
Rhapsody Ready®

Optimized Plays for Sure

Test Kit and Program Information

Rev. 1.0.5– February 2, 2010



Test Program Executed by Intertek Testing Services NA, Inc.

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1. WELCOME

Welcome to the “Rhapsody Ready®” Logo Program. The tests and processes detailed throughout this document have been designed in partnership between Rea Networks, Inc. and Intertek and approved by Real Networks, Inc.

Intertek is an independent test company chosen to administer the Rhapsody Ready® testing program. All program specifics including process, test design, and program design have been approved, and are enforced by Real Networks, Inc.

The purpose of this Kit is to provide the Rhapsody-compatible portable device manufacturer with detailed information about the process, and the specific tests that will be run, when you submit your portable product for Rhapsody Ready® compliance with Rhapsody platform.

Upon passing these tests, you will receive a “Rhapsody Ready®” logo from Real Networks, Inc.

The Test Kit includes a summary of tests for your use. In addition, each test contains a detailed description. Make sure that you pre-test your portable product prior to submitting it to Intertek.

We look forward to contributing to your portable product’s success and working with you as part of the Rhapsody Ready testing program.

Intertek Rhapsody Ready Test Team
Intertek, Inc.

2. WHAT THE “RHAPSODY READY®” LOGO MEANS

1.1 Introduction

The “Rhapsody Ready®” logo provides assurance that the portable product meets compatibility, quality and usability standards set by Real Networks, Inc. The test suite focuses mainly on the portable device’s interaction with the Rhapsody server. All Rhapsody Ready® portable hardware that bears the logo will also exhibit a level of reliability that will work with the Rhapsody server, managed by the Rhapsody Jukebox software.

The logo is an assurance that your product has passed a set of criteria as defined by Real Networks, Inc. The logo is not a Full Product Quality Assurance guarantee. Intertek’ test engineering service is to ensure that your product meets a set of Real Networks, Inc. compliance standards, and that your portable product’s stability is adequate throughout the compliance tests.

Intertek is pleased to be the Rhapsody Ready® compliance Test Lab for retail level portable hardware devices.

Note: Passing results in the compliance test report do not represent any type of Quality Assurance seal from Intertek. Intertek has no control over whether Real Networks, Inc. will issue a “Rhapsody Ready®” logo. Real Networks, Inc. has reserved the right to refuse participation by any Vendor in the use of any trademark, licensing or compliance program regardless of the test results determined by Intertek.

3. **HOW TO ACHIEVE THE LOGO**

To achieve Rhapsody Ready® compliance, you must schedule testing for your portable product, and submit your package to the Intertek Test Lab. **In order to maximize your chances for a successful test result, you must run all tests prior to submission.** Once your portable product has passed the test, Real Networks, Inc. will provide you with the “Rhapsody Ready” logo.

You can schedule your test by sending an email to realnetworks@Intertek.com

The following are requirements for submission of your test package.

- A pre-tested candidate of your portable device by package delivery submission. The version of your portable device must be the same as its release to your target market and should be stated on the Addendum A legal forms submitted to Intertek.
- Please submit a **full** version of your portable product. The logo does not apply to Demo or “lite” versions of the device. Please ship two of your hardware devices to Intertek.
- A copy of your product documentation, i.e. User’s Guide.
- The signed Intertek **Developer Vendor Hardware Testing Agreement** and Addendum. *Testing agreements are to be returned only once. Additional Rhapsody Ready® compliance testing will only require product Addendums to be signed.*
- Payment by check for the Rhapsody Ready® testing. Make checks payable to **Intertek Testing Services NA, Inc.** See “Pricing” to determine fee. We also accept cashier checks and wire transfer. Please contact Intertek via email (realnetworks@Intertek.com) for banking information if you choose wire transfer option.
- Developer Questionnaire with “required” fields filled in.
- Exception requests submitted to Intertek, Inc. See “Exception Handling Process” for details.
- Any additional active service accounts, software, hardware, server configurations, or equipment required to use the device.

The following is recommended prior to submission of your test package:

- A copy of the test outline or functional specification associated with your portable device.

Ship your package to:

Intertek Testing Services NA, Inc
Rhapsody Real Networks Program
450 Main Street, Suite 207
Pleasanton, CA 94566
Phone: (925) 485-5619 Fax: (925) 484-2631

4. SUBMISSION PROCESS

1. Intertek will schedule your test window to begin within five (5) business days of contact.

In an effort to continue to offer submission scheduling within a one-week time frame, it is important that once you have submitted and received confirmation of a start date that the commitment be met.

Delayed submissions by the Portable Device manufacturer and/or no shows, result in delayed schedule availability.

If no change of date or cancellation has been received prior to the original planned submission start date, then a new submission date will need to be requested and your submission will be placed in the queue for the next available submission start time. A late or no show submission penalty fee may be applied and due upon submission. See “Pricing” for details.

2. You will receive confirmation of receipt of your package and login information to a secure, online Intertek Problem Status database.
3. Once testing has begun, regular problem information can be obtained via the online Intertek Problem Status database at any time. Final test results will be made available to Real Networks team for evaluation. As soon as Real Networks team complete evaluation, final test result will be sent to you.
4. **IMPORTANT:** The majority of the testing will be performed during the first day of the test cycle. If numerous problems have been found thus inhibiting the completion of testing by the end of the first day, testing will be stopped and a resubmission of your application (with the problems fixed and all requirements re-tested) will be necessary to achieve the logo. In this case, a notification will be sent to you and Real Networks, Inc. indicating the testing has been stopped. Information will also be included on tests completed to date, tests remaining, problems found, and any open issues.

5. TEST CUSTOMIZATION

1.2 Should you customize?

You may be eligible for test customization if one of the following applies:

- If your product technology is a component other than a standalone portable device
- If your portable device technology does not apply to the majority of the tests described in this kit
- Due to the nature of your portable device, Real Networks, Inc. **requires** a customized test kit in order to achieve compliance

Note: Real Networks, Inc. has reserved the right to require a customized test kit for a portable device in order to issue a "Rhapsody Ready Logo". Intertek has no control over whether Real Networks, Inc. will issue a "Rhapsody Ready Logo" or refuse participation by any Vendor in the use of any trademark, licensing or compliance program.

1.3 What's the Process?

1. Intertek emails the "Rhapsody Committee" describing the portable device, and states justification for the customization. Approval from Real Networks, Inc will be typically provided within 24 hours.

==> If Real Networks, Inc. approves/agrees the portable product needs to have a customized set of test suites, then proceed to next step. Otherwise inform Portable Device manufacturer they must go through the standard program.

2. Intertek requests detailed information from the Portable Device manufacturer. With this information Intertek provides a cost estimate to customize, develop, and execute the Test Suite for the logo.

==> If the Portable Device manufacturer agrees to pay for a customized suite, then proceed to next step.

3. Within an average maximum of 6 business days of receipt of payment from Portable Device manufacturer, Intertek develops and sends to Portable Device manufacturer and Real Networks a customized Test Suite. Feedback or approval from Real Networks, Inc will be typically provided within 24 hours, and no later than 72 hours.

==> If Portable Device manufacturer and Real Networks approves/agrees to the Test Suite written by Intertek, then proceed to next step. Otherwise, there is a reiterative process between Intertek, Portable Device manufacturer and/or Real Networks. To modify the customized Test Suite that will become approved.

4. Portable Device manufacturer schedules their tests with the Intertek- INTERTEK- Rhapsody Test lab, submitting hardware, documentation, and other relevant information.

6. **EXCEPTION HANDLING PROCESS**

On occasion, there are justified cases that need exception. For example, if the design of a portable product prohibits a Portable Device manufacturer from conforming to one of the tests listed in the criteria, or if a Portable Device manufacturer is unable to conform to a test because of a specific problem with the Real Network SDK, or a reason completely out of the portable device manufacturer's control.

After reviewing the tests within this kit, and you feel that your portable product will not meet a portion of the test criteria, you must request an exception upon submission by sending an email to Intertek. Please indicate "EXCEPTION REQUEST" in the email subject line, and include the test the exception is requested for as well as the rationale for the request in the body of the message. Intertek will submit the exception request for approval to Real Networks, Inc.

If you were unaware of a particular exception candidate at time of submission, a section for tracking exceptions will be included in the test results report. Each case will be handled separately. All potential exceptions will be communicated to Real Networks, Inc. in the results report with information explaining the rationale of the problem. Real Networks, Inc. will approve or deny the exception typically within 24 hours, but no later than 72 hours. An immediate e-mail will be sent to the Portable Device manufacturer reporting approval results for their exception candidate.

If the exception has been approved, Intertek will record the information in the results report. If all other tests have passed, the Portable Device manufacturer will receive a test pass. If the exception has been denied, a retest of the portable product will be necessary to fix the problem as documented in the failed test result.

PLEASE NOTE: No failure status will occur if the failure cannot be reproduced in the lab at Intertek. If Intertek discovers a problem once and cannot reproduce the problem, it will be noted in the test results report but will not affect the test status. However, if Intertek can reproduce the problem consistently, but the Portable Device manufacturer cannot, we will work with the Portable Device manufacturer to help isolate the condition for reproducibility. Problems not reproducible at the Portable Device manufacturer site will be escalated to Real Networks, Inc. for decision handling through the test results report.

It is important to note that an exception granted will not indicate a passed status for that particular test. However, a Portable Device manufacturer will pass the overall test suite and receive the logo, with a disclaimer for those tests that have been granted an exception.

7. **TEST INFORMATION**

The following are some test tips, and a guide to follow during your pre-test effort. The tests listed in the next section will be executed at the Intertek – Rhapsody® Test Lab. A full Requirements Pass/No Pass report will be generated based on the results of these tests. **You must run all tests prior to submission in order to maximize your chances for a successful test result.**

If a specific test does not apply to your portable device, the difference and reasoning behind this must be documented for test and for the users.

For devices that require additional software/device drivers installed onto the Desktop and/or Server that will host the Rhapsody service, the most recent versions of Windows and Mac OS supported by the product will be used.

Testing will be performed with the most recent version of the Rhapsody™ Jukebox software and the submitted portable devices. At Intertek’s and/or Real Network’s discretion, Windows XP will be selected for testing from the list of supported OS platforms provided by the product’s user documentation. If no particular OS is specified by the product documentation, the application will be tested with Windows XP (subject to change).

Testing on additional OS platforms is available. Please contact the Intertek-Rhapsody Test Lab for information on additional OS platforms available for testing. See [“Pricing”](#) for details.

1.3.1 Warnings:

All requirements must be met in order to be eligible for the logo. However, if your application does not meet a requirement identified with “*WARNING ELIGIBLE*” (see Core Tests descriptions below), the requirement not met will be indicated as a warning on the final report. Warnings are typically granted for problems that are more cosmetic in nature. A warning on the final report will still allow the application to receive the logo and all of its benefits, as described in Rhapsody Ready Logo usage agreement, however, the requirement will only be excused from being met until the release of the next version of the application. Please realize that a warning will not be issued twice.

If a warning is issued for a requirement that only requires a firmware edit to rectify, then the portable device manufacturer will be allowed to submit revised firmware for the portable device. See **HARDWARE REVISION HANDLING** section below for additional revision information.

It’s important to note that if a memory leak is given a warning; all memory leaks no matter the location, on all future revisions, will result in the no memory leak requirement to not be met. In other words, if a memory leak is given a warning, no other warnings will be granted for any memory leaks found in future revisions.

Important Notes:

1. If numerous problems have been found thus inhibiting the completion of testing by the end of the first day, testing will be stopped and a resubmission of your device (with the problems fixed and all requirements re-tested) will be necessary to achieve the logo.
2. Portable Devices must support Windows XP.

8. CORE TESTS

1. Plays For Sure Verifications

1.1. Test: Device supports Device Friendly Name.

Required/Recommended: Required

Steps:

1. Clear the contents of C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log
2. Connect your device to Rhapsody
3. Open C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log.
4. Search for the string "Device Friendly Name"

Verifications:

There should be a line in the log file that looks something like this: "Device Friendly Name: iriver clicx"

1.2. Test: Device supports Use Count Object Property.

Required/Recommended: Required

Steps:

1. Clear the contents of C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log
2. Connect your device to Rhapsody
3. Open C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log.
4. Search for the string "WMDM Device Supported Format: WMDM_FORMATCODE_WMA"
5. Below this line you should see the following string: "Property Name: WMDM/PlayCount"

1.3. Test: Device supports Rating Object Property.

Required/Recommended: Required (if ratings is supported)

Steps:

1. Clear the contents of C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log
2. Connect your device to Rhapsody
3. Open C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log.

1.3. Test: Device supports Rating Object Property.

4. Search for the string “WMDM Device Supported Format: WMDM_FORMATCODE_WMA”
5. Below this line you should see the following string: “Property Name: WMDM/UserRating”

1.4. Test: Device supports Buy Flag Object Property.

Required/Recommended: Required (if purchasing is supported)

Steps:

1. Clear the contents of C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log
2. Connect your device to Rhapsody
3. Open C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log.
4. Search for the string “WMDM Device Supported Format: WMDM_FORMATCODE_WMA”
5. Below this line you should see the following string: “Property Name: WMDM/BuyNow”

1.5. Test: Device Supports Sync ID.

Required/Recommended: Required

Steps:

1. Clear the contents of C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log
2. Connect your device to Rhapsody
3. Open C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log.
4. Search for the string “WMDM Device Supported Format: WMDM_FORMATCODE_WMA”
5. Below this line you should see the following string: “Property Name: WMDM/SyncID”

1.6. Test: Device supports Windows Media Playlist support.

Required/Recommended: Required

Steps:

1. After connecting the device, open the following file: C:\Documents and Settings\User\Application Data\Real\Rhapsody>ErrorLogs\pdgenwmdm.log
- 2.
- 3.

Verifications:

Verify the following string exists in this file:
WMDM_FORMATCODE_ABSTRACTAUDIOVIDEOPLAYLIST

2. Capabilities.xml

2.1. Test: Capabilities.xml exists under \Service\Rhapsody folder on device.

Required/Recommended: Required

Steps:

1. Connect device to USB
2. Format the device through explorer (right click on the device from my computer and select format)
3. Disconnect and reconnect the device to USB.

Verifications:

1. Verify the following folder structure exists on the device: \Service\Rhapsody.
2. Verify Capabilities.xml exists in the \Service\Rhapsody\ folder.

2.2. Test: Capabilities.xml is pre-provisioned with the correct tags.

Required/Recommended: Required

Steps:

1. Connect device to USB
2. Open capabilities.xml from \Service\Rhapsody\
3.

Verifications:

1. capabilities.xml includes a version indicator "RhapDNAVersion"
2. capabilities.xml includes a Boolean value for channel support "RhapChannelCapable"
3. capabilities.xml includes path attributes for Video, Photos, Audio, Artist info, text, recordings, and channels path.
4. capabilities.xml includes a Boolean value for a logo splash screen. "SupportsServiceLogo"

Info: If the device doesn't support any of the above, the tag will still exist but be empty.

2.3. Test: Capabilities.xml cannot be deleted or edited.

Required/Recommended: Required

Steps:

1. Try deleting and editing Capabilities.xml

Verifications:

Capabilities.xml should be a system file that cannot be deleted or edited.

3. Messaging

3.1 Test: Messaging.xml is created after registering with Rhapsody
Required/Recommended: Required
<p>Steps:</p> <ol style="list-style-type: none"> 1. Connect device to Rhapsody 2. Authorize and license the device 3. Open the \Service\Rhapsody\ folder through explorer <p>Verifications: After registering the device, Rhapsody creates Messaging.xml in the \Service\Rhapsody folder.</p>

3.2 Test: Device uses startup txt from messaging.xml
Required/Recommended: Required
<p>Steps:</p> <ol style="list-style-type: none"> 1. From \service\rhapsody\ open messaging.xml 2. Change the startupMessage MessageText (you may need to copy the xml locally to your pc, make the changes and recopy to the device) 3. Reboot the device <p>Verifications: On start up the text you supplied is displayed</p>
<p>Info: Here is an example of the .xml file. The string you should change is bolded and RED.</p> <pre><?xml version="1.0"?> <messaging> <StartupMessage> <MessageEnable>1</MessageEnable> <MessageText>Welcome To Rhapsody</MessageText> <MessageAttributes></MessageAttributes> <MessageDuration>5</MessageDuration> </StartupMessage> <ShutdownMessage> </ShutdownMessage> </messaging></pre>

3.3 Test: Device uses startup message duration from messaging.xml
Required/Recommended: Required
<p>Steps:</p> <ol style="list-style-type: none"> 1. From \service\rhapsody\ open messaging.xml 2. Change the startupMessage MessageDuration 3. Reboot the device

3.3 Test: Device uses startup message duration from messaging.xml**Verifications:**

On start up the message is displayed for the amount of time you specified in seconds.

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
</messaging>
```

3.4 Test: Device doesn't display disabled startup message.

Required/Recommended: Required

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the startupMessage MessageEnable to 0
3. Reboot the device

Verifications:

On start up the text you supplied is NOT displayed.

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
```

3.4 Test: Device doesn't display disabled startup message.

</messaging>

3.5 Test: Device displays startup message after disabled.

Required/Recommended: Required

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the startupMessage MessageEnable back to 1
3. Reboot the device

Verifications:

On start up the text you supplied is displayed

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
</messaging>
```

3.6 Test: Device uses shutdown txt from messaging.xml

Required/Recommended: Required

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the shutdownMessage MessageText
3. Reboot the device

Verifications:

On shutdown the text you supplied is displayed

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
```

3.6 Test: Device uses shutdown txt from messaging.xml

```

    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
</messaging>

```

3.7 Test: Device uses shutdown duration from messaging.xml**Required/Recommended:** Required**Steps:**

1. From \service\rhapsody\ open messaging.xml
2. Change the shutdownMessage MessageDuration
3. Reboot the device

Verifications:

On shutdown the message is displayed for the duration you specified in seconds.

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```

<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
</messaging>

```

8 Test: Device doesn't display shutdown message when disabled from messaging.xml**Required/Recommended:** Required**Steps:**

1. From \service\rhapsody\ open messaging.xml
2. Change the shutdownMessage MessageEnable to 0
3. reboot the device

Verifications:

On shutdown the text you supplied is NOT displayed

8 Test: Device doesn't display shutdown message when disabled from messaging.xml

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>0</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>0</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
</messaging>
```

3.9 Test: Device displays message on shutdown after being re-enabled in messaging.xml

Required/Recommended: Required

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the shutdownMessage MessageEnable back to 1
3. reboot the device

Verifications:

On shutdown the text you supplied is displayed

Info: Here is an example of the .xml file. The string you should change is bolded and RED.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Welcome To Rhapsody</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </StartupMessage>
  <ShutdownMessage>
    <MessageEnable>1</MessageEnable>
    <MessageText>Goodbye</MessageText>
    <MessageAttributes></MessageAttributes>
    <MessageDuration>5</MessageDuration>
  </ShutdownMessage>
</messaging>
```

3.10 Test: Device uses logo specified in messaging.xml

Required/Recommended: Required

This test case only applies if the device supports a Service Logo. To check if the device supports

3.10 Test: Device uses logo specified in messaging.xml

this you can check the capabilities.xml file under the <SupportsServiceLogo> tag. If the value is 1 its supported. 0 is not supported.

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Make sure LogoEnable is set to 1 If it is not, change it to 1
3. Make sure there is a value for LogoDuration, if not set one yourself. This value represents seconds.
4. Copy an image called logo.jpg to \Service\Rhapsody\ and change the LogoPath to point to this image on the device.
5. Shut the device off and turn it back on.

Verifications:

1. On startup, the image you supplied is shown.

Info: Here is an example of the ServiceLogo tag in Messaging.XML. If Messaging.XML doesn't have the ServiceLogo tag copy and paste the bold portion below.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
  </StartupMessage>
  <ShutdownMessage>
  </ShutdownMessage>
  <ServiceLogo>
    <LogoEnable>1</LogoEnable>
    <LogoDuration>5</LogoDuration>
    <LogoPath>\Service\Rhapsody\logo.jpg</LogoPath>
  </ServiceLogo>
</messaging>
```

3.11 Test: Device uses ServiceLogo duration supplied in messaging.xml

Required/Recommended: Required

This test case only applies if the device supports a Service Logo. To check if the device supports this you can check the capabilities.xml file under the <SupportsServiceLogo> tag. If the value is 1 its supported. 0 is not supported.

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the ServiceLogo LogoDuration
3. Reboot

Verifications:

On startup, the logo is displayed for the amount of time you specified in seconds.

Info: Here is an example of the .xml file. The string you should change is bolded and RED. If Messaging.XML doesn't contain the ServiceLogo tag, copy and paste it from the example below.

```
<?xml version="1.0"?>
<messaging>
```

3.11 Test: Device uses ServiceLogo duration supplied in messaging.xml

```

<StartupMessage>
</StartupMessage>
<ShutdownMessage>
</ShutdownMessage>
<ServiceLogo>
  <LogoEnable>1</LogoEnable>
  <LogoDuration>5</LogoDuration>
  <LogoPath>\Service\Rhapsody</LogoPath>
</ServiceLogo>
</messaging>

```

3.12 Test: Device doesn't display ServiceLogo when disabled from messaging.xml**Required/Recommended:** Required

This test case only applies if the device supports a Service Logo. To check if the device supports this you can check the capabilities.xml file under the <SupportsServiceLogo> tag. If the value is 1 its supported. 0 is not supported.

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the ServiceLogo LogoEnable to 0
3. Reboot

Verifications:

On startup, the logo is NOT displayed

Info: Here is an example of the .xml file. The string you should change is bolded and RED. If Messaging.XML doesn't contain a ServiceLogo tag, copy and paste it from the example below.

```

<?xml version="1.0"?>
<messaging>
  <StartupMessage>
  </StartupMessage>
  <ShutdownMessage>
  </ShutdownMessage>
  <ServiceLogo>
    <LogoEnable>0</LogoEnable>
    <LogoDuration>5</LogoDuration>
    <LogoPath>\Service\Rhapsody</LogoPath>
  </ServiceLogo>
</messaging>

```

3.13 Test: Device displays ServiceLogo after re-enabling from messaging.xml**Required/Recommended:** Required

This test case only applies if the device supports a Service Logo. To check if the device supports this you can check the capabilities.xml file under the <SupportsServiceLogo> tag. If the value is 1 its supported. 0 is not supported.

Steps:

1. From \service\rhapsody\ open messaging.xml
2. Change the ServiceLogo LogoDuration back to 1

3.13 Test: Device displays ServiceLogo after re-enabling from messaging.xml**3. Reboot****Verifications:**

On startup, the logo is displayed.

Info: Here is an example of the .xml file. The string you should change is bolded and RED. If Messaging.XML doesn't contain the ServiceLogo tag, copy and paste it from the example below.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
</StartupMessage>
  <ShutdownMessage>
</ShutdownMessage>
  <ServiceLogo>
    <LogoEnable>1</LogoEnable>
    <LogoDuration>5</LogoDuration>
    <LogoPath>\Service\Rhapsody</LogoPath>
  </ServiceLogo>
</messaging>
```

3.14 Test: ServiceLogo enabled without image.

Required/Recommended: Required

This test case only applies if the device supports a Service Logo. To check if the device supports this you can check the capabilities.xml file under the <SupportsServiceLogo> tag. If the value is 1 its supported. 0 is not supported.

Steps:

1. from \service\rhapsody\ open messaging.xml
2. Make sure LogoEnable is set to 1
3. delete the image that messaging.xml is pointing to
4. reboot.

Verifications:

On startup nothing shows, or a default logo is displayed.

Info: Here is an example of the .xml file. If Messaging.XML doesn't contain the ServiceLogo tag, copy and paste it from the example below.

```
<?xml version="1.0"?>
<messaging>
  <StartupMessage>
</StartupMessage>
  <ShutdownMessage>
</ShutdownMessage>
  <ServiceLogo>
    <LogoEnable>1</LogoEnable>
    <LogoDuration>5</LogoDuration>
    <LogoPath>\Service\Rhapsody</LogoPath>
  </ServiceLogo>
```

3.14 Test: ServiceLogo enabled without image.

</messaging>

3.15. Test: Message displays on startup when subscription is expired.

Required/Recommended: Required

Steps:

1. Set the subscription to expire. To do this follow the instructions under Info.
2. Reboot the device.

Verifications:

On startup, the normal startup message should be displayed first, after the welcome message is displayed the expiration message will appear.

Info: To change the expiration date follow these steps:

1. open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

4. Rhapsody Channels (if supported continue test cases)

4.1 Test: Verify Channel tracks are not displayed in device library.

Required/Recommended: Required

Steps:

1. Delete all tracks from the device.
2. Transfer at least 3 Rhapsody Channels to device
3. Navigate through all nodes of the device library (Artist, Album, Genre, etc.)

Verifications:

None of the tracks transferred in the Channels show up in the device library.

4.2 Test: Verify Channel names don't show up in playlist menu.

Required/Recommended: Required

Steps:

1. After transferring the Rhapsody Channels navigate to the playlist menu on the device (if device has a playlist menu)

Verifications:

The names of the Rhapsody Channels do not show up in playlist section of the device.

4.3 Test: 'Rhapsody Channels' is displayed in main menu.

Required/Recommended: Required

Steps:

4.3 Test: 'Rhapsody Channels' is displayed in main menu.

1. The link to Rhapsody Channels should be displayed in the main menu of the device.

4.4 Test: 'Rhapsody Channels' is displayed in the Music Menu.

Required/Recommended: Required

Steps:

1. From the main menu Choose 'Music'

Verifications:

Inside the music menu there is a link to Rhapsody Channels.

4.5 Test: Rhapsody Channels are displayed under the Rhapsody Channel menu in a scrollable list.

Required/Recommended: Required

Steps:

1. Transfer some Channels to the device.
2. Open the Rhapsody Channels menu.
3. Scroll through the list.

Verifications:

1. Rhapsody Channels are displayed in the Rhapsody Channel menu.
2. You are able to scroll back and forth through the Channel menu.

4.6 Test: Currently playing channel track doesn't resume after leaving and returning to channel.

Required/Recommended: Required

Pass/fail:

Steps:

1. Play a Rhapsody Channel
2. Stop Channel playback (you can do this by playing a track from the library)
3. Go back to the channel you were playing and play it again

Verifications:

1. The channel does not resume the track you were playing previously. Instead the next track is loaded.

4.7 Test: Selecting a channel while playing from it returns you to now playing.

Required/Recommended: Required

Steps:

1. Start playback from a channel
2. Go back to the channel list while playing
3. Select the same channel you are currently playing.

Verifications:

1. You are simply taken back to the now playing screen without any audible interruptions.

4.7 Test: Selecting a channel while playing from it returns you to now playing.

4.8 Test: All Transport controls work like normal during Channel playback

Required/Recommended: Required

Steps:

1. Start playback from a channel
2. Hit pause, then unpause
3. Fast forward through part of the track
4. Rewind through part of the track
5. Skip forward a couple tracks
6. Skip back a couple tracks.

Verifications:

All the above work the same as they do if you were playing a track from the library.

4.09 Test: Channel Playback doesn't shuffle.

Required/Recommended: Required

Steps:

1. Turn shuffle on
2. Start Channel playback

Verifications:

Songs do not shuffle (you can verify this by looping through the channel and verifying they always play in the same order.)

4.10 Test: Channel playback repeats with repeat turned off.

Required/Recommended: Required

Steps:

1. Turn repeat OFF
2. Start channel playback
3. Let the channel play all the way through (probably best to skip through all tracks in the channel)

Verifications:

Playback never stops, the channel song list will keep repeating.

4.11. Test: Shuffle and Repeat icons are hidden while playing from Channel.

Required/Recommended: Required

Steps:

1. Turn shuffle and repeat ON
2. Start Channel playback
3. Observe the now playing UI

Verifications:

4.11. Test: Shuffle and Repeat icons are hidden while playing from Channel.

1. Shuffle and repeat icons are not displayed in the now playing UI.

4.12. Test: radiopc.txt gets updated while playing Channels

Required/Recommended: Required

Steps:

1. Close Rhapsody and connect the device.
2. Go to the devices Service\Rhapsody folder and delete RadioPC.txt
3. Disconnect the device
4. Play a couple tracks from a Rhapsody Channel
5. Connect the device and open radiopc.txt from \service\rhapsody\ folder

Verifications:

The device writes the following to this file: file_version; Channel_count; Channelid; station_type; tracks_played; track_index; Channel_looped;

The above string may or may not be written in one line, it doesn't matter as long as each number is delimited by a ";" While playing from the channels keep track of how many tracks have been played, and where you're at in the track index. Compare this with the results that are written to radiopc.txt.

For instance this is what the RadioPC.txt file should look like: 1;1;7754;0;2;3;0;

The numbers I have outlined in RED represent the number of tracks played and the current index of the channel. I have played 2 tracks and the index is at 3, which means it will start on the third song in the list the next time that channel is played.

4.13. Test: Radiopc.txt Channel_looped updates after completing the playlist.

Required/Recommended: Required

Steps:

1. Play the same channel as you did in the previous test case.
2. Skip through all the songs until you loop through them and start playing the same ones over again.
3. Connect the device and open RadioPC.txt from the Rhapsody\Service folder.

Verifications:

The Channel_looped integer is updated to 1.

Example: 1;1;7754;0;2;3;1; The last number in this string is 1 which tells the client the channel has been played all the way through.

4.14. Test: Radiopc.txt Channel_count gets updated when more than one channel is played.

Required/Recommended: Required

Steps:

1. Play more than one channel on the device.
2. Connect the device and open RadioPC.txt from the Service\Rhapsody folder.

Verifications:

The Channel_count integer gets updated to reflect the number of channels that have been played

4.14. Test: Radiopc.txt Channel count gets updated when more than one channel is played.

and an additional Channel_ID; station_type; tracks_played; track_index; channel_looped is appended to the file to account for the other channel played.

Here is an example of RadioPC.txt after two channels have been played:

1;2;7754;0;2;3;1;60;0;3;4;0;

Here is an example if three channels were played: 1;3;7754;0;2;3;1;60;0;3;4;0;450;0;5;6;0;

4.15. Test: Radiopc.txt persists across reboots

Required/Recommended: Required

Steps:

1. Reboot device
2. Open radiopc.txt file again.

Verifications:

The information that was written to the file persists across reboots.

4.16. Test: information in Radiopc.txt is updated correctly after subsequent sessions.

Required/Recommended: Required

Steps:

1. Start channel playback
2. Skip through a few songs
3. Check radiopc.txt and remember the number of tracks played and the current index
4. Reboot the device, play the same channel again and skip through a few more tracks.
5. Open radiopc.txt

Verifications:

1. The total tracks played equal the number of tracks you played before and after rebooting.
2. The track index is updated correctly to reflect the number of track played before and after the reboot.

4.17 Test: track index in radiopc.txt is subtracted after skipping back in Channels.

Required/Recommended: Required

Steps:

1. Start Channel playback, skip forward a couple tracks, check track index and playcount from radiopc.txt
2. Start playback of the same channel, skip back a few tracks, check track index and playcount from radiopc.txt

Verifications:

1. The track index is less than what it was when you checked it in step 1.
2. Play count shows the total tracks played from step 1 and step 2.

4.18 Test: Track index in radiopc.txt starts over when channel playlist is repeated.

Required/Recommended: Required

Steps:

1. Play all the way through a channel playlist, until you roll over the beginning of the list.
2. Open radiopc.txt from \service\rhapsody

Verifications:

1. The track index accurately reflects where you are at in the index, example: 3/30 instead of 33/30
2. Total number of tracks played does not roll over when the channel list is repeated.

4.19 Test: RadioPC.txt is cleared after connecting to Rhapsody.

Required/Recommended: Required

Steps:

1. Connect the device to Rhapsody
2. Open RadioPC.txt from Service\Rhapsody

Verifications:

RadioPC.txt should be empty or non-existent.

4.20 Test: Restricted Channel – Pause stops restricted channel playback.

Required/Recommended: Required

Steps:

1. Start playback of a restricted channel (to make a channel restricted, change the Restricted tag to 1 in the channels.xml file located in the \Service\Rhapsody\ folder of the device.
2. While playing a restricted channel, hit Pause

Verifications:

1. Playback stops and you are returned to the Channel list menu.

4.21 Test: Restricted Channel – Message displays when using skip back.

Required/Recommended: Required

Steps:

1. Start playback of a restricted channel (to make a channel restricted, change the Restricted tag to 1 in the channels.xml file located in the \Service\Rhapsody\ folder of the device.
2. Hit Skip Back

Verifications:

Skipping back is not allowed while playing from a Restricted Channel, instead a message is displayed telling you it's not allowed.

4.22 Test: Restricted Channel – Message displays after skip limit is reached.

Required/Recommended: Required

Steps:

1. Start playback of a restricted channel (to make a channel restricted, change the Restricted tag to 1 in the channels.xml file located in the \Service\Rhapsody\ folder of the device.
2. Skip forward more than 30 times

4.22 Test: Restricted Channel – Message displays after skip limit is reached.

Verifications:

1. You are only allowed to skip 30 tracks in an hour while playing a restricted channel. After the skip limit is reached a message is displayed telling you that the skip limit is reached.

4.23 Test: Restricted Channel – Skip limit is reset after 1 hour.

Required/Recommended: Required

Steps:

1. Start playback of a restricted channel (to make a channel restricted, change the Restricted tag to 1 in the channels.xml file located in the \Service\Rhapsody\ folder of the device.
2. Skip forward 30 times to reach the skip limit
3. Wait an hour, and then skip forward again.

Verifications:

1. After an hour is up, the skip limit is reset and you can successfully skip ahead again.

4.24 Test: Double line menu UI – Menu expands to two lines when scrolling over channels.

Required/Recommended: Recommended.

Steps:

1. Go into the channel menu
2. Scroll through the channel list

Verifications:

1. Whatever channel is highlighted gets expanded into a double line menu. The top line remains as the channel title, and a new line appears below the Channel title that displays the currently playing track, or the track that will be played if the channel is selected.

4.25 Test: Double line menu UI – channel menu always displays currently playing track.

Required/Recommended: Recommended.

Steps:

1. Start channel playback
2. Skip ahead a few tracks
3. Return to the channel menu.
4. Highlight the channel you are currently playing

Verifications:

1. Double line menu shows the track that is currently playing.

4.26 Test: Double line menu UI – after playback stops, channel menu shows next track in queue.

Required/Recommended: Recommended

Steps:

1. While playing a channel track, stop channel playback (you can do this by playing a track from the library)
2. Return to channel menu

4.26 Test: Double line menu UI – after playback stops, channel menu shows next track in queue.

3. Highlight the Channel you were previously playing from

Verifications:

1. The double line menu doesn't show the track you were playing when you stopped playback, instead it shows the next song in the list (selecting the channel will load this track)

5. Add to Library

5.1. Test: Add to library context menu exists from channel playback.

Required/Recommended: Required

Steps:

1. Start Channel playback
2. Enter the context menu (song options)

Verifications:

1. Option exists to add the currently playing track to the library.

5.2. Test: Channel track can be added to library.

Required/Recommended: Required

Steps:

1. Start Channel playback
2. Enter song options and select 'Add to library'
3. Go back to the device library and check library nodes (songs, artist, album, genre etc)

Verifications:

The track you added to the library shows up in all areas of the library correctly.

5.3. Test: Add Channel track that already exists in library.

Required/Recommended: Required

Steps:

1. Start channel playback
2. Add a track to the library
3. Try adding the same track to the library again (from channel playback)

Verifications:

1. Depends on device implementation (shouldn't cause anything unexpected)

5.4. Test: addtolibrary.dat updates with each added track.

Required/Recommended: Required

Steps:

1. Take note of the size (in bytes) of \service\rhapsody\addtolibrary.dat
1. Start Channel playback
2. Add a couple tracks to the library.
3. Close Rhapsody then connect the device (make sure Rhapsody is closed first)
4. Go to \Service\Rhapsody and right click on addtolibrary.dat

Verifications:

1. For each track you added to the library, 4 bytes should be added to addtolibrary.dat. For example, in step 1 if the size was 12bytes, then you added two tracks to the library, the total size of addtolibrary.dat should be 20 bytes.

5.5. Test: Rhapsody library is updated with tracks added to device library.

Required/Recommended: Required

Steps:

1. From your device add a couple tracks to the library from a channel (remember what tracks you added)
2. Connect the device to Rhapsody
3. From Rhapsody click on My Library.

Verifications:

1. All the tracks that you have added to the device library show up in the Rhapsody library.

5.6. Test: Addtolibrary.dat is cleared after connecting to Rhapsody.

Required/Recommended: Required

Steps:

1. After adding tracks to your library and verifying that the 4 byte rhapsody id is written to addtolibrary.dat connect the device to Rhapsody
2. Open \Service\Rhapsody\addtolibrary.dat or look at the file size.

Verifications:

1. Addtolibrary.dat is deleted, or the contents of addtolibrary.dat are cleared and the total file size = 0bytes.

5.7. Test: AddtoLibrary.dat persists across reboots.

Required/Recommended: Required

Steps:

1. Add a couple tracks to your library.
2. reboot the device
3. connect the device (make sure rhapsody is closed)
4. go to \Service\Rhapsody on the device

Verifications:

- AddtoLibrary.dat exists with a file size greater than 0.

5.8. Test: Verify you cannot add regular rhapsody content that already exists in the library.

Required/Recommended: Required

Steps:

1. download some content from Rhapsody to the device
2. Play a Rhapsody track from the device library.
3. Enter the song options screen and try to “add track to library”

Verifications:

1. Depends on device implementation. The option should be grayed out or hidden. Or it should tell you it has already been added to library.

5.9. Test: Verify you cannot add regular content to the library.

Required/Recommended: Required.

Steps:

1. download all supported content to the device
2. Play each content type and try adding them to the library

Verifications:

1. Depends on device implementation: it is recommended that this option be grayed out, hidden, or tell you the track already exists in the library.

6. Ratings (Required if the device already supports ratings)

6.1. Test: Ratings screen lets you choose from 7 different ratings.

Required/Recommended: Required

Steps:

1. Play a track
2. Enter the ratings menu

Verifications:

1. The UI lets you choose from 7 different levels of ratings: 1-5 star, Not Rated, and Negative.

6.2. Test: All rating levels can be applied and persist across reboot.

Required/Recommended: Required

Steps:

1. Rate 7 different tracks with the 7 different rating levels:
 1. Negative/Banned
 2. Not Rated
 3. 1 star

6.2. Test: All rating levels can be applied and persist across reboot.

4. 2 star
 5. 3 star
 6. 4 star
 7. 5 star
2. Reboot
 3. Play the same 7 tracks again

Verifications:

1. Each track retains the rating you gave it before rebooting.

6.3. Test: Ratings.dat gets updated with each rated track.

Required/Recommended: Required

Steps:

1. Take note of the size (in bytes) of \service\rhapsody\ratings.dat
1. Rate some tracks.
2. Close Rhapsody then connect the device (make sure Rhapsody is closed first)
3. Go to \service\rhapsody and right click on addtolibrary.dat and look at the size in bytes

Verifications:

1. For each track that was rated, 4 bytes are added to the file. For example, if the original file size in step 1 was 12 bytes, and you rated two more tracks, the total size in bytes would be 20.

If the original file size in step 1 was 0 and you rated two tracks, the total file size would be 8 bytes.

6.4. Test: Ratings.dat gets cleared after connecting to Rhapsody.

Required/Recommended: Required

Steps:

1. Rate some content
2. Connect device to Rhapsody
3. Check \Service\Rhapsody\Ratings.dat

Verifications:

1. Rhapsody clears the contents of this file and the total size is 0 bytes.

6.5. Test: Ratings.dat persists after reboot.

Required/Recommended: Required

Steps:

1. Rate some content
2. Reboot the device
3. Connect the device to USB (make sure Rhapsody is closed)
4. Go to the \Service\Rhapsody folder of the device.

Verifications:

Ratings.dat exists with a file size greater than 0.

6.6. Test: Rating a Channel track doesn't add to library.

Required/Recommended: Required

Steps:

1. Start the playback of a channel
2. Rate a track you are playing from a channel.
3. Check all nodes of the device library (songs, artist, album, genre etc)

Verifications:

1. The channel track you rated does not show up in the device library.

6.7. Test: Rhapsody library is updated with ratings from device.

Required/Recommended: Required

Steps:

1. Transfer a track from your Rhapsody library to the device.
2. On the device give the track a rating
3. Connect the device to Rhapsody
4. From Rhapsody view My Library.

Verifications:

1. The track in your Rhapsody library gets updated with the rating you just supplied on the device.

6.8. Test: track added to library and rated gets updated on Rhapsody.

Required/Recommended: Required

Steps:

1. Start the playback of a channel
2. Rate a track you are playing from a channel.
3. Now add that same track to your library
4. Connect the device to Rhapsody.
5. Select My library from within Rhapsody.

Verifications:

1. The track you rated and added to your library gets populated in your Rhapsody library.

6.9. Test: Rated track from Rhapsody keeps rating after transfer to device.

Required/Recommended: Required

Steps:

1. From within Rhapsody rate a track in your library
2. Transfer that track to your device
3. Disconnect the device and play the track you just rated/transferred

Verifications:

1. The rating you gave the track in Rhapsody is the same on the device.

6.10. Test: Rating UI starts with Not Rated and ends with Negative/Banned

Required/Recommended: Recommended

Steps:

1. Enter the ratings menu while playing a track

6.10. Test: Rating UI starts with Not Rated and ends with Negative/Banned

Verifications:

1. The UI shows 7 levels of rating starting with Not Rated and ending with Negative/Banned.

6.11. Test: You can scroll through ratings in both directions.

Required/Recommended: Recommended

Steps:

1. Enter the ratings menu while playing a track
2. Scroll back and forth through the ratings.

Verifications:

1. You are able to scroll back and forth through the ratings menu.

6.12. Test: You should be able to jump from beginning to end and vice versa from the ratings menu.

Required/Recommended: Recommended

Steps:

1. Enter the Ratings menu while playing a track
2. Go from position 0 to 7 (not rated directly to Negative)
3. Go from position 7 to 0 (Negative directly to Not rated)

Verifications:

You can jump from the beginning to the end and vice versa.

7. Artist Info (Required if device has multi line display)

7.1. Test: Artist information is written to location specified in capabilities.xml

Required/Recommended: Required

Steps:

1. Transfer some rhapsody content to the device
2. Look in the path specified in the ArtistInfoPath tag of Capabilities.xml (located in \Service\Rhapsody)

Verifications:

1. The artist information text files are written to this path on the device.

7.2. Test: Artist info is displayed while playing a rhapsody track.

Required/Recommended: Required

Steps:

1. Play a Rhapsody track from the device library.

7.2. Test: Artist info is displayed while playing a rhapsody track.

2. Check artist information

Verifications:

1. Artist information is displayed for the track and the info pertains to the artist.

Info: Some artists don't have information associated with them. If you run into this skip to another track. If you don't see artist info for any of the tracks this is most likely a problem with the device.

7.3. Test: Artist info is displayed while playing channel tracks.

Required/Recommended: Required

Steps:

1. Start Channel playback.
2. Check artist information

Verifications:

1. Artist information is displayed for the track and the info pertains to the artist you're listening to.

Info: Some artists don't have information associated with them. If you run into this, skip to another track. If you don't see artist info for any of the tracks, then this is most likely a problem with the device.

7.4. Test: Artist info that is too long to fit on one screen scrolls.

Required/Recommended: Required

Steps:

1. Play a track that has artist information that is too long to be viewed on one screen. (most artist info is longer than what can fit on screen, if you cannot find an artist with long enough info, you can edit the artist info yourself)

Verifications:

1. The artist info scrolls, or allows you to scroll through it so you can read the entire thing.

7.5. Test: Artist info updates while switching between artists.

Required/Recommended: Required

Steps:

1. Start playing from a play list that contains different artists.
2. Skip through the playlist and check the artist information for each track.

Verifications:

For each track skip the artist information changes, unless it's the same artist.

7.6. Test: Artist information only displays while playing Rhapsody content.

Required/Recommended: Required

Steps:

1. play all supported content on the device
2. for each content type, check the artist information

7.6. Test: Artist information only displays while playing Rhapsody content.

Verifications:

Artist information is NOT displayed for any non rhapsody content. (content downloaded from the Rhapsody service)

8. Subscription Information

8.1. Test: User info doesn't show in account screen after deauthorizing.

Required/Recommended: Required

Steps:

1. Connect your device to rhapsody
2. Right click on the device and select deauthorize.
3. Disconnect the device
4. Check the account screen on the device.

Verifications:

The user name doesn't appear.

8.2. Test: Trial Account: Account screen shows trial information.

Required/Recommended: Required

Steps:

1. Open subscriptioninfo.xml from Service/Rhapsody
2. Change the <TrialActive> tag to TRUE
3. Disconnect the device and check the account screen.

Verifications:

Device shows that the device is in a trial period.

During a trial period the device must display the number of days remaining in the trial in the

8.2. Test: Trial Account: Account screen shows trial information.

status bar or other persistent or frequently viewed location e.g. “12 days left in trial”

Info: If the <TrialActive> tag doesn’t appear in subscriptioninfo.xml you can add it your self.

For example, open subscriptioninfo.xml and copy the following line under <UserID></UserID>: <TrialActive>TRUE</TrialActive>

8.3. Test: Trial Account: trial account information is always displayed on main ui.

Required/Recommended: Recommended.

Steps:

1. While you have an active Trial account check the status bar of the device.

Verifications:

Trial account info is displayed in the status bar of the device.

During a trial period the device must display the number of days remaining in the trial in the status bar or other persistent or frequently viewed location e.g. “12 days left in trial”

8.4. Test: Trial Account: trial account expired

Required/Recommended: Required

Steps:

1. Set the trial date to a time that has already expired. To change the license duration or time of license see the info field below.
2. Disconnect the device and check the account screen.
3. Turn the device off and back on

Verifications:

Account screen shows that the trial period has expired. Upon startup a message is displayed that tells you the trial is over.

Info: To change the expiration date follow these steps:

1. Open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

8.5. Test: Licensed device shows correct account information.

Required/Recommended: Required

Steps:

1. Connect the device to Rhapsody
2. Right click on the device and select License

8.5. Test: Licensed device shows correct account information.

3. Disconnect the device and look at the account screen.

Verifications:

1. The account screen shows user name, license duration, time of license, and the amount of days left in the subscription.
2. Verify the info in the account screen matches what is in subscriptioninfo.xml located in the \Service\Rhapsody folder of the device. (time of license and license duration wont show as actual dates in the subscriptioninfo.xml, just the epoch time will be displayed (long number))

8.6. Test: Persistent Subscription Status indicator on device status bar.

Required/Recommended: Required

Steps:

1. After a device has been authorized it must ALWAYS show a subscription status on the status bar of the device. This includes while its licensed and after the license has expired. Throughout the rest of these test cases keep an eye on the subscription status to make sure it is always present.

The device manufacturer can implement any system for showing the subscription status that they want, but it is recommended that they use our system(test cases for this are belo

8.7. Test: After device is licensed, subscriptioninfo.xml is created on device.

Required/Recommended: Required

Steps:

1. Connect and license device with the rhapsody service.
2. Open the device through explorer and check that subscriptioninfo.xml exists under Service\Rhapsody folder.

Verifications:

Subscriptioninfo.xml file is created in the service/rhapsody folder.

8.8. Test: Message displays on startup when subscription is less than 7 days.

Required/Recommended: Required

Steps:

1. Set the subscription to have less than 7 days remaining. To do this follow the instructions under Info.
2. Reboot the device.

Verifications:

On startup a message is displayed informing you of how many days are left in your subscription.

Info: To change the expiration date follow these steps:

1. open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days

8.8. Test: Message displays on startup when subscription is less than 7 days.

from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

8.9. Test: Message displays on startup when subscription is less than 2 days.

Required/Recommended: Required

Steps:

1. Set the subscription to expire in less than two days. To do this follow the instructions under Info
2. Reboot the device.

Verifications:

On startup a message is displayed telling you your subscription has less than two days remaining.

Info: To change the expiration date follow these steps:

1. open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

8.10. Test: Message displays on startup when subscription is expired.

Required/Recommended: Required

Steps:

1. Set the subscription to expire. To do this follow the instructions under Info.
2. Reboot the device.

Verifications:

On startup a message is displayed telling you that your subscription is expired.

Info: To change the expiration date follow these steps:

3. open subscriptioninfo.xml
4. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

Subscription indication icons (The icon descriptions below are recommended)

8.11. Test: Licensed device shows green circle icon.

Required/Recommended: Required

Steps:

1. License your device.

8.11. Test: Licensed device shows green circle icon.

2. Disconnect and check the account screen and status bar.

Verifications:

A green circle with a dot in the middle is shown in the account screen and or status bar.

8.12. Test: yellow circle appears with less than 7 days left in your subscription.

Required/Recommended: Required

Steps:

1. set your license to expire within 7 days. To do this follow the instructions under Info.
2. check account screen and status bar

Verifications:

A yellow circle with a triangle in the middle is displayed

Info: To change the expiration date follow these steps:

1. open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

8.13. Test: Orange circle appears with less than 2 days left in your subscription.

Required/Recommended: Required

Steps:

1. Set your license to expire within 2 days. To do this follow the instructions under Info.
2. Check the account screen and status bar

Verifications:

An orange circle with a triangle in it is displayed.

Info: To change the expiration date follow these steps:

1. Open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

8.14. Test: Red circle appears when your subscription is expired.

Required/Recommended: Required

Steps:

1. Set your license to have expired. To do this follow the instructions under Info
2. Check the account screen and status bar

Verifications:

A red circle is displayed.

8.14. Test: Red circle appears when your subscription is expired.

Info: To change the expiration date follow these steps:

1. Open subscriptioninfo.xml
2. For each day you want to push the time of license back, subtract 86,400 from the value in the <TimeOfLicense> tag. For example, if today were April 5th and I wanted to make the device think that the subscription was going to end today I would have to subtract 30 days from the TimeofLicense. To do that you would apply the following: (TimeofLicense – (30 * 86400))

8.15. Test: Account information is available from main Settings menu.

Required/Recommended: Required

Steps:

1. Navigate to the main Settings Menu.

Verifications:

From within the main settings window there is an option for Account Settings which contains subscription information.

10. Purchasing(if supported)

10.1. Test: Purchasing Channel track automatically adds track to library and updates addtolibrary.dat

Required/Recommended: Required

Steps:

1. Start Channel playback
2. Purchase the channel track
3. Check all nodes of the device library and addtolibrary.dat

Verifications:

The purchased channel track shows up in all nodes of the device library, and addtolibrary.dat is updated with the 4 byte id.

This can be verified by checking the addtolibrary.dat file before and after purchasing. The file should grow by 4 bytes for every track.

9. PRICING

The program offers all device manufacturers:

- ✓ One full time, Senior-level resource allocated to the program
- ✓ Additional resource on an “as needed” basis to minimize scheduling time
- ✓ Submission time within one week of call request from device manufacturer
- ✓ A secured, online system database allowing the device manufacturer to check status of submission, real-time.
- ✓ Call support for questions, problem information requests, etc. from ISVs
- ✓ Exception handling issues handled immediately during test cycle

Optimized Plays For Sure Device Certification Test (all portable devices): \$2,550.00

The prerequisite for Optimized Plays For Sure (Opt. PFS) program is to pass the certification testing for MTP Portable Device. The pricing is \$1,500.00. The test kit can be found at:

<http://intertek.com/wireless-mobile/applications-and-content/realnetworks-rhapsody/>

After passing and meeting the MTP Portable Certification (Regular PFS), the product will be qualified to be submitted for Optimized Plays For Sure program. The pricing for MTP portable (Regular PFS) device is \$1,500.00 and Optimized PFS testing is \$1,050.00. Thus, the total price would be \$2,550.00.

For both programs, the cost of the submission includes the regression testing of any problems documented resulting from the testing of the initial submission. Regression testing is limited to those problems documented by the Intertek test engineers. Intertek will only regress problems that have been marked as fixed by the developer in the AWS database.

Important Notes:

The majority of the testing will be performed during the first day of the test cycle. If numerous problems have been found thus inhibiting the completion of testing by the end of the first day, testing will be stopped and a **resubmission** of your portable device or device driver (with the problems fixed and all requirements re-tested) will be necessary to achieve the logo. Contact Intertek if the device requires a software installation to be functional.

Each Additional OS Platform: \$2,550.00

Intertek accept check, cashier's check, or wire transfer.

Make checks payable to **Intertek Testing Services NA, Inc.**

Send it to:

Intertek Testing Services NA, Inc
Rhapsody Real Networks Program
450 Main Street Suite 207
Pleasanton, CA 94566

For Intertek's wire transfer banking information, please contact us via email at realnetworks@Intertek.com

Late or No Show Submission Penalty Fee:

All submission items must be received prior to the scheduled test date. If Intertek is not notified by the device manufacturer regarding a change of date or cancellation prior to the original planned submission start date, and if Intertek has not received the complete submission package by 8:00 AM Pacific Time of the planned start date, a \$300 penalty fee may apply and the device will automatically be rescheduled for the next available test window. No testing will begin until the penalty fee and the submission charge are paid in full.

10. **HARDWARE REVISION HANDLING**

Device Revision

The “Rhapsody Ready” logo only applies to the device manufacturer’s portable product **version** (1) that has passed the Intertek’ Rhapsody Ready tests, and (2) for which Real Networks, Inc. has authorized the use of a “Rhapsody Ready”.

If a new version of the portable device manufacturer’s portable product becomes available, which includes major feature changes or additions, the portable device **must** be resubmitted and pass the compliance tests for the use of the “Rhapsody Ready” logo.

11. **TESTING AGREEMENT**

All first time participants in the program must sign a **Vendor Hardware Testing Legal Agreement**. Once your company has a **Vendor Hardware Testing Legal Agreement** on file with Intertek, future portable device certification testing will require product Addendum only to be signed. Other required form is Questionnaire. All the above required legal forms and Questionnaire form can be found on:

<http://intertek.com/wireless-mobile/applications-and-content/realnetworks-rhapsody/>

Please fax the forms to:

(925) 484-2631