

# Features

IP Office provides a comprehensive telephony feature set to enable a fast and efficient response to a telephone call. Features such as Caller ID display and call tagging allow employees to see who is calling and who they are calling before they pick the call up. Client information can even be 'popped-up' on the user's PC.

For those who are not tied to a desk, Wireless handsets and twinning offer mobility around the office. For those out of the office, be it on the road or working from home, comprehensive and easy to use call forwarding facilities, PC Softphone and a remote access service allow them to remain in telephone contact and access centralized resources at all times.

Incoming calls can be efficiently handled using either Direct Dialling (DDI/DID) or dedicated operators. For out of hours calls or times when you just can't take calls, IP Office provides voicemail and optional Auto-Attendant services.

## IP Office Features

### Basic Call Handling

#### Tones

IP Office generates the correct user tones for the geography. These tones are generated for all IP Office extension types, analog, digital and IP.

Supported tones are:

- Dial, both primary and secondary depending on geography
- Busy
- Unobtainable
- Re-order
- Conferencing tone depending on geography

#### Caller ID

##### Feature

- Display of the caller's number on incoming calls, where supplied by the service provider.
- Sending of calling number on outgoing external calls.

##### Benefit

- Confirmation and recognition of who is calling.
- Storage of Caller ID numbers for return calls.
- Directory name matching to Caller ID numbers.
- Screen-Popping customer records in compatible applications.

##### Description

Where supplied by the service provider, the IP Office can receive and use the callers Caller ID. The Caller ID is passed through to the answering phone or application and is included in any call log or history supported by the phone or application. If the Caller ID matches a number in the IP Office's Directory, the matching directory name is shown instead of the number.

Where IP Office Phone Manager, or the TAPI service is used to link to database software on the users PC, it is possible to have an automatic query performed on the supplied Caller ID and have the caller's record in front of the user before the call is answered.

For outgoing calls the IP Office can insert a system wide Caller ID or set a flag to have Caller ID withheld. For users with a direct dial number routed to their extension, that direct dial number is also used as their Caller ID for outgoing calls. Alternatively short codes can be used to specify the Caller ID that should be sent with outgoing calls.

Note that the sending and receiving of Caller ID is subject to the service provider supporting that service. The service provider may also restrict which numbers can be used for outgoing Caller ID.

#### Hold

A call may be placed on hold with optional Hold music. A held call cannot be forgotten as it is presented back to the extension after a timeout set by the system's administrator.

See also [Park](#) .

#### Toggle Calls

Toggle Calls cycles round each call that the user has On Hold to their extension locally within the system, presenting them one at a time to the user

## Hold Call Waiting

Hold Call Waiting is a compound feature combining hold and answer and provides a convenient way to hold an existing call and answer a waiting call through a single button press.

## Hold Music (Music on Hold)

The IP Office system supports up to 4 sources of music on hold - one system source which may be external, internal (WAV) or tone, plus up to 3 additional internal sources. Small Office Edition supports either one internal or one external music on hold source at a time. The internal sources are .WAV files saved either in volatile memory, or on the optional memory card in an IP500, IP406 V2 or Small Office Edition. The .WAV file must be 16bit PCM mono and sampled at 8Khz with a maximum duration of 30 seconds.

From release 4.2, the alternate sources for music on hold are selectable for use by Incoming Call Routes or Hunt Groups (not available on the Small Office Edition). On IP500 systems, each source can be up to 90 seconds long (30 seconds on IP406 V2 and IP412).

External music on hold sources connect to the 3.5mm Audio socket on all IP Office control units.

## Park

As an alternative to placing a call on hold, a call can be parked on the system to be picked by another user.

The call park facility is available through the user's telephone, Phone Manager or SoftConsole. Calls are Parked against a 'park slot number' which can be announced over a paging system so the person the call is for can go to any phone and collect the call by dialling the park slot number.

For convenience Phone Manager has 4 pre-defined park buttons. On digital phones with DSS/BLF keys it is possible to program Park keys that will indicate when there is a call in a particular park slot and allow calls to be parked or retrieved.

There is a system configurable timeout that determines how long a call may remain parked before it is represented to the extension that originally parked the call.

## Automatic Callback

### Feature

- When calling an extension that is busy, set the system to call you when the extension becomes free. This feature is also called "Ringback When Free".
- When calling an extension that just rings, set the system to call you when the extension is next used. This feature is also called "Ringback When Next Used".

### Benefit

- Carry on with other work and let the system initiate a call for you when the extension becomes available.

### Description

Depending on the type of phone a user has, call back when free is accessed by dialling a short code while listening to internal busy tone, selecting an option from an interactive menu or pressing a programmed DSS/BLF key. Callback when free can also be activated from Phone Manager.

You can also set a callback when free or a callback when next used using a short code without attempting a call.

Note that a user can only have one automatic callback set at any one time.

This feature is supported across the IP Office Small Community Network.

## Direct Inward Dialing (DID/DDI)

This relies on the local telephone exchange passing all or part of the dialed number to the IP Office. This number can then be used by IP Office call routing software to route the call to an individual phone, or groups of phones. This service is typically used to reduce the workload on a reception position by giving members of staff or departments individual numbers so they can be called directly. For convenience it is common to have the extension or group number the same as the digits supplied from the network, but IP Office can convert the number to what ever number is needed by the business, within limits

In North America, T1 circuits are required for DID.

## Transfer

Call Transfer allows users to transfer a call in progress to another phone number – either internal extension or external public number. The caller is placed on hold while the transfer is performed.

If the phone is put down before the destination has answered, the original caller will be automatically transferred. This is called an Unsupervised or Blind Transfer. Alternatively, a user can wait for the destination to be answered and announce the transfer before hanging up to complete the transfer. This is called a Supervised Transfer.

Unless restricted by the system administrator, the IP Office makes no differentiation between internal or external call transfers.

## Distinctive and Personalized Ringing

The IP Office uses different ringing sequences to indicate the type of call, for example whether internal or external. This feature is called 'distinctive ringing'. For analog phones the distinctive ringing sequences used are adjustable. For digital and IP phones the distinctive ringing sequences are fixed as follows;

- Internal Call: Repeated single-ring.
- External Call: Repeated double-ring.
- Ringback Call: Single ring followed by two short rings.

This ring is used for calls returning from park, hold or transfer. It is also used for call back when free and voicemail ringback calls.

This feature is supported across the IP Office Small Community Network

## Personalized Ringing

In IP Office the term personalized ringing is used to refer to changing the sound or tone of a phone's ring. On many Avaya digital phones, the ringer sound can be personalized. Changing the ringer sound does not alter the ring sequence used for distinctive ringing. This feature is local to the telephone and not supported on all types of telephones.

## Message Waiting Indication

Message waiting indication (MWI) is a method IP Office uses to set a lamp or other indication on compatible telephones when a new message has been left for the user, either in a personal voice mailbox or in a group mailbox or call back message. When the message has been played or acknowledged, the lamp is turned off. All Avaya digital and IP phones all have in-built message waiting lamps, and the IP Office Phone Manager application provides message waiting indication on screen

For analog phones, from IP Office 3.1 a variety of analog message waiting indication (MWI) methods are provided. Those methods are 51V Stepped, 81V, 101V and Line Reversal. The MWI method must be selected from the IP Office Manager application when configuring a system to match the properties of the analog phones. Note that the 101V signaling is only available on IP500 Phone cards and modules plus version 2 IP400 Phone 8, 16 and 30 modules, not on the IP406 system unit.

## Visual Voice

### Feature

- Provides interface to voicemail through handset display and buttons e.g. Listen, Save, Delete, Fast Forward.

### Benefit

- Quick access to voicemails and commonly used messaging features.

### Description

With IP Office R4.0, you can now access and control voice messages via the display on Digital or IP phones. Visual Voice requires VoiceMail Pro or Embedded Messaging, and can be used with large display LCD sets only (1608, 1616, 2410, 2420, 5410, 5420, 4610, 4620, 4621, 4625, 5610, 5620, and 5621 phones plus all T3 phones are supported).

From release 4.2, the fixed message button on certain phones can be configured to invoke visual voice. This configurable option frees the button programming required currently for Visual Voice.

Features supported are:

- access new/old/saved messages for personal and hunt group mailboxes.
- next and previous message.
- fast forward and rewind.
- pause message.
- save, delete and copy message to other users of the system.
- change default greeting.
- change password.
- change email settings (VoiceMail Pro only).

Note: Visual Voice is NOT available on VoiceMail Lite.

# Advanced Call Handling

## Description

In larger businesses or businesses with greater reliance on the telephone for internal and external communications some of the more advanced features will improve efficiency and customer service. Features like Pick-Up which permit users to take a call for a colleague who is temporarily away from their desk, of Absence Text which can quickly give information to internal callers about a person's availability.

## Absence Text

### Feature

- Display a text message on the user's phone and IP Office Phone Manager application.
- Display the same message on other internal phones and IP Office applications when calling the user.

### Benefit

- Inform other internal users of your current status and likely availability.

### Description

Any user can set Absence Text on their phone, even users of standard analog phones, but it can only be displayed on selected display phones, Phone Manager and SoftConsole that call the user. Most supported feature phones give the option of adding some text, for example, "At lunch until 16:00".

When a user has an absence text message set, call processing is not affected to the user and they still have the choice of using features like Do Not Disturb or Forward on No Answer as appropriate. Phones that support the interactive setting of Absence Text will also display it on the users own phone for the benefit of people who come to their desk. There are 10 predefined strings for Absence Text:

- None (no text message)
- "On vacation until"
- "Will be back"
- "At lunch until"
- "Meeting until"
- "Please call"
- "Don't disturb until"
- "With visitors until"
- "With cust. til"
- "Back soon"
- "Back tomorrow"
- Custom

All may have additional text entered, eg message 4 plus 10:00 will show "Meeting until 10:00" and the text strings are localized to the system language

This feature is supported across the IP Office Small Community Network

## Call Tagging

### Feature

- Display a text message on the user's phone, or Phone Manager application, when a call is presented to it.

### Benefit

- Provide additional information about the call.

### Description

This feature is used to provide additional information about the call to the targeted user before they answer it. Call Tagging may be used when transferring a call from Phone Manager or Soft Console to give caller info if the user doing the transfer is not able to announce the call.

It is possible to add a tag to a call automatically using CTI and IP Office VoiceMail Pro. This is also possible based on an Incoming Call Route. On some telephones, displaying the Tag may mean that it is not possible to display the usual call source and target information.

## Reclaim Call

### Feature

- The ability to recover, or reclaim, the last call that was at your phone but is now ringing or is connected elsewhere.

### Benefit

- If you just miss a call and it goes to voicemail or call coverage, you can get the call back while it is still being presented or connected through IP Office

### Description

This is a special version of the Acquire Call feature that only applies to the last call at your extension.

## Hunt Group Enable/Disable

### Feature

- The ability for a user to enable or suspend their membership of Hunt Groups.

### Benefit

- A user may need to temporarily join or leave individual hunt groups, for example to cover a peak of calls without changing the system programming.

### Description

A team supervisor or administrator may not usually take calls for a team but at times of high traffic they may join the group to take calls and when the peak is over leave the group to resume their regular tasks. To use this feature the User must be configured as a member of the Hunt Group by the systems administrator, it is not possible for a User to arbitrarily join a Hunt Group that they have not been identified as a member of.

## Call Waiting

A User may not want people calling them to receive busy tone if they are already on another call, but have the call receive ring tone and have some kind of alert that there is a call waiting. The user can then decide to finish or hold the current call and answer the one that is waiting. The amount of information that is available about the call that is waiting depends on the type of phone the user has, or if they are using Phone Manager.

As Call waiting tone can be disruptive it is possible to turn the feature on or off and even suspend it for a single call – useful for conference calls.

## Do Not Disturb (DND)

This is the ability to temporarily stop incoming calls ringing at a user's telephone. It will prevent the user from receiving Hunt Group calls and give direct callers either voicemail (if enabled) or a busy signal. This feature can be enabled/disabled from the phone or via the Phone Manager application.

It is possible to have some calls bypass the DND setting and ring the phone. For example a manager might have their secretary's extension number on the DND exceptions list. The exceptions list can be easily managed by the Phone Manager application. Both internal and external numbers can be on the exception list.

## Dial Plan

IP Office has a very flexible numbering scheme for extensions, hunt groups and feature commands. While the system has default numbering for feature codes and extensions, they can all be re-defined. Default extensions and hunt groups have 3 digit numbers starting at 200 but these can be changed from 2 to 9 digits through the IP Office Manager application. There is a default set of feature access "short codes," but these can be changed to what ever the end user requires, within limits. This is useful for example, if IP Office is replacing a system where DND was accessed by dialling \*21, it is possible to change the IP Office Short Code to mimic the code of the replaced system.

In certain countries IP Office can support a Secondary Dial Tone when an access digit is dialled, though this limits some functionality like Alternate Route Selection (ARS). IP Office can also be configured to work without line access digits, by analyzing digits as they are dialled and determining if they are for an internal number or should be sent out on a line – this is valuable in SOHO installations where users will not necessarily be used to dialling an access digit for an outside line.

## **Paging**

All Avaya digital and IP phones supported on the IP Office that have loudspeakers can be used to receive broadcast audio messages without having to install a separate paging system. Paging can be to individual phones or groups of phones.

Analog extension ports can be configured for connection to external overhead paging systems, usually through an adapter, such that a port can be included in a paging group to permit mixed phone and overhead paging.

Some Avaya digital and IP phones are able to answer a page by pressing a key while the page is going on, this terminates the page and turns it into a normal call.

This feature is supported across the IP Office Small Community Network

## **Intrude**

The Call Intrude feature allows a user, if permission through IP Office Manager is given, to join an existing conversation whether this is an internal or external call.

A user with the "Can Intrude" option can join a call on any extension on the system, however, a User with "Cannot be Intruded" setting would prevent others from joining their call.

## **Inclusion**

This feature enables selected users to intrude on calls that are already in progress. The intruding party intrudes on the existing call and all parties hear a tone. The speech path is enabled between the intruding party and the called user, the other party is forced onto hold and will not hear the conversation. On completion of the intrusion the called party speech path is reconnected to the original connected party. The feature is enabled or disabled on a per user basis through the Manager application.

## **Private Call**

Users can set a status of private call using short codes or a programmed button. Private calls cannot be recorded, intruded on, bridged into or monitored.

## **Hot Desking**

Hot Desking allows a number of users non-exclusive use the same extension. Each user logs in with their own identity so they can receive calls and can access their own Voicemail and other facilities. For example, sales personnel who visit the office infrequently can be provided with telephony and Voicemail services without being permanently assigned a physical extension. When finished, they simply log off to make the extension available to others or if users log on at another phone, they are automatically logged off the original extension.

## Remote Hot Desking

### Feature

- The ability for a user to Hot Desk to other locations within the Small Community Network.
- Available on Digital, Analog and IP phones.

### Benefit

- A user can make and receive calls from any office as if using the phone on their own desk.
- Single number, improved mobility and easy access to familiar features.
- Great for consultants, managers, lawyers working on different offices on different days.

### Description

IP Office 4.0 supports remote hot desking between IP Office systems within a Small Community Network. The system on which the user configured is termed their 'home' IP Office, all other systems are 'remote' IP Offices. To log on at a remote IP Office requires that IP Office to have a Small Community Advanced Networking license. A license is not necessary on the user's home IP Office.

### • User Settings

When a user logs on to a remote IP Office system, all their user settings are transferred to that system.

- The user's incoming calls are rerouted across the SCN.
- The user's outgoing calls use the settings of the remote IP Office.
- However some settings may become unusable or may operate differently. For example if the user uses a time profile for some features, those feature will only work if a time profile of the same name also exists on the remote IP Office.

### • Break Out Dialing

In some scenarios a hot desking user logged on at a remote system will want to dial a number using the system short codes of another system. This can be done using either short codes with the Break Out feature or a programmable button set to Break Out. This feature can be used by any user within the Small Community Advanced Network but is of significant use to remote hot deskers.

Note: Remote Hot Desking is not supported for use with CCC. Features handled by the telephone itself are not affected by Hot Desking (e.g. call log and phone speed dials).

## Relay On/Off/Pulse

IP Office is fitted with two independent switch outputs for controlling external equipment such as door entry systems. Control of these switches is via allotted handsets allowing the switches to be opened, closed or pulsed as required. Control of switches is also accessible via Phone Manager Pro, SoftConsole and VoiceMail Pro.

## Pickup

Call Pickup allows a user to answer a call presented to another extension. Types of call pickup include:

- Pick up any call ringing on another extension.
- Pick up a Hunt Group call ringing on another extension, where the user must be a member of that Hunt Group.
- Pick up a ringing call at a specified Extension.
- Pick up any call ringing on another extension that is a member of the Hunt group specified.

This feature is supported across the IP Office Small Community Network

## Call Recording

Where IP Office has VoiceMail Pro installed it is possible to record a call and save the recording to the user's mailbox, a group mailbox or the voice recording library. For example, this is useful when a caller is going to give detailed information like an address or phone number and the caller will hear a warning message or tone that the call is being recorded in some countries. Where call recording is required for Quality Assurance, it is possible to set the IP Office system to automatically record a percentage of calls for later review.

Beginning with IP Office R4.0, any call (normal, conference, or intrusion) and any phone type (including IP) can be recorded. Where "advice of recording" needs to be played, IP Office will ignore Voicemail port licensing if an insufficient number of voicemail channels have been licensed.

Note: for IP phones, a VCM channel will be required for the duration of the recording.



## Telecommuter Mode

Phone Manager Pro allows the making and receiving of calls and the retrieving of voicemails from an external phone number as if they were in the office, with Phone Manager providing the call control. The typical scenario is the remote worker that occasionally works from home or from a hotel room.

This feature also provides billing convenience and potential cost savings for remote workers and mobile work force as all the calls are established by IP Office: there is no need to check bills, nor to pay for expensive hotel calls.

## Twinning and Mobility

Twinning allows a primary extension and a secondary number (extension or external) to operate together as a single telephone. When a call is presented to the primary phone the secondary will ring. If the primary telephone does not ring, for example in Do Not Disturb, the secondary phone will not ring.

### Internal Twinning

This is typically used in scenarios like workshops or warehouses where team supervisors may have a desk with a fixed phone but also have a wireless extension (e.g. DECT). When a call is made from either twinned phone, the call will appear to have come from the primary phone (when the secondary is an extension on the IP Office system). Other users of the system need not know that the supervisor has two different phones. The supervisor's Coverage Timer and No Answer Time are started for the call and if the call is not answered within that time, the call will be delivered to available coverage buttons (if applicable) and then Voicemail (if applicable).

### Mobile (external) Twinning

A typical use for Mobile Twinning would be for a salesperson who has a desk extension but is often out of the office. They can give out one phone number to clients, but it will ring their mobile/cell phone as well as the desk extension. External mobile devices can be set as twinning targets even if the primary telephone is logged out (e.g. in the case of a "virtual" extension).

From IP Office 4.2 onwards, the following additional Mobility features are available in addition to simple mobile twinning (but need to be separately enabled per user in IP Office Manager):

### Mobile Call Control

This allows a user who has answered a twinned call on their mobile phone to dial a DTMF sequence \*\* (star-star) to put the call on hold and receive IP Office system dial tone. The user will then be able to perform supervised and un-supervised transfers, shuttle (switch between held calls), and conference (Conference add and transfer to a meet-me conference).

### Avaya one-X™ Mobile Client Support

IP Office 4.2 supports the Avaya one-X Mobile "Single Mode" Client running on selected Symbian Single-Mode or Windows Mobile 5 or 6 handsets. This provides a graphical interface for call control and allows a one-number service for both incoming and outgoing calls. For a full list of supported handsets see <http://support.avaya.com>. IP Office systems supporting one-X Mobile require a dedicated DID/DDI number for each feature required (e.g. hold, transfer).

Mobile Call Control and one-X Mobile support require twinned calls to be routed through specific trunk types on IP500 only:

- IP500 PRI-U (single or dual) daughter cards
- IP500 Dual or Quad BRI daughter cards
- SIP trunks (RFC 2833)

In IP Office 4.2 the existing Mobile Twinning license has been renamed to Mobility license. The license now enables the use of Mobile Call Control and one-X Mobile client features as well as Mobile Twinning. An instance of the license will be consumed for every user who has Mobility Features checked in IP Office Manager.

With either internal and external twinning, users may be allowed to enter a twinned number, or may just be able to activate/deactivate the twinning function depending on administrative settings.

The following types of calls are eligible for twinning:

- Any internal call on a Call Appearance button
- Internal or external calls transferred to the extension
- Direct Dial calls to that extension
- Hunt Group Calls
- Calls forwarded from another extension
- Line Appearance calls (configurable)
- Bridged Appearance calls (configurable)
- Coverage calls (configurable)
- Automatic Intercom calls
- Returning transferred, held or park calls

Callback calls from the system (Transfer and Park Return)

Paging Calls

Follow Me calls

\*Requires IP500 BRI, PRI or SIP trunks and Mobile Call Control to be enabled for that user.

## Key and Lamp Operation

IP Office offers a full range of Key and Lamp features on Avaya feature phones. These features include; Line Appearance, Call Appearance, Bridged Appearance and Call Coverage. As these features require a phone with buttons and indicators, the features are only supported on certain Avaya digital and IP phones. Key and Lamp operation is not supported on analog phones.

IP Office can have a ring delay set on each appearance button to allow time for the target number to answer before other extensions ring, or visual alert only without ring.

In Key and Lamp operation, IP Office supports up to 10 buttons on each telephone and 10 telephones with the same line appearance.

## Appearance Buttons

### Feature

- Use the programmable buttons available on Avaya digital and IP telephones to represent individual calls.
- Answer, originate and join calls by pressing the appropriate appearance buttons.

### Benefits

- Indication of calls connected and calls waiting.
- Handling of multiple calls from a single phone.

### Description

Many Avaya digital and IP telephones supported by IP Office have programmable buttons. These buttons can be assigned to appearance functions that allow the handling of calls. These functions are:

- Line Appearance Buttons

Used to indicate make and answer calls on a specific external trunk.

- Call Appearance Buttons

Used to handle multiple incoming and outgoing calls from a user's extension.

- Bridged Appearance Buttons

Used to match the call appearance buttons on a colleagues extension.

- Call Coverage Buttons

Used to indicate unanswered calls ringing at a colleagues extension.

## Line Appearance

A Line Appearance is a representation of a trunk line on the IP Office system where the indicator tracks the activity on the Line. Only external calls can be answered or made on Line Appearances. Line appearances can be used with Analog, E1 PRI, T1 PRI and BRI trunks PSTN trunks. They cannot be used with E1R2, QSIG and IP trunks.

## Call Appearance Buttons

**Feature**

- Uses a programmable button on the Avaya digital and IP telephone to represent an incoming or outgoing call.
- Separate buttons are used to represent each simultaneous call that the user can make or answer.
- Where possible, the status of the calls (ringing, connected or held) is indicated by the button indicator.

**Benefit**

- Call appearances allow a single user to make, answer and switch between multiple calls by pressing the appropriate call appearance button for each call.

**Description**

On Avaya IP Office digital and IP telephones that have programmable buttons, those buttons can be set as call appearance buttons through the IP Office Manager application. The number of call appearance buttons set for a user determines the number of simultaneous calls they can make and answer.

Note that the use of call appearance buttons overrides IP Office call waiting features. It is only when all call appearances are in use that subsequent callers receive either busy tone, voicemail or follow a forward on busy action

When call appearance buttons are used, a minimum of three call appearance buttons is recommended where possible, although some phones are restricted to two call appearance buttons by the number or design of their programmable buttons.

## Bridged Appearance Buttons

**Feature**

- Allow the user to have an appearance button that matches another user's call appearance button.

**Benefit**

- Answer and make calls on behalf of the other user.
- Audible indication of calls presented to the bridged user, where programmed
- Visual indication of when the other user has calls presented, held or connected.
- Join and exchange calls using the paired call appearance and bridged appearance buttons.

**Description**

A bridged appearance button matches the activity on one of another user's call appearance button. For example, when the call appearance shows a ringing call, the bridged appearance button will also show the ringing call and can be used to answer that call.

Similarly, if the bridged appearance button is used to make a call, the call activity is shown on the matching call appearance button. The call appearance button user can join or takeover the call using their call appearance button.

Bridged appearance buttons allow paired 'manager/secretary' style operation between two users, and are only supported for users who have call appearance buttons.

## Call Coverage

**Feature**

- Allow unanswered calls to alert at other user extensions and be answered there before being forwarded or going to voicemail.

**Benefit**

- Provide users the opportunity to answer colleague's unanswered calls before they go to voicemail.

**Description**

When a user has an unanswered call ringing, after a configurable delay, the call will also start alerting on any call coverage buttons associated with the user on other extensions. The call can then be answered by pressing the call coverage button. If still unanswered the call is forward or goes to voicemail as normal.

The time a call rings before also alerting on any associated call coverage buttons can be adjusted for each user.

## Outbound Call Handling Features

Every business needs to make calls, but depending on the type of business these calls may need to be treated in a special way, such as recorded against a project or client through the use of Account Codes. A business may have several sites linked via a private network but certain users, like customer services agents, may need to be able to call colleagues in other offices even when the network is busy, while other users can wait for a line to come free, Least Cost Routes can automatically translate the internal number to a direct dial call over the public network while other users wait.

## Account Codes

### Feature

- Associate an account code with a call.
- Validate account codes used against list stored by the IP Office.
- Include the account code used with call log details.

### Benefit

- Through the call records, group calls by account code for the purpose of call costing and tracking.
- Restrict outgoing calls by requiring users to enter a valid account code.

### Description

IP Office stores a list of valid account code numbers. When making a call or during the call, the user can enter the account code they want associated with that call. IP Office will check the account code against its list of valid codes and request the user to re-enter the code if it is not valid. For incoming calls, the Caller ID can be used to match it with an account code from the IP Office's list of valid codes and report the account code with the call for billing.

Individual users can be set to Forced Account Code operation where they are required to enter a valid account code before making external calls. By using IP Office Short Codes it is possible to identify certain numbers or call types as requiring a valid account code before permitting the call to proceed, for example long distance or international numbers. Analog phone users can only enter account codes before making a call or in response to an audible system prompt to enter a code when making the call.

Account codes can also be entered through the IP Office Phone Manager application, a system wide setting, determines whether Phone Manager will display a list of account codes from which users can select the code required or will hide the account code list.

In all the cases above, the account code entered is included with the call details in the IP Office's call record output. (CDR and SMDR).

## Authorization Codes

Authorization codes allow an IP Office user to go to another extension on the system and make calls using their personal toll restrictions; this may grant the user greater or fewer privileges than the normal owner of the extension they use. Since Authorization Codes are independent of Account Codes, the user has to enter both if the required by the system configuration. All entered codes are logged in CDRs.

## Dial Emergency

Dial emergency is an IP Office Short

## Call Barring

### Feature

- It is possible to prevent or allow calls to certain numbers such as international numbers or premium rate numbers for individual users or on a system wide basis.

### Benefit

- Restrict the dialing of specific numbers or types of numbers system wide.
- Restrict certain users from dialing specific numbers or types of numbers.

### Description

IP Office supports call barring at many levels. Short codes can be used at the system or individual user level to block the external routing of specific numbers or types of numbers. Typically the barring short codes are set to return busy tone, however they could route the call to an alternate number or to a Voicemail service that returns a 'barred dialing message'.

For users, the short codes can be allocated to a User Rights template. This template is then applied to the Users whose calls need restriction. In addition to barring the dialling of certain numbers, IP Office can be set to bar the forwarding of calls to external numbers on a per user basis.

## Alternate Route Selection (ARS)

IP Office supports Alternate Route Selection, which is more flexible and easier to configure than Least Cost

Routing (LCR). If a primary trunk is unavailable, then ARS provides automatic fallback to an available trunk (e.g., analog trunk fallback if a T1 or SIP trunk fails, or use PSTN for SCN fallback). By configuring ARS, calls may be routed via the optimum carrier. Time profiles can also be used to allow customers to take advantage of cheaper rates or better quality at specific times of day. Multiple carriers are supported. For example, local calls are to go through one carrier between specific hours and international calls through an alternative carrier. Carrier selection using 2-stage call set up via in-band DTMF is possible. It is possible to assign specific routes on a per user basis, e.g. only allow expensive routes to be used by critical staff.

Note: Existing LCR configurations are automatically converted to ARS when upgrading to 4.0

## Maximum Call Length

This feature allows the system to control the maximum duration of any call based on the dialed number. This could be used for controlling calls to cellular networks or data calls made over the public network to ISPs.

## PIN Restricted Calling

See [Account Codes](#) .

## Forwarding

This is the ability to forward a user's calls to another extension or external number such as a Mobile/Cell Phone. Calls can be forwarded in a number of ways and if the call is not answered at the forward destination it will go to IP Office voicemail if enabled for the user and call supervision is available. There are three separate forward destinations, one for forwarding on busy one for no answer and one for forward unconditional. Once the numbers have been entered, the user can toggle the forwarding to be active or not as required without having to re-enter the numbers.

If the user is a member of a hunt group, some types of Hunt Group calls can also follow forward unconditional. Users can select if forwarding is applied to external calls only, or all calls. Call forwarding is processed after Do Not Disturb and Follow-Me conditions are tested.

### Associated Features

- Do Not Disturb (DND)
- Voice Mail (VM)
- Follow Me
- Hunt Groups
- No Answer Interval

### Precedence

- Forward Unconditional
- Forward Busy
- Forward No Answer

## Forward on Busy

If enabled, this forward will be triggered when the user is busy and another call is routed to them, but does not include calls for a hunt group that they may be a member of. A user is normally considered to be busy when they are on a call but depending on call waiting settings and key and lamp features this may not be the case.

## Forward on No Answer

This forward is triggered if a call has been ringing for a user but they haven't answered it within the configured answer time, this includes calls that have been indicating call waiting if enabled.

## Forward Unconditional

This sends all calls for the user to the forward unconditional number, but if the call is not answered within a user's timeout period the call will be sent to IP Office voicemail, if enabled.

## Forward Hunt Group

Calls for a hunt group that the user belongs to can also follow forward unconditional. The hunt group must be set for either hunt or rotary ring type and if the call is not answered at the forward destination it will follow the hunt group call handling instead of going to voicemail. This can be particularly useful in a sales or support environments where a number of people

## Follow Me

Follow-Me is similar to Forwarding except that the destination can only be an extension on the same IP Office as the user making use of the feature. Follow-Me is typically used when a user is going to be working away from their desk, for example in a workshop. All the call settings the user has on their main phone will apply to calls that follow the follow-me feature, including forward on busy or no answer. Follow-Me can be set either from the users main phone – Follow-Me To – or from the phone where they want calls to be received – Follow-Me Here. Several people can have their phones forwarded

## Programmable Buttons

As well as the usual dialing keys, Avaya digital and IP phones have dedicated function buttons like Mute, Volume, Hold, Conference and Transfer. In addition to these, on many Avaya digital and IP phones there are keys that can be programmed with a range of selected special functions. These keys can be used for calling other extensions on the system (Direct Station Select or DSS keys), or can be used for options from speed dialing numbers to controlling features such as Do Not Disturb. Many features use an indicator to show whether a feature is enabled. Button programming is done through the IP Office Manager application as part of the system configuration, although some phones allow the user to program buttons and functions where given administration rights.

## Busy Lamp Field (BLF) Indicators

### Feature

- Status indicators which show the status of a programmable buttons associated feature or function.

### Benefit

- Indication of when a button or associated feature is active.

### Description

Avaya digital and IP phones have programmable buttons which can be assigned to various features. When those buttons include some form of BLF indicator, the button can also be used to indicate when the feature is active. For example, a button associated with another user will indicate when that user is active on a call. A button associated with a group will indicate when the group has calls waiting to be answered.

The speed dial icons within the IP Office Phone Manager and SoftConsole applications also act as BLF's. When the icons are associated with internal users, the icons will change to indicate the current status of the users. Phone Manager and SoftConsole show these conditions:

- **Busy**
- **Message**
- **Forward All**
- **Do Not Disturb**

This feature is supported across the IP Office Small Community Network.

## Call History

### Feature

- Storage of called and calling number details within the user's phone and/or IP Office application.

### Description

Most Avaya digital and IP phones keep a record of calls made and received, including unanswered calls. The method of operation varies according to the phone type but in all cases the call records can be used for return calls.

The IP Office Phone Manager application maintains a call history record of the users last 100 calls. The application must be running to record call history. Phone Manager Lite can display call history for all calls and missed calls only. Phone Manager Pro can display call histories for all calls, missed calls, inbound calls and outbound calls. Entries in the call history can be used for return calls, sorted and added to the Phone Managers local directory or speed dials.

## Language

Avaya digital and IP phone menus and displays are available in many languages and usually the system default setting will be applicable to all phones, however it is possible to have language set on an extension by extension basis, this will also change the language of menus for IP Office Voice Mail.

## Directory

The IP Office Directory is a list of up to 1000 numbers and associated names stored centrally in the system. A Directory Entry can be used to label an incoming call on a caller display telephone or on a PC application. The Directory also gives a system wide list of frequently used numbers for speed dialling via Phone Manager or a feature phone with a suitable display.

For example "Head Office" can be displayed when a known Caller ID is received. A user can also select "Head Office" in the Directory List in Phone Manager or on the display phone Directory to speed dial this number. IP Office's Directory is LDAP (Lightweight Directory Access Protocol) compliant which allows it to be synchronized with the information on any LDAP server. A maximum of 500 records can be retrieved by this method.

## Self-Administration

The IP Office administrator may give select users the ability to change some of the phone settings themselves. For example, button programming. The range of changes that the user can make depends on the phone type

in use.

## On Hook Dialing

Avaya digital and IP phones allow the user to make calls by just dialing the number on the keypad, without having to lift the handset or pressing a speaker button. Usually the call progress can be monitored using the speaker in the phone, on phones that support handsfree the whole conversation can be had without having to lift the handset.

## Inbound Call Handling

IP Office offers several features to provide versatile inbound call processing, including PC based applications, and a standards-based TAPI interface for 3rd party applications.

## Incoming Call Routing

Incoming calls can be presented to an Operator who then decides where to pass the call, but IP Office supports intelligent call routing capable of making routing decisions based on a number of criteria.

The system currently supports routing based on;

- Call presentation digits from the exchange such as DDI/DID or ISDN MSN.
- Calling telephone number or Caller ID (This could even be part of the number received such as an area code).
- ISDN sub-address.
- ISDN/PRI service type i.e. Voice Call, Data Call, etc.

It is even possible to look for multiple criteria so, for instance, a DDI/DID call to a sales group could be handled differently depending on which part of the country the call is originating from.

Each incoming Call Route also supports a secondary destination 'Night Service' that can provide alternative routing for an incoming call based on 'time of day' and 'day of week' criteria, as well as calendar-based routing for specific dates.

Calls that cannot be routed to the configured destination are re-routed to a user defined 'Fall Back' destination. This can be particularly useful where calls are normally answered by an auto-attendant and a network fault occurs.

Where multiple call routes are set up to the same destination, a Priority level can be associated with the call. This priority level is used to determine a call's queue position in place of simple arrival time, but note that calls already ringing a free extension are not considered queuing and are not affected by a high priority call joining a queue (unless the option "Assign Call On Agent Answer" is selected for that Hunt Group). In Release 4.2 a new Priority Promotion Timer can be configured to increase the priority of calls which have been in the queue for more than a defined time.

An optional tag can be added to calls on the Incoming Call Route, which can be displayed on the alerting telephone.

## Hunt Groups

A Hunt Group is a collection of users, typically users handling similar types of calls, e.g. a sales department. An incoming caller wishing to speak to Sales can ring one number but the call can be answered by any number of extensions that are members of the Hunt Group.

Four modes of call presentation are supported on IP Office;

### • Sequential

One extension at a time sequentially always starting at the top of the list.

### • Collective

All extensions in the Hunt Group simultaneously.

### • Rotary

Start with the extension in the list immediately following the extension that answered the last Hunt Group call.

### • Longest Waiting

Start with the extension that has been free for the longest time.

In Release 4.2 a new option has been added "Assign Call On Agent Alert" which means that CTI applications will always correctly report the details for the call that is alerting. The previous (default) behavior is now termed "Assign Call On Agent Answer" and ensures that the call at the head of the queue is always answered first.

If all extensions in the Hunt Group are busy or not answered, another Hunt Group, called an Overflow Group, can be used to take the calls. An overflow time can be set to stipulate how long a call will queue before being



passed to the Overflow Group (in Release 4.2 this can be configured either for individual calls or for all calls in the group). The system can change the status of users who do not answer a hunt group call presented to them. The user can be put into busy wrap-up, busy not available or logged off. The change of status can be set per user and the use of this option can be set per hunt group.

Outside normal operation a hunt group can be put into two special modes; Night Service and Out of service. In Night Service calls are presented to a Night Service Group. This can be controlled automatically by setting a time profile which defines the hours of operation of the main group or manually using a handset feature code. Night service fallback using a time profile is no longer applied to a hunt group already set to Out of Service. The Out of Service mode is controlled manually from a handset. While in this mode calls are presented to the Out of Service group

Voicemail can also be used in conjunction with Hunt Groups to take all group related messages, play an announcement when the Hunt Group is in Night Service or Out of Service mode and give announcements while a call is held in a queue. For internal voicemail use a broadcast option is provided. This feature will alter the voicemail box operation so that the message notification will only be turned off for each hunt group member when they retrieve their own copy of the message.

## **Small Community Networking (SCN) Distributed Hunt Groups**

Small Community Networking (SCN) Distributed Hunt Groups

Hunt groups in a Small Community Network can include members located on other systems within the network. This feature requires entry of an Advanced Small Community Networking license in each system in the network.

Note: Distributed Hunt Groups are not supported for use with CCC.

## **Night Service**

When a Hunt Group is in Night Service mode the Hunt Group is temporarily disabled. Callers to this Hunt Group will:

- Pass to a Night Service Fallback group used to provide cover, e.g. pass calls to a manned extension or an external number
- Be played the Out of Hours greeting if Voicemail is operational
- Receive the busy tone

A Hunt Group can be switched in or out of Night Service mode by a user dialing the appropriate short code – by any extension or by specific users.

## **Time Profiles**

Time Profiles can be used to define when a Service, Hunt Group, Least Cost Route, Conference Bridge or a user's dial-in facility are operational. For example, a time profile can be used to route Hunt Group calls to a manned extension or voicemail outside of office hours, or be used to apply different Least Cost Routes at varying times of day to take advantage of cheaper call rates. Multiple Time Entries can be created so that a Time Profile can be used to define specific hours in the day e.g. 09:00-12:00 and 13:00-17:00. Outside of a Time Profile, voice calls would be re-routed according to the configuration but any currently connected calls at the time the Time Profile changes would not get cut off as the change only affects the routing. Data calls will get cut off as the time profile goes out of service but a new data call will start immediately if specified. From Release 4.1, Time Profiles can also be based on specific calendar dates to make allowance for public holidays or other events.

## **Queuing**

Queuing allows calls to a Hunt Group to be held in a queue when all extensions in the group extension List are busy. When an extension becomes free the queued call is then presented. The definition of queued calls now includes ringing calls and calls waiting to be presented for ringing. The queue limit can be set to control the maximum number of calls to wait against a hunt group.

While queuing, if Voicemail is operational, the caller will be played the announcements for this Hunt Group.

## **Announcements**

From IP Office 4.0 onwards, Hunt group announcements are separated from hunt group queuing and can be used even when queuing is off. Hunt group announcements are now supported by Embedded Voicemail in addition to VoiceMail Pro and VoiceMail Lite.

Further, times for the first announcement, second announcement, and between repeated announcements are configurable.

## **Contact Center Features**

Contact Centers have specific needs for reporting on how calls are handled and these are covered in a separate section of the Product Description. Basic handling of telephony requirements for a Call Center is a

standard part of IP Office from Automatic Call Distribution (ACD) and Call Queuing to agents logging on and selecting the groups that they service.

## Login

A contact center agent function, login is required before the agent is able to make or receive calls from their phone. A login idle period can be specified which will dictate how long an extension can be idle before the user is automatically logged off, ensuring that an extension is not left logged in and calls go unanswered.

## Monitor Calls

A user can monitor other peoples' calls by listening in. This feature is not available by default; it must be specifically enabled in the system configuration. An option exists to have a beep tone indicate when monitoring is in use. The user is only able to listen; they cannot speak into the conversation being monitored.

## Acquire Call

### Feature

- Takeover a call currently connected at another extension. This feature is also known as "Call Steal".

### Benefit

- Assist a colleague who indicates they want you to take the call.

### Description

The Acquire Call function can be setup as a special short code or programmed against a button on an Avaya digital or IP phone with programmable buttons. Use of the feature is subject to IP Office intrusion control settings, the user acquiring the call must be set to be able to intrude and the user whose call is being acquired must be set to can be intruded. Acquire call works in two ways, invoked with or without a number:

Without a value in the number field

- This allows a user to reclaim a call that was ringing on their phone but has now gone elsewhere, for example to Voicemail or Forward No Answer destination. The Intrude settings are not checked and the call can be reclaimed even if it has been answered.

- If the last call to ring this User is no longer ringing or connected on the system, the feature will fail.

With a number, where the number is the telephone number of a user who currently has the call to be acquired.

- If the user has a call ringing or waiting Acquire Call will act like the Call PickUp Extension short code and the user executing Acquire Call will be connected to the oldest ringing/waiting call.
- If the User has a connected call with no call waiting and the Intrude settings of the two Users allow it, the call will be connected to the user executing the Acquire Call and the other user will be disconnected.
- If the User does not have a call the feature will fail.

## Queue Threshold Alert

When the number of calls queued against a Hunt Group exceed a threshold, the system can be configured to alert at a selected analog extension port. Typically the User to Alert will be a loud ringer or other alerting device. The alert does not present a real call.

## Miscellaneous Features

### Conference Calls

Calls can be placed on hold and a conference created using either the phone or desktop applications. Additional conference members may be added up to a maximum number of 64 members. The IP Office - Small Office Edition supports 24 conference parties with a maximum of 6 parties in any single conference. The IP406 and IP500 can support multiple conference calls totaling up to 64 parties. For example one conference of 64 calls or 21 conferences of 3 calls each. The IP412 has two 64-party conference bridges giving any combination from 2 x 64-party conferences to 42 x 3-party capacity. Only two calls connecting through analog trunks are permitted in any single conference. For more information on managing conference calls, refer to Chapter 12 where IP Office Conferencing Center is described

## Dial On Pickup

Also known as "Hotline". Automatically dials a specified extension when the phone is taken off hook. This facility is commonly used in unmanned reception areas or for door entry systems to allow visitors to easily gain assistance.

## Off Hook Operation

Off-Hook Station is designed for users who want their analog phone to operate like digital or IP feature phone, to isolate the user's phone idle state from the Hook state. This is a useful feature when using Phone Manager or SoftConsole to control the phone state when using a headset on an analog telephone and with call control and dialing from Phone Manager or SoftConsole.

## External Control Port

The IP Office system unit has two electronic switches, similar to relays, which can be normally open, normally closed, pulsed open or pulsed closed and activated by dialing a short code or through Phone Manager, SoftConsole or VoiceMail Pro action.

These switches can be used for several purposes, for example as a means to control an electronic door release. The External Control Port switches are used to trigger/control purpose built door release equipment which is supplied by a third party. All that needs to be done is to wire the trigger/control output of the third party device to the appropriate External Control port pins.

## E911

This is a specific service for North America. When an emergency call is connected, IP Office provides calling party information to an external line interface unit. The external unit carries out a number to text translation and forwards this to the emergency services bureau so that the originating location of the call is clearly identified.

## System Short Codes

Short Codes are used as commands the IP Office to make changes for the user, group or system, so need to set up with consideration to security. The command may need additional information included with it, such as for forward, the phone number forwarded to. Short codes are a flexible and quick way of setting up certain features. IP Office has short codes provided by default on the system, or more advanced codes that need programming by the system administrator.

The full set of short code commands are listed below; please see product configuration documents for more detail on how to set them up.

- AOC Previous Call
- AOC Reset Total
- AOC Total
- Auto Attendant
- Break Out
- Busy
- Busy On Held
- Call Intrude
- Call List
- Call Listen
- Call Pickup Any
- Call Pickup Extn
- Call Pickup Line
- Call Pickup Group
- Call Pickup Members
- Call Pickup User
- Call Queue
- Call Record
- Call Steal

Call Waiting On  
Call Waiting Off  
Call Waiting Suspend  
Cancel All Forwarding  
Cancel Ring Back When  
Free  
Channel Monitor  
Clear Call  
Clear CW  
Clear Hunt Group Night  
Service  
Clear Hunt Group Out Of  
Service  
Clear Quota  
Conference Add  
Conference Meet Me  
CW  
Dial  
Dial 3K1  
Dial 56K  
Dial 64K  
Dial CW  
Dial Direct  
Dial Direct Hot Line  
Dial Emergency  
Dial Extn  
Dial Inclusion  
Dial Paging  
DialPhysicalExtensionByNu  
mber  
DialPhysicalNumberByID  
Dial Speech  
Dial V110  
Dial V120  
Dial Video  
Disable ARS Form  
Disable Internal Forwards  
Disable Internal Forward  
Unconditional  
Disable Internal Forward  
Busy or No Answer  
Display Msg  
Do Not Disturb Exception  
Add  
Do Not Disturb Exception  
Delete  
Do Not Disturb On  
Do Not Disturb Off  
Enable ARS Form  
Enable Internal Forwards  
Enable Internal Forward  
Unconditional  
Enable Internal Forward  
Busy or No Answer  
Extn Login  
Extn Logout  
Flash Hook  
Follow Me Here  
Follow Me Here Cancel  
Follow Me To  
Forward Hunt Group Calls  
On  
Forward Hunt Group Calls  
Off  
Forward Number  
Forward On Busy Number  
Forward On Busy On  
Forward On Busy Off  
Forward On No Answer On

Forward On No Answer Off  
Forward Unconditional On  
Forward Unconditional Off  
Group Listen Off  
Group Listen On  
Headset Toggle  
Hold Call  
Hold CW  
Hold Music  
Hunt Group Disable  
Hunt Group Enable  
Last Number Redial  
MCID Activate  
Mobile Twinned Call Pickup  
Off Hook Station  
Park Call  
Private Call  
Private Call Off  
Private Call On  
Priority Call  
Record Message  
Relay On  
Relay Off  
Relay Pulse  
Resume Call  
Retrieve Call  
Ring Back When Free  
Secondary Dial Tone  
Set Absent Text  
Set Account Code  
Set Authorization Code  
Set Hunt Group Night  
Service  
Set Hunt Group Out Of  
Service  
Set Inside Call Seq  
Set No Answer Time  
Set Mobile Twinning  
Number  
Set Mobile Twinning On  
Set Mobile Twinning Off  
Set Outside Call Seq  
Set Ringback Seq  
Set Wrap Up Time  
Shut Down Embedded  
Voicemail  
Suspend Call  
Suspend CW  
Toggle Calls  
Unpark Call  
Voicemail Collect  
Voicemail Node  
Voicemail On  
Voicemail Off  
Voicemail Ringback On  
Voicemail Ringback Off