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Avaya Solution & Interoperability Test Lab

Application Notes for Teledex iPhone Hybrid HD6200 Series and Avaya Communication Manager – Issue 1.0

Abstract

These Application Notes describe the procedures for configuring Teledex iPhone™ Hybrid HD6200 which were compliance tested with Avaya Communication Manager. The overall objective of the interoperability compliance testing is to verify Teledex iPhone functions in an environment that is comprised of Avaya Communication Manager, Avaya SIP Enablement Services, as well as various Avaya SIP and H.323 IP Telephones.

Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab at the request of the Solutions Marketing Team.

PV; Reviewed:
SPOC 12/12/2008

Solution & Interoperability Test Lab Application Notes
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1. Introduction

These Application Notes describe the procedures for configuring Teledex iPhone HD6200 which were compliance tested with Avaya Communication Manager. The overall objective of the interoperability compliance testing is to verify Teledex iPhone functions in an environment that is comprised of Avaya Communication Manager, Avaya SIP Enablement Services, as well as various Avaya SIP and H.323 IP Telephones.

Teledex iPhone HD6200 Series phones are hybrid endpoints designed for hotel environment. Teledex iPhone HD6200 series phones combine a standard analog phone with an interactive color touch screen display. It is designed for hotel properties which have not upgraded their infrastructure and still have analog wiring to the rooms. These phones are equipped with wireless access points. The content to the phones is updated by using the wireless infrastructure.

These Application Notes assume that Avaya Communication Manager is already installed and basic configuration steps have been performed. Only steps relevant to this compliance test will be described in this document.

1.1. Supported Features

Table 1 gives a summary of the features supported and tested with Teledex iPhone. Features shown in **Table 1** are invoked by using Teledex iPhone VoIP Phone Configuration Portal, or by dialing a Feature Access Codes (FAC).

Features	Teledex iPhone Hybrid HD6200 Series
Basic Calling Features	
Extension to extension call	X
Intercept tones/displays	X
Speed Dial Buttons	X
Message Waiting Support	X
Call Waiting	X
Call Transfer	X
Other Features	
Call Hold & Music on Hold	X
Call Forwarding	X
Conference – 3rd party added	X
Conference – 3rd party joins	X
Call Park/Unpark	X
Call Pickup	X
Last Number Dialed	X
Send All Calls	X
Send All Calls Cancel	X
Transfer to Voice Mail	X

Table 1

2. Network Topology

Figure 1 illustrates a sample configuration consisting of Avaya S8720 Servers controlling G650 Media Gateways, an Avaya SIP Enablement Services (SES) server, and Teledex iPhone, Avaya 4626 Series H.323 IP Telephones, Avaya 9600 Series SIP IP Telephones, and Avaya 2420 Series Digital Telephones. The Teledex iPhone Hybrid HD6200 support two call appearances and this requires two physical connections to the analog circuit pack on G650 Media Gateway.
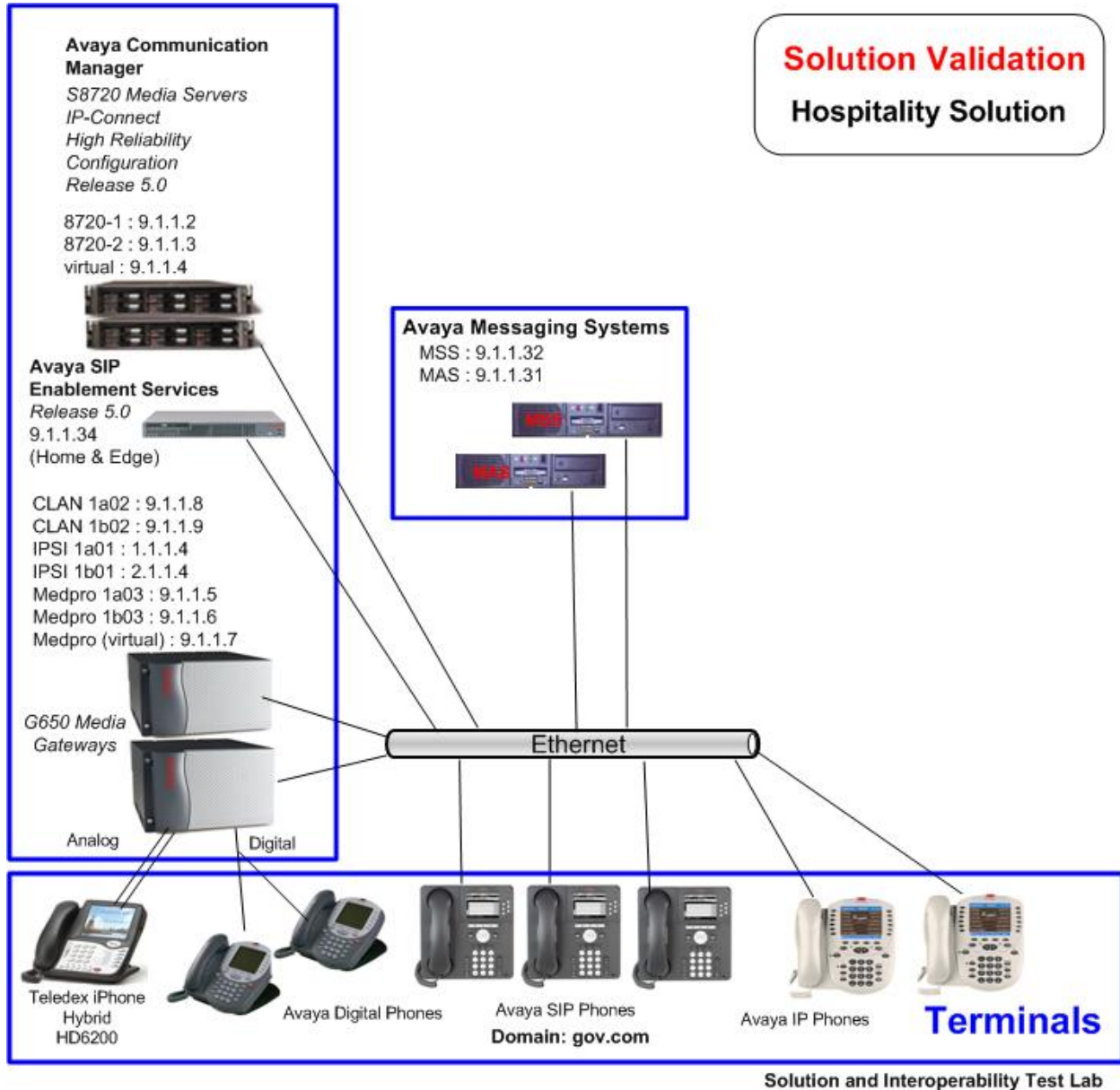

Figure 1 – Avaya Hospitality Solution Reference Configuration

3. Equipment and Software Validated

The following equipment and software were used for the sample configuration:

Device Description	Versions Tested
Avaya Communication Manager - S8720 Servers	Release 5.0 (R015x.00.0.825.4)
Avaya G650 Media Gateway - IPSI (TN2312BP) - CLAN (TN799DP) - MedPro (TN2602AP) - Analog Line (TN2183)	 - HW15 FW039 - HW01 FW156 - HW02 FW033 000002
Avaya 4626 Series H.323 Telephones	R2.4
Avaya 9600 Series SIP Telephones	R2.2.0.7
Avaya 2420 Digital Telephones	N/A
Avaya Modular Messaging	Release 3.1
Teledex iPhone™ HD6200 Series	App Version: 1.10.12HT App Build date: Oct 1, 2008

4. Configure Avaya Communication Manager

These steps are performed from the Avaya Communication Manager System Access Terminal (SAT) interface. The highlights in the following screens indicate the values used. Default values may be used for all other fields.

4.1. Configure Stations

Enter **add station s**, where **s** is an extension valid in the provisioned dial plan.

Configure the following fields on Page 1:
- Type – Enter **6210**.
- Port – Enter the physical port number where the Teledex iPhone is connected on the Avaya G650 Media Gateway. For the sample configuration, enter "01B0501".
- Name – Enter a descriptive name. This is the name which will be displayed when placing an outgoing call.
- Coverage Path – Enter the appropriate coverage path for voice messaging. For the sample configuration, Coverage Path 1 was used. **Section 4.3** and **4.4** will provide configuration details.
- COR – Enter the appropriate Class of Restrictions. This can be used to enable applicable calling features like Directed Call Pickup.
- COS – Enter the appropriate Class of Service. This can be used to set the appropriate service permissions.

```
add station 44022                                            Page    1 of    4
                              STATION

Extension: 44022                        Lock Messages? n               BCC: 0
     Type: 6210                         Security Code:                  TN: 1
     Port: 01B0501                   Coverage Path 1: 1                COR: 10
     Name: Teledex Hybrid             Coverage Path 2:                 COS: 1
                                       Hunt-to Station:              Tests? y
STATION OPTIONS
                                       Time of Day Lock Table:
              Loss Group: 1        Message Waiting Indicator: led
  Off Premises Station? n                  Message Lamp Ext: 44022



          Survivable COR: internal
  Survivable Trunk Dest? y
                                        Remote Office Phone? n
```

On Page 2, configure MWI Served User Type as "qsig-mwi".

```
add station 44022                                            Page    2 of    4
                              STATION
FEATURE OPTIONS
          LWC Reception: spe
       LWC Activation? y                     Coverage Msg Retrieval? y
 LWC Log External Calls? n                            Auto Answer: none
          CDR Privacy? n                            Data Restriction? n
  Redirect Notification? y                    Call Waiting Indication: y
 Per Button Ring Control? n              Att. Call Waiting Indication: y
   Bridged Call Alerting? n                  Distinctive Audible Alert? y
        Switchhook Flash? y                     Adjunct Supervision? y
    Ignore Rotary Digits? n
       H.320 Conversion? n      Per Station CPN - Send Calling Number?
       Service Link Mode: as-needed
         Multimedia Mode: basic                Audible Message Waiting? n
   MWI Served User Type: qsig-mwi

                                           Coverage After Forwarding? s
                                             Multimedia Early Answer? n
                                        Direct IP-IP Audio Connections? y
  Emergency Location Ext: 44022                IP Audio Hairpinning? n
```

4.2. Configure Second Extension

The Teledex iPhone HD6200 Series phones supports two lines. To configure the second line, repeat the steps in Section 4.1.

4.3. Add Coverage Path

Use the **add coverage path** command to configure the coverage path to be used for the voice messaging hunt group, which is group "h7" in the sample configuration. The default values can be used for the **COVERAGE CRITERIA**.

```
add coverage path 1
                             COVERAGE PATH

                 Coverage Path Number: 1
                                                  Hunt after Coverage? n
                    Next Path Number:       Linkage

COVERAGE CRITERIA

    Station/Group Status    Inside Call     Outside Call
            Active?             n                 n
             Busy?              y                 y
       Don't Answer?           y                 y          Number of Rings: 2
             All?               n                 n
 DND/SAC/Goto Cover?           y                 y
   Holiday Coverage?           n                 n

COVERAGE POINTS
    Terminate to Coverage Pts. with Bridged Appearances? n
  Point1: h7            Rng:    Point2:
 Point3:                        Point4:
 Point5:                        Point6:
```

4.4. Configure Hunt Group

Enter **add hunt-group h**, where **h** is an unused hunt group number. The following fields were configured for the compliance test:
- Group Name – Provide a descriptive name of the group.
- Group Extension – Provide the hunt group extension.

```
add hunt-group 7                                         Page   1 of  60
                          HUNT GROUP

          Group Number: 7                            ACD? n
            Group Name: MM                          Queue? n
        Group Extension: 44444                     Vector? n
           Group Type: ucd-mia            Coverage Path:
                  TN: 1          Night Service Destination:
                 COR: 1                   MM Early Answer? n
          Security Code:          Local Agent Preference? n
 ISDN/SIP Caller Display:
```

On Page 2, the following fields were configured for the compliance test.
- Message Center – Set to **qsig-mwi**.
- Voice Mail Number – Set to **44444**.
- Routing Digits (e.g. AAR/ARS Access Code) - **8**.

```
add hunt-group 7                                              Page   2 of  60
                              HUNT GROUP

                 LWC Reception: none              AUDIX Name:



                    Message Center: qsig-mwi
                 Send Reroute Request: y
                  Voice Mail Number: 44444
Routing Digits (e.g. AAR/ARS Access Code): 8          Provide Ringback? n
                 TSC per MWI Interrogation? n
```

4.5. Feature Access Codes

Use **change feature-access-codes** to define the FACs shown in bold below.

```
change feature-access-codes                                  Page   1 of   9
                         FEATURE ACCESS CODE (FAC)
         Abbreviated Dialing List1 Access Code:
         Abbreviated Dialing List2 Access Code:
         Abbreviated Dialing List3 Access Code:
Abbreviated Dial - Prgm Group List Access Code:
                    Announcement Access Code: *20
                   Answer Back Access Code: *42
                     Attendant Access Code:
     Auto Alternate Routing (AAR) Access Code: 8
   Auto Route Selection (ARS) - Access Code 1: 9      Access Code 2:
             Automatic Callback Activation: *10     Deactivation: *11
Call Forwarding Activation Busy/DA: *93    All: *94   Deactivation: *95
   Call Forwarding Enhanced Status:      Act:         Deactivation:
                     Call Park Access Code: *41
                   Call Pickup Access Code: *43
CAS Remote Hold/Answer Hold-Unhold Access Code: *39
               CDR Account Code Access Code:
                    Change COR Access Code:
               Change Coverage Access Code:
                 Contact Closure   Open Code:        Close Code:
```

```
change feature-access-codes                                 Page   2 of   9
                         FEATURE ACCESS CODE (FAC)
                Contact Closure  Pulse Code:
                Data Origination Access Code:
                  Data Privacy Access Code:
             Directed Call Pickup Access Code: *44
        Directed Group Call Pickup  Access Code:
      Emergency Access to Attendant Access Code:
          EC500 Self-Administration Access Codes: *79
                       Enhanced EC500 Activation:          Deactivation:
            Enterprise Mobility User Activation: *77      Deactivation: *78
   Extended Call Fwd Activate Busy D/A     All:            Deactivation:
              Extended Group Call Pickup Access Code: *80
                     Facility Test Calls Access Code:
                              Flash Access Code:
             Group Control Restrict Activation:          Deactivation:
                   Hunt Group Busy Activation:          Deactivation:
                             ISDN Access Code:
                  Last Number Dialed Access Code: *99
        Leave Word Calling Message Retrieval Lock:
      Leave Word Calling Message Retrieval Unlock:
```

```
change feature-access-codes                                 Page   3 of   9
                         FEATURE ACCESS CODE (FAC)
              Leave Word Calling Send A Message: *66
              Leave Word Calling Cancel A Message: *67
   Limit Number of Concurrent Calls Activation:          Deactivation:
                 Malicious Call Trace Activation:          Deactivation:
          Meet-me Conference Access Code Change:

  PASTE (Display PBX data on Phone) Access Code:
  Personal Station Access (PSA) Associate Code:           Dissociate Code:
          Per Call CPN Blocking Code Access Code:
        Per Call CPN Unblocking Code Access Code:

                    Priority Calling Access Code: *68
                          Program Access Code:

      Refresh Terminal Parameters Access Code:
            Remote Send All Calls Activation:            Deactivation:
              Self Station Display Activation:
                    Send All Calls Activation: *98     Deactivation: *97
         Station Firmware Download Access Code:
```

```
change feature-access-codes                                 Page   4 of   9
                         FEATURE ACCESS CODE (FAC)
                     Station Lock Activation:          Deactivation:
       Station Security Code Change Access Code:
               Station User Admin of FBI Assign:                    Remove:
   Station User Button Ring Control Access Code:
                Terminal Dial-Up Test Access Code:
  Terminal Translation Initialization Merge Code:        Separation Code:
              Transfer to Voice Mail Access Code: *96
              Trunk Answer Any Station Access Code:
               User Control Restrict Activation:          Deactivation:
     Voice Coverage Message Retrieval Access Code:
    Voice Principal Message Retrieval Access Code:
              Whisper Page Activation Access Code: *51
```
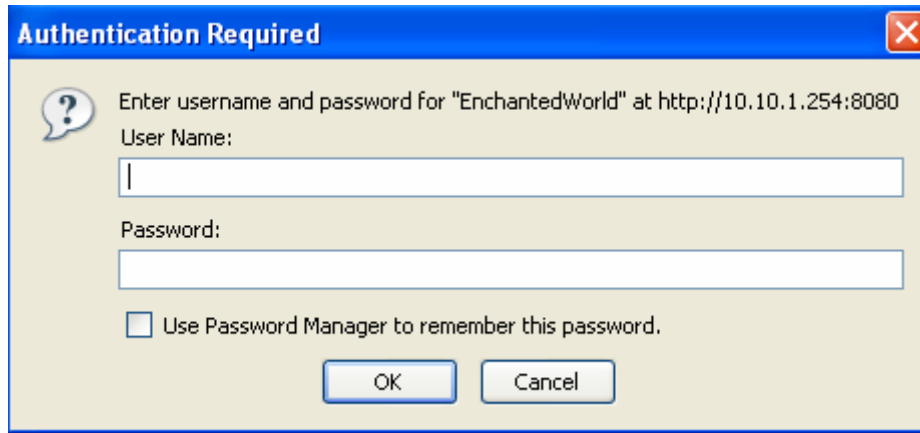
5. Configure Teledex iPhone
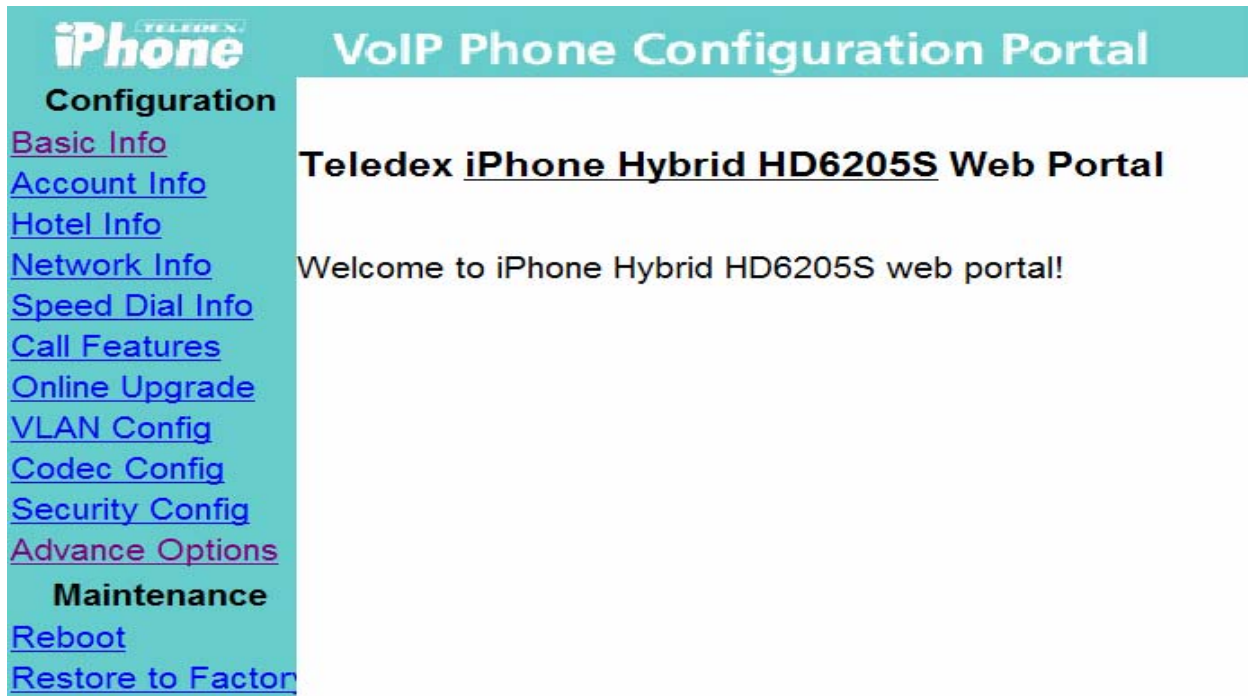
This section describes the steps to configure Teledex iPhone. The highlights in the following screens indicate the values used during the compliance test. Default values may be used for all other fields.

The default address of the Teledex iPhone as shipped from the factory is 10.10.1.254. Launch a web browser, enter **http://<10.10.1.254:8080>** in the URL, and log in with the appropriate credentials for accessing the iPhone Configuration Web Client page.
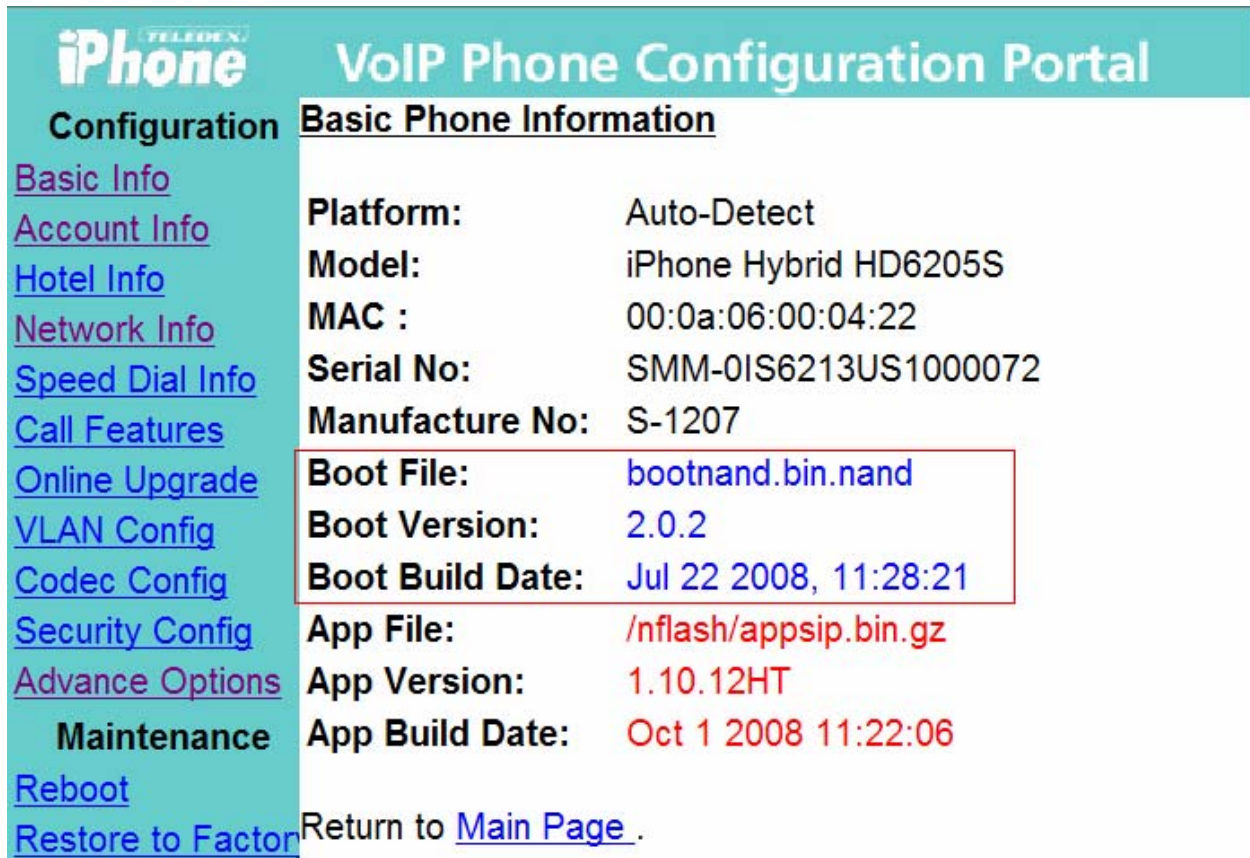
The Teledex iPhone Configuration Portal will be displayed after successful log in.

5.1. Basic Phone Info

From the Teledex iPhone Configuration Portal, select **Basic Info** from the left side menu. Following information will be displayed. Verify the values for **Boot file**, **Boot Version**, and **Boot Build Date**.

5.2. Configure Network Info

From the Teledex iPhone Configuration Portal, select **Network Info** from the left side menu.

Configure the following fields:
- Acquire IP Through – Select **Use Static IP** from the drop down menu.
- Phone IP Address – Enter the IP address of the iPhone.
- Phone Network Subnet – Enter the subnet mask of the network that the iPhone is located.
- Phone Gateway Address – Enter the default gateway IP address of the iPhone.
- DNS Server Address – Enter the DNS server IP address.

Click on **Submit** button.

5.3. Configure Line 1 Info

From the Teledex iPhone Configuration Portal, select **Line Info 1** from the left side menu.

Configure the following fields:
- Phone Name – Enter a descriptive phone name
- Phone Number – Enter the iPhone extension number configured in **Section 4.1**.
- Message Waiting Number – Enter the Voice Mail Number configured in **Section 4.3**.
- Dialing Plan – If needed, modify the default dialing string.

Click on **Submit** button to save the Line 1 configuration.

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5.4. Configure Line 2 Info

From the Teledex iPhone Configuration Portal, select **Line Info 2** from the left side menu.

Configure the following fields:
- Phone Name – Enter a descriptive phone name
- Phone Number – Enter the iPhone extension number configured in **Section 4.2**.
- Message Waiting Number – Enter the Voice Mail Number configured in **Section 4.3**.
- Dialing Plan – If needed, modify the default dialing string.

Click on **Submit** button to save the Line 2 configuration.

5.5. Configure Call Features

From the Teledex iPhone Configuration Portal, select **Call Features** from the left side menu. Enable Caller ID, Call Transfer and Call Waiting and click on **Submit** button to save.

5.6. Configure Auto Dial Keys

From the Teledex iPhone Configuration Portal, select **Speed Dial Info** from the left side menu to configure the speed dial feature. The feature access codes configured in **Section 4.5** can be entered for the Speed Dial Key fields. In the sample configuration feature access codes for Send All Calls was programmed for Do Not Disturb feature.

Click on the **Submit** button to save the Speed Dial Key configuration.

5.7. Reboot iPhone

The Teledex iPhone needs to be rebooted after modifying any configurations. From the left side menu, select **Reboot**. Click on **Reboot** button.

6. Interoperability Compliance Testing

The interoperability compliance testing included basic feature and serviceability testing.

The Hospitality solution consisting of Teledex iPhone Hybrid HD6200 Series phones was successfully tested with Avaya Communication Manager. Refer to **Table 1** for all the supported features for the Teledex iPhone which were tested as part of the compliance testing.

The serviceability testing focused on verifying the ability of Teledex iPhone to recover from adverse conditions, such as:
- Server interchanges / Reset.
- Disconnect/reconnect of Ethernet cable to Teledex iPhone.

6.1. General Test Approach

All test cases were performed manually. The general approach was to place outbound calls, and receive inbound calls. Serviceability failures were simulated by disconnecting cables, and by executing reset system commands from the Avaya Communication Manager System Access Terminal interface.

6.2. Test Results

Basic calling features worked which included extension to extension call, call hold, and conference.

Few observations were made during testing which are noted below:

1. The display for incoming calls on the Hybrid Phone always indicated "unknown caller". The list trace station on Avaya Communication Manager shows that the correct name and caller-id information is being sent to the station.

2. Priority call from Teledex iPhone to another Teledex iPhone is delivered as a normal call, i.e. do not get the priority call display and ringtones. Priority call from Teledex iPhone to Avaya phones is delivered as a priority call, i.e. the call display and ringtone indicate that the call is a priority call.

3. Use the feature access code for "Send All Calls Activation" for Teledex iPhone HD6200 to activate "Do Not Disturb" feature. Use feature access code for "Send All Calls Deactivation" to cancel. The "Do Not Disturb" feature on the Teledex iPhone VoIP Phone Configuration Portal is not supported for the HD6200 Series phones.

4. When Send All Calls feature is activated on the Teledex iPhone, the phone will ring once before the call is routed to the coverage path.

5. The FLASH button on the Teledex iPhone Hybrid HD6200 phone is on the touch screen. At times, the user has to press hard to activate the feature.

6. The Call Waiting needs to be enabled in Avaya Communication Manager (on page 2 of the station form). To answer a call waiting, put the present call on hold, press FLASH, and dial the hold/un-hold Feature Access Code.

7. Support

Technical support for Teledex iPhone can be obtained by contacting via the support link at iphonesupport@teledex.com or by calling the support telephone number at 408-574-2661.

8. Conclusion

These Application Notes describe the configuration steps required for Teledex iPhone Hyrbid HD6200 to interoperate with Avaya Communication Manager.

9. Additional References

Avaya documentation can be located at http://support.avaya.com

[1] *Administrators Guide for Avaya Communication Manager*, Document 03-300509, Issue 4.0, Release 5.0, Jan 2008.
http://support.avaya.com/elmodocs2/comm_mgr/r5.0/03-300509_4.pdf

[2] Definity Enterprise Communications Server (ECS) Release 6, 6210, 6210 and 6220 Telephones User's Guide
http://support.avaya.com/edoc/docs/def6/555230712_1.pdf

The following document was provided by Teledex.

[3] Teledex iPhone HD6100/6200 Series IP Phone User's Guide.

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