



Job Aid: Communication Manager Branch – Unicode Support

Purpose

This job aid provides administration, implementation and troubleshooting details for Unicode support on the Communication Manager Branch platform.

Revisions

Issue 2.0, May 4, 2009

Audience

This document provides information for administrators who are responsible for managing the Communication Manager Branch platform.

Glossary

ASCII Name	This name supports only the ASCII Character Set.
Basic Latin	The 26 letters of the English alphabet
Coded Character Set	The characters that are encoded in a character set depend on the writing systems that are represented.
Font	A complete character set in a particular point size, in a particular typeface
Native Name	See Unicode Name
Posted Messages	The messages that are part of the Posted Messages feature
Romanization	The representation of a word or language with the Latin alphabet. Methods of Romanization include transliteration.
System Labels	Allows a customer to customize the labels in their native language for the system-wide Abbreviated Dial buttons the 4600 series IP phones.
Transliteration	A process in which words in one script are represented in another script.
Script	Also known as a writing system or writing script. A writing system can be used to represent a language or a group of languages. Most European languages use the Latin script, while Middle Eastern languages often use the Arabic script, and some Asian languages use Han ideographs.
Unicode	A coded character set that encodes the characters in most of the world's major writing scripts
Unicode Name	Also known as Native Name. The object that support Unicode basically support all the world's writing scripts

Overview

Communication Manager Branch provides Unicode support for the following managed objects:

1. Station Names
2. Hunt Group Names
3. Collective Ringing Group Names
4. Trunk Group Names

Additionally, Unicode support is also available for phone display update messages, posted messages, system labels and phone button labels. Managed Objects with Unicode support offer dual language capability referred to as "Native Name/ASCII Name". This means you may administer a Unicode name (aka Native Name) in any writing script along with a Romanization of the Unicode name when the Unicode name uses a non-Latin writing script. Communication Manager Branch programmatically determines whether to use the Unicode name or the ASCII Name when sending the name to a phone. The decision on which name to send is based on the phone's capabilities (what coded character set does the font support) and the user's preference (Preferred Language). The design used by Communication Manager Branch when sending a Unicode or ASCII name to an H.323 IP phone is illustrated in Figure 1.

Note that other objects within the system (e.g., Pickup Groups, Paging Groups) have an ASCII Name but no Native Name. For these objects we always display the ASCII Name because we have no other name to display.

Communication without “language” boundaries

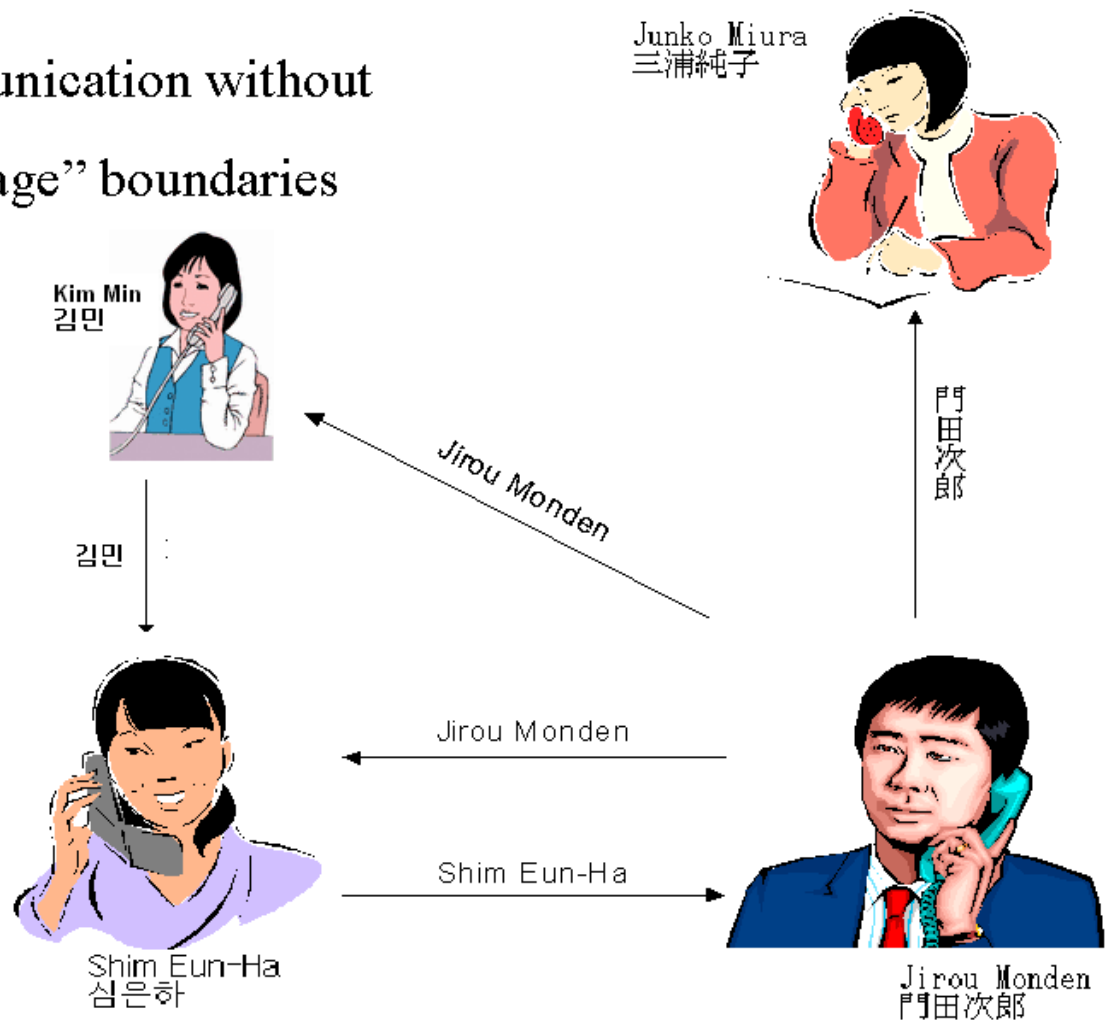


Figure 1

Unicode Name Administration

This example uses the Branch Device Manager user administration form (figure 2) and the Branch Central Manager station form (figure 3). The native name is in Kanji script and we also have an associated name that *must* only use ASCII characters. Typically the ASCII Name is a Romanization of Unicode names when such names do not use the Latin script.

Edit User - (Ext.)

[Back to List](#)
[Apply Changes](#)

General
Voicemail
Station
Buttons
Groups

Last Name	Extension	Preferred Language
Monden	2000000 ▼	Unicode ▼
First name	Privileges	IM Handle
Jirou	Medium ▼	
Native Name	Security Code	Authorization Code
門田次郎		
Name (ASCII)	Confirm Security Code	
Jirou Monden		

Figure 2

AVAYA Integrated Management
Communication Manager Branch Edition

Communication Manager Branch Edition - Central Manager [? Help](#) [Log Off](#)

Managed Objects: [Branches](#) [Stations](#) [Announcements/AA](#) [Jobs](#) [Templates](#) [Groups](#) [Private Networking](#) [Utilities](#) [Maintenance](#) [Help](#)

Home > Stations

[Save Changes](#)
[Cancel](#)

General
Abbreviated Dialing
Voice Mail
Station Groups
Station Template

Last Name Monden	IM Handle
First Name Jirou	Branch User Privileges Medium ▼
Native Name 門田次郎	Station Template ▼
Name (ASCII) ☐ 'Last, First'? Monden Jirou	Station Type 4621SW-H323
Branch Name i40	Coverage Path None ▼
Extension 2000000 Select...	Display Language unicode ▼
Security Code 	Station Port IP ▼
Authorization Code 	☒ Call Waiting Indication
☐ EC500 Cellular Number -	

Figure 3

Preferred Language

The preferred language is set on the Branch Device Manager user page (Figure 2) and the Branch Central Manager stations page (Figure 3). A Unicode name will only be sent to an H.323 IP phone when the “Preferred Language” for that phone is “Unicode”. “Preferred Language” setting is immaterial for SIP phones (it is assumed to be Unicode no matter what the user form Preferred Language is).

Script Tag Administration

A “script” is a particular subset of the Unicode character set. Most (but not all) scripts have been assigned a bit in a 32-bit bitmap called a “Script Tag”. The script tag is used by Communication Manager Branch to help determine whether to send the Unicode Name or the ASCII name to an H.323 IP phone. All Unicode Name script tags throughout the system are the same. Basic Latin characters may be used in any Unicode Name, regardless of the script tag value selected.

The Script Tag is set on the Localization tab of the General System Parameters form in Branch Device Manager (Figure 4) and the Branch Central Manager System Parameters Template form (Figure 5).

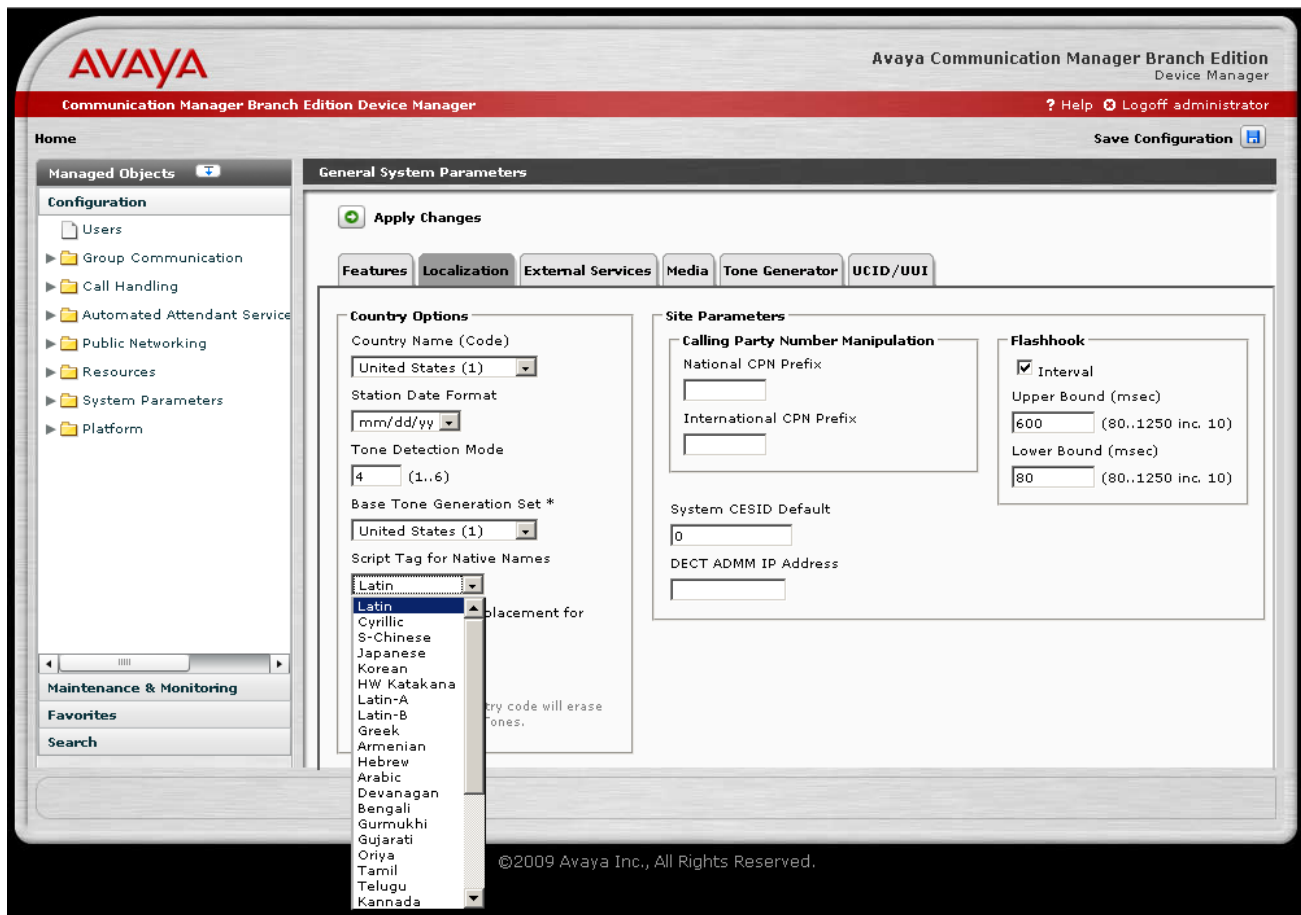


Figure 4

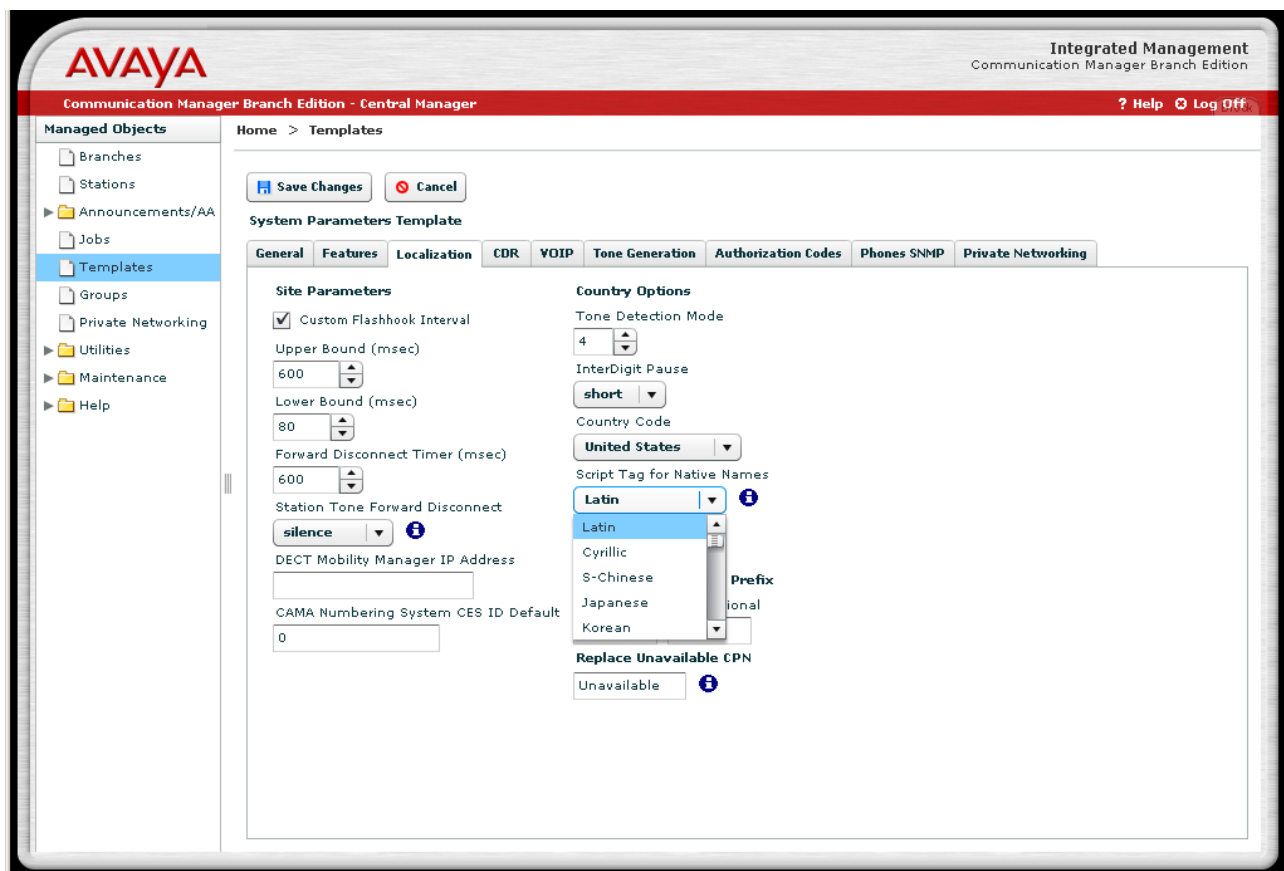


Figure 5

Unicode Phone Message File

The Unicode Phone Messages File “avaya_unicode.txt” contains messages such as “Transfer Completed” and “Last Number Dialed” in the chosen language of your system. The Unicode file “custom_unicode.txt” contains posted messages and system labels that are customizable in your native language. These files are downloaded and installed onto your Communication Manager Branch platform with the “Phone Messages File Management” page of Branch Device Manager . Phone Messages Files for various languages are available at Avaya’s support site <http://support.avaya.com/unicode> Please note that the Unicode files, in the ZIP archives, on this page are supported on both Communication Manager and Communication Manager Branch. You should download the desired translation to your PC, and then load them onto your Communication Manager Branch platform. Note that only files named “avaya_unicode.txt” and “custom_unicode.txt” are supported on the Communication Manager Branch platform. Once on your PC, using Branch Device Manager’s Phone Messages File Management, select the download method “File” and then click Browse to locate avaya_unicode.txt or custom_unicode.txt as shown in Figure 6.

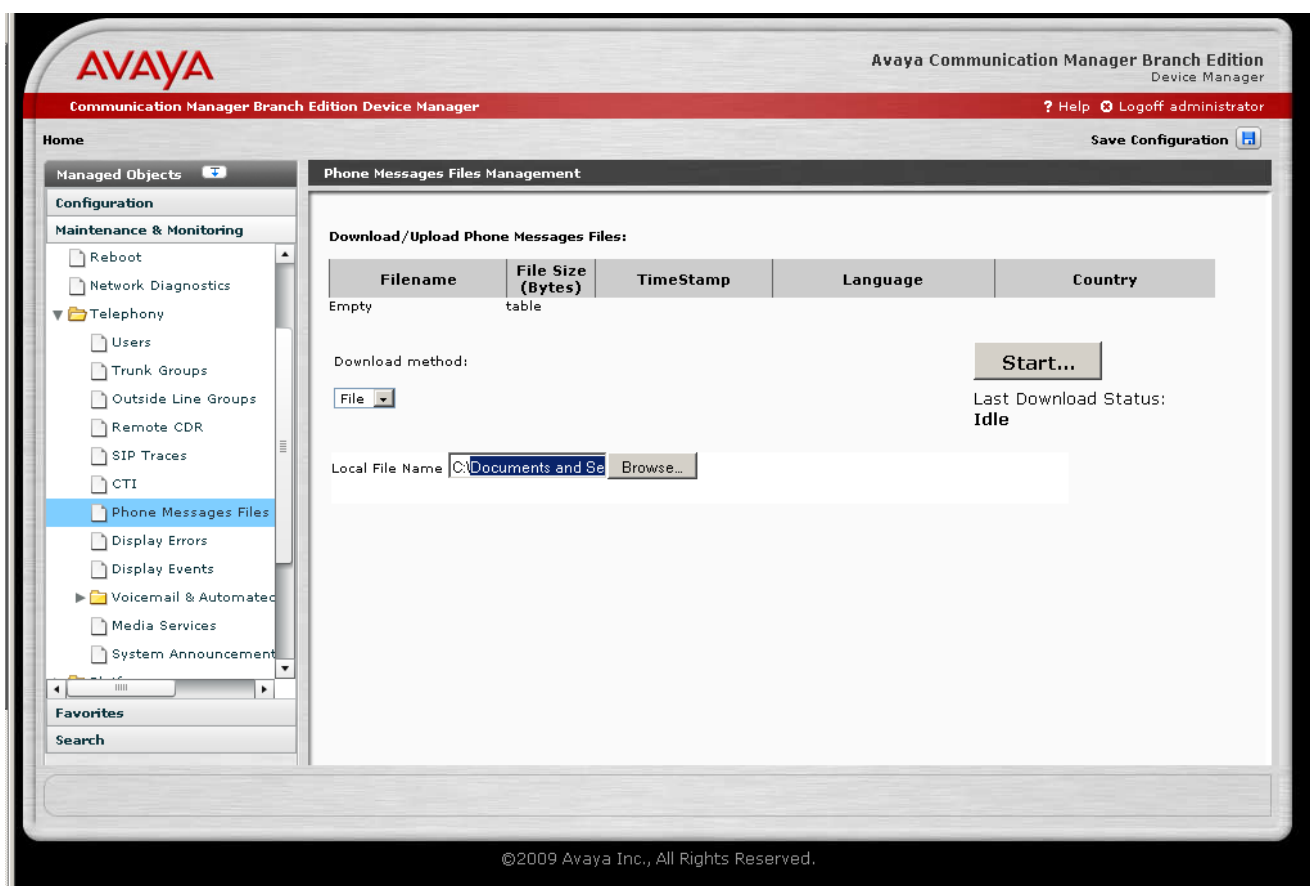


Figure 6

Click on the “Start” button when you are ready to start the file download into Communication Manager Branch. Please note that the download process will be followed by a *platform Reset*. After clicking on the “Start” button, a warning message as shown in Figure 7 will pop up. Click OK if the Communication Manager Branch platform is not being used, as phone service will be interrupted for approximately 1-2 minutes. If the system is in use, click Cancel and choose a more appropriate time to complete this task.

You can only have one version of avaya_unicode.txt and one custom_unicode.txt on your Communication Manager Branch platform, supporting just one language.

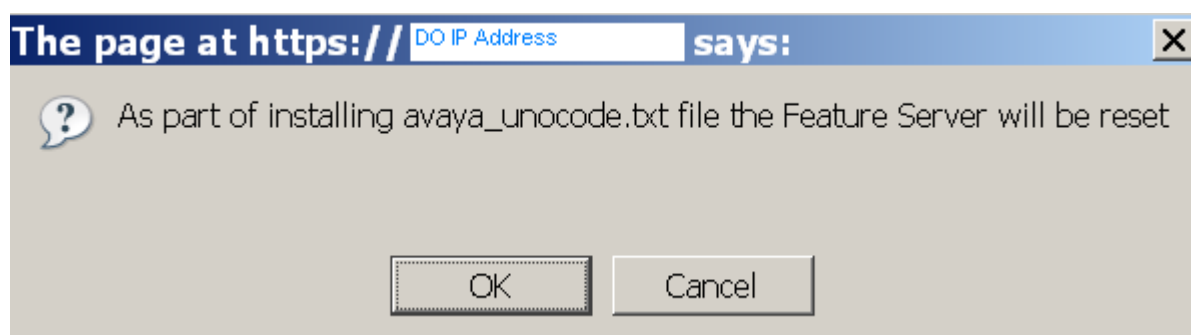


Figure 7

After your Communication Manager Branch platform resets you can verify file details (file size, time stamp and comment) on the avaya_unicode.txt you downloaded by going to the Phone Messages Files Management screen, as shown in figure 8.

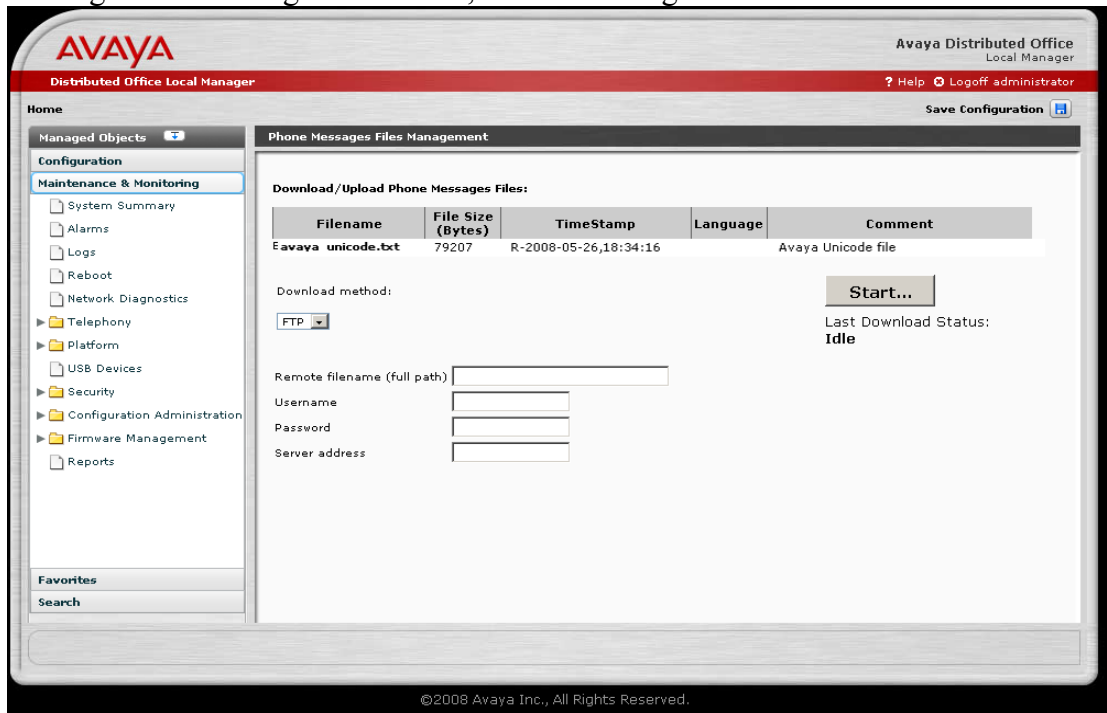


Figure 8

If your language is not available for download, you may translate the Phone Messages with the Avaya Message Editing Tool (AMET). This tool can be downloaded at Avaya's support site: <http://support.avaya.com/amet> (the files on this page are supported on both Communication Manager and Communication Manager Branch.). Also, note that if you want to change any translation in avaya_unicode.txt or custom_unicode.txt, you *must* use AMET. Using any other editor on avaya_unicode.txt and custom_unicode.txt is not allowed and such edited files will not install on a Communication Manager Branch platform. For more details on using AMET, refer to the Job Aid found in the zip file Generic Phone Message Package also on this same download page.

Phone Script Support

The table below describes the scripts supported by the Communication Manager Branch phones. This information was correct as of Issue 1.0 of this Job Aid, and you should check for current information at the Avaya Support Web Site. Also, please check endpoint documentation for information on how to load language files to phones that support the download capability.

	Example	96xx SIP Rx	16xx H.323 (Sage)	46xx H.323	H.323 Softphone
Basic Latin	John Meiners	X	X	X	X (3)
Latin-1	Böris Becker	X	X	X	X (3)
Latin-A	Ã Ä Å	X	X	X	X (3)

		Example	96xx SIP Rx	16xx H.323 (Sage)	46xx H.323	H.323 Softphone
Latin-B		б Б б	X		X	X (3)
Cyrillic		Борис Ельцин	X	X	X (1)	X (3)
Greek		Ηλίας Κοτέας	X		X (1)	X (3)
Hebrew		נמרוד	Future (2)		X (1)	X (3)
Arabic		يوسف وهبي				X (3)
HW Katakana		チャールズ・ロー・アル	(4)	X	X (1)	X (3)
Japanese	Kanji & Hiragana	桜田 淳子	(4)		X (1)	X (3)
	Katakana	マイケルジョージ	(4)		X (1)	X (3)
Simplified Chinese		实行 经济	(4)		X (1)	X (3)
Traditional Chinese		后实 现利				X (3)
Korean (Hangul)		흠침흠칭	(4)		X (1)	X (3)

Table 1

- (1) Only if the corresponding language file is loaded onto the phone. Use “Options > Select display language” to find out what files are loaded. The only one of these scripts loaded on my test phone was Katakana.
- (2) The SIP phone has limited support for Hebrew and it is not an officially supported script yet.
- (3) As long as you configure the softphone font to something that supports these scripts (such as Arial Unicode MS).
- (4) Only if the corresponding language file is loaded onto the phone..

H.323 Intrabranch Call Troubleshooting Guide

When it comes time to send a display name to an H.323 IP phone, Communication Manager Branch checks various conditions to see if it can send the Unicode name. The two main conditions are:

1. The physical phone must be capable of displaying the Unicode name.
2. The human at the phone prefers to read the Unicode name.

If these conditions are met, Communication Manager Branch sends the Unicode name. Otherwise it sends the ASCII name. If you are not seeing what you expect, follow the troubleshooting guide below.

Items to check	Reference
Make sure your object (station, hunt group, collective ringing group or trunk group) has a native name administered.	Applicable Branch Device Manager form
Make sure your object has a script tag administered.	Localization tab of the General System Parameters form
Ensure that the object's administered native name is actually limited to the characters in the administered native name script.	Applicable Branch Device Manager form
Make sure your system has the correct Display Messages File installed. The script tag of the sender's native name must be a subset of the script tag of the installed display messages.	The script tag of the phone message file avaya_unicode.txt is on line 6
Make sure your endpoint has its preferred language set to "Unicode".	Branch Device Manager user administration form
Make sure your endpoint is Unicode capable and has fonts to support the script of the Unicode names.	Refer to your phone's user guide

SIP Intrabranch Call Troubleshooting Guide

The story for SIP is much simpler than the story for H.323, but it is also more limited.

- SIP phones do not register their script capabilities. Communication Manager Branch assumes that all SIP phones can support all scripts.
- Communication Manager Branch always sends the Unicode name to SIP phones, whether or not they can display it.
- An Avaya SIP phone (96xx) that receives characters it cannot display will show them as boxes.
- The administered "Script Tag for Native Names" on the Branch Device Manager General System Parameters screen has no effect on SIP phone displays.
- The installed Display Messages File has no effect on SIP phone displays.

Items to check	Reference
Make sure your object (station, hunt group, collective ringing group or trunk group) has a native name administered.	Applicable Branch Device Manager form

Items to check	Reference
Make sure your SIP endpoints are capable of displaying the object's Unicode name script. If not all of your SIP phones are capable of displaying the Unicode names used on your system, then you should modify your Unicode names so that they are compatible with your phones.	Refer to your phone's user guide

Interbranch Call Troubleshooting Guide

Interbranch calls have somewhat different capabilities. On the initial INVITE over the interbranch SIP trunk, Communication Manager Branch will never send a native name—it always sends the ASCII name. When the receiving Communication Manager Branch responds with a Ringing message, it also never sends the native name—it always sends the ASCII name. Thus, while the called phone is ringing, both sides will see the ASCII name of the other party. After the phone is answered, Communication Manager Branch will return the native name of the called party to the originator. This is sent on to the originator's phone regardless of whether or not it can display it. If the originator's phone is incapable of displaying that native name, it will either display boxes or garbage or a blank name (depending on phone type). The called phone will continue to display the ASCII name.

Items to check	Reference
Make sure your object (station, hunt group, collective ringing group or trunk group) has a native name administered.	Applicable Branch Device Manager form
Make sure your SIP and H.323 endpoints are capable of displaying the object's native name script. If not all of your SIP and H.323 endpoints are capable of displaying the native names used throughout your enterprise, then you should modify your native names so that they are compatible with your endpoints.	Refer to your phone's user guide