1      │
├─────────────────────────────┤
│ [i 10:03   20Dec   1999     │
├─────────────────────────────┤
│ J CARLSSON        30310     │
├─────────────────────────────┤
│  Next   Del   Call   Exit   │
└─────────────────────────────┘
    F1     F2     F3     F4
```

AFTER PRESSIIIG **F3(Call)**

```
┌─────────────────────────────┐
│  12:59   20Dec   1999       │
├─────────────────────────────┤
│ Calling...                  │
├─────────────────────────────┤
│ J CARLSSON        30310     │
├─────────────────────────────┤
│                             │
└─────────────────────────────┘
    F1     F2     F3     F4
```

===>

AFTER AIISWER OF 30310

```
┌─────────────────────────────┐
│  12:59   20Dec   1999       │
├─────────────────────────────┤
│                             │
├─────────────────────────────┤
│ J CARLSSON        30310     │
├─────────────────────────────┤
│                             │
└─────────────────────────────┘
    F1     F2     F3     F4
```

AFTER EIID OF CALL

```
┌─────────────────────────────┐
│   New missed calls : 0      │
├─────────────────────────────┤
│ [-> 10:03   20Dec   1999    │
├─────────────────────────────┤
│ J CARLSSON        30310     │
├─────────────────────────────┤
│  Next   Del   Call   Exit   │
└─────────────────────────────┘
    F1     F2     F3     F4
```

===>

AFTER PRESSIIIG **F2(Del)**

```
┌─────────────────────────────┐
│   New missed calls : 0      │
├─────────────────────────────┤
│ [i 10:03   20Dec   1999     │
├─────────────────────────────┤
│ J CARLSSON        30310     │
├─────────────────────────────┤
│  Next   Del   Call   Exit   │
└─────────────────────────────┘
    F1     F2     F3     F4
```

AFTER PRESSIIIG **F2(Del)**
IIO IIUMBERS LEFT III IILOG

```
┌─────────────────────────────┐
│   New missed calls : 0      │
├─────────────────────────────┤
│                             │
├─────────────────────────────┤
│    No logged calls          │
├─────────────────────────────┤
│  Next   Del   Call   Exit   │
└─────────────────────────────┘
    F1     F2     F3     F4
```

===>

AFTER PRESSIIIG **F4(Exit)**

```
┌─────────────────────────────┐
│  13:09   20Dec   1999       │
├─────────────────────────────┤
│                             │
├─────────────────────────────┤
│ P ERIKSSON        20320     │
├─────────────────────────────┤
│                             │
└─────────────────────────────┘
    F1     F2     F3     F4
```

Example:

Digital extension 20221 with name Paul Bailliery which has the function NLOG assigned to the soft-keys has no numbers stored in the NLOG. A call is received from analog extension 30555 with name Michel Herrera while Paul Bailliery is out. When he comes back, the soft-key 1 Missed is out. Paul Bailliery accesses the NLOG, calls the stored number and, after finishing the call, deletes the stored numbers and exits the NLOG.

This will give the following result on the graphical display of extension 20221 which is a DBC 223:

AT IDLE

Paul Bailliery		20221	12:30	12 Jan 2002
1 Missed	CallList	Absence		more...

AFTER PRESSING **Missed** SOFT-KEY

Michel Herrera	30555	12 Jan 1995	12:31
Ana Smith	46775	12 Jan 1995	12:31
Call	Up	Down	more...

AT PRESSING **CALL**

Calling...		12:30	12 Jan 2002
Michel Herrera			30555
CallBack	CallPager	Timer	

AFTER ANSWER OF 30555

		12:30	12 Jan 2002
Michel Herrera			30555
Tones	Conf/Transf	Timer	more...

AFTER END OF CALL

Ana Smith	46775	12 Jan 1995	12:31
Call	Up	Down	more...

AFTER PRESSING **Delete**
NO NUMBERS LEFT IN NLOG

			No logged calls
Call	Up	Down	more...

AFTER PRESSING **Exit**

Paul Bailliery		20221	12:30	12 Jan 2002
CallList	Absence	Lock		more...

Example:

Digital extension 20225, in DBC 223 telephone with name Sue Corlett, which has the function NLOG assigned to the Top Menu and soft-keys has several numbers stored in the NLOG. No new missed calls are logged while Sue is out. When she comes back, the soft-key 1 Missed is not on display, but only the CallList soft-key. Sue accesses the NLOG, calls one stored number and, after finishing the call, deletes the stored numbers and exits the NLOG.

AT IDLE

Sue Corlett	20221	12:30	12 Jan 2002
CallList	Absence	Lock	more...

AFTER PRESSING **Missed** SOFT-KEY

1. Call List			
2. Unanswered			
Select	Up	Down	Exit

AFTER PRESSING **Down** THREE TIMES

3. Incoming			
4. Outgoing			
Select	Up	Down	Exit

AFTER PRESSING **Select**

Michel Herrera	30555	12 Jan 1995	12:31
Ana Smith	46775	12 Jan 1995	12:31
Call	Up	Down	more...

AT PRESSING **CALL**

Calling...		12:30	12 Jan 2002
Michel Herrera			30555
CallBack	CallPager	Timer	

AFTER ANSWER OF 30555

		12:30	12 Jan 2002
Michel Herrera			30555
Tones	Conf/Transf	Timer	more...

AFTER END OF CALL

Michel Herrera	30555	12 Jan 1995	12:31
Ana Smith	46775	12 Jan 1995	12:31
Call	Up	Down	more...

AFTER PRESSING **Delete**

Ana Smith	46775	12 Jan 1995	12:31
Call	Up	Down	more...

AFTER PRESSING **Delete**
NO NUMBERS LEFT IN NLOG

			No logged calls
Call	Up	Down	more...

AFTER PRESSING **Exit**

Paul Ballllery	20221	12:30	12 Jan 2002
CallList	Absence	Lock	more...

Example:

Digital extension 20221, in DBC 225 telephone with name Paul Bailliery, which has the function NLOG assigned to the Top Menu and soft-keys has several numbers stored in the NLOG. A call is received from analog extension 30555 with name Michel Herrera while Paul Bailliery is out. When he comes back, the soft-key 1 Missed is out. Paul Bailliery accesses the NLOG, calls the stored number and, after finishing the call, deletes the stored numbers and exits the NLOG.

This will give the following result on the graphical display of extension 20221:

AT IDLE, AFTER PRESSING **CallList** TOP MENU OPTION

Services	PhoneSet	CallList	▬▬	PhoneBook	Messages
2-01. Call List
2-02. Unaswered calls
2-03. Incoming calls
2-04. Outgoing calls
	Up		Down		Select

AFTER SELECTING ONE OF THE LISTS (Call List)

Services	PhoneSet	CallList	▬▬	PhoneBook	Messages
↖	Michel Herrera	30555	12 Jan 2002	12:35
↙	Beatriz Rubio	45567	12 Jan 2002	10:01
↗	Tomas Gracia	23221	11 Jan 2002	08:20
→	John Smith	78982	11 Dec 2002	17:43
Call	Up		Down	more...

AT PRESSIIIG **Call** SOFT-KEY

Services	PhoneSet	CallList	▬	PhoneBook	Messages

Calling...   12:30   12 Jan 1995

  Michel Herrera   30555   Paul Balillery
                                                   20221

CallBack	CallPager	Timer	

AFTER AIISWER OF 30555

Services	PhoneSet	CallList	▬	PhoneBook	Messages

                                                    12:30   12 Jan 1995

  Michel Herrera   30555   Paul Balillery
                                                    20221

Tones	Conf/Transf	Timer	more...

AFTER EIID OF CALL

Services	PhoneSet	CallList	▬	PhoneBook	Messages

	Michel Herrera	30555	12 Jan 2002	12:35
	Beatriz Rubio	45567	12 Jan 2002	10:01
	Tomas Gracia	23221	11 Jan 2002	08:20
	John Smith	78982	10 Jan 2002	17:43

Call	Up	Down	more...

AFTER PRESSIIIG **Delete** SOFT-KEY

Services	PhoneSet	CallList	▬	PhoneBook	Messages

	Beatriz Rubio	45567	12 Jan 2002	12:35
	Tomas Gracia	23221	12 Jan 2002	10:01
	John Smith	78982	11 Jan 2002	08:20
	Sue Corlet	66672	10 Jan 2002	17:43

Call	Up	Down	more...

AFTER PRESSIIIG **Delete** FOUR TIMES. IIO IIUMBERS LEFT III IILOG

Services	PhoneSet	CallLIst	▬	PhoneBook	Messages
					No logged calls
Call		**Up**		**Down**	**more...**

AFTER PRESSIIIG **more...**

Services	PhoneSet	CallLIst	▬	PhoneBook	Messages
					No logged calls
Exit		**Delete**			**Return**

AFTER PRESSIIIG **Exit**

Services	PhoneSet	CallLIst	▬	PhoneBook	Messages
			12:30	12 Jan 1995	
			Paul Balllery		
			20221		
CallLIst		**Absence**		**Lock**	**more...**

Note that the soft-key to access the functionality can appear in any of the four possibilities.

2.3 ADMINISTRATION FROM I/O TERMINAL

2.3.1 SIP TERMINALS

The centralized NLOG feature is enabled for a SIP extension when its service profile is programmed to support the NLOG handling function. This is done by means of an I/O-command. This I/O-command needs parameters that state the extension directory number, and will turn off the local NLOG function in the terminal.

The same functionality is also available via the Service Node Manager. Centralized NLOG is supported for Mitel 6900 and Mitel 6800 SIP phones, of version 4.0.0 SP1 or later.

2.3.2 DTS

The NLOG feature is enabled in a non graphical DTS when one of its keys is programmed with the NLOG handling function. This is done by means of an I/O-command. This I/O-command needs parameters that state the extension number, the function to program and key where the function is to be programmed. This is true for all telephones except for DBC 22X family that also have a soft-key available or options through the Top menu (DBC 225DBC 223), to handle the NLOG functionality. In that way the DBC 22X family telephones have always this functionality available for the users.

The function key (NLOG key) assignment for any extension can be printed by I/O-commands, too. These commands require a parameter stating the extension number.

The text strings shown on the display can be altered by I/O-commands. Parameters stating the string identity and text string contents are needed.

The string information can be printed by I/O-commands. Parameters describing the string identity are required.

The NLOG feature can be disabled in a DTS removing the function key (NLOG key) from the telephone by means of an I/O-command. In case of DBC 22X family telephones this feature cannot be removed.

The time before an unanswered call is registered can be defined in the system by means of an I/O-command.

The NLOG key cannot be initiated in a Service Quarter Hospitality Class DTS.

3 CAPACITY AND LIMITATIONS

Note: The centralized name and number log feature is only supported for certain models of SIP extensions and DTS.

3.1 CAPACITIES AND LIMITATIONS FOR SIP TELEPHONES

A Mitel 6800/6900 SIP terminal with the centralized NLOG function can store up to 30 calls (numbers and names) in the outgoing/made call log, and up to 60 calls in the incoming/received call log. (The maximum may vary depending on phone model).

Maximum number of digits for calling number in a logged call is 20 digits.

Maximum number of characters for calling name in a logged call is 40 (20+20) characters.

If the number in a logged call has more than 10 digits, its name may be suppressed, i.e. not shown. The behavior depends on the SIP terminal model.

Unanswered/Incoming/Outgoing call information coming from the same originator is stored more than once if the type of logged call is the same.

Only one outgoing and one incoming NLOG function key can be assigned per terminal (if keys are available).

It is necessary to emphasize that the dialled number is the number received from the terminal. The connected party number is also the number received from the terminal (or via the CSTA interface).

For certain services, like call pickup services, the central NLOG function will log calls as missed, even though they are answered/picked from another extension, since the "answered elsewhere" information is not considered by the NLOG function. There are similar cases for certain group, diversion and deflect services.

Note: Calls to/from EDNs will be logged by the system, but the logs will not be fetched by the SIP terminals.

Note: There is no minimum time defined for the logging of unanswered calls to SIPex (abandoned very early), i.e. also very short calls will be logged.

3.2 CAPACITIES AND LIMITATIONS FOR DTS

A DTS with the NLOG function can store up to 30 numbers in the log.

Maximum digits for calling number in a logged call are 20 digits.

Maximum characters for calling name in a logged call are 10 characters.

If the number in a logged call has more than 10 digits, its name will not be shown. For DBC 22X family DTSes with display the name is shown depending on the remaining space.

Unanswered/Incoming/Outgoing call information coming from the same originator is not stored more than once if the type of logged call is the same.

Only one NLOG function key can be assigned per telephone.

Neither number of logged unanswered calls nor date and time are shown on a 2 rows display DTS, except for DBC 222.

It is necessary to emphasize that the dialed number is the received number. Consequently, in some cases, when the number is public, it is essential to add to the logged number a route access code to reach the public network. This can be solved by means of the number conversion feature.

Calls released before the time defined in the system to register unanswered calls will not be logged.

4 HARDWARE

No extra hardware is required for these functions.

5 SUMMARY

Centrally stored Name and number log is a function for storing and handling information about calls from and to a Mitel 6800/6900 SIP phone or a DTS. The Mitel 6800/6900 SIP phones also support a local name and number log in the terminal, but that function shall be turned off if the central one shall be used.