Announcements and User Interactive Voice Response IVR

Introduction

Announcements and its Interactive Voice Response IVR features extends the call distributions with the possibility of:

◊ To play a courtesy welcome text
◊ To play an announcement with instructions for the caller how to proceed.
◊ Provide waiting music
◊ Periodically repeat an announcement text
◊ Expecting interactions with the user for more specific call forwarding:
• Start a call to any type telephone number
• Forward to a next announcement
• etc.

Specific actions can be taken, when a user is not providing any input, a destination is not responding or is not reachable:

◊ Start a call to any type telephone number
◊ Forward to a next announcement
◊ Restart the announcement
◊ Terminate the call
◊ Wait until free

## Contents

The Announcement

Characteristics of an Announcement

An "announcement" is used to receive an incoming call automatically and to play back an information to the caller. Thereafter, the call is forwarded, or a response from the caller is waited for and continued according to the answer.

An announcement is invoked by a call forwarding or call distribution as a destination.

The implementation of the "announcement" feature does not contain pre-built modules of possible scenarios. It offers "atomic" blocks, with which a desired scenario can be realized.

The following overview explains the possibilities of an announcement:
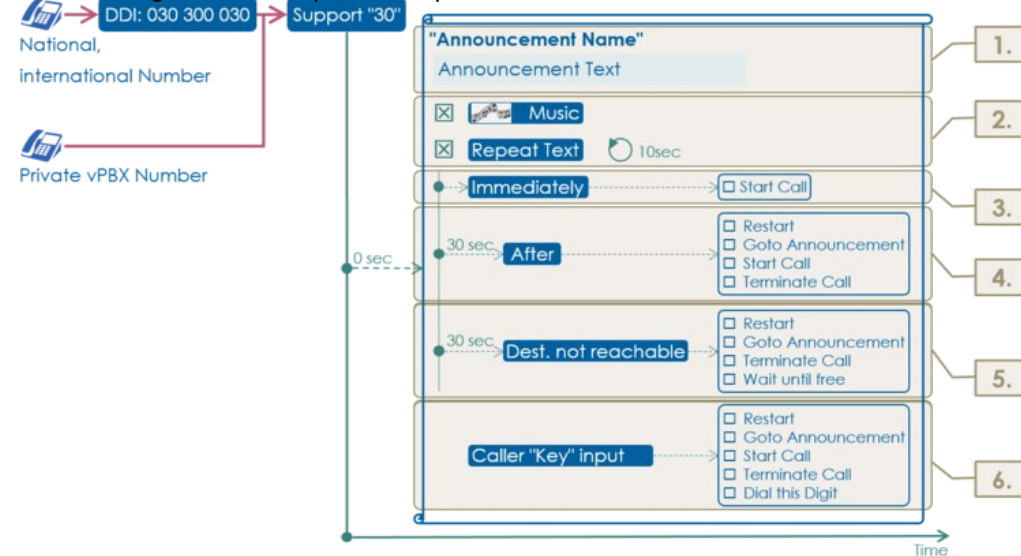
1. Name and Text of the Announcement

The announcement can have any name.
The loading of the announcement text is done either by uploading an audio file or directly by recording via telephone.

2. Waiting Music and Text Repeated Periodically

The caller can be played a waiting music .
The caller can be played a periodically repeated text, e.g. every 10sec "Please wait ...".
If the music and a periodic text are activated at the same time, the periodic text interrupts the music while the text is being played then the music continues.

3. Immediate Forwarding

The incoming call is forwarded [#FeatureAnnouncementConfiguationImmediately | immediately to a new destination]]. The text is not played!
The text of this announcement is not automatically played in this state. If desired, this can be done with a periodic text or with an previous simple announcement.

4. Timeout if no Answer

The timeout "After" allows to react when the caller does not answer when prompted or no destination answers the call. A possible action after expiration of the timeout can be:

◊ Repeat this announcement
◊ Forward to another announcement
◊ Forward to a new telephone number
◊ Cancel the connection
This timeout action can prevent that:
◊ The caller does not wait unnecessarily when nothing happens.
◊ The system-wide maximum call time stops this call.

5. Timeout when the Destination is not Reachable

This timeout "Destination is not Reachable" allows to react when all destinations are busy or no callee wants to accept the call. A possible action after expiration of the timeout can be:

◊ Repeat this announcement
◊ Forward to another announcement
◊ Cancel the connection
◊ Wait until a destination becomes free

This timeout action can prevent that:
◊ The caller does not wait unnecessarily when no destination is reachable.
◊ The system-wide maximum call time stops this call.

6. Caller Response

If the caller is prompted in the text to provide a response by entering a key in order to make a selection or to call up an action, the announcement can call the following actions:

◊ Repeat this announcement
◊ Forward to another announcement
◊ Forward to a new telephone numberr
◊ Cancel the connection
◊ Receive a digit.
   The received digit is stored in a buffer. The digits in this buffer are interpreted as a telephone number to be dialed . The dialing starts automatically after a timeout of a few seconds.

Best Practice	1. Keep it simple! Do not try to implement a call center ... 2. Do not use recursions of announcements. 3. Study the examples! 4. The implementation of the "announcement" feature does not contain pre-built modules of possible scenarios. It offers "atomic" blocks, with which a desired scenario can be realized. Therefore, during the realization of your scenario, develop our configuration step by step. Check after each configuration step whether the announcement behaves as desired. 5. When an announcement receives a call, the caller may be in a paid connection. To ensure that the connection is not permanently maintained and costs are incurred, a "Cancel the connection" should be configured somewhere in the proceeding of the announcement.

Statuses and Schematic Work Flow of an Announcement

Simplified overview of the statuses and the work flow of an announcement with interactive user guidance IVR:
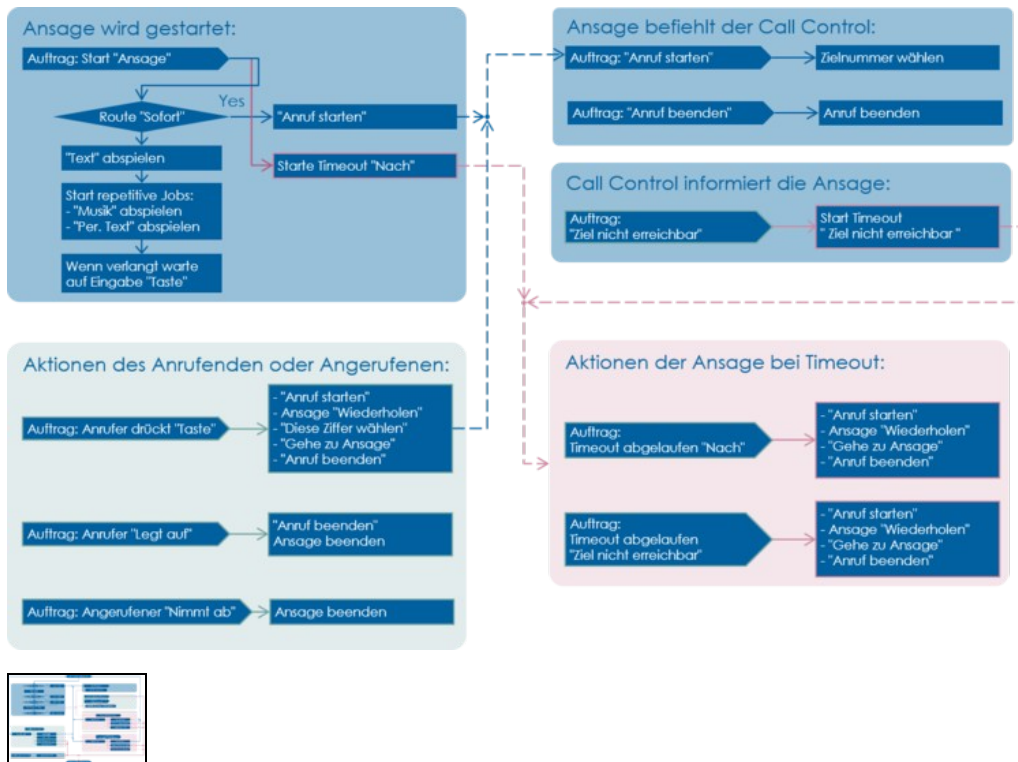
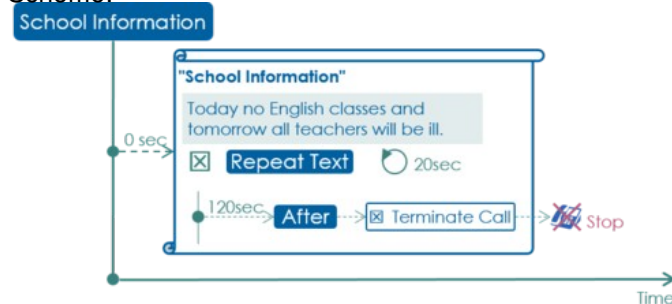Detailed Scheme Statuses and Schematic Work Flow of an Announcement

Examples of Announcements

Information for the Caller

Goal of the call distribution:

◊ Only the announcement text is played to the caller.
◊ The same announcement text is repeated every 20 seconds.
◊ The connection is automatically terminated after 2 minutes.

Scheme:

Configuration in the AdminCenter:

Announcement Configuration of vPBX Subscriber 50:

Settings	Interactions

Name	School Information

Announcementtext   ▶   Play / Modify...   Modify using phone ☐

Immediately	- ▾
Music on wait	- ▾
Periodically	20 Sec. ↕	Play announcement ▾	School Information ▾
Dest. not reachable	- ▾
After	120 Sec ↕	Terminate call ▾

Distribution Configuration of vPBX Subscriber 50:

Name ⇕	Delayed ⇕	Destination ⇕	Other Phones	Call Forward	State	Schedule									
						From	To	From	To	Mon	Tue	Wed	Thu	Fri	Sat	Sun
School Information	0 sec.	School Information	stop ringing	not possible	active											

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Forward

Name	School Information
Destination	Announcement ▾	School Information ▾
Delay	0 Sec. ↕
Other Phones	stops ringing ▾
Call Forward	not possible ▾
State	active ▾

Schedule

From   To

Mon Tue Wed Thu Fri Sat Sun
☐ ☐ ☐ ☐ ☐ ☐ ☐

Greeting Text and Immediate Forwarding to the Support

Goal of the call distribution:

◊ A greeting is played to the caller.
◊ After 5sec, the call is automatically forwarded to the support team.
◊ The support team is served from Monday - Friday from 8:00 - 12:00, 13:00 - 17:00.
◊ If no supporter accepts the call, after 90sec the call is automatically forwarded to the VoiceMail Box of the support.

Scheme:
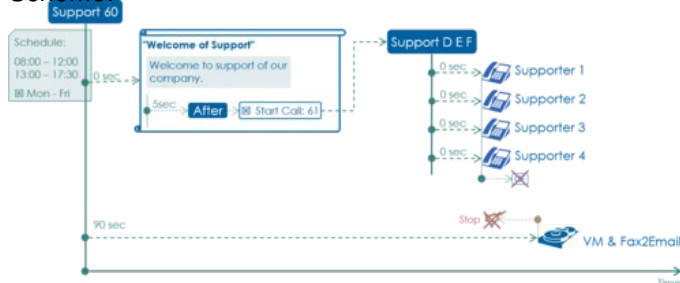
Configuration in the AdminCenter:

Announcement Configuration of vPBX Subscriber 60:

Settings	Interactions

Name	Welcome to Support
Announcementtext	▶ Play / Modify…	Modify using phone ☐

Immediately	- ▾		
Music on wait	- ▾		
Periodically	- ▾		
Dest. not reachable	- ▾		
After	10 Sec. ▴▾	Start call ▾	61

Distribution Configuration of vPBX Subscriber 60:

Name ⇕	Delayed ⇕	Destination ⇕	Other Phones	Call Forward	State	Schedule										
						From	To	From	To	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Support 60	0 sec.	Welcome to Support	stop ringing	possible	active	08:00	12:00	13:00	17:30	✔	✔	✔	✔	✔			🗑
VM Support 60	90 sec.	VoiceMail	stop ringing	possible	active												🗑

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Distribution Configuration of vPBX Subscriber 61:

Name ⇕	Delayed ⇕	Destination ⇕	Other Phones	Call Forward	State	Schedule										
						From	To	From	To	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Supporter 1	0 sec.	41	stop ringing	not possible	active												🗑
Supporter 2	0 sec.	42	stop ringing	not possible	active												🗑
Supporter 3	0 sec.	43	stop ringing	not possible	active												🗑
Supporter 4	0 sec.	44	stop ringing	not possible	active												🗑

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Greeting Text and User Input for German, English or French Support

Goal of the call distribution:

◊ A greeting is played to the caller.
◊ The caller is prompted to choose the desired language.
◊ Depending on the callers input, the call will be forwarded to the German/English or French support team.
   If the caller does not make an entry, the announcement is repeated after 15sec.
◊ The support teams are served from Monday - Friday from 8:00 - 12:00, 13:00 - 17:00.
◊ If no supporter accepts the call, after 90sec the call is automatically forwarded to the VoiceMail Box of the support.

Scheme:
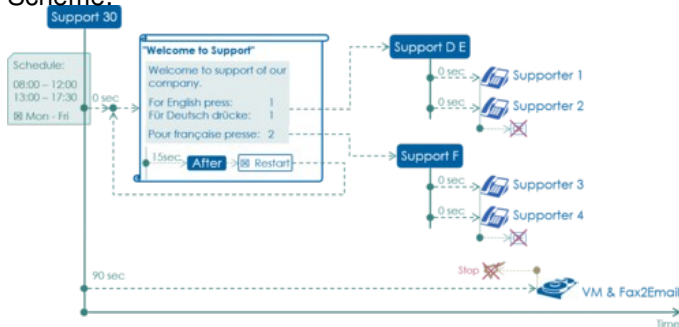
Configuration in the AdminCenter:

Announcement Configuration of Subscriber 30:

Settings	Interactions

Name	Welcome to Support
Announcementtext	▶ Play / Modify...
	Modify using phone ☐
Immediately	-
Music on wait	-
Periodically	-
Dest. not reachable	-
After	15 Sec. ⬍ Restart

Settings	Interactions

Key	0	-	
Key	1	Start call	31
Key	2	Start call	32
Key	3	-	
Key	4	-	
Key	5	-	

Distribution Configuration of vPBX Subscriber 30:

Name	Delayed	Destinatic	Other Phones	Call Forward	State	Schedule										
						From	To	From	To	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Support IVR 30	0 sec.	Welcome to Support	stop ringing	possible	active	08:00	12:00	13:00	17:30	✓	✓	✓	✓	✓		🗑
VM Support IVR 30	90 sec.	VoiceMail	stop ringing	possible	active											🗑

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Distribution Configuration of vPBX Subscriber 31 "Support D E" (vPBX Subscriber 32 "Support F" is similar):

Name	Delayed	Destinatic	Other Phones	Call Forward	State	Schedule										
						From	To	From	To	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Supporter 1	0 sec.	41	stop ringing	not possible	active											🗑
Supporter 2	0 sec.	42	stop ringing	not possible	active											🗑

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Complex Support Announcement

Goal of the call distribution:

◊ A greeting is played to the caller.
◊ The caller is prompted to choose the desired language.
◊ Depending on the callers input, the call will be forwarded to the German/English or French support team.
   • If the caller does not make an entry within 15 seconds, the call is automatically forwarded to the German/English support team.
◊ If the caller can not be connected directly to a support employee, he is held in a waiting loop.
   In the waiting loop, the caller hears a waiting music and every 15sec a "Please wait ..." message.
◊ The announcement "Please wait ..." restarts every 60sec.
   This restart of the announcement is required at in order to prevent the timeout of the system-wide maximum call time.
◊ The support teams are served from Monday - Friday from 8:00 - 12:00, 13:00 - 17:00.
◊ At noon, at night and at weekends, the calls are forwarded immediately to the VoiceMail Box of the support.
   Note:
   To prevent that the waiting loop is interrupted by a fixed timeout for forwarding to the answering machine, it is necessary to configure three call distribution elements for forwarding to the VoiceMail Box.

Scheme:
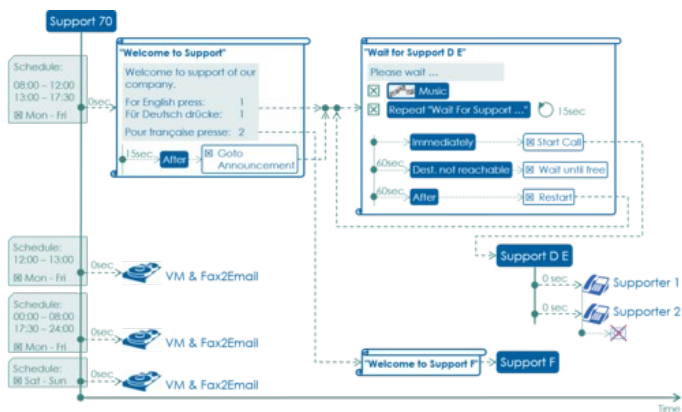
Configuration in the AdminCenter:

Announcement Configuration "Welcome to Support" of vPBX Subscriber 70:

Announcement Configuration "Wait for Support D E" of vPBX Subscriber 70:

Announcement Configuration "Wait for Support F" is similar!

Distribution Configuration of vPBX Subscriber 70:

Name	Delayed	Destination	Other Phones	Call Forward	State	Schedule									
						From	To	From	To	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Support IVR 70	0 sec.	Welcome to Support	stop ringing	possible	active	08:00	12:00	13:00	17:30	✓	✓	✓	✓	✓			🗑
VM Support "Noon"	0 sec.	VoiceMail	stop ringing	not possible	active	12:00	13:00			✓	✓	✓	✓	✓			🗑
VM Support "Night"	0 sec.	VoiceMail	stop ringing	not possible	active	00:00	08:00	17:30	24:00	✓	✓	✓	✓	✓			🗑
VM Support "Weekend"	0 sec.	VoiceMail	stop ringing	not possible	active										✓	✓	🗑

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Distribution Element Configuration of vPBX Subscriber 70:

Configuration

Where to Configure this Feature

As vPBX administrator:

→ Tab "PBX"

→ Tab "Subscriber xx"

→ Tab "Voiceportal"

As subscriber:

→ Tab "Voiceportal"

Creating, Modifying and Deleting an Announcement

Create a new announcement:

1. Enter the name of the new announcement in the input field
2. Click Button [+ Add]
3. A dialog pops up, in which all configurations of the announcement are configured.
4. In tab "Settings" the following parameters can be configured:
   - · Define the "Name" of the announcement
   - · Load, create or modify the "Announcement text"
   - · Define automatic announcement actions:
     - ♦ Define a "Immediately" action
     - ♦ Define "Music on Wait"
     - ♦ Define a "Periodically" repeated text
     - ♦ Define the action if the "Destination is not reachable" .
     - ♦ Define an action "After" a timeout when no user input is received or the called destination doesn't respond in any way.
5. In tab "Interactions" the following parameters can be configured:
   - · Define the actions that can be executed when a user presses a "Key" on its telephone keypad.
6. For saving the configurations click the Button [Save]

Modify an existing announcement:

1. Click the row of the desired announcement
2. Modify the desired parameter
3. For saving the configurations click the Button [Save]

Delete a announcement:

1. Click the waste icon 🗑 at the end of the row of the desired announcement.

Configuration of an Announcement

An announcement is created as described in chapter "Creating, Modifying and Deleting an Announcement" .

Defining the Name

The announcement can be given any name .
As announcements, will be selected by name it is recommended to give meaningful names, e.g.:

> ◊ "Welcome to Support"
> ◊ "Waiting Music"
> ◊ "Sorry, try later"

Loading the Announcement Text

The announcement text can be loaded in two ways:

1. Load a prepared audio file
2. Recording the text via your own telephone or any telephone of the vPBX

Load an Announcement Text with an Audio File

Here an externally prepared audio file is uploaded via AdminCenter.

Proceeding:

1. The text must be recorded with an external device and stored in an audio file.
   The audio file must meet the following requirements:
   · WAV- (8kHz, 16bit PCM-encoded) or MP3-formated
   · Max. size 1MByte (from V6.10: 2MByte)
2. For "Announcement text" click on Button [Play/Modify ...]. It opens a dialog where the text can be loaded and listened to.
3. Click on the Button ["+ Replace ..."], find and select the audio file in the opening file browser. After selection, the file is loaded immediately. To listen to the text, click Button [>].
4. In the dialog "Announcement", click Button [Save]

Loading the Announcement Text via Telephone

Here the announcement text is directly recorded via a telephone (similar to the VoiceMail Box).

Proceeding:

1. Prepare the recording via AdminCenter:
   1. Mark the selections box for "Modify using phone":
      A *88-code is displayed, e.g.: `*881058`
   2. Click Button [Save] in the dialog "Announcement"
2. Recording the text via telephone:
   1. In order to access the voice portal, the above generated *88-code is dialed from the own or any telephone of the vPBX, e.g.: `*881058`
   2. In the speech-guided menu, a loaded text can be listen to or replaced
3. Finalize the recording via AdminCenter:
   1. Unmark the selections box for "Modify using phone":
      The *88-code will disappear.
4. Click Button [Save] in the dialog "Announcement"

The text can no longer be modified with the telephone via the voice portal. If the text must be modified via telephone later, the recording must be enabled again by selecting "Modify using phone".

Immediately Call Forward to the Destination

If after invoking the announcement, a predetermined destination has to be called immediately, the parameter "Immediately" must be set to "Start call" and the telephone number of the destination must be configured.

The text of this announcement will not be played! This can be bypassed by adding a periodically played text. The text can come from any announcement, including its own.

Play Music during Waiting

For playing music during waiting select at parameter "Music on wait" the setting "Play announcement" and choose the announcement whose text contains the music sample.

The music is paused when a periodically text is played.

A waiting music must be loaded as an audio file in its own "announcement". The procedure is identical to the loading the announcement text.

Play Text Periodically

To play a text periodically, select at parameter "Periodically" the "Play announcement" and select the announcement with the desired text. The text will be played for the first time after the configured time has elapsed and then it is repeated periodically in the same rhythm.

Hint:
Only the text of the selected announcement is played. All other configured parameters of the selected announcement are not taken into account! It is possible to replay the text of the "own" announcement.

Automatic Action if No Response

If no key input is done by the caller or if a called destination doesn't respond then the automatic action "After" can be invoked. This time-controlled action is designed to prevent the caller from having to wait unnecessarily when nothing happens.

The following actions can be selected:

- ◊ "Restart"
  After the defined time period, this announcement is restarted.
- ◊ "Goto announcement"
  After the defined time period, the selected announcement is called. The current announcement is stopped.
- ◊ "Start call"
  After the defined time period, the configured telephone number is called. The current announcement is stopped.
- ◊ "Terminate call"
  After the defined time period, the call and the current announcement are stopped.

Automatic Action, if the Destination is not Reachable

If the called destination cannot be reached (e.g.: user busy or call rejected), an automatic action "Destination not reachable" can be invoked. This time-controlled action is designed to prevent the caller from having to wait unnecessarily when it is known that the called destination cannot accept the call.

The following actions can be selected:

◊ "Restart"
   After the defined time period, this announcement is restarted.
◊ "Goto announcement"
   After the defined time period, the selected announcement is called. The current announcement is stopped.
◊ "Terminate call"
   After the defined time period, the call and the current announcement are stopped.
◊ "Wait until free"
   Until the defined time period, it will be tried to reach the destination repeatedly. After the defined time period, the current announcement is stopped.

Hint:
In combination with the automatic action "After" the caller can be forwarded to a state where he can choose a new action.

Actions due to Caller Inputs IVR

With a text the caller can be prompted to press different keys on the telephone keypad to start predefined actions. If the caller does not press a key, then an automatic action "After" may be executed.

The following actions can be selected on the Keys 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, *, and #:

◊ "Restart"
   This announcement is restarted.
◊ "Goto announcement"
   The selected announcement is called. The current announcement is stopped.
◊ "Start call"
   The configured telephone number is called. The current announcement is stopped.
◊ "Terminate call"
   The call and the current announcement are stopped.
◊ "Dial this digit"
   The selected digit is stored in a buffer

Special Case " Dial this digit "

If one or more keys are configured with "Dial this digit", the caller can use these digits to create a new telephone number and have it dialed.

The digits collected are dialed as telephone numbers when:

◊ After entering of the last digit approx. 6 seconds have elapsed
◊ A key is pressed with the "Start Call" action selected. For this key the telephone number must be let empty.

To prevent that any telephone number can be dialed, one ore more dialing rules must be assigned to the telephone number to which the announcement belongs.

Parameter Configuration

Parameter: Name

Description:	Defines the name of the announcement.
Configuration:	Any string
	Configuration String:
	◊ Any string
Default:	None
Version:	AdminCenter V5.6

Parameter: Immediately

Description:	Defines an immediately executed action upon the invoking of the announcement. The text of this announcement will not be played! With the call initiation a timer "After" will be started. If this timer runs out its defined action will be executed. If the destination signals that it is occupied (e.g. busy, call rejected) then timer "Dest. not reachable" will be started. If this timer runs out its defined action will be executed.

Configuration:	Selection Menu:
	
	        Start Call
	        The configured number will be dialed immediately.

Default:	None
Version:	AdminCenter V5.6

Parameter: Music on Wait

Description:	Defines that the user will hear music while waiting to be connected to a destination.

Configuration:	Selection Menu:
	
	        Play announcement
	        The text of the selected "announcement" will be used as the source for music.

Default:	None
Version:	AdminCenter V5.6

Parameter: Periodically

Description:	Defines that the user will hear periodically an additional text.

Configuration:	Selection Menu:
	
	        Play announcement
	        The text of the selected announcement will periodically replayed. It is played the first time after the configured timeout and afterwards repeated with the same

timeout.

Default:	None
Version:	AdminCenter V5.6

Parameter: Dest. not reachable

Description:	Defines the action that has to be taken when the destination is not reachable (e.g. busy, rejected the call) after the configured timeout. This timeout shall help to prevent that the user may wait needlessly when it is known that the called cannot take the phone.
Configuration:	Selection Menu: Restart After the configured timeout this announcement is restarted. Goto announcement After the configured timeout the selected announcement is invoked. The current announcement will be terminated. Terminate call After the configured timeout the call and the current announcement will be terminated. Wait until free Until the configured timeout the destinations are polled if they are free. After this timeout, the polling is stopped.
Default:	None
Version:	AdminCenter V5.6

Parameter: After

Description:	Defines the action that has to be taken when the user does not provide an input or a placed call is not answered. This timeout shall help to prevent that the user may wait needlessly for to be connected to any destination or to hear the announcement again, etc.
Configuration:	Selection Menu: Restart After the configured timeout this announcement is restarted. Goto announcement After the configured timeout the selected announcement is invoked. The current announcement will be terminated. Start Call After the configured timeout the configured telephone number will be dialed. The current announcement will be terminated. Terminate call After the configured timeout the call and the current announcement will be terminated.
Default:	None
Version:	AdminCenter V5.6

Parameter: Key

Description:	Defines the action that has to be taken when the user presses this key on the telephone keypad.
Configuration:	Selection Menu: Restart This announcement is restarted. Goto announcement The selected announcement is invoked. The current announcement will be terminated. Start Call The telephone number will be dialed. The current announcement will be terminated. Dial this digit The pressed digit will be collected in a dialing buffer. The collected digits will be dialed as a telephone number: - After a timeout of ca 6 sec after the last entry of a digit - When a key is pressed that has the action "Start Call" (See above) with no configured number
Default:	None
Version:	AdminCenter V5.6