



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring the Ascom i62 VoWiFi handset version 2.3.16 with Avaya IP Office Release 7.0 - Issue 1.0

Abstract

These Application Notes describe a solution for supporting wireless interoperability between the Ascom i62 VoWiFi handset with Avaya IP Office release 7.0. Emphasis of the testing was to verify voice calls with wireless Ascom i62 SIP handsets registered to the Avaya IP Office.

Information in these Application Notes has been obtained through DevConnect Compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These application notes provide detail configurations of Avaya IP Office (hereafter referred to as IPO) and the Ascom i62 VoWiFi handset (hereafter referred to as i62) used during the compliance testing. The Ascom i62 was tested with non-SIP and SIP telephones using IPO Release 7.0. All the applicable telephony feature test cases of Release 7.0 were executed on the Ascom i62, where applicable to ensure that the interoperability with IPO.

2. General Test Approach and Test Results

The general test approach was to have the Ascom Wifi i62 telephone to register to the IPO. Calls were then placed from other IPO telephone clients/users to and from the Ascom Wifi i62 handset. Other telephony features such as busy, hold, DTMF, MWI and codec negotiation were also verified.

2.1. Interoperability Compliance Testing

Avaya's formal testing and Declaration of Conformity is provided only on the headsets/handsets that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headset/handset to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/handsets for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different handset/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality.

The focus of this testing was to verify that the i62 SIP telephone was able to interoperate with the IPO system. The following areas were tested:

- Registration of the i62 to the IPO.
- Call establishment of i62 with IPO telephones.
- Telephony features: Basic calls, conference, blind and consultative transfer, DTMF (dual tone multi frequency) RFC2833 and SIP Info transmission, voicemail with Message Waiting Indication (MWI) notification, busy, hold, hunt group, call waiting, bridge appearance and Call forward.
- Codec negotiation – G.711 and G.729.
- i62 calls PSTN telephone via SIP trunk.

2.2. Test Results

The objectives outlined in **Section 2.1** were verified. The i62 was registered to IPO successfully. Calls have been made between IPO telephones and i62 with clear voice path.

2.3. Support

Technical support for the Ascom i62 handsets can be obtained through local Ascom suppliers.

Ascom global technical support:

- Phone: +46 31 559450
- Email: support@ascom.se

3. Reference Configuration

Figure 1 illustrates the reference configuration used during compliance testing.

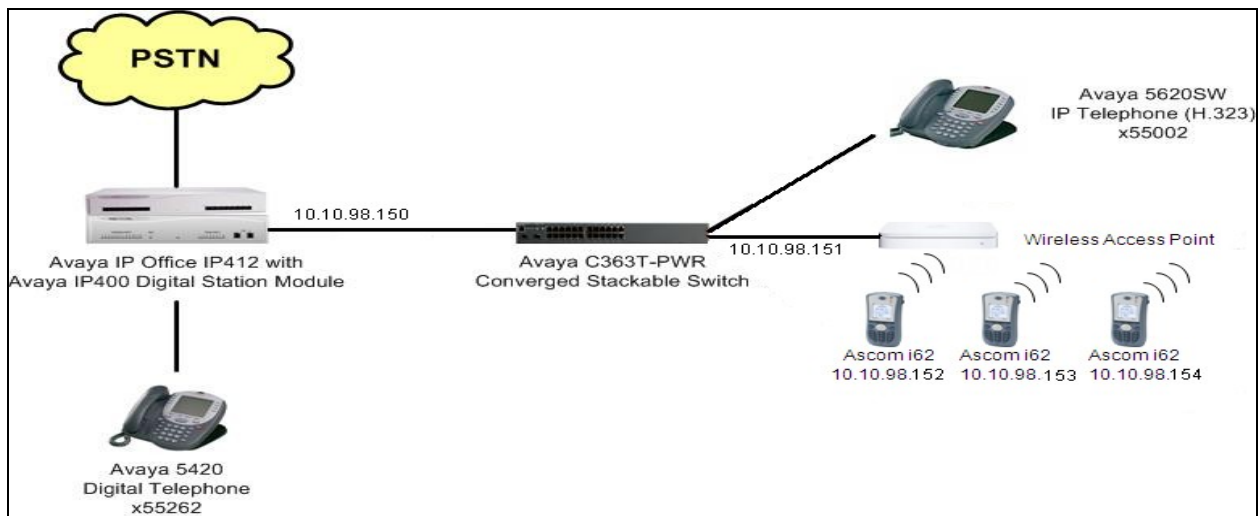


Figure 1: Network Configuration Diagram

4. Equipment and Software Validated

The following equipment and software/firmware were used for the reference configuration:

Equipment	Software Version
Avaya IP Office (IP500 v2)	7.0 (5)
Avaya IP Office Manager	9.0 (5)
Analog Telephones	N/A
Avaya 2420 Series Digital Telephones	6.0
Avaya 9600 Series IP Telephones	S6.016T
Avaya 9508 Series Digital Telephones	N/A
Avaya VoiceMail Pro	7.0 (17)
Ascom i62 VoWifi	2.3.16

5. Avaya IP Office & Extension Configuration

5.1. Avaya IP Office Configuration

This section was included to verify that Avaya IP Office was configured correctly. Except where stated, the parameters in all steps are the default settings and are supplied for reference. For all other provisioning information such as provisioning of the trunks, call coverage and voice mail, please refer to the Avaya IP Office product documentation in **Section 9**.

Step 1

Avaya IP Office is configured via the Avaya IP Office Manager program. Log into the Avaya IP Office Manager PC and select **Start → Programs → IP Office → Manager** to launch the Avaya IP Office Manager application. Select **File → Open** to search for IP Offices in the network. Click on appropriate Avaya IP Office. Click **OK** to continue Log in to the Avaya IP Office Manager application using the appropriate credentials.

Step 2

The main IP Office Manager window appears. The following steps refer to the Configuration Tree which is in the left pane of the window and under the heading **IP Offices** as shown in **Figure 2**.

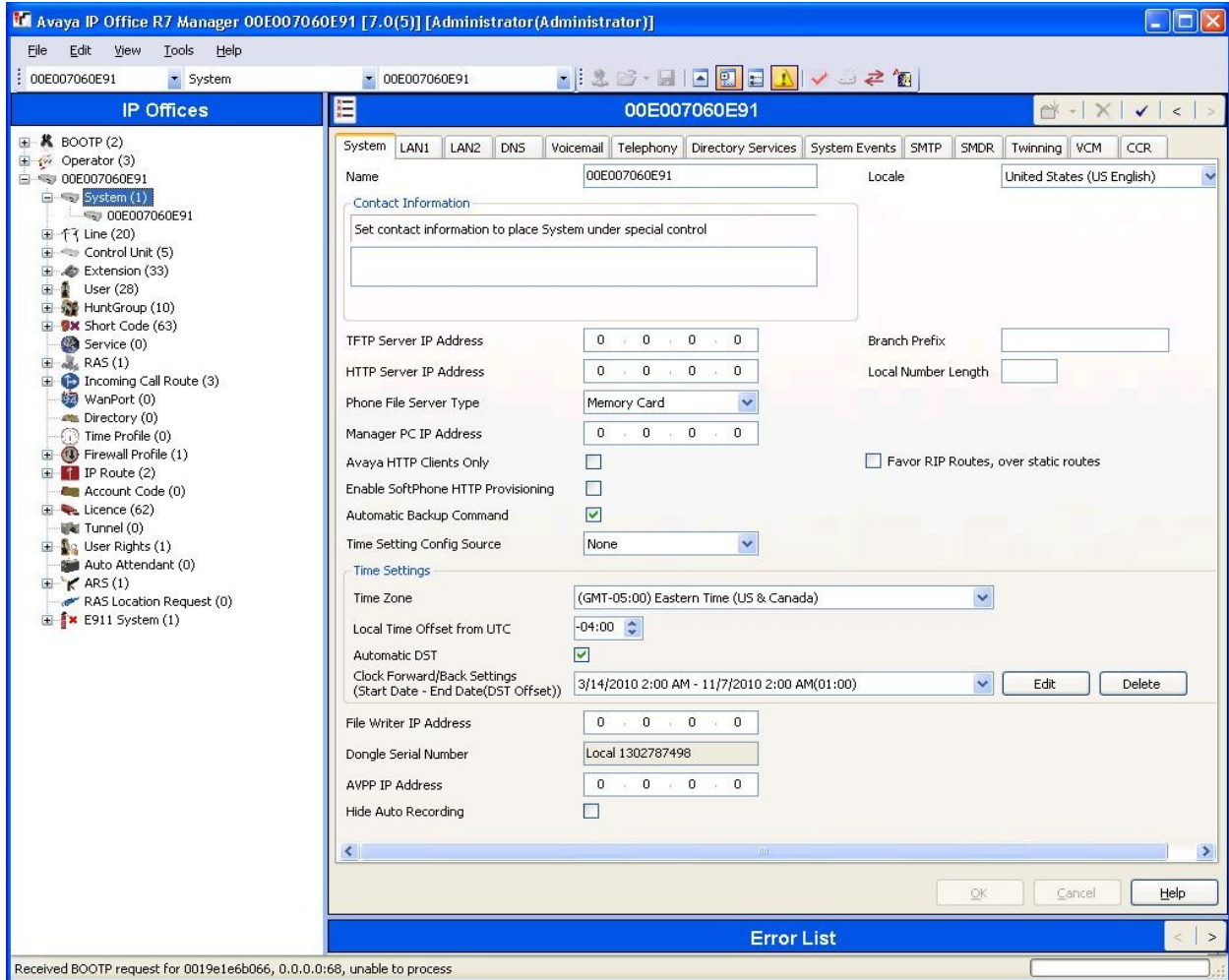


Figure 2: IP Office System

Step 3

Verify VoIP information.

The Avaya IP Telephones will get Differentiated Services information from the Avaya IP Office. In the Manager window, from the Configuration Tree, click **System** → **LAN1** → **VoIP** Verify that the **DiffServ Settings** for **DSCP** and **SIG DSCP** are both set to **46**. If they are not **46**, change them and then click **OK** to continue as shown in **Figure 3**.

Note: 00E007060E91 is the MAC address of this specific IP Office and will be different for all IP Offices.

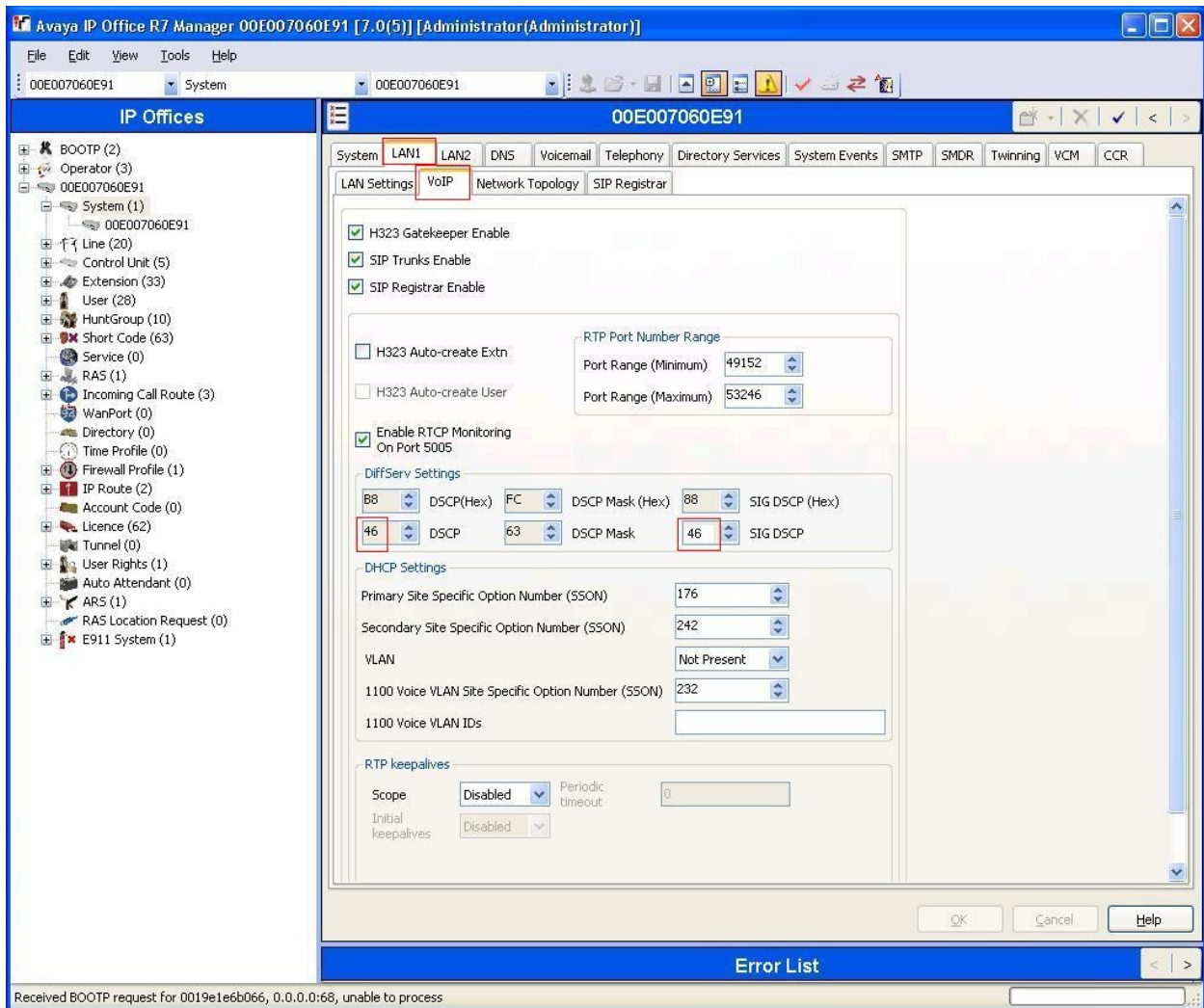


Figure 3: System Lan1 VoIP Settings

Step 4

Disable DHCP server on Avaya IP Office.

From the Configuration Tree, click **System** → **LAN1** → **LAN Settings**. Set the **DHCP Mode** to **Disabled**. Click **OK** to continue as shown in **Figure 4**.

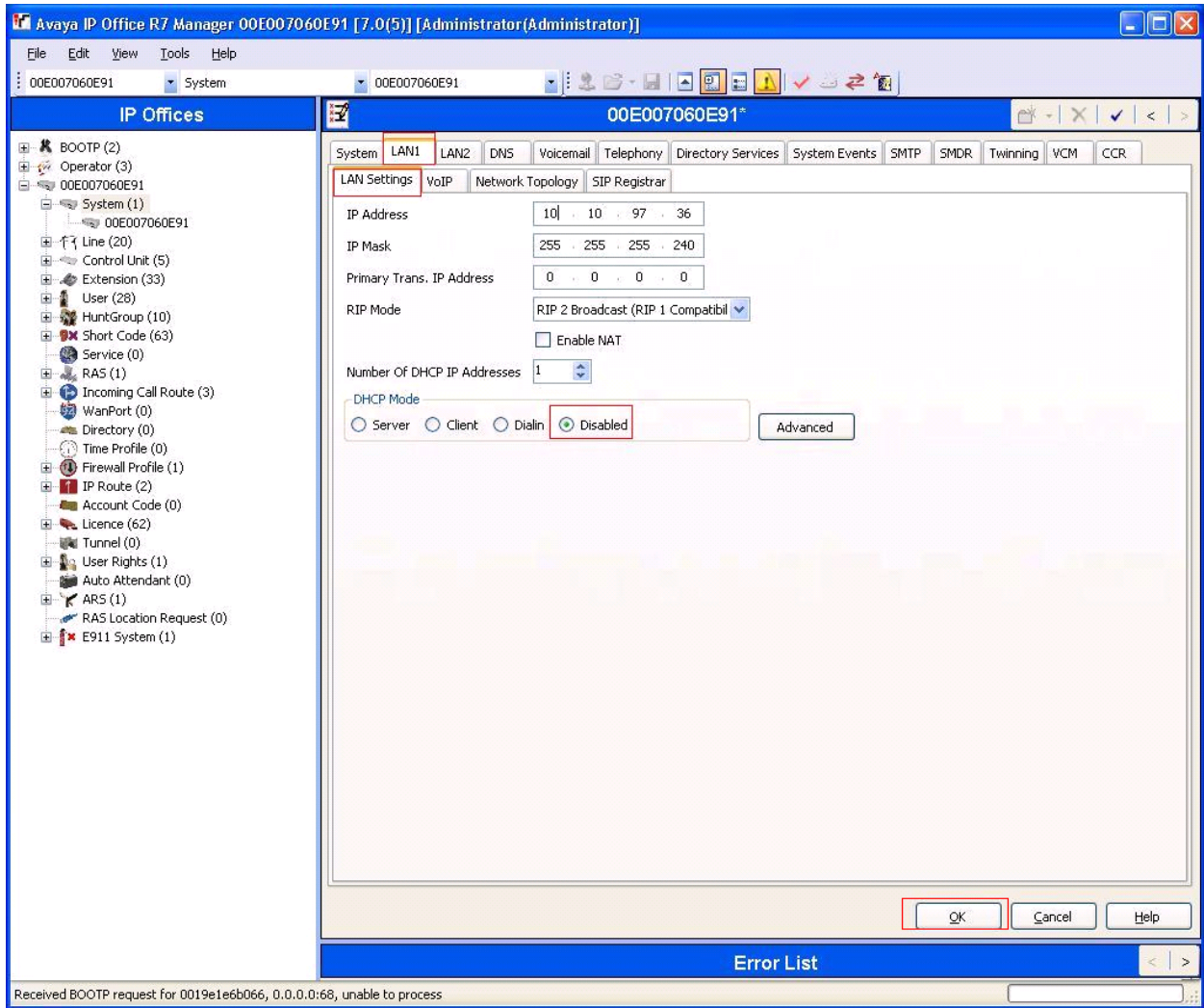


Figure 4: Disable DHCP

5.2. SIP Extension Configuration

This section was included to show basic SIP Extension configuration. Except where stated, the parameters in all steps are the default settings and are supplied for reference. For all other provisioning information such as provisioning of the trunks, call coverage and voice mail, please refer to the Avaya IP Office product documentation in **Section 9**.

Step 1

Avaya IP Office is configured via the Avaya IP Office Manager program. Log into the Avaya IP Office Manager PC and select **Start → Programs → IP Office → Manager** to launch the Avaya IP Office Manager application. Select **File → Open** to search for IP Offices in the network. Click on appropriate Avaya IP Office. Click **OK** to continue. Log in to the Avaya IP Office Manager application using the appropriate credentials.

Step 2

The main IP Office Manager window appears. The following steps refer to the Configuration Tree which is in the left pane of the window and under the heading **IP Offices** as shown in **Figure 2**.

Step 3

Create SIP Extension.

From the Configuration Tree, right mouse click on **Extension** and select **New → SIP Extension** (not shown). Enter a unique **Base Extension** as shown in **Figure 5**.

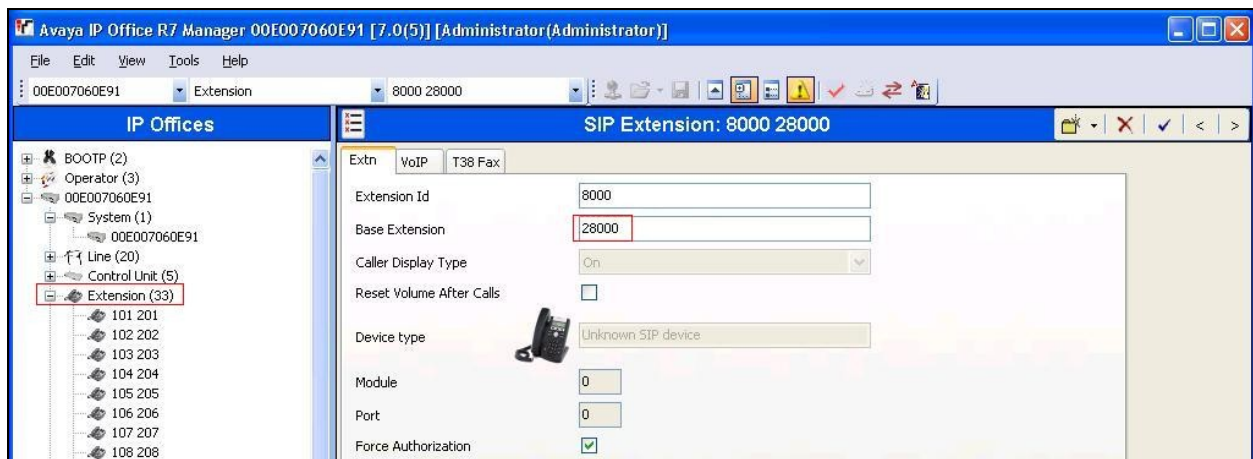


Figure 5: Create SIP Extension

Step 4

Verify Direct Media Path.

Click the **VoIP** tab. Verify that **Allow Direct Media Path** is checked. Click **OK** (not shown) to continue as shown in **Figure 6**.

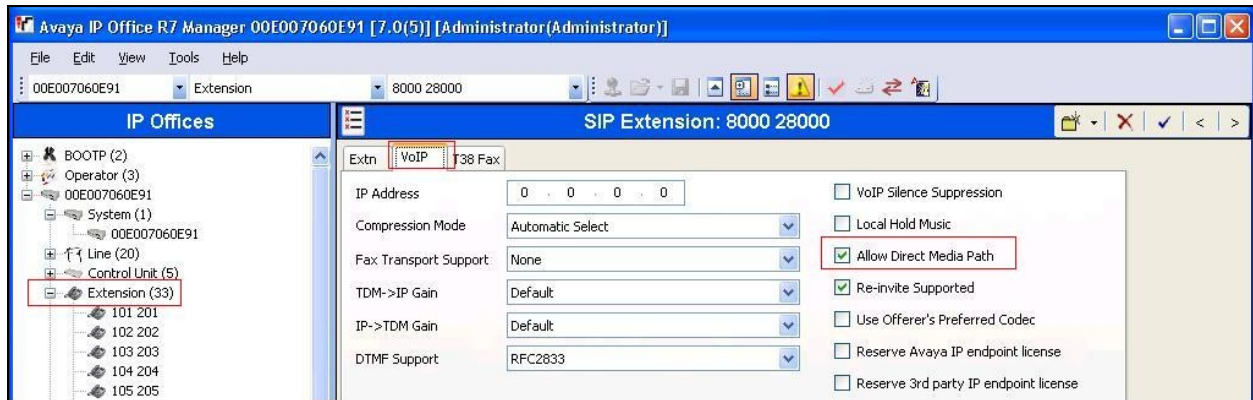


Figure 6: Allow Direct Media Path Setting

Step 5

Create User.

From the Configuration Tree, right mouse click on **User** and select **New** (not shown). Enter a user **Name** for the extension that was created in **Step 3**. Enter a **Password** and **Confirm Password** value. Enter the **Extension** that was created in **Step 3** as shown in **Figure 7**.

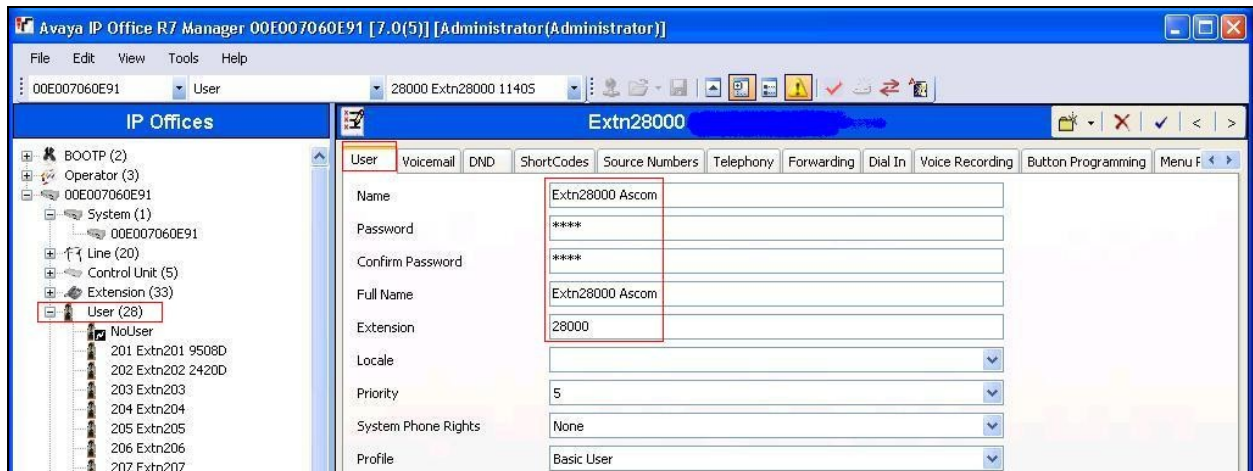



Figure 7: Create User

Step 6

Click **Telephony** tab and **Supervisor Settings** sub-tab. Enter a **Login Code**. 1234 was used for the compliance testing. The **Login Code** is used by the Ascom i62 Handset to log in to the Avaya IP Office, it will be configured in **Section 6.1, Figure 17**. Click **OK** (not shown) to continue. The changes must be saved before they will take effect, click to the  icon to save the configuration as shown in **Figure 8**.

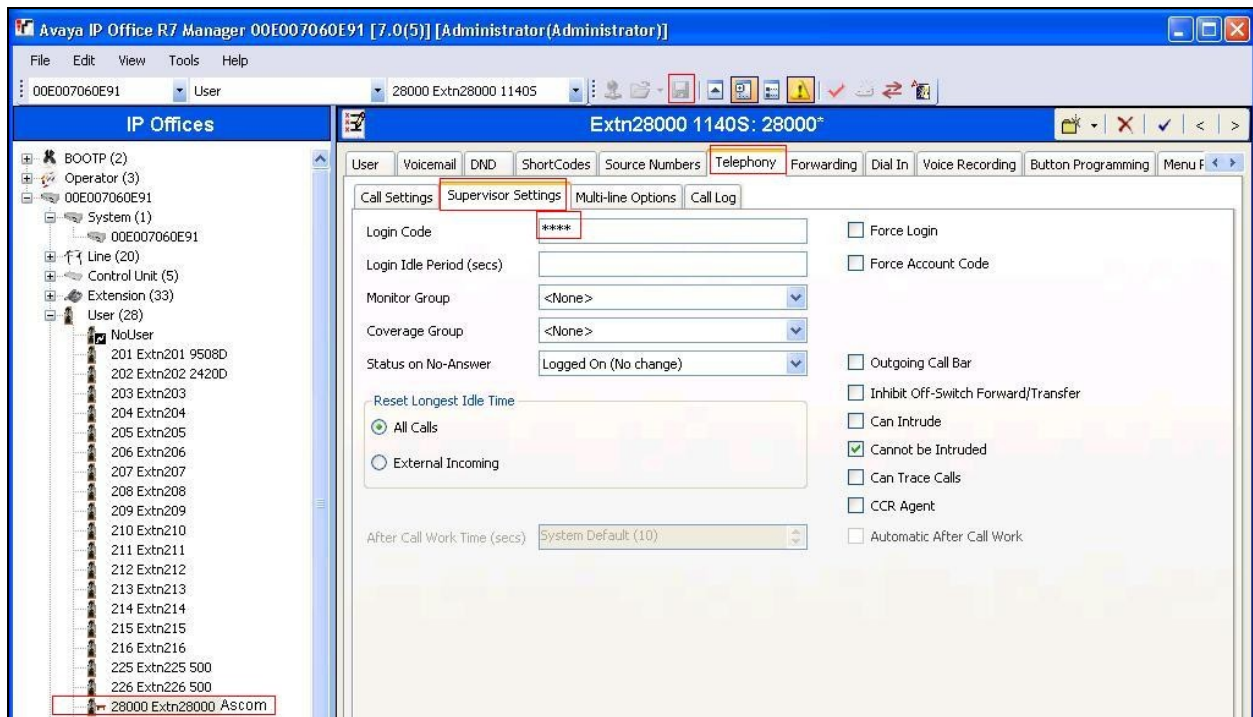


Figure 8: Telephony Supervisor Settings

Step 7

Repeat **Step 3** through to **Step 6** for additional Extensions.

6. Configure Ascom VoWiFi i62 SIP

This section describes how to access and configure the Ascom i62 VoWiFi handset via the Windows Device Manager called WinPDM version 3.8.1. The Device Manager software can be downloaded via Ascom extranet and installed on a Windows PC. Remote device management “over the air” provides a similar graphical user interface. Insert the handset to be configured in the DP1 USB cradle, start the Ascom Device Manager, and select the “Devices” tab. The inserted i62 set is now being indicated with a check mark under the **Online** column as shown in **Figure 9**.

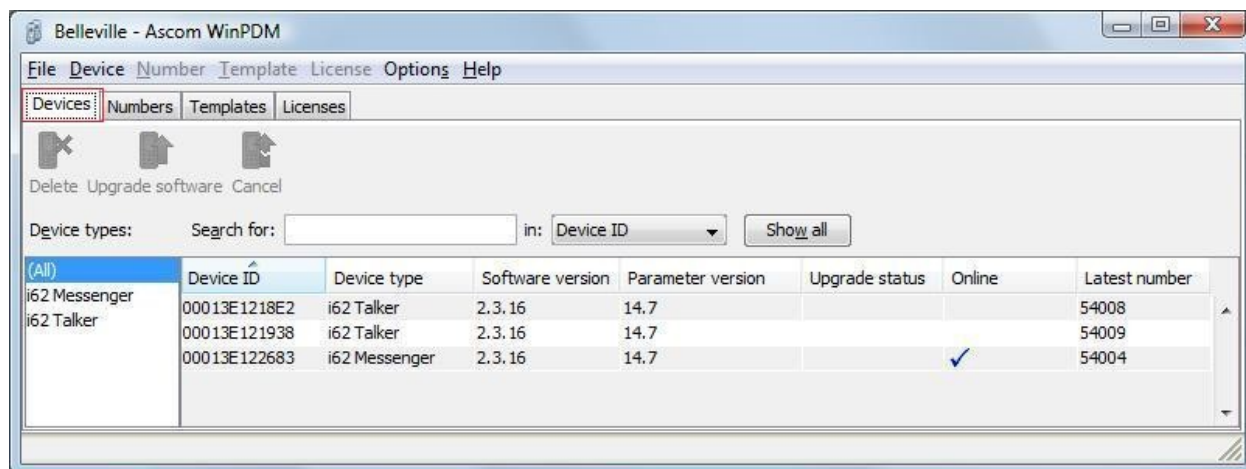


Figure 9: Ascom Device Manager Devices Tab

Select the **Numbers** tab as shown in **Figure 10**. Click on the **New** icon to add a new number **28000** in this example.

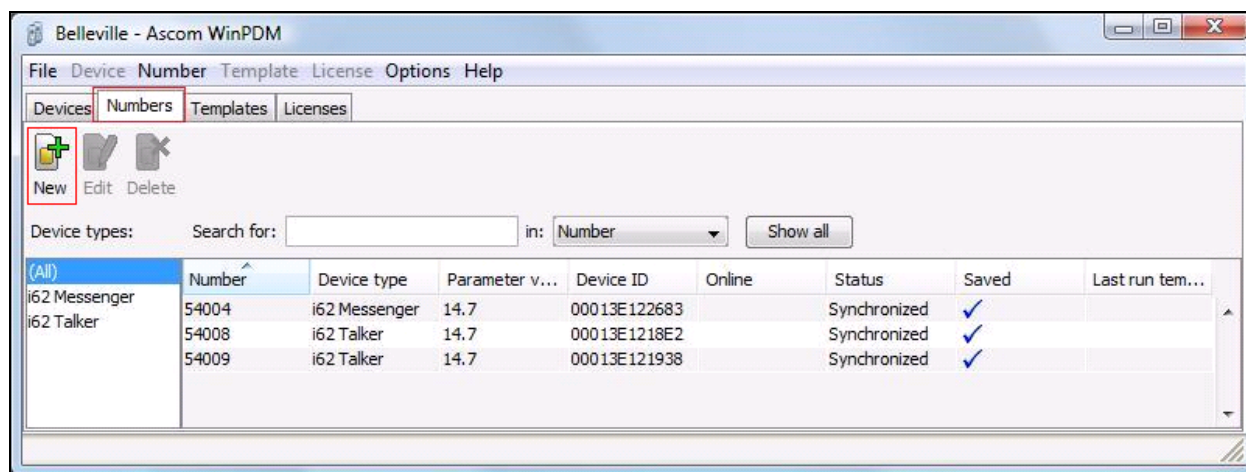


Figure 10: Ascom Device Manager Numbers Tab

There is a dialog box popping up as shown in **Figure 11**. Enter **28000** in the textbox of **Call number** parameter. Click **OK** to create the new number in the **New Numbers** table.

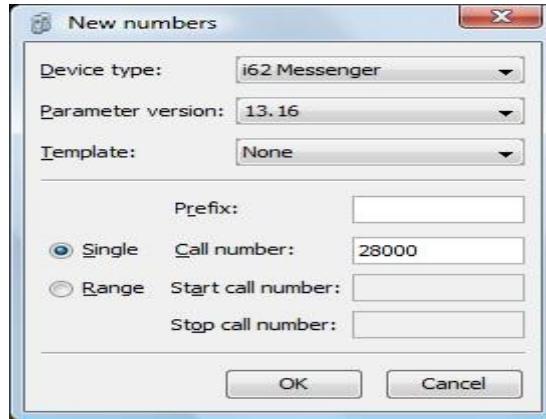


Figure 11: Device Manager Add New Numbers

On the **Numbers** tab, the number **28000** is now shown up on the **Number** list as shown in **Figure 12**.

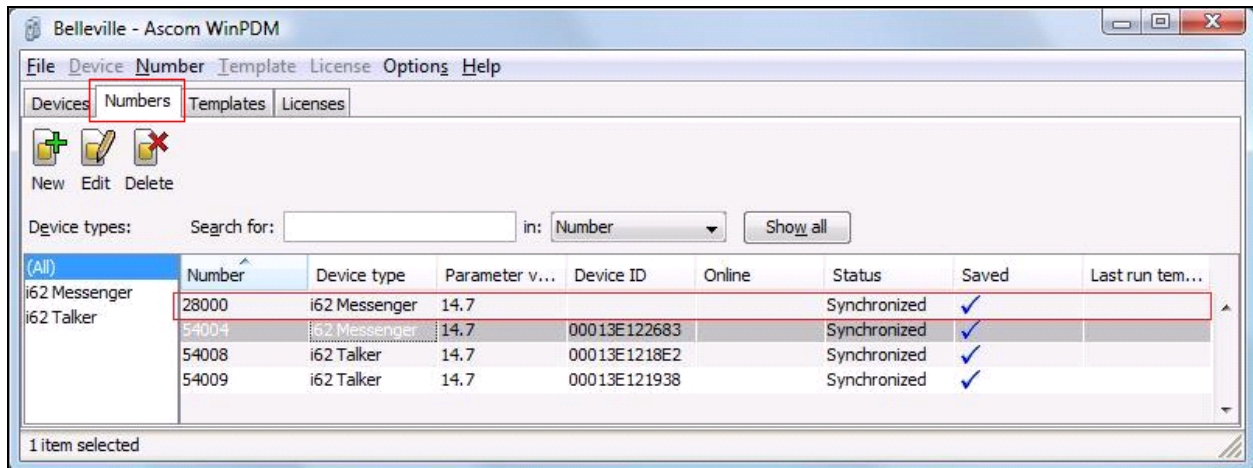


Figure 12: Device Manager with New Number Added

Right click on the newly created number **28000** and choose the **Associated Numbers** to associate the new number with the i62 physical device being inserted as shown in **Figure 9**. Pop up **Associated Number** window appears as shown in **Figure 13**. Choose the i62 set to associate the number with and click **OK** to assign the number.

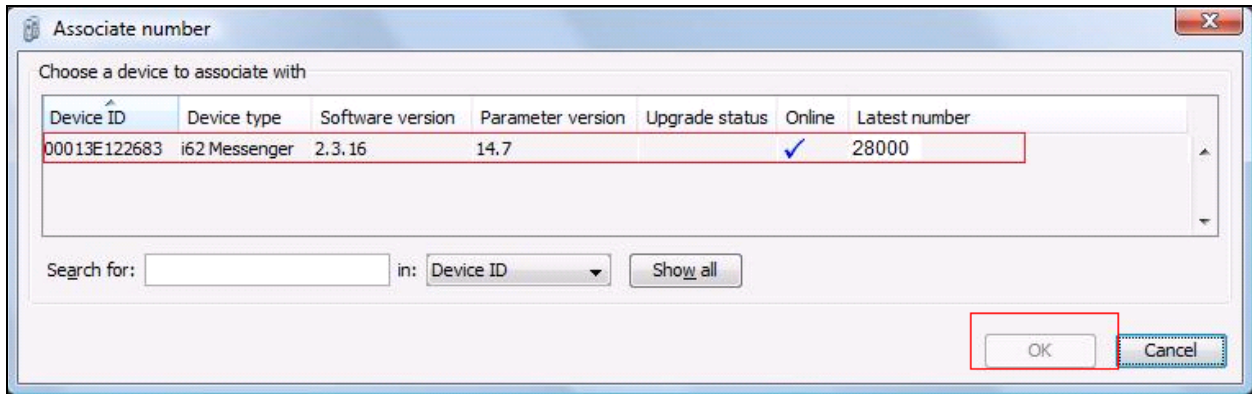


Figure 13: Associate a Number to Physical Set

Figure 14, below, shows the inserted i62 set with its assigned number **28000** in the **Numbers** table.

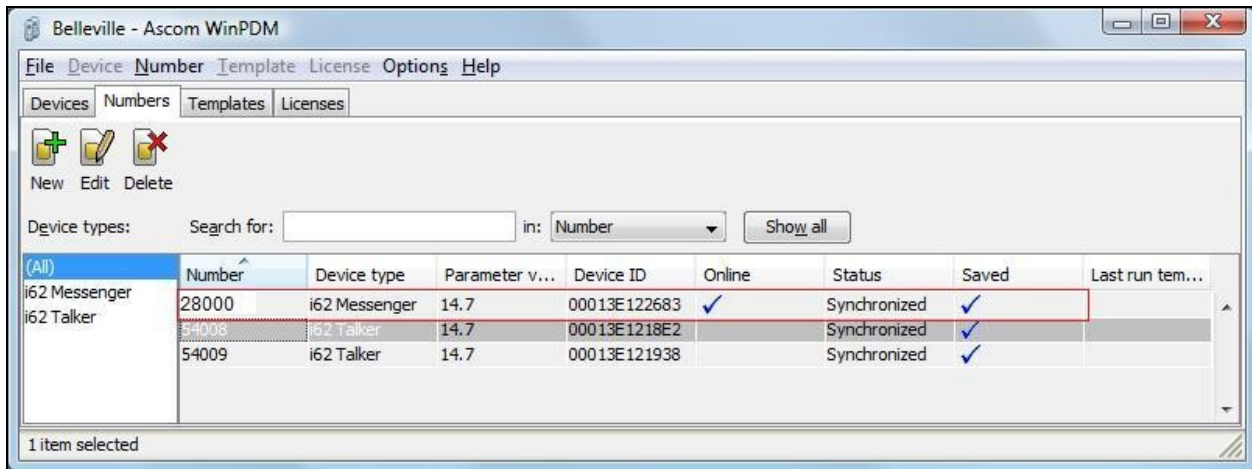


Figure 14: New Number with Associated i62 Set

Double click on the entry for the handset to be configured, select the **Network → Network A, Edit parameters for 28000** window will appear as shown in **Figure 15**. Fill in the parameters with appropriate values as highlighted in red.

Note: This setting is one of many ways to configure the network set up for the i62 handset. For more information how to configure this in a different way, refer to **Reference [2]**.

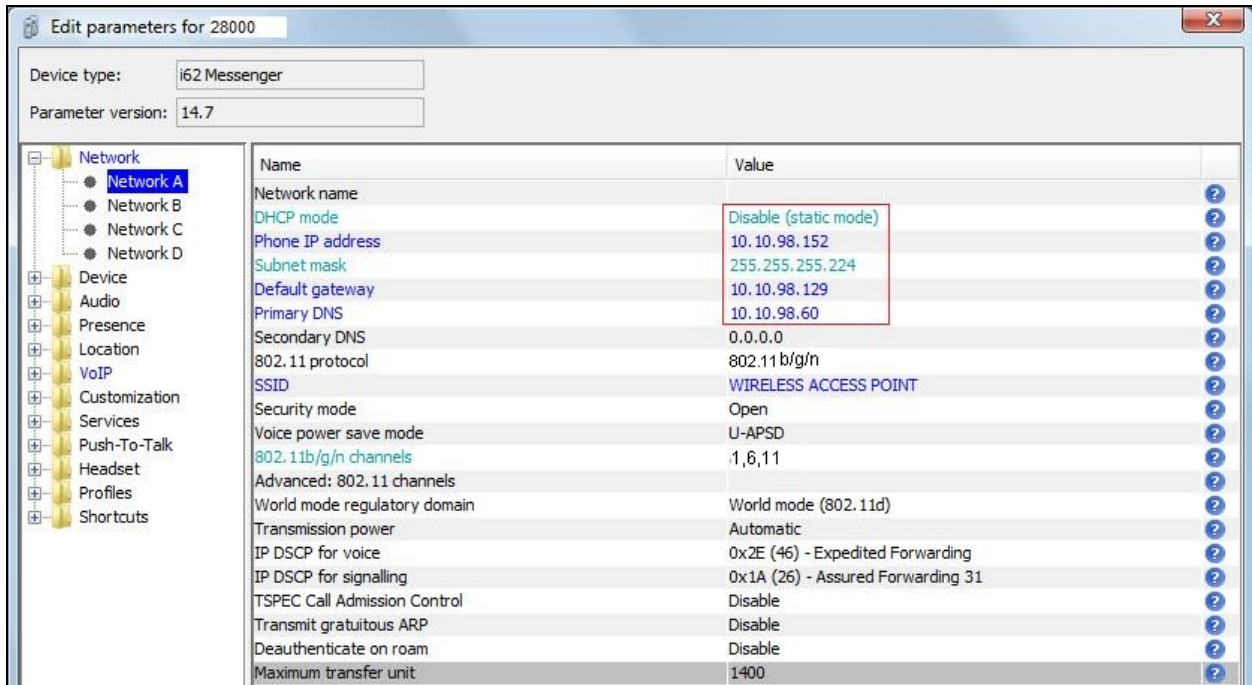


Figure 15: Network Parameters

Select **VoIP → General** menu, and enter the values highlighted in red as shown in **Figure 16**. Click **OK** (not shown) to save the change.

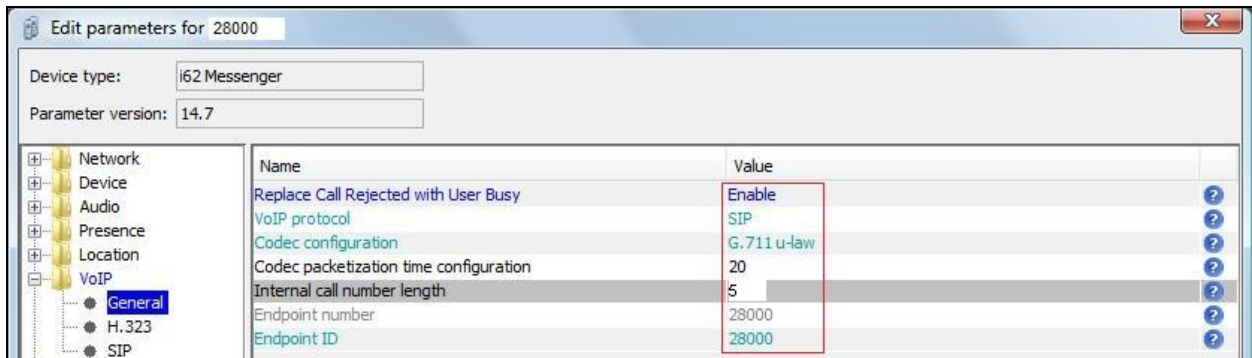


Figure 16: VoIP General Parameters

Select **VoIP → SIP** menu point, and enter the values highlighted in red as shown in **Figure 17**. Click **OK** (not shown) to save the changes.

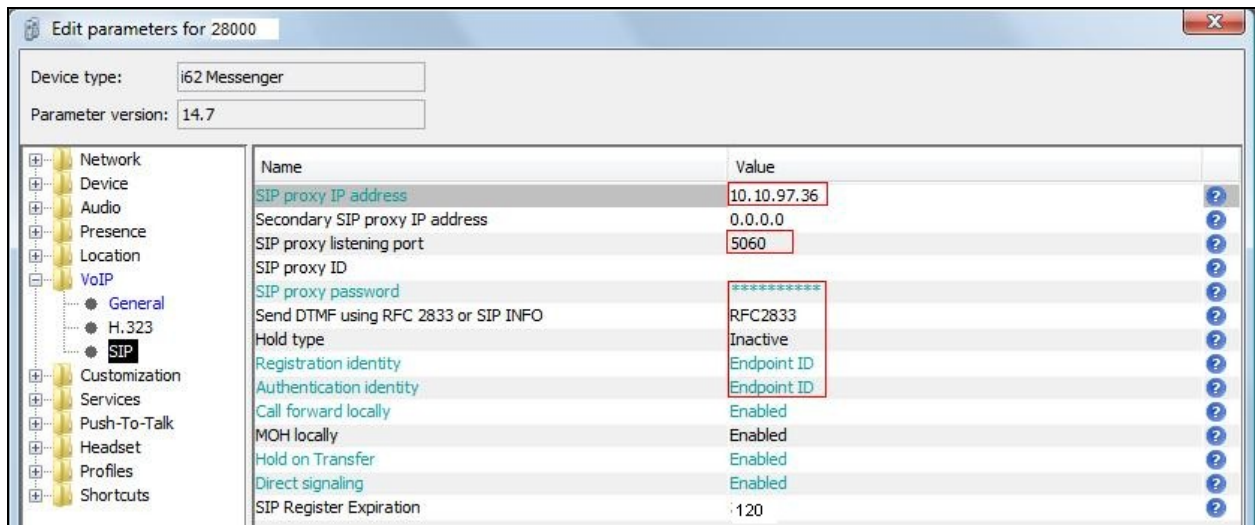


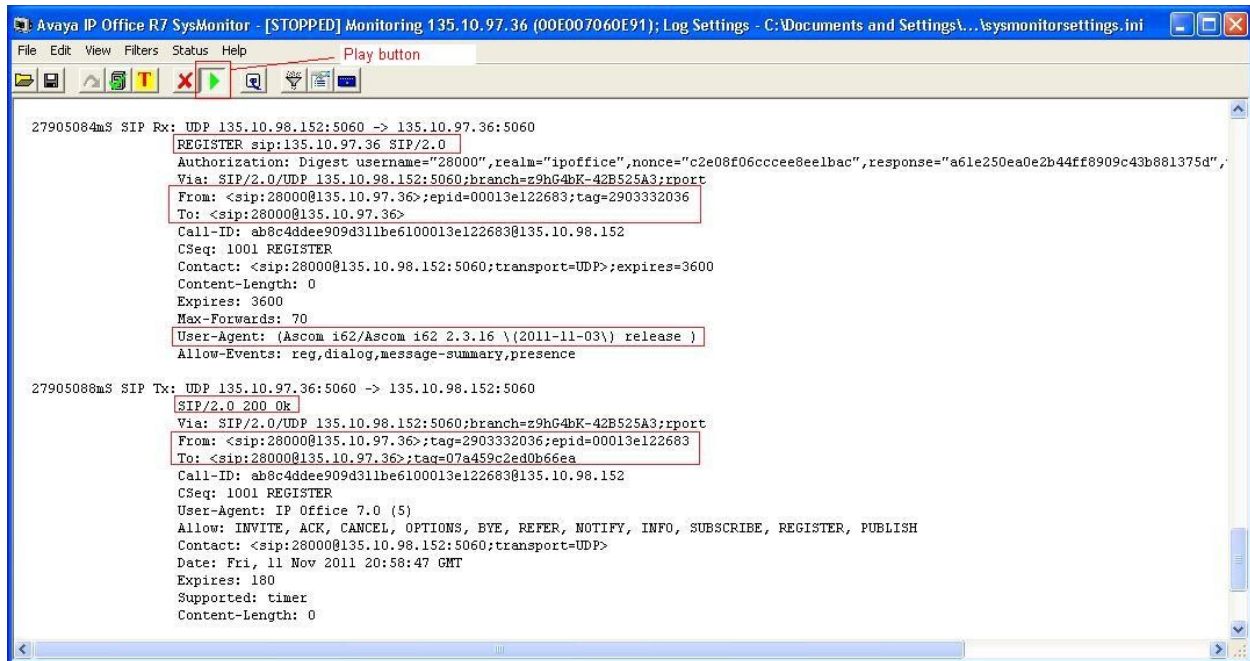
Figure 17: VoIP SIP Parameters

7. Verification Steps

This section includes some steps that can be followed to verify the configuration.

Step 1

Verify that the Ascom Wifi i62 telephone registers successfully to the IPO by logging into the Avaya IP Office Manager PC and select **Start** → **Programs** → **IP Office** → **Monitor** to launch the Avaya IP Office Monitor application. Click on the **Play** button as shown in **Figure 18**. Turn on the i62 handset. Observe the log on the monitor screen, it should show the registration of the i62 to IPO as shown in **Figure 18**.



```
Avaya IP Office R7 SysMonitor - [STOPPED] Monitoring 135.10.97.36 (00E007060E91); Log Settings - C:\Documents and Settings\...\sysmonitorsettings.ini
File Edit View Filters Status Help
Play button

27905084ms SIP Rx: UDP 135.10.98.152:5060 -> 135.10.97.36:5060
REGISTER sip:135.10.97.36 SIP/2.0
Authorization: Digest username="28000",realm="ipoffice",nonce="c2e08f06ccce8e8elbac",response="a61e250ea0e2b44ff8909c43b881375d";
Via: SIP/2.0/UDP 135.10.98.152:5060;branch=z9hG4bK-42B525A3;rport
From: <sip:28000@135.10.97.36>;epid=00013e122683;tag=2903332036
To: <sip:28000@135.10.97.36>
Call-ID: ab8c4ddee909d311be6100013e122683@135.10.98.152
CSeq: 1001 REGISTER
Contact: <sip:28000@135.10.98.152:5060;transport=UDP>;expires=3600
Content-Length: 0
Expires: 3600
Max-Forwards: 70
User-Agent: (Ascom i62/Ascom i62 2.3.16 \ (2011-11-03) release )
Allow-Events: reg,dial,message-summary,presence

27905088ms SIP Tx: UDP 135.10.97.36:5060 -> 135.10.98.152:5060
SIP/2.0 200 OK
Via: SIP/2.0/UDP 135.10.98.152:5060;branch=z9hG4bK-42B525A3;rport
From: <sip:28000@135.10.97.36>;tag=2903332036;epid=00013e122683
To: <sip:28000@135.10.97.36>;tag=07a459c2ed0b66ea
Call-ID: ab8c4ddee909d311be6100013e122683@135.10.98.152
CSeq: 1001 REGISTER
User-Agent: IP Office 7.0 (5)
Allow: INVITE, ACK, CANCEL, OPTIONS, BYE, REFER, NOTIFY, INFO, SUBSCRIBE, REGISTER, PUBLISH
Contact: <sip:28000@135.10.98.152:5060;transport=UDP>
Date: Fri, 11 Nov 2011 20:58:47 GMT
Expires: 180
Supported: timer
Content-Length: 0
```

Figure 18: Monitor of i62 Registration

Step 2

Making a voice call from the Ascom i62 extension **28000** to IPO telephones, verify clear voice path between them.

8. Conclusion

These Application Notes illustrate the procedures necessary for configuring the Ascom i62 VoWifi handset to interoperate with the Avaya IP Office. All feature functionality test cases described in **Section 2.2** were passed.

9. Additional References

This section references documentation relevant to these Application Notes.

[1] Avaya product documentation is available at <http://support.avaya.com>.

IP Office Installation Manual, May 22, 2011, Document Number 15-601042.

IP Office Manager, May 22, 2011, Document Number 15-601011.

System Status Application, February 12, 2010, Document Number 15-601758.

Voicemail Pro: Installation Manual, May 1, 2011.

Voicemail Pro: Administration Manual, May 1, 2011, Document Number 15-601063.

IP Office System Monitor, November 28, 2008, Document Number 15-601019.

[2] Ascom's technical documentation is available through a local supplier:

User Manual Ascom i62 VoWiFi Handset (TD 92599GB)

Configuration Manual Ascom i62 VoWiFi Handset (TD 92675GB)

System Description Ascom VoWiFi System (TD 92313GB)

System Planning Ascom VoWiFi System (TD 92408GB)

Information about the Ascom i62 VoWiFi handset is available at

<http://www.ascom.com/en/index/products-solutions/our-solutions/product/i62/solutionloader.htm>

©2012 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.