

Telephone Notification System (TNS) by i-tiva

Overview

i-tiva MESSAGE efficiently delivers library notifications to patrons, such as overdue or hold pickup notices. The system calls library patrons and delivers a high quality courteous message according to the library's specific requirements. Information is delivered faster and cheaper than traditional postal methods, with accurate proof of delivery provided.

Each message delivers the message to the name of the person who the notice is for using Text to Speech technology. The pickup location is specifically identified. i-tiva MESSAGE will also list the number of overdue or reserved items.

The basic flow for delivering a message via the i-tiva system is shown in the diagram below:

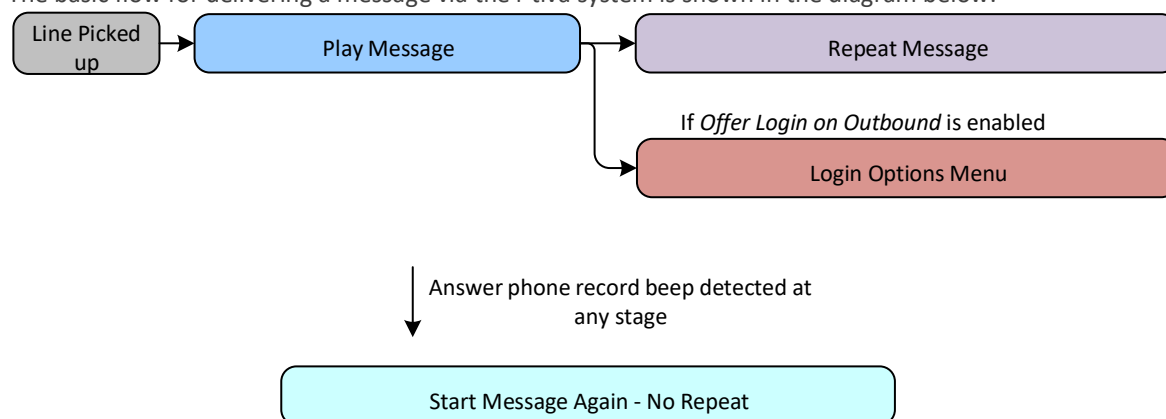


Figure 52 - MESSAGE

Operation The process can be

described as:

- System makes call and waits for patron's phone to pickup.
- The patron picks up the phone, system starts analyzing call and delivers message.
- If the library has chosen to give the patron the ability to login then an options menu will be heard at the end of the call, otherwise the message will repeat.
- Repeating the message occurs on all answered results if login on outbound is disabled and cannot be disabled. This is because in certain cases i-tiva cannot or will not detect the presence of an answering machine or service and in those cases a full message, be it in multiple parts, can be left on the answering service.
- If a record beep is detected at any stage in the call, the system restarts the message from the beginning and does not repeat – any message that is delivered to a detected recording system will not be given the ability to login.
- Introduction Identifies Library: This option is used to identify the library at the beginning of the call using the Library Default or Library<LibraryName> prompts. (See MESSAGE Call Flow for more information). It is highly recommended that this setting be enabled.
- Introduction reveals intention: This option informs the patron at the beginning of the phone call if it is regarding overdue or reserve items. If it is regarding another notice type or the phone call includes multiple types of notices then the system will not reveal the intention at the beginning of the call.
- Name That Person: The standard delivery method used by the i-tiva platform. Uses Text to Speech to speak the patron's name, in order to deliver a more personalized message and to identify the patron:

- Patron Name (TTS): Uses Text to Speech to name the patron if the patron name is provided.
- None: The system will say a “A member of your household”
- Barcode & Initials: Speaks the patron’s initials and the last four digits of their barcode.
- Goodbye Plays Recorded Library Phone Number: At the end of the call the system plays a prompt of the phone number that is associated with a given Library.
- Enable Overdue Branch Breakdown: Determines if i-tiva will play the branch of the library a book must be returned to. If the patron has books that must be returned to multiple branches then the system will name each branch. Most libraries do not worry about which branch a book is returned to as long as it's returned, so this functionality is typically disabled.
- Consider Message Delivered on Answer: With this feature enabled i-tiva will consider the message delivered on any answered result, regardless of how much of the actual message the patron listened to. With this feature disabled the patron will have to listen to just after the patron name is spoken to consider the message successfully delivered. Enabling this feature resolves a common patron complaint where i-tiva is calling them back repeatedly because the message was not considered successful.
- Swap Patron Names: Determines the behavior of i-tiva when speaking the first name and surname of a patron. This functionality depends on how the name is received from the LMS.
- Don't Swap: This functionality does not swap the first and last name.
- Always Swap: This functionality will always swap the patron names.
- Swap only on Comma: This functionality will only swap patron names if there is a comma in the name being provided to i-tiva, e.g. Smith, William.
- Say Reserve Pickup Date: Enabled by default, this disabling this feature will turn off the feature where i-tiva names the specific pickup by date provided by the LMS.

Frequently Asked Questions

The following sections detail the frequently asked questions for i-tiva MESSAGE and i-tiva CONNECT. For each question the problem, diagnosis and solution is provided. In some cases, the library may need to contact Support for further information.

Please note that we maintain a list of known issues and that this is available for review from Support should you require. Our Development Team continue to address this list in order to ensure a high-quality product.

i-tiva MESSAGE

What happens if i-tiva MESSAGE calls a phone that has an anti-telemarketing device installed?

Problem:

Some patrons may have anti-telemarketing devices installed onto their household phone lines, with the intention of filtering out automated calls.

Diagnosis:

These systems employ a range of techniques designed to confuse standard computer-generated calls.

Solution:

Due to the variety of these systems and the methods they employ, it is extremely difficult to circumvent these systems. If a patron has such a device installed, then the only viable solution is to exclude their account from the notice files provided for voice delivery. For information on how to do this contact your LMS supplier.

Patrons have been receiving multiple messages on their answering machine. Why does this happen?

Problem:

Multiple messages have been delivered to a patron's answering machine.

Ask the patron:

- What kind of answering machine does the patron have?
- Does the answering machine have any uncharacteristic beeps after the initial record beep?
 - Has this problem with this answering machine or service been encountered before?

Diagnosis:

This problem will occur when the i-tiva system detects multiple record beeps while playing the message to the answering machine.

In order for the i-tiva system to first detect an answering service, it must correctly identify a record beep tone associated with known services. Once detected and silence occurs, the system will begin playing the message.

If some sort of record beep tone is detected from this point forward the i-tiva system will become confused and hang-up.

Solution:

Since this answering service is not one that follows typical patterns, the most practical way to solve this problem is to remove the patron from the list of patrons who receive phone notifications. For further information on how to do this please contact Support.

Why was only part of the message left on an answering machine?

Problem:

The patron received a message on their answering machine from the library, but the message started half way through.

Ask the patron:

- What kind of answering machine or service does the patron have?
- Has this occurred on their answering machine before?

Check whether this problem with this answering machine or service has been encountered before.

Diagnosis:

Typically this problem occurs because no record beep was detected when delivering the notification message. Because of this lack of detection, the message will continue to be delivered, but the patron's answering machine or service will only start recording from the moment the beep occurred i.e. some way through the partially delivered message (length of message cut-off varies depending on answering machine message length).

The i-tiva system will treat this as an answered call even though it did not detect the record beep and will it not try to send another message.

Solution:

Because of the many different types of record beeps available in the many different types of answering machine or services, careful analysis of the tone that is used is required to solve this problem. At times this may not be viable due to the low number of patrons using a service.

- For cases where this is minimal, it may be more practical to remove the patrons from the list delivered to i-tiva for phone delivery. For further information on how to do this please contact Support.
- For cases where multiple patrons are experiencing the same problem, and where the answering service appears to be the same, careful analysis from illion Digital Tech Solutions support staff is required.

Contact Support:

- Answering machine service type
- Patron's phone number
- A time when a test dial for analysis can take place on the patron's answering service
- Actions taken so far to analyze the problem

A library patron has received multiple messages after answering the call once. Why does this happen?

Problem: The patron has picked up the phone and listened to the message, but has been called back again with the same message.

Ask the patron:

- Was there any noise in the background while listening to any of the messages? Such noise might be TV noise, kettle boiling, or Traffic noise.
- How much of the message did the patron listen to for each occurrence?

Diagnosis: This problem tends to occur for two reasons:

- The patron did not listen to enough of the message for the i-tiva system to consider it delivered.
 - A noise in the background triggered the system into a confused state so it just hangs up and retries the call at a later point.

Problem 1: The i-tiva system considers a call complete when it has played approximately 5% of the main body of the message to the patron. The main body tends to be the information that the call is about after the introduction i.e. item is overdue, reservation is ready to pick up etc.

If the patron does not listen to at least this much of the message, i.e. hangs up during the introduction, then this will be considered an undelivered attempt, and will be tried again.

Solution: The patron must be made aware that they should listen to the majority of the message to ensure they receive the information.

Problem 2: This tends to occur when background noise confuses the i-tiva system into detecting multiple record beeps and it hangs up assuming the device is something that it cannot handle.

Solution: The patron should be made aware that noise such as TV, kitchen noise, or anything in the background, may cause the system to misinterpret connect status, terminate the call, and call them back. This is a rare occurrence and cannot be readily overcome by a computer system due to these events being detected as the same tone frequency as record beep definitions.

Contact Support:

If the patron insists that none of these problems were evident during their calls then illion Digital Tech Solutions will need to review this query. This patron may need to be removed from receiving phone notifications in the future

- Approximate time/date the multiple calls occurred
- Patron's full name, patron ID and phone number
- Any spam filtering software
 - Actions that have been taken so far to analyze the problem

Why did a library patron not receive any notification about items?

Problem:

The patron insists that they did not receive a phone call or notice file about existing items on their record.

- Ask the patron:
- What is their patron name and ID?
- Determine an approximate date that these items should have been phoned. You can do this by checking the patron's record to determine when a notice file should have been sent to the i-tiva machine for dialing. Diagnosis:

The cause of this problem tends to be either the call was answered by another person in the household who did not pass on the message, or the LMS did not provide a notice file to dial from.

Solution:

Use the i-tiva MESSAGE Reports application to find the call records for the patron. The report produced will contain information such as: contact date/time, contact result, how much of the message was listened to and whether i-tiva classed the message as delivered. If this report indicates valid delivery illion Digital Tech Solutions will need to review the query.

Contact Support:

- Approximate date patron should have been called
- Patron's full name, patron ID and phone number
- Message type that should have been delivered
- Actions taken so far to analyze the problem

A patron has received a message where the voice was cutting out. Why?

Problem: When delivering the message, parts of it seem to skip or break up.

Diagnosis:

This can occur if other processing is happening on the i-tiva machine during delivery of the message.

Solution:

- Try to isolate the time that the call was made to the patron and determine if there was any unusual usage of the illion Digital Tech Solutions servers during this time.

- Pre-emptive measures should be taken to ensure that no high CPU or disk load is enforced onto the i-tiva servers through external influence during the day-to-day running of the system (for example human copying large files, server backups running etc.).

Why are library patrons receiving calls at abnormal hours?

Problem:

A patron receives a phone call that is outside of the normal dialing hours for the library. Typically these might be late at night or in the early hours of the morning.

Ask the patron:

- What time did the patron receive the call?
 - Check that this is within the normal slots allocated for dialing by the system (check system configuration).

Diagnosis:

Typically this occurs due to an incorrect setting in the time clock on the i-tiva machine. The system verifies call schedules against the system time, so if this is wrong the machine will deliver messages at the wrong time of the day. The clock can become out of sync for a number of reasons:

- Power surge/outage
- Bios battery may be flat
- Human intervention

Bios batteries tend to last a few years so the likely reason for the clock to be wrong is a power surge of some kind, or human error in changing the date/time.

Solution:

Your library system administrators or IT department should be able to change the clock on the system back to its original time. Also check that the [Dialing Time Slots](#) to ensure that they have not been tampered with.

Why has a library patron's name been pronounced incorrectly?

Problem:

On delivery of the message the patron's name is pronounced incorrectly.

Diagnosis:

Because the system uses Text to Speech functionality to convert patron names to a voice recognizable sound, there are times when non-standard names can cause this conversion to sound inappropriate.

Solution 1:

Names can be tweaked over time by building a dictionary applicable to the patron base, containing the correct pronunciation of names. This involves support staff making text entries into a dictionary file mapping the actual name to a text version of how it sounds.

An example of this might be tweaking the name Andre. This perhaps may be configured in the dictionary as "On Dray".

Ask the patron:

What is the correct pronunciation?

Contact Support:

Information to be supplied to Support:

- Description of problem
- The pronunciation of the name explained as closely as possible in text format, for example Andre would be "On Dray"

Solution 2:

Libraries that also employ i-tiva CONNECT have a feature where patrons can dial into the system and record their own name. This recorded name will then be used instead of Text-to-Speech on CONNECT and MESSAGE allowing for much better pronunciation.

Why are library patrons getting messages multiple days in a row?

Problem: The patron complains that they have received a message a few days in a row.

Diagnosis:

The i-tiva system dials what is provided by the LMS notice file extraction. This problem is typically due to the LMS determining that a patron should receive the message on subsequent days or results data failing to be returned to the LMS.

Solution:

The LMS business rules determine the days that a patron is notified. It first needs to be established if a patron was notified multiple days in a row for the same notice.

Step 1: Check if notices are legitimate

There are various legitimate edge cases where contact could be made multiple days in a row. This includes:

Notice for different items generated a day apart.

1. Multiple patrons are using the same phone number.
2. First determine if this was just a misunderstanding.

Step 2- Check Results Data.

If the issue was due to the same notice then the next step is to check that the results data. With some ILS systems, a failed result may lead to further notifications on subsequent days. If the problem is happening to many patrons (not just one) then it could be that all results are failing. If just a single patron then it could be that the particular update is failing.

Check the following - a problem in any one of these areas could cause this issue:

1. Ensure that the results information contains the patron information. That the patron information was successful.

2. Ensure that the results file / REALTIME updates are being sent back to the LMS.
3. Ensure that the LMS is successfully updating the problematic patrons record.

Questions:

- What is the patron's patron ID and phone number?
- What is the approximate day/time the calls occurred?
 - Is this problem happening to everybody, or a single patron?

Contact Support:

Support with a description of the problem and the following information:

- Patron's ID and phone number
- Approximate time/date the messages occurred
- Actions taken so far to analyze the problem

Why has a library patron received a message even after they have already returned or picked up their items?

Problem: The patron complains a message was left after they had returned or already picked up their items.

Diagnosis:

The i-tiva system only dials what is provided by the LMS notice file extraction. For some setups the dial outs occur the day after this extraction, while others dial out the same day. Because in some instances the notices are delivered the day after, a patron may return books during the day, only to get a message that night.

Solution:

In these cases nothing can be done due to the method with which notices are delivered.

Why is i-tiva showing a lot of "No Dial tone" results?

Problem:

The reports for the i-tiva MESSAGE application show a lot of 'No Dial tone' results, causing a large number of notices/letters to be printed.

Diagnosis:

The i-tiva system reports, either emailed or accessed on the PC, show a large number of 'No Dial tone' results for a particular day's dialing. The result of this is that a large number of messages are undelivered and are sent back to the library for printing, which is normally the first indication that something has gone wrong.

Solution:

- This usually means something is wrong with the telephone line feeding into the dialogic cards at the rear of the i-tiva server. This should be checked first before anything else.

- Test all lines to ensure they have dial tone. This is best accomplished by taking the line out of the dialogic card and putting it into a standard analogue phone handset. If the handset has a valid dial tone then the line should be operating correctly.
- Do this for all lines.
- If a line does not have a dial tone, contact the location's telephony provider to look into the status of the lines.
- If all the lines are working, further investigation will need to be carried out by illion Digital Tech Solutions.

Contact Support:

- Date and time of problem
- Any unusual event surrounding the time the problem occurred (for example, power outage, lightning storms etc.)

Why is the system not advertising the ability to login to their account?

Problem:

Patrons have complained that when they call into the system that accessing their account is not an option that is available. When they select the option they get "This is not one of the choices, please try again". Diagnosis:

i-tiva maintains a persistent network connection with the LMS SIP2 server. If at any point that connection has been disconnected then i-tiva will remove this ability to login from the system until the connection has been re-established.

Solution:

- Ensure that the LMS SIP2 server is accessible from i-tiva.
- Check whether the LMS SIP2 interface with the i-tiva system is working.
- Also ensure that the LMS server IP address has not changed and that no network changes have been made that could affect the connection between the i-tiva system and the LMS.
- Once the LMS server is available again, restart the i-tiva service "_i-tiva - Self Check for Library Server"
- If the problem persists further investigation will need to be carried out by illion Digital Tech Solutions.

Contact Support:

- Date and time of problem
- Patron name and barcode number affected
- Actions taken so far to analyze the problem

Why are library patrons unable to login to their accounts?

Problem:

Patrons have complained that when they attempt to login to their account they are being denied with messages such as 'Sorry, this transaction cannot be completed at present', or 'Your barcode was incorrect'.

Diagnosis:

If patrons insist they are entering the correct data from their library card but are getting the message 'Your barcode was incorrect' this will typically mean that there is a constraint on the LMS system that is preventing the logon from occurring.

If there are no constraints then contact your LMS to ensure that they are sending back appropriate message responses to the i-tiva system to allow a logon to occur.

If the message being received is 'Sorry, this transaction cannot be completed at present', then this points to an issue between the i-tiva system and the LMS.

Solution:

- Ensure the patron's record is accessible by checking their record and verifying that any possible deny settings are not active (for example, library card has expired).
- Check whether the LMS SIP2 interface with the i-tiva system is working or not, and has been restarted.
- Also ensure that the LMS server IP address has not changed and that no network changes have been made that could affect the connection between the i-tiva system and the LMS.
- If the problem persists further investigation will need to be carried out by illion Digital Tech Solutions.

Contact Support:

- Date and time of problem
- Patron name and barcode number affected
- Actions taken so far to analyze the problem

Why are library patrons unable to renew items?

Problem:

Patrons have complained that they have tried to renew their items but were denied.

Diagnosis:

The i-tiva system does not determine the renewal status of library items. That is determined by the responses returned by the LMS SIP2 interface.

Issues surrounding patrons being unable to renew are either due to the LMS returning a negative response to the request, or to callers not entering in their correct barcode details.

Solution:

- First ensure that the patron has no outstanding issues on their record that would prevent a renewal from occurring. Such issues may be 'Exceeded max fine amount' or 'Item on reserve by someone else' etc.
- If there are no such issues, it may be the case that the patron entered their barcode incorrectly, or the LMS returned a denied response. Please check with Support to ensure their SIP2 interface returned a valid response to this request.
 - Support staff can do a further analysis of the problem if it remains unresolved. This investigation will involve analysis of log files to determine caller and LMS activity.

Contact Support:

- Description of problem
- Patron name and barcode number this is occurring to
- Approximate date/time the problem occurred
- Actions taken so far to analyze the problem

Why is the wrong renewal date being spoken after a library patron has renewed an item?

Problem:

The patron indicates that the renewal date spoken back by the system is not what they were expecting, i.e. not what library policy indicates.

Diagnosis:

i-tiva speaks the dates that are returned by SIP2 responses. This means that what is spoken by the itiva CONNECT service is directly related to what is returned by the SIP2 response.

Ask the patron:

What date was spoken and what was the patron expecting?

Solution:

- First it must be verified that the renewal date that occurred on the patron's record is in fact the wrong date. Because of various rules that different libraries associate with renewals, the renewal date returned may actually be the correct one. This can be verified on the patron's library record.
- If the library item should have been renewed for a different date than that spoken, please consult your MHLS to ensure the date provided to the i-tiva system is correct. If the date supplied is correct, the issue needs to be raised with Support for further follow-up.