Voyager® 7.2
Interface to Self Check Modules Using 3M SIP User's Guide

November 2009

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About This Document

Purpose

The purpose of this document is to explain how the Voyager® Standard Interchange Protocol (SIP) Translation Server (also known as SIP Self Check) works as an extension module of the Voyager system.

This document provides instructions for setting up and running SIP Self Check.

Intended Audience

This document is intended for System Administrators of libraries that are using the Voyager interface to self check modules using 3M Standard Interchange Protocol.

Reason for Reissue

This document is being reissued for the following reason:

- Addition of Appendix B, ESIP Support in Voyager on page B-1.

How to Use This Document

This document consists of the following segments:

Chapter 1 — "Getting Started on page 1-1"
Chapter 1 describes the prerequisite knowledge and procedures for setting up Self Check.

Chapter 2 — "Setting Up SIP Self Check on page 2-1"
Chapter 2 explains how SIP Self Check works with Voyager and an external client system. It also provides instructions for setting up SIP Self Check using the Voyager System Administration module.

Chapter 3 — "Patron Information Through SIP Self Check on page 3-1"
Chapter 3 describes how SIP Self Check works with Voyager and an external client system to provide Patron Information.

Chapter 4 — "Discharge to Bins with SIP Self Check on page 4-1"
Chapter 4 describes how SIP Self Check works with Voyager and an external client system to provide a discharge to bins capability.

Chapter 5 — "SIP2 Fine/Fee Support
Chapter 5 describes how SIP Self Check works with Voyager and an external client system to facilitate the payment of patron fines and fees.

Chapter 6 — "SIP2 Magnetic Media and Sensitize Flags
Chapter 6 describes how SIP Self Check works with Voyager and an external client system to enable system flexibility for check-in, check-out, and renewal with third-party, self-check machines using the 3M SIP2 (Standard Interchange Protocol, Version 2) standard for magnetic media and sensitize alerts.

Appendix A — "SIP2 Support in Voyager on page A-1"
Appendix A describes Voyager SIP2 support.

Appendix B — "ESIP Support in Voyager on page B-1"
Appendix B describes Voyager ESIP support.

Index — The Index is an alphabetical, detailed cross-reference of topics contained in this document.

Conventions Used in This Document

The following conventions are used throughout this document:

- Names of commands, variables, stanzas, files, and paths (such as `/dev/tmp`), as well as selectors and typed user input, are displayed in `constant width` type.

- Commands or other keyboard input that must be typed exactly as presented are displayed in **`constant width bold`** type.
- Commands or other keyboard input that must be supplied by the user are displayed in ***`constant width bold italic`*** type.
- System-generated responses such as error messages are displayed in `constant width` type.
- Variable *portions* of system-generated responses are displayed in *`constant width italic`* type.
- Keyboard commands (such as **Ctrl** and **Enter**) are displayed in **bold**.
- Required keyboard input such as “Enter **`vi`**” is displayed in **`constant width bold`** type.
- Place holders for variable portions of user-defined input such as **`ls -l`** ***`filename`*** are displayed in ***`italicized constant width bold`*** type.
- The names of menus or status display pages and required selections from menus or status display pages such as “From the **Applications** drop-down menu, select **System-wide**,” are displayed in **bold** type.
- Object names on a window’s interface, such as the **Description** field, the **OK** button, and the **Metadata** tab, are displayed in **bold** type.
- The titles of documents such as *Curator Web Client User’s Guide* are displayed in *italic* type.
- Caution, and important notices are displayed with a distinctive label such as the following:

NOTE:
Extra information pertinent to the topic.

IMPORTANT:
Information you should consider before making a decision or configuration.

CAUTION:
Information you must consider before making a decision, due to potential loss of data or system malfunction involved.

TIP:
Helpful hints you might want to consider before making a decision.

RECOMMENDED:
Preferred course of action.

OPTIONAL:
Indicates course of action which is not required, but may be taken to suit your library's preferences or requirements.

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Getting Started

1

Getting Started

1

Introduction

This chapter describes the following.

- Prerequisite skills and knowledge for applying this guide to the SIP Translation Server (SIP Self Check) extension module of Voyager.
- Information you need before a 3rd-party vendor comes to install the external client.

Purpose of this Chapter

This chapter's purpose is to provide an understanding of the prerequisites for using the rest of this user's guide and to give you the tools and instructions you need to get started with SIP Self Check.

Prerequisite Skills and Knowledge

To use this document effectively, you need knowledge of the following.

- Basic Microsoft® Interface navigation
- Basic UNIX® commands and navigation
- Basic Voyager® System Administration Module

Preparation for 3rd-Party Vendor Installation Discussion

Because SIP Self Check integrates an external 3rd-party client with Voyager, you should have the following information available when the 3rd party comes to install your external client.

- The dedicated IP address for your 3rd-party client installation
- The values you set for the operator ID, password, and location as you follow the procedures in the remainder of this guide.
- Server IP - self check port number (generally 7031 for a production database)

This requires that you complete the procedures in this guide before 3rd-party installation of the external client.

IMPORTANT:
If you do not have the Voyager operator ID, password, and location as well as the IP address available for the external client installation, the technician may be unable to complete the installation.

Self Check Components

There are several components that may all casually be referred to as "self check" that could be a cause for confusion in this environment. See Table 1-1 for a description of terms.

Table 1-1. Self Check Terminology

Term	Description
3M™ SelfCheck™	Product of 3M Corporation
3M SIP (Standard Interchange Protocol)	Communication protocol developed by 3M for use with 3M SelfCheck.
SIP Self Check	Voyager extension module used to interface with self check modules using 3M Standard Interchange Protocol (SIP)
selfchk	Voyager binary executable file used for SIP Self Check and located in /m1/voyager/bin/
Voyager Self Check	Product that is provided with the Voyager Circulation module and is executed with CircSelfCheck.exe

Setting Up SIP Self Check

2

Setting Up SIP Self Check

2

Introduction

This chapter provides an overview of the Voyager Standard Interchange Protocol (SIP) Translation Server, also referred to as SIP Self Check, and the systems within which it performs its functions.

This chapter also provides instructions for configuring SIP Self Check for use in your library.

Purpose of this Chapter

This chapter's purpose is to provide you with the following.

- A solid understanding of how SIP Self Check works.
- Easy-to-follow instructions for setting up and maintaining SIP Self Check.

About SIP Self Check

The Voyager Standard Interchange Protocol (SIP) Translation Server (also known as SIP Self Check) is a Voyager extension module. It is separate and distinct from Voyager Self Check, a Voyager product designed to work directly with the Voyager Circulation module.

For more information about Voyager Self Check, see Appendix C of the *Voyager Circulation User's Guide*.

SIP Self Check is a communication layer between an external client system such as a 3M™ SelfCheck™ machine and Voyager Circulation. It translates messages between the two systems allowing patrons to charge items to themselves and perform other circulation tasks.

For more information, see "Communication Between SIP Self Check, External Client Systems, and Voyager Circulation" on page 2-2.

Several vendors offer external client systems that are compatible with SIP Self Check and Voyager such as 3M, epixtech®, and Check Point™.

About Standard Interchange Protocol (SIP)

SIP Self Check uses 3M SIP, a communication protocol developed by 3M for use with their SelfCheck terminals; and subsequently as a standard used by other vendor self check systems. 3M SIP provides a standardized means of communication between information systems that would otherwise be unable to interact such as Voyager Circulation and 3M SelfCheck.

SIP is not an official standard like Z39.50. However, it has become an unofficial standard in the library industry because it is supported by a number of large vendors. There is currently an industry-wide committee being formed to further develop SIP into the official standard for circulation-based communications.

SIP Self Check implements with 3M SIP version 2.0. Any third-party software used with SIP Self Check must use 3M SIP version 2.0 also.

Communication Between SIP Self Check, External Client Systems, and Voyager Circulation

SIP Self Check translates data messages between Voyager Circulation (circsvr) and an external client system (such as the 3M SelfCheck machine).

The following numbered sequence demonstrates the flow of data between the three systems in a typical SIP Self Check exchange.

1. The external client system sends a message in 3M SIP (version 2.0) to SIP Self Check. (The message is actually intended for Voyager Circulation, but SIP Self Check intercepts and translates.)

2. SIP Self Check translates the message from 3M SIP format into Voyager VACS format so that it can be understood by circsvr.

3. SIP Self Check sends the message to circsvr.

4. Circsvr processes the message.

5. Circsvr sends the response message to SIP Self Check in Voyager VACS format. (The message is actually intended for the external client system, but SIP Self Check must intercept and translate.)

6. SIP Self Check converts the response message from Voyager VACS format back into 3M SIP format.

7. SIP Self Check sends the response message back to the external client system.

8. The external client system receives the response message in 3M SIP format, thereby completing the transaction.

   See Figure 2-1 on page 2-4 for an illustration of the cycle of communication between SIP Self Check, an external client system, and Voyager Circulation.

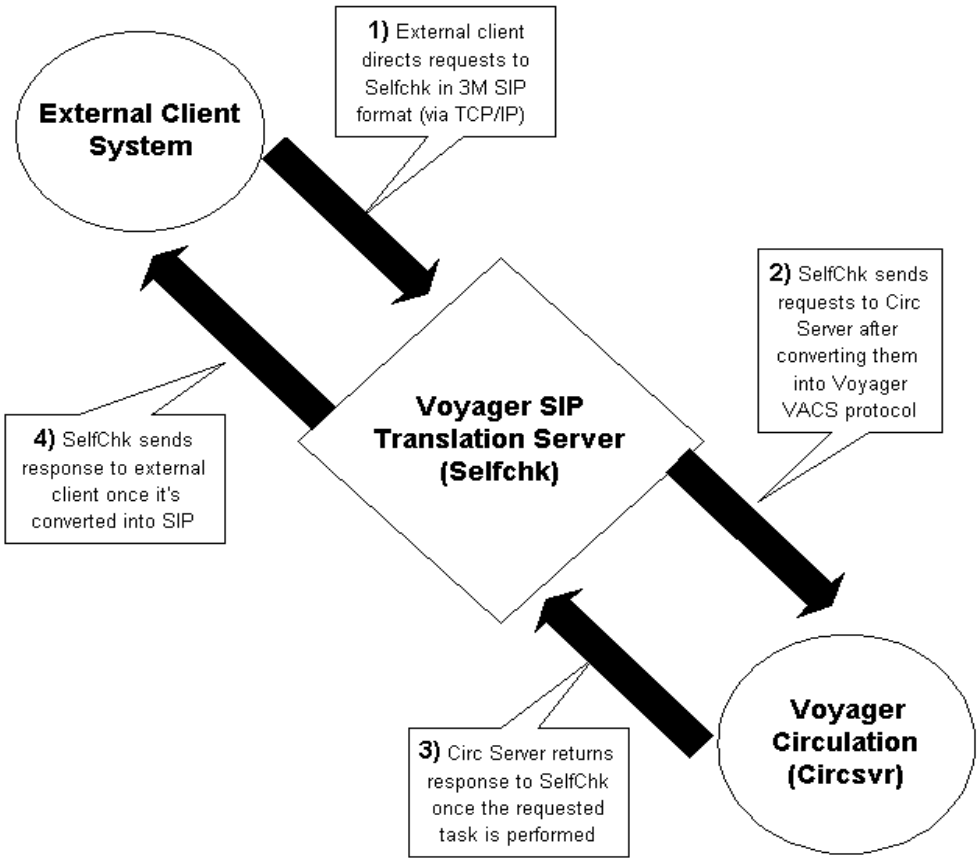

Figure 2-1. Communication cycle between SIP Self Check, external client system, and Voyager Circulation (Circsvr)

System Administration Setup

To run SIP Self Check, you must perform the following tasks in the Voyager System Administration module.

- Create a circulation desk location for SIP Self Check
- Create an operator profile for SIP Self Check
- Create a circulation security profile for SIP Self Check

- Associate the SIP Self Check operator profile with the circulation security profile
- Associate the SIP Self Check circulation location with the circulation security profile
- Associate the SIP Self Check circulation desk location with a circulation policy group, and define values for the location

Procedure 2-1. Creating a circulation desk location

We suggest that you set up a separate circulation desk location to access Voyager through SIP Self Check. This helps you to differentiate between SIP Self Check transactions and transactions made from other locations.

Use the following to create a circulation desk location for SIP Self Check.

1. Log in to the Voyager System Administration module.

2. From the Voyager System Administration **Functions** menu, select **System**, and click **Locations** (see Figure 2-2 on page 2-6). Alternately, click **System** in the listbar and select **Locations**.

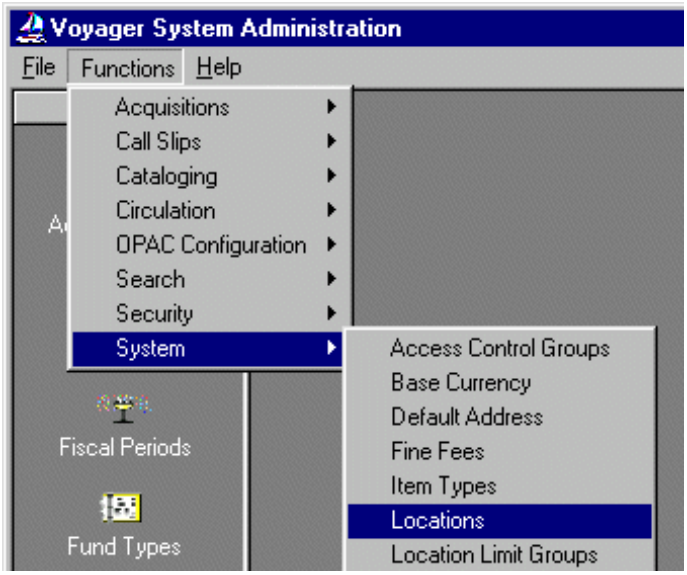

Figure 2-2. Functions - System - Locations menu path in System Administration

Result: The **System - Locations** window opens (see Figure 2-3 on page 2-7).

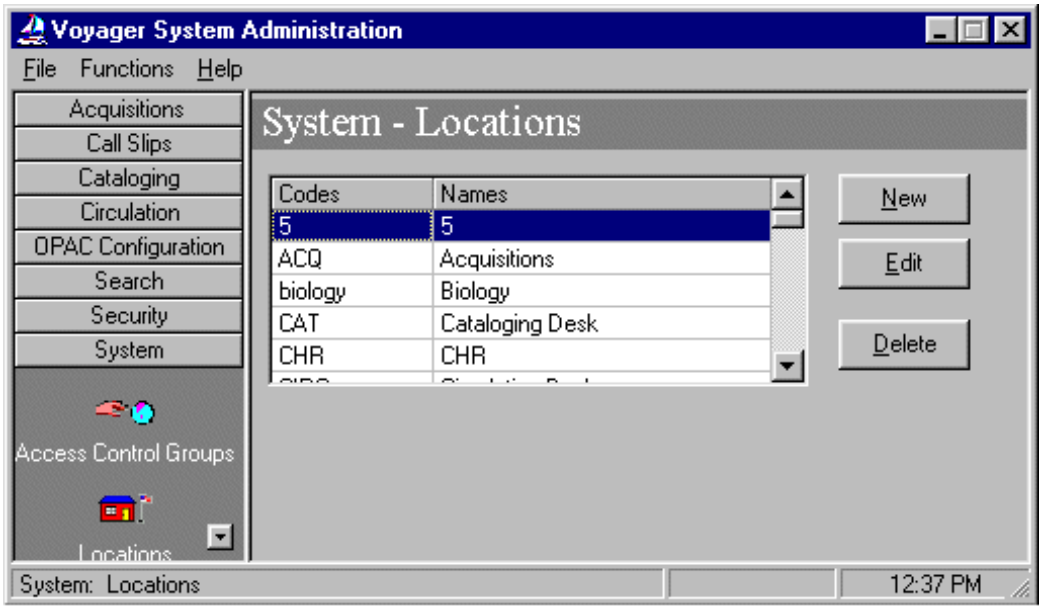

Figure 2-3. System - Locations window

3. Click the **New** button.

   Result: Fields for adding a new location display below the list of codes and names on the **System - Locations** window (see Figure 2-4 on page 2-8).

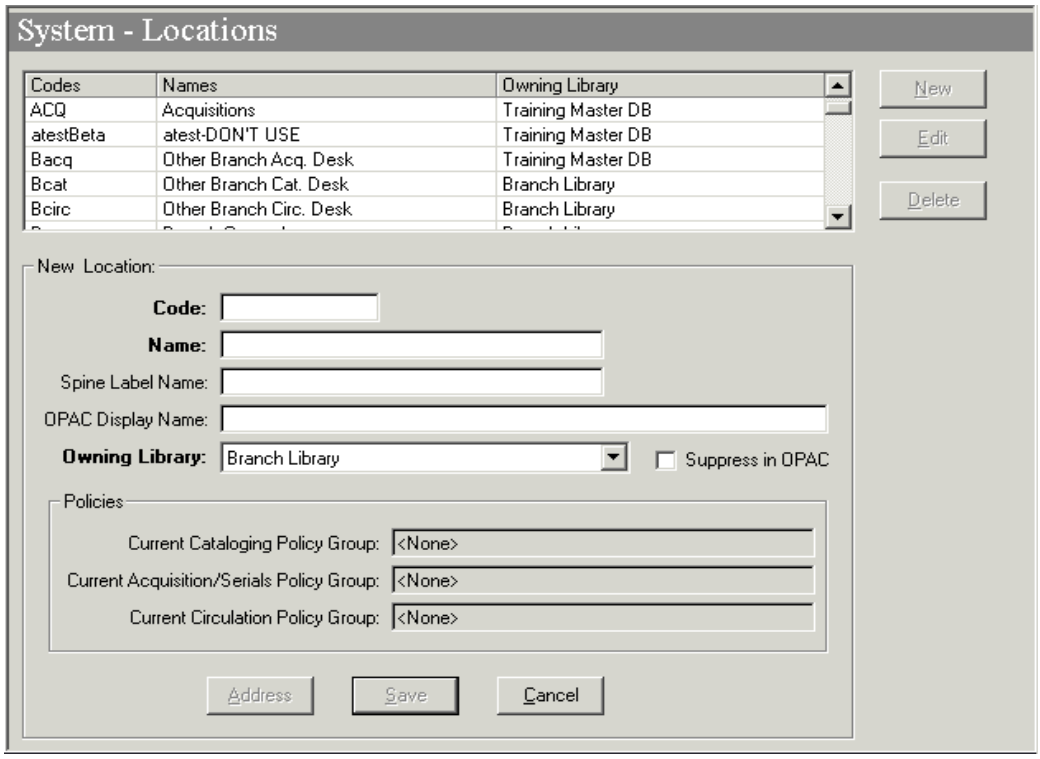

Figure 2-4. System - Locations window with add/edit fields active

4. Enter information for adding the new location. See Figure 2-5 on page 2-8 for an example. (For additional information regarding Locations, see the *Voyager System Administration User's Guide*.)

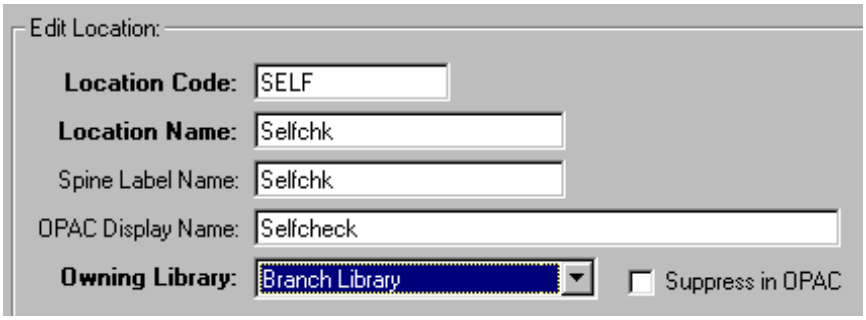

Figure 2-5. Edit Location section, sample entries for Self Check

Result: As you enter text in the fields, the **Save** button activates.

NOTE:
It does not matter if you check the **Suppress in OPAC** check box. The check box has no impact on SIP Self Check.

5. Click the **Save** button to save the new location in Voyager.

   Result: The add/edit fields close and the new location displays in the list box.

SIP Self Check Security

Security features help to protect the integrity of the library database against unauthorized operators. In Voyager, security features for SIP Self Check are configured in the System Administration module.

SIP Self Check requires a successful login in order for the external client system to request Voyager transactions. The external client system needs to be configured with a valid Voyager operator login, password, circulation location code, server IP, and port.

RECOMMENDED:
We recommend that you set up a separate operator profile exclusively for accessing Voyager through SIP Self Check. A separate operator profile allows for differentiation between SIP Self Check transactions and other circulation transactions. If your library uses multiple external client systems to connect to Voyager, it may be advisable to configure a separate operator profile for each system. This helps you to maintain an audit trail.

Procedure 2-2. Establishing an Operator Profile for SIP Self Check

Use the following to assign an operator profile to SIP Self Check in the System Administration module. (See the “Operator Profiles” section of the *Voyager System Administration User’s Guide* for more detailed information.)

1. From the System Administration module’s **Functions** menu, select **Security**>**Operator Profiles**, or click **Security** in the listbar and the **Operator Profiles** button.

Result: The **Security - Operator Profiles** window opens with a list box displaying the names and IDs of all current operators.

2. Click the **New** button to create a new operator.

   Result: A **New Operator Profile** section displays (see Figure 2-6).

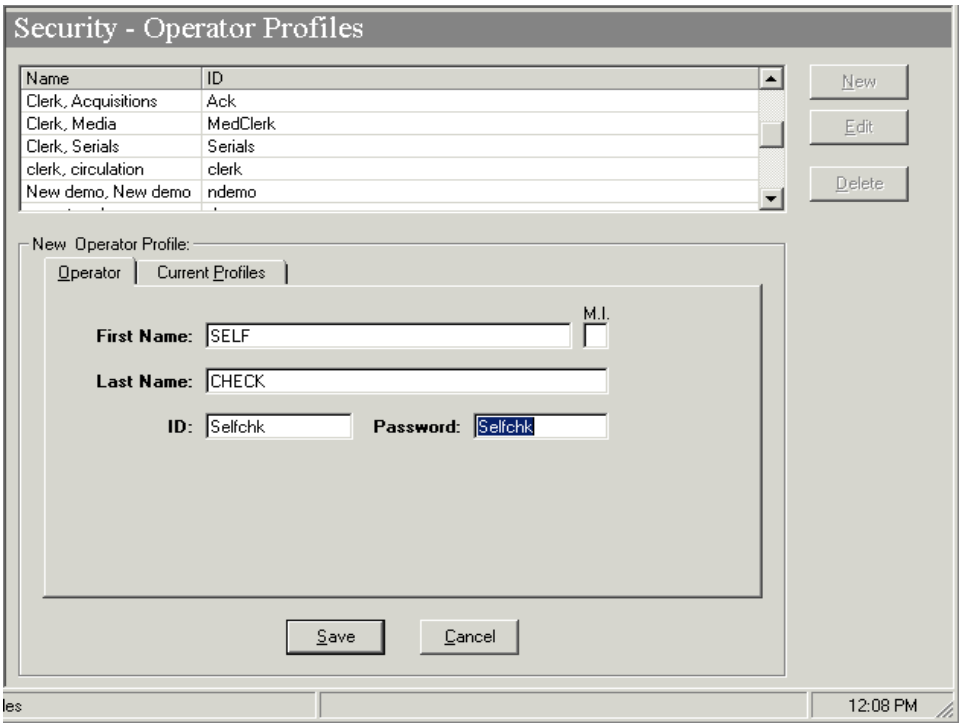

Figure 2-6. Security - Operator Profiles window with new profile section

3. On the **Operator** tab, enter a **First Name** and a **Last Name** (25 characters maximum each field) and a middle initial (optional) for the operator.

4. Enter an operator **ID** (10 characters maximum), and a **Password** (9 characters maximum).

5. Click the **Save** button to create the new operator, or click the **Cancel** button to cancel.

Result: The **New Operator Profile** section closes.

TIP:
*Remain on the **Security - Operator Profiles** window to complete the next procedure.*

Circulation Security Profiles

After you create the SIP Self Check operator profile, you need to associate it with a circulation security profile. This security profile controls which functions an operator can perform in a module. For SIP Self Check, operators should be set up to perform minimal functions since the module only involves charging items.

You can use a new or an existing circulation security profile. Because of the limited functions performed by SIP Self Check operators, you may want to create a new security profile exclusively for SIP Self Check use.

If you are using an existing circulation security profile, skip Procedure 2-3 and continue with Procedure 2-4, “Associating the SIP Self Check Operator Profile with a Circulation Security Profile,” on page 2-14.

If you are creating a new circulation security profile solely for SIP Self Check, use Procedure 2-3 and continue with Procedure 2-4.

Procedure 2-3. Creating a New Circulation Security Profile for SIP Self Check

Use the following to create a new circulation security profile for SIP Self Check.

1. From the System Administration **Functions** menu, select **Security**>**Circulation Profiles**, or click **Security** in the listbar and click the **Circulation Profiles** button.

   Result: The **Security - Circulation Profiles** window opens.

2. Click the **New** button.

   Result: A **New Circulation Profile** section opens (see Figure 2-7).

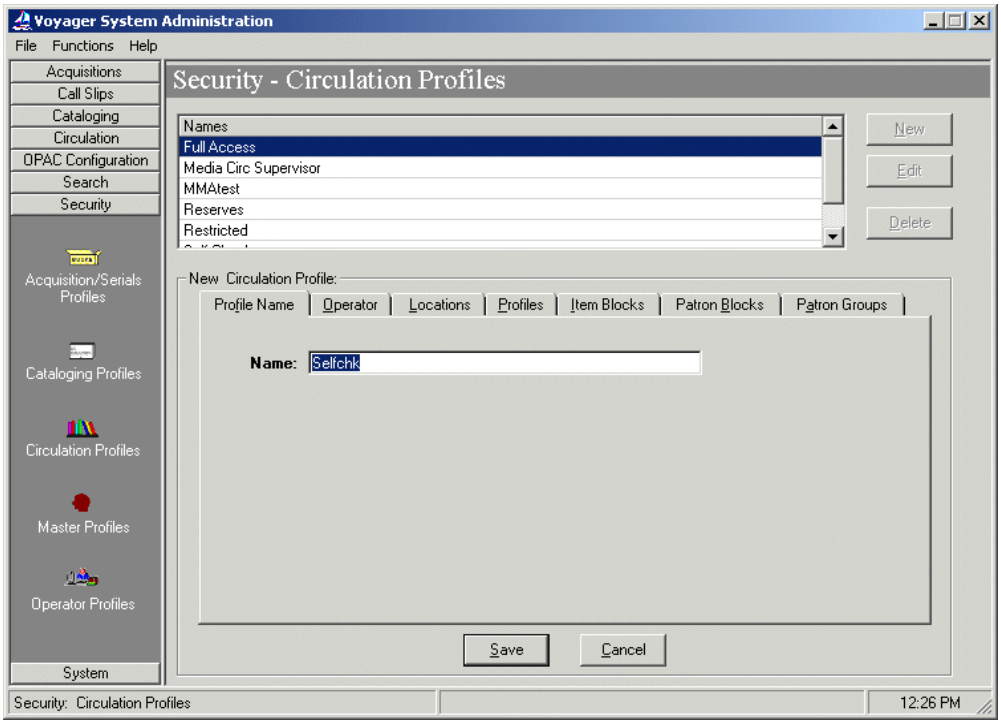

Figure 2-7. Security - Circulation Profiles window

3. In the **Name** field, enter a circulation profile name (25 characters maximum).

TIP:
Select a name for the SIP Self Check security profile that suggests the scope of the authority being conferred. This is particularly important when many security profiles are defined.

4. Click the **Profiles** tab.

   Result: The **Profiles** tab opens to a list of profile options (see Figure 2-8).

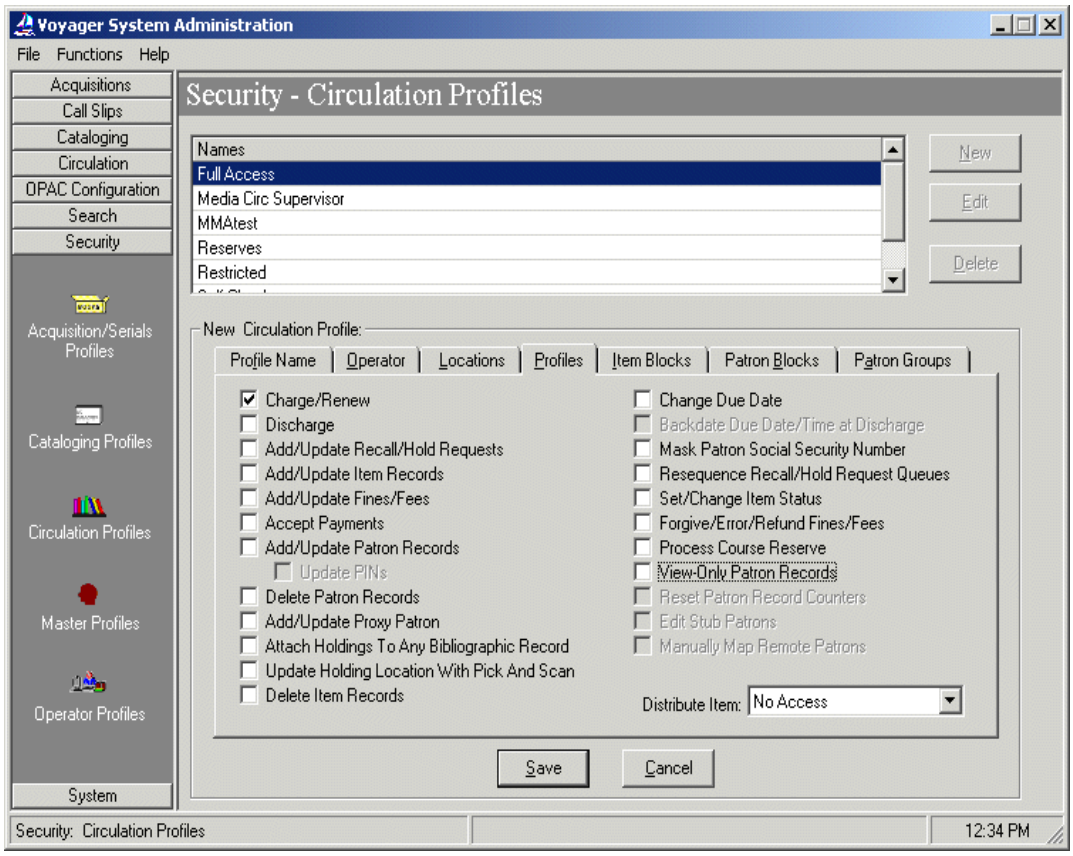

Figure 2-8. Security - Circulation Profiles window, Profiles tab

5. Click the **Charge/Renew** check box and the **Discharge** check box (if not already selected as a default).

RECOMMENDED:

6. *To maximize security, deselect all other profile options that are selected by default.*

7. Click the **Save** button.

   Result: The **New Circulation Profile** section closes and the new profile name displays in the **Names** list box.

Procedure 2-4. Associating the SIP Self Check Operator Profile with a Circulation Security Profile

Use the following to associate an operator with a circulation security profile.

1. If you haven't already opened your SIP Self Check circulation security profile, click it from the **Names** list box on the **Security - Circulation Profiles** window, and click the **Edit** button.

   Result: The **Edit Circulation Profile** section displays with information relating to the profile you selected.

2. Click the **Operator** tab.

   Result: The **Operator** tab opens with list boxes for available and selected operators (see Figure 2-9).

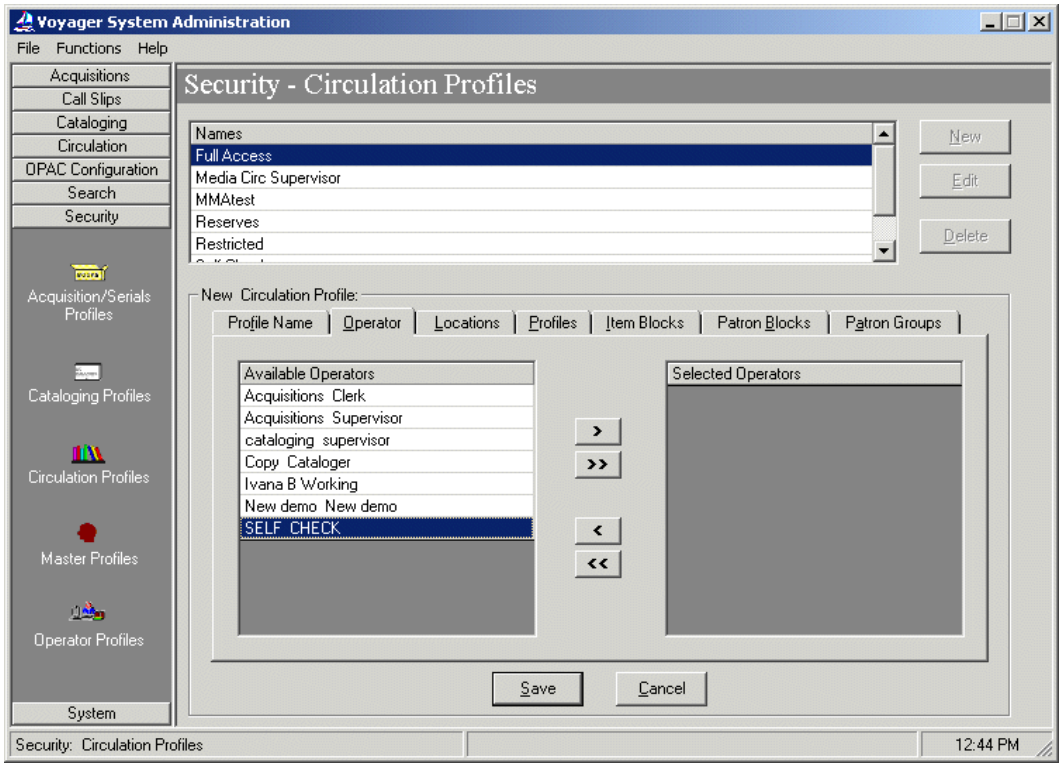

Figure 2-9. Security - Circulation Profiles, Operator tab

3. Click the name of the SIP Self Check operator profile from the list of **Available Operators**.

4. Click the single right arrow button.

   Result: The operator name is moved to the list of **Selected Operators** and is associated with the circulation security profile.

5. Click the **Save** button to save the association, or click the **Cancel** button to discard it.

   Result: The **New** (or **Edit**) **Circulation Profile** section closes.

Procedure 2-5. Associating the SIP Self Check Circulation Desk Location with a Circulation Security Profile

The SIP Self Check circulation desk location must also be associated with the circulation security profile. Use the following to create the association.

1. If you haven't already opened your SIP Self Check circulation security profile, click it from the **Names** list box on the **Security - Circulation Profiles** window, and click the **Edit** button.

   Result: The **Edit Circulation Profile** section displays with information relating to the profile you selected.

2. Click the **Locations** tab.

   Result: The **Locations** tab opens with list boxes for available and selected locations.

3. Click the name of the SIP Self Check circulation desk location in the list of **Available Locations**.

4. Click the right arrow button.

   Result: The SIP Self Check circulation desk location displays in the list of **Selected Locations** (see Figure 2-10) and is associated with the circulation security profile.

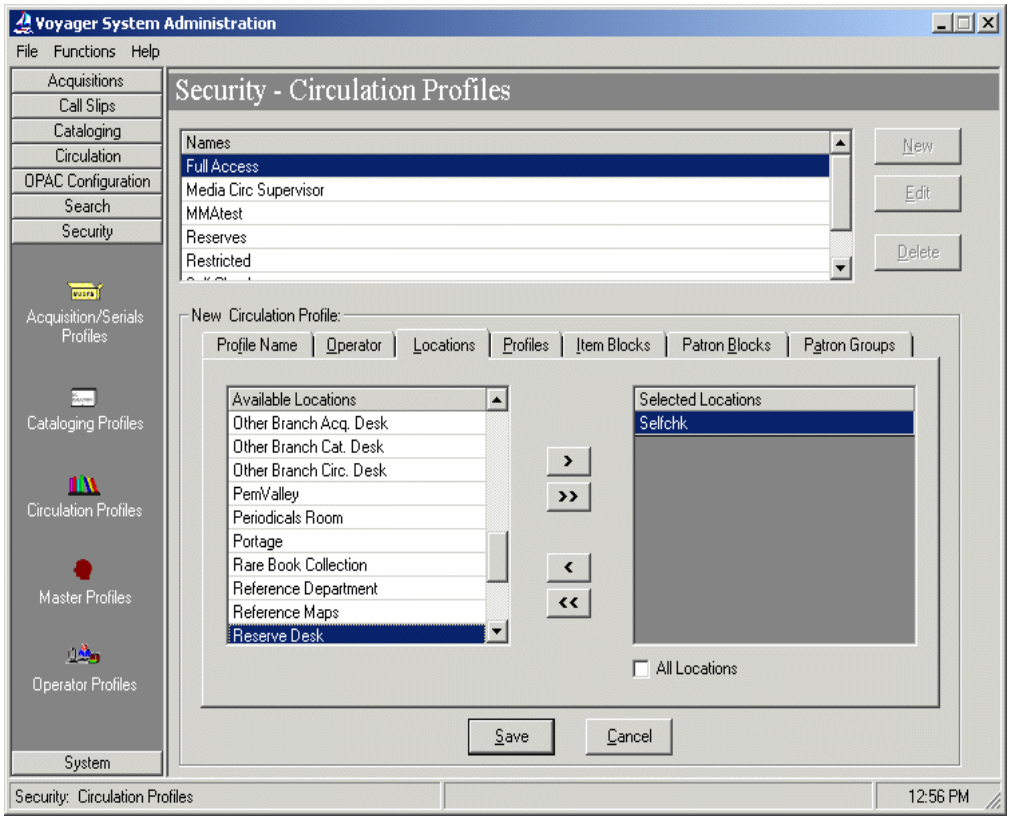

Figure 2-10. Security - Circulation Profiles, Locations tab

5. Click the **Save** button to save the association, or click the **Cancel** button to discard it.

   Result: The **New** (or **Edit**) **Circulation Profile** section closes.

The SIP Self Check location must also be selected in a Master Profile. See Procedure 2-6, "Master Profile SIP Self Check Location Selection." See also the *Voyager System Administration User's Guide* for more information about Master Profiles and enabling the use of a new location.

Procedure 2-6. Master Profile SIP Self Check Location Selection

Use the following to associate the SIP Self Check location in a Master Profile in Voyager System Administration.

1. Click **Security** and then click **Master Profiles**.

   Result: The list of Master Profiles opens.

2. Select the Master Profile to associate with the SIP Self Check location and click **Edit**.

   Result: The **Edit Master Profile** section opens. See Figure 2-11.

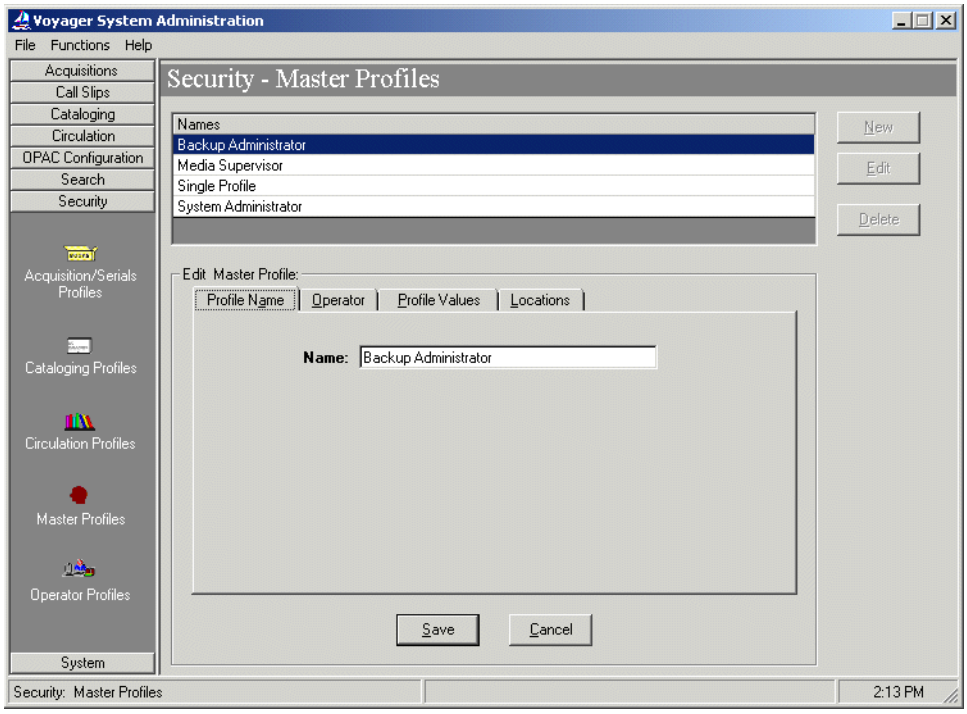

Figure 2-11. Edit Master Profile section

3. Click the **Locations** tab.

   Result: The **Available Locations** and **Selected Locations** display.

4. Select the SIP Self Check location from the **Available Locations** list and click the right arrow button.

   Result: The SIP Self Check location moves to the **Selected Locations** list.

5. Click **Save** or **Cancel**.

Result: The selection is saved or canceled.

Circulation Policy Groups

The SIP Self Check circulation desk location must be associated with a circulation policy group. The circulation policy group should allow minimal privileges because users only have the ability to charge items. You may use an existing policy group or create a new one.

If you decide to create a new circulation policy group for SIP Self Check, see the *Voyager System Administration User's Guide* for instructions on creating new circulation policy groups and setting values in the circulation policy matrix definition.

Also, the circulation policy group should store the bulk of the items anticipated for processing using the SIP Self Check interface.

Procedure 2-7. Adding the SIP Self Check Location to a Circulation Policy Group

Use the following to associate the SIP Self Check location with an existing or a new circulation policy group.

1. Log in to the Voyager System Administration module.

2. From the Voyager System Administration **Functions** menu, select **Circulation**, and click **Policy Definitions**. Alternately, click **Circulation** in the listbar, and select **Policy Definitions** (see Figure 2-12).

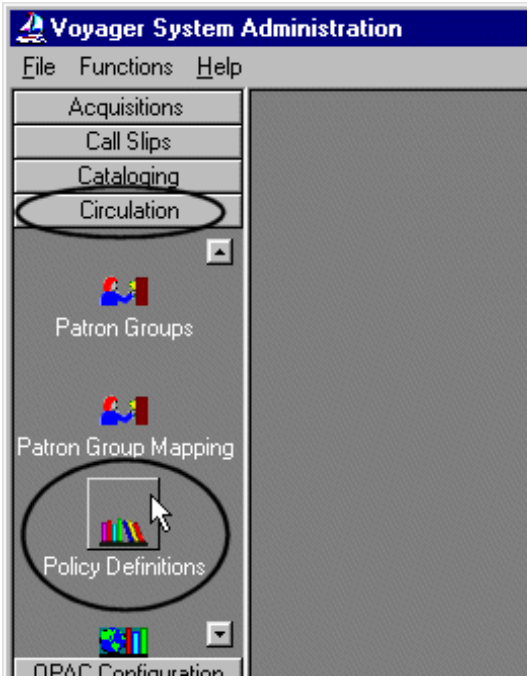

Figure 2-12. Circulation bar, Policy Definitions icon

Result: The **Select Cluster** list box opens (see Figure 2-13).

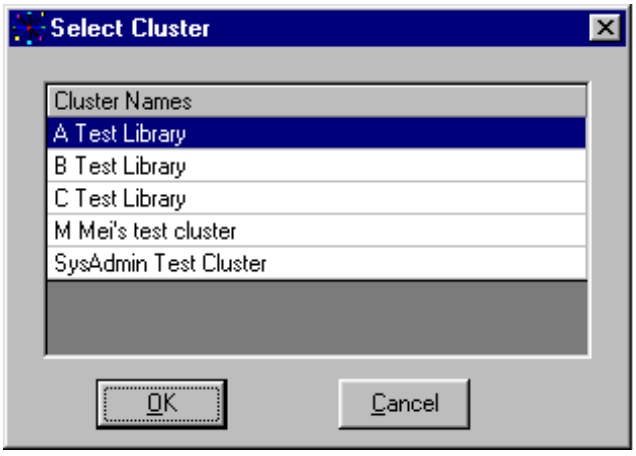

Figure 2-13. Select Cluster list box

OPTIONAL:

3. *(Multicluster environment) Click the name of the cluster you want to use.*

OPTIONAL:

4. *(Multicluster environment) Click the **OK** button.*

   Result: The **Circulation - Policy Definitions** window opens (see Figure 2-14).

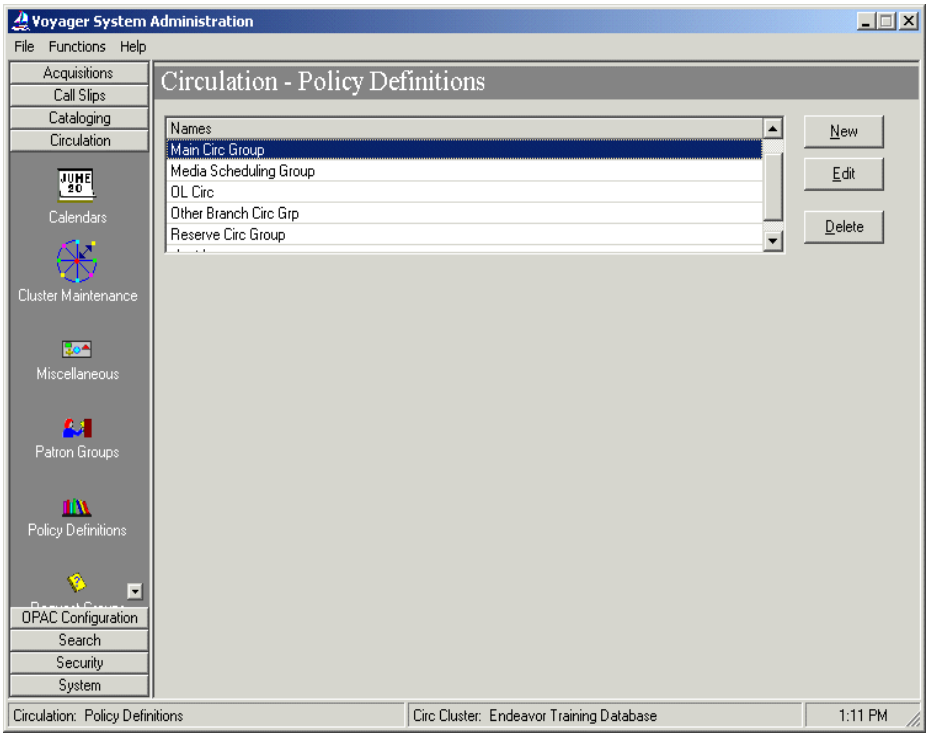

Figure 2-14. Circulation - Policy Definitions window

5. In the list box, click the name of the circulation policy group to which you want to associate the circulation desk location.

6. Click the **Edit** button.

   Result: The **Edit Policy Definition** section opens (see Figure 2-15).

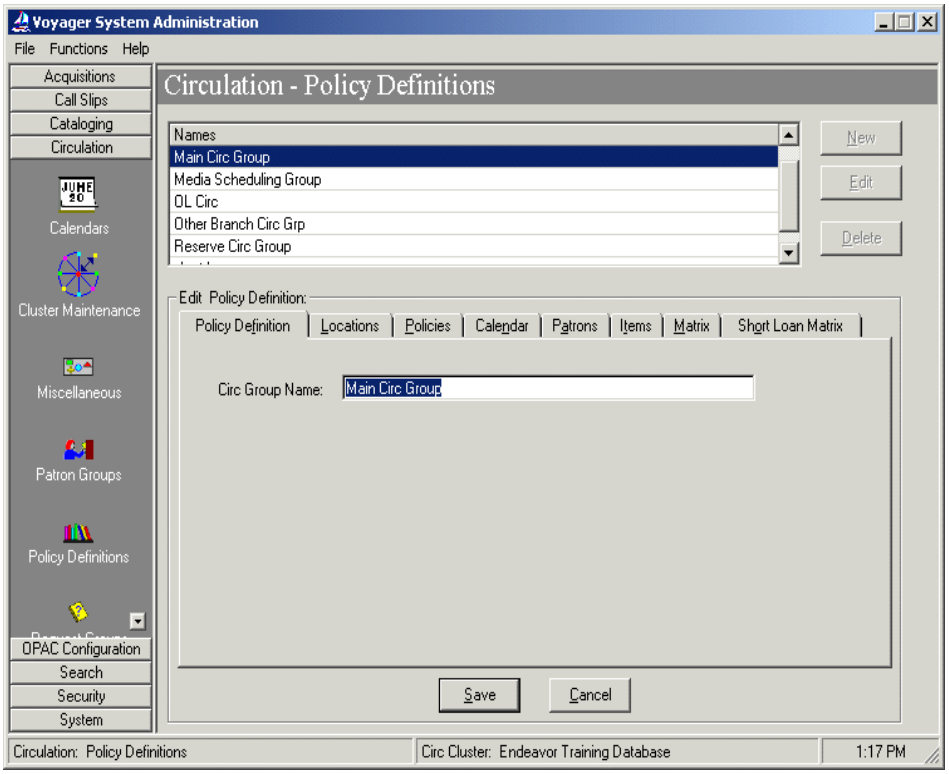

Figure 2-15. Edit Policy Definition section, Circulation -- Policy Definitions window

7. Click the **Locations** tab.

   Result: The **Locations** tab displays two list boxes containing **Available** and **Selected** locations (see Figure 2-16).

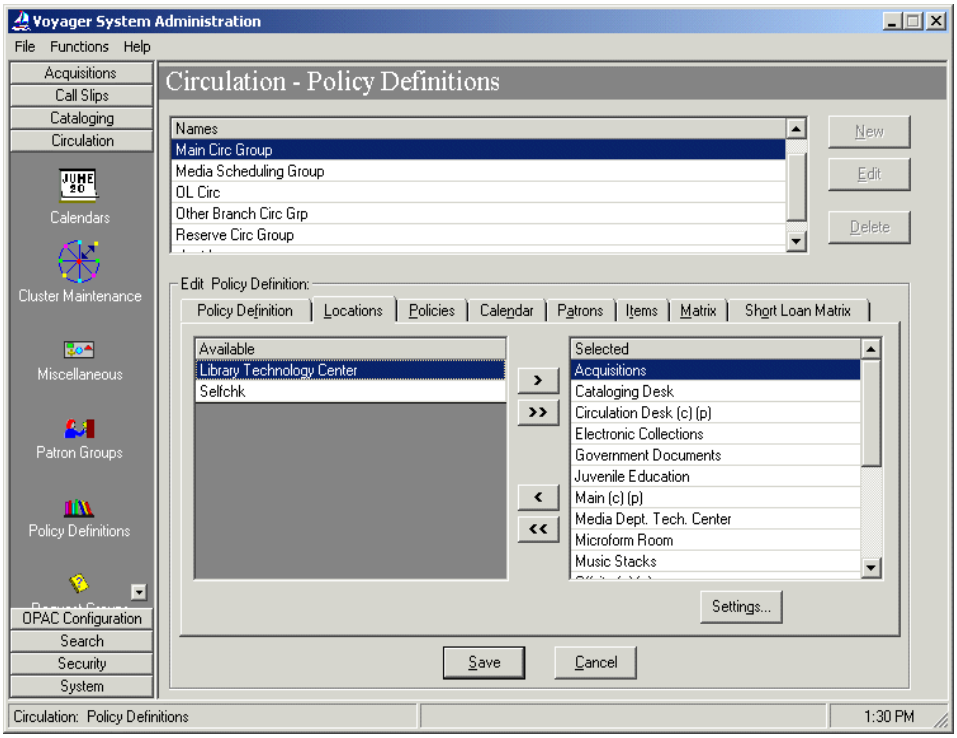

Figure 2-16. Edit Policy Definition section, Locations tab

8. From the **Available** list, click the location created for SIP Self Check.

   NOTE:
   The **Available** locations list box is populated by locations created in System-Wide Configuration that have not yet been assigned to a policy group.

9. Click the single right arrow button.

   Result: The SIP Self Check location item moves from the **Available** list to the **Selected** list and is associated with the circulation policy group.

10. Click the **Save** button to save the association, or click the **Cancel** button to cancel.

Result: The **Edit Policy Definition** section closes.

TIP:
Remain at this location in the System Admnistration module to complete the next procedure.

Procedure 2-8. Defining SIP Self Check Location Values

Once the SIP Self Check location is associated with a circulation policy group, you must define the values applicable to the location.

Use the following to define SIP Self Check location values.

1. From the **Circulation - Policy Definitions** window, click the name of the group your SIP Self Check location is associated with and click the **Edit** button.

   Result: The **Edit Policy Definition** section opens.

2. Click the **Locations** tab of the **Edit Policy Definition** section.

   Result: The **Locations** tab opens.

3. Click the new SIP Self Check location in the list of **Selected** locations and click the **Settings...** button.

   Result: The **Location Settings** dialog box opens (see Figure 2-17).

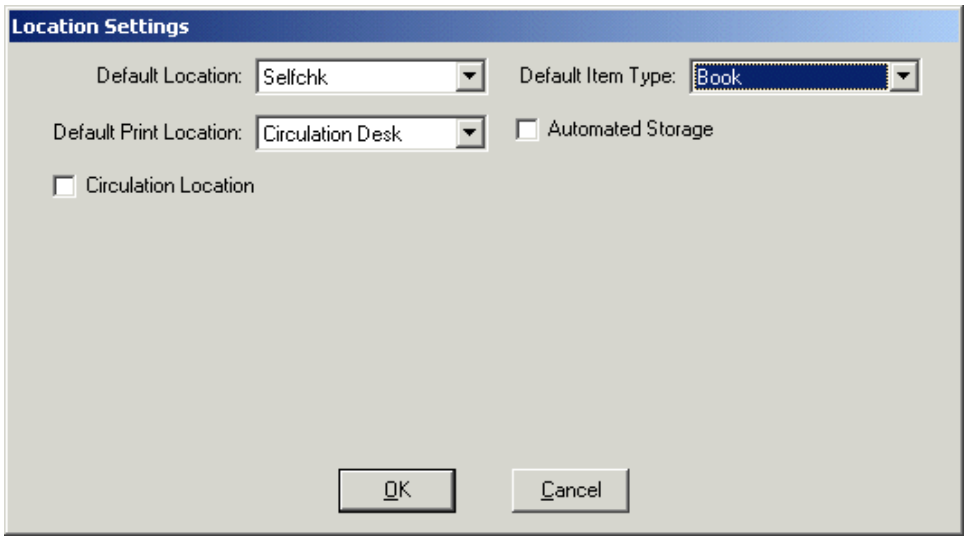

Figure 2-17. Location Settings dialog box

4. Click the **Circulation Location** check box to make the SIP Self Check location a Happening Location, thereby allowing circulation transactions to be performed there. (For more information about Happening Locations, see the *Voyager System Administration User's Guide*.)

   Result: Additional fields display below the **Circulation Location** check box (see Figure 2-18).

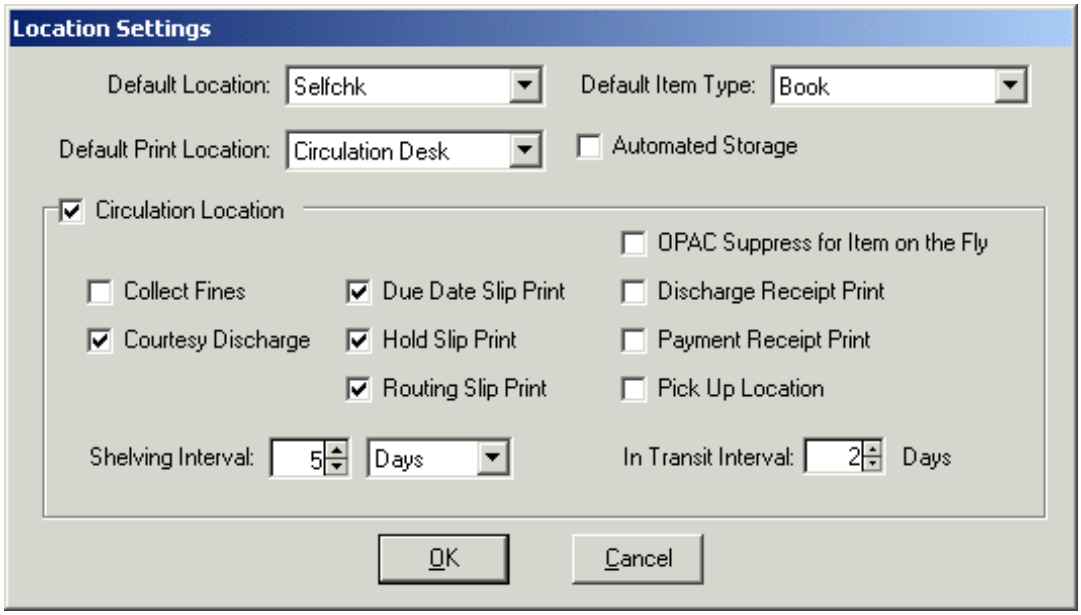

Figure 2-18. Location Settings, Circulation Location checked

5. In the **Shelving Interval** field, enter the time it typically takes for a discharged item to be reshelved at this location. Entering a 0 indicates items discharged at this location are reshelved immediately.

   NOTE:
   The **Shelving Interval** determines when the system changes an item's status from "Discharged-mm/dd/yyyy" to "Not Checked Out."

6. Check the **Courtesy Discharge** check box so that operators working at different locations can discharge items that were charged at this location using SIP Self Check.

7. Set other values by referring to the "Circulation Policy Definitions" section of the *Voyager System Administration User's Guide*.

8. Click the **OK** button to save the settings, or the **Cancel** button to discard them.

   Result: The **Location Settings** dialog box closes.

Patron Information Through SIP Self Check

3

Patron Information Through SIP Self Check

3

Introduction

SIP Self Check provides the flexibility to interchange Voyager data with a number of devices allowing for a variety of services that can be offered to library patrons.

This chapter describes the Voyager patron information provided for use with a telephone renewal system through the use of SIP Self Check and the 3M Standard Interchange Protocol Version 2.00.

Patron Information Exchange

With a telephone renewal system, the patron may want to accomplish a number of activities such as the following.

- Review a list of charged items
- Renew items that are coming due
- Review a list of overdue items
- Check on the status of Hold items
- Identify the pickup location for an item on Hold

The institution may have other requirements for a telehpone renewal system such as verifying the patron's barcode and PIN as well as checking for any maximum item counts, fees, and/or fines that may impact circulation requests that a patron may attempt to make through the telehphone renewal system.

With SIP Self Check, Voyager has the ability to send the following information to a telephone renewal system.

- Patron information request summary
- Patron information request for charged items
- Patron information request for overdue items
- Item information request for charged items details
- Item information request for overdue items details
- Patron information request for hold items
- Patron information request for unavailable holds
- Item information request for hold items details
- Item information request for unavailable hold items details

More specifically, this information is pulled from the following fields stored in Voyager.

- Patron status (see Table 3-1)
- Language
- Transaction date
- Hold items count
- Overdue items count
- Charged items count
- Fine items count
- Recall items count
- Unavailable holds count
- Institution ID
- Patron identifier (patron barcode)
- Personal name (first, middle, last)
- Hold items limit
- Overdue items limit
- Charged items limit
- Valid patron (Y/N indicates patron's barcode status of active/non-active)
- Valid patron password (Y/N indicates validity of patron's PIN input)
- Hold items (item barcode data provided)

If the hold is for a title level, the bibliographic record ID is sent prefixed with “bibid.” As a result, a request for bibliographic record 12345 is sent as item identifier “bibid12345” in the patron information response. Any subsequent item information request that contains “bibid” indicates that the data requested is for a bibliographic record rather than an item record.

- Overdue items (item barcode data provided)
- Charged items (item barcode data provided)
- Fine items (item barcode data provided)
- Recall items (item barcode data provided)

Table 3-1. Patron status list

Status	Definition
0	Charge privileges denied
1	Renewal privileges denied
2	Recall privileges denied
3	Hold privileges denied
4	Card reported lost
5	Too many items charged
6	Too many items overdue
7	Too many renewals
8	Too many claims of items returned
9	Too many items lost
10	Excessive outstanding fines
11	Excessive outstanding fees
12	Recall overdue
13	Too many items billed

Security

The Valid Patron and Valid Patron Password fields are used for security purposes. If both are populated with N (for No), no patron transaction information is returned to the requesting system (or patron).

Special Considerations

There are some minor differences between the 3M Standard Information Protocol and the management of information in Voyager. The following summarizes these differences.

- In responding to a telephone renewal system, the Voyager statuses for Charge and Renewal privileges are linked. Voyager communicates to a remote system whether or not a patron's charge and renewal privileges are blocked as a whole versus at an individual item level. This relates to Statuses 0 and 1. See Table 3-1.
- If a patron has exceeded a limit such as the maximum fine limit, all their circulation transactions are blocked. This means that frequently recall privileges and hold privileges are simultaneously blocked.
- Excessive outstanding fines and excessive outstanding fees are reported simultaneously based on the information stored in Voyager. These are not mutually exclusive in Voyager.
- Too many items billed is always blank based on the information stored in Voyager.
- When there is a status of card reported lost, the patron is blocked from logging in and is unable to retrieve any other patron information.

NOTE:
The 3M Standard Interchange Protocol does not provide for Voyager to pass on information about call slip requests, short loan request privileges, or transactions.

Patron Considerations/Results

As a result of the information exchange between a self check system and the Voyager system, it is possible that a patron may be blocked from or authorized for future transactions based on circulation criteria set in Voyager that cannot be overridden or modified through the self check system by the patron.

For most transactions, the SIP renewal message communications are processed; and the patron's requests are handled satisfactorily.

Discharge to Bins with SIP Self Check

4

Discharge to Bins with SIP Self Check

4

Introduction

SIP Self Check provides the flexibility to interchange Voyager data with a number of devices allowing for a variety of services that can be offered to institutions and library patrons.

This chapter describes the Voyager capability to provide discharge to bins (sorting) information for use with automated SelfCheck systems through SIP Self Check and the 3M Standard Interchange Protocol, Version 2. See “SIP2 Support in Voyager” on page A-1 for more information regarding SIP2 support.

Functional Overview

The goal of discharge to bins is for the SelfCheck machine sortation system to determine into which bin the returned item is to be placed based on certain alerts or conditions.

Using an operator profile and system security described in Chapter 2, a SelfCheck machine places a request to Voyager through SIP Self Check and expects a response that includes bin information based on data stored in Voyager. The process flow is as follows:

1. A SelfCheck machine sends a Checkin Request message to Voyager through SIP Self Check.

2. SIP Self Check sends the message to circsvr.

3. Circsvr checks the item's statuses/exceptions against the `selfchk.cfg` file (see "selfchk.cfg" on page 4-2) and determines if the bin alert/notification should be sent.

4. Circsvr sends a Checkin Response with any alert information to SIP Self Check.

5. SIP Self Check sends the response message back to the SelfCheck system.

6. The SelfCheck system receives the response message in 3M SIP format and completes the transaction.

   See "selfchk.cfg" on page 4-2 for more information about `selfchk.cfg`, statuses, and processing.

Assumptions

The discharge to bins (sorting) function makes the following assumptions:

- SelfCheck systems use a sort bin value for determining bins. If one is not present, the sort bin is derived from other available data such as destination location.
- Message fields are sent with blank values where applicable such as when an item record that doesn't have a call number rather than omit the message field altogether. This approach is used when the field is supported, but Voyager simply has no value to supply for the field.

selfchk.cfg

Setup for the discharge to bins function is handled through the `selfchk.cfg` configuration file that has a default location of `/m1/voyager/xxxdb/ini/selfchk.cfg` on the server where xxxdb equals the database name used at your site.

For alert statuses in Voyager, the `selfchk.cfg` file provides status mapping that includes the following:

- Identification of an alert
- Alert type

- Should item be discharged
- Sort bin

The `selfchk.cfg` file contains the following stanzas for exceptional statuses:

- `[Recall Request]`
- `[Hold Request]`
- `[Damaged]`
- `[Withdrawn]`
- `[Missing]`
- `[Lost]`
- `[Claims Returned]`
- `[Bindery]`
- `[Foreign Location Discharge]`
- `[No Courtesy Discharge]`
- `[Inactive Barcode]`
- `[Cataloging Review]`
- `[Circulation Review]`
- `[Scheduled]`
- `[In Process]`
- `[Multi-piece]`
- `[Misrouted UB]`
- `[Overdue]`
- `[Fine]`
- `[Route]`
- `[Browse]`
- `[Media]`

This represents one stanza for each item exceptional status.

IMPORTANT:
If multiple exceptional statuses are assigned to an item, the first listed status stanza that matches one of the item statuses is used to determine the exceptional status processing. By arranging the order of the stanzas in the selfchk.cfg file, you have the control and flexibility to align this processing with your institute's workflows.

Each stanza related to exceptional statuses in `selfchk.cfg` contains the following variables:

- Alert
- AlertType
- Discharge
- SortBin

See Table 4-1 for a description of these variables.

Table 4-1. Stanza Variables for selfchk.cfg

Variable	Description
Alert	Sets the <alert> flag in the response for the item exceptional status identified in the stanza. Specify Y (Yes) or N (No). The default value is N. This is a required variable.
AlertType	Sets the CV value (type of alert) in the response. Possible value settings are as follows: • 00 (unknown) • 01 (hold for this library) • 02 (hold for another branch) • 03 (hold for ILL) • 04 (send to other branch) • 99 (other) The default value is 00. This is not a required variable.
Discharge	This variable specifies for circsvr if the item should be discharged in the Voyager database. Specify Y (Yes) or N (No). The default value is N. This is a required variable.
SortBin	Sets the CL value (sort bin) in the response. This is a variable-length text option. This is not a required variable, and no default is specified.

The alert capability for the discharge to bins function is determined by the entries/settings in these stanzas. These entries are compared with the actual item information to determine if an alert needs to be sent to the requesting Self Check system which would then determine into which bin the returned item is placed.

Exceptional Status Processing

Per existing functionality, `selfcksvr` reads the `selfchk.cfg` file when it starts and applies the configuration to the processing of check-in requests. When an item has an exceptional status, it is handled per the variables established in the `selfchk.cfg` file.

If `Alert=Y`, the alert field value is set to `Y` in the Checkin Response message. The CV (alert type) field is set to the value specified in the `AlertType=<variable>`.

If `Alert=N`, the alert field is set to `N` in the Checkin Response message. The value in the CV field is blank.

If `Discharge=Y`, the item is discharged in the Voyager database.

If the item has a Route status, the route to location name is put in the CT (Destination Location) in the Checkin Response.

If the item has an active hold or recall, the patron barcode is put in the CY (Hold Patron ID) field and the patron name in the DA (Hold Patron Name) field.

If the SortBin variable is populated, its value is sent in the CL field of the Checkin Response message. If no SortBin variable is supplied, the value of CL is blank.

[Media Type] Stanza (CK)

The `[Media Type]` stanza in `selfchk.cfg` provides additional function that applies to every Checkin Response, Checkout Response, Item Information Response, and Renew Response message.

You have the ability to map your own Voyager item types to SIP2 media types as identified in the SIP2 protocol. The mapping format uses the following structure:

```
<Voyager item type code>=<SIP2 media type value>
```

The Voyager item type code is defined in Voyager System Administration.

See Figure 4-1 for an example of the `[Media Type]` stanza.

```
[Media Type]
book=001
cd=006
periodical=002
video=005
```

Figure 4-1. [Media Type] stanza example

An asterisk may be used as a wildcard for the Voyager item type code. See Figure 4-2.

```
[Media Type]
*=001
```

Figure 4-2. [Media Type] stanza wildcard example

The example in Figure 4-2 indicates that any item code that isn't explicitly listed in the stanza uses the value of 001 in the response.

See Table 4-2 for a listing of media type values as defined by the SIP2 protocol.

Table 4-2. Media Types

Value	Media Type
000	other
001	book
002	magazine
003	bound journal
004	audio tape
005	video tape
006	CD/CDROM
007	diskette
008	book with diskette
009	book with CD

Table 4-2. Media Types

Value	Media Type
010	book with video tape

Field Extensions

The following extensions are provided for sortation configuration/processing:

- Patron identifier (see “Patron Identifier” on page 4-7)
- Item properties (see “Item Properties” on page 4-7)
- Collection code (see “Collection Code” on page 4-7)
- Call number (see “Call Number” on page 4-8)

Patron Identifier

The patron identifier field (AA) is returned in the Checkin Response message. It contains the patron barcode associated with the circulation transaction just completed. This field is not dependent on anything in the `selfchk.cfg` file. If the discharge is a browse, the value is blank in the response.

Item Properties

The item properties field (CH) is returned in the Checkin Response message. It contains the Voyager media type or else the active item type name. If a Voyager media type is assigned to the item, it is included in the response. Otherwise, if a temporary item type named is assigned to the item record, it is sent. If no Voyager media type or temporary item type is assigned to the record, the permanent item type name is sent. This field is not dependent on anything in the `selfchk.cfg` file and is always included in the checkin response.

Collection Code

The collection code field (CR) is returned in the Checkin Response message. It contains the active item location code. If a temporary item location named is assigned to the item record, it is sent. Otherwise, the permanent item location code is sent. This field is not dependent on anything in the `selfchk.cfg` file and is always included in the Checkin Response.

Call Number

The call number field (CS) is returned in the Checkin Response message. It contains the call number in the MFHD to which the item is linked. This field is not dependent on anything in the `selfchk.cfg` file. If there is no 852‡h in the MFHD, the field is blank in the response message.

Running Pselfchk

Pselfchk reads in the `selfchk.cfg` file through the use of the `-b` parameter. Use the `-b` parameter to specify the path and file name for the `selfchk.cfg` file. If nothing is specified after the `-b` parameter, the system assumes that `selfchk.cfg` is located in `/m1/voyager/xxxdb/ini/`.

The `-b` parameter provides your institution the flexibility of running different `selfchk.cfg` configuration files on different ports by simply specifying the customized path and file name for each copy of the configuration file.

SIP2 Fine/Fee Support

5

SIP2 Fine/Fee Support

5

Introduction

To enhance your system flexibility and enable you to provide additional levels of service to your patrons, Voyager supports the SIP2 (Standard Interchange Protocol, Version 2) standard for fine/fee messaging with third-party circulation hardware and software products.

This capability enables you to facilitate the payment of patron fines and fees. Utilizing a kiosk type of interface, patrons can request information regarding their fines and fees and, subsequently, make payments through coordinated options that you specify in Voyager and a kiosk type of device.

Specifically, SIP2 messaging is used to do the following:

- Interchange system messages between Voyager and a kiosk type of interface to communicate to the patron fine and fee amounts that are owed.
- Interchange system messages between Voyager and a kiosk type of interface to transact fine and fee payments per a patron's request.

This capability in Voyager is implemented/coordinated through the server `selfchk.cfg` configuration file and Voyager System Administration.

selfchk.cfg

To implement SIP2 fine/fee support in Voyager, you need to modify the `selfchk.cfg` configuration file to include the types of payments that your kiosk device supports. Specifically, the `selfchk.cfg` file contains the `[Payment Type Mapping]` stanza for this purpose.

The `selfchk.cfg` configuration file is located in `/m1/voyager/xxxdb/ini` where xxxdb is your database name.

[Payment Type Mapping] Stanza

Use the `[Payment Type Mapping]` stanza to specify payment type codes and associated payment type text. See Figure 5-1 for an example.

```
[Payment Type Mapping]
00=Cash
01=Check
02=Debit/Credit Card
03=University ID
```

Figure 5-1. [Payment Type Mapping] stanza example.

The payment type code matches the code set in the kiosk-like interface. The code may range from 00 to 99.

IMPORTANT:
The payment type text must match the payment type text entered in Voyager System Administration. See "Voyager System Administration Settings" on page 5-2 for more information.

Voyager System Administration Settings

Voyager System Administration System settings are used to support fine/fee processing typical with using the standard client interface. Base currency settings are also used to define the currency for kiosk fine/fee processing.

Fine/Fee Setup in Voyager System Administration

Fine/Fee reasons and payment types are defined through the System component (see Figure 5-2) in Voyager System Administration. See Figure 5-3 and Figure 5-4 for examples of these definitions on the Fine Fee tab and the Payment tab. You may use existing definitions or make changes to meet your requirements.

The payment type text specified in the `[Payment Type Mapping]` stanza must match the text as identified on the Payment tab in Voyager System Administration as in Figure 5-4.

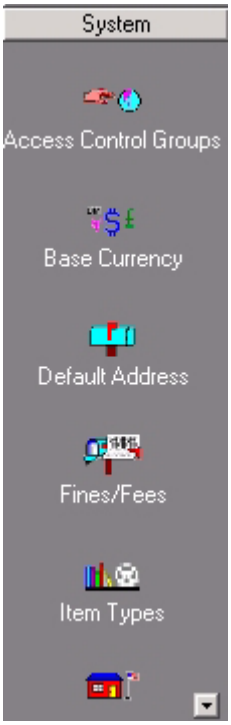

Figure 5-2. Fines/Fees System panel option

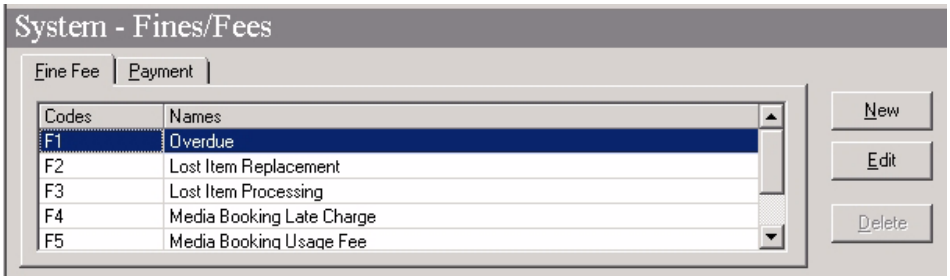

Figure 5-3. Fine Fee tab example

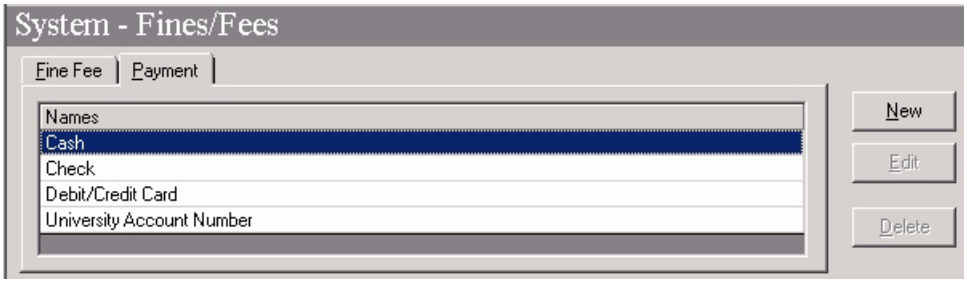

Figure 5-4. Payment tab example

Base Currency

The currency of the fines/fees owed and paid is defined in Voyager System Administration. This also applies to processing fine/fee transactions when using a third-party option that interfaces with Voyager. See Figure 5-5 for an example of defining base currency in Voyager System Administration.

The base currency must be defined in order for the SIP2 payment interaction with Voyager to work. If the necessary base currency is already defined in Voyager, no additional changes are required.

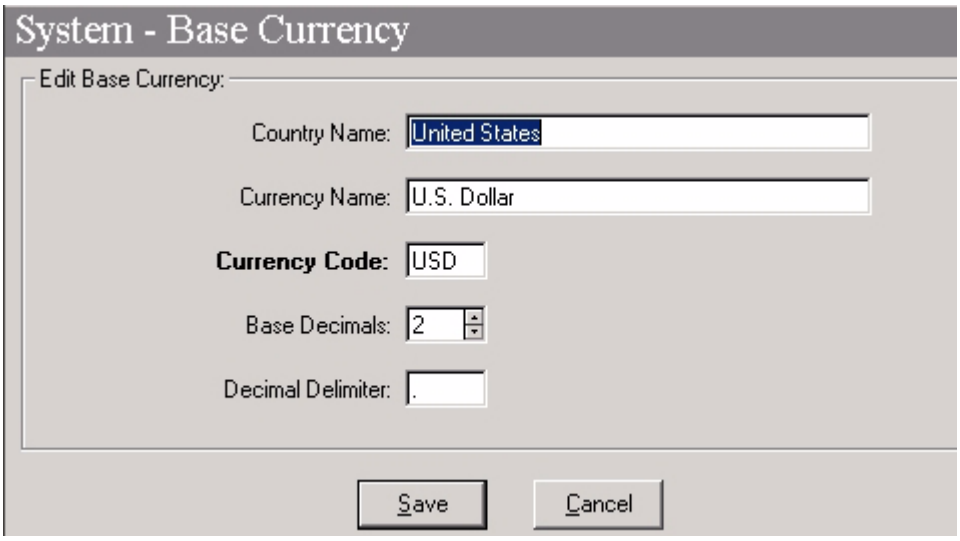

Figure 5-5. Base Currency example

Process Considerations

A valid patron may view his/her current status and pay fines even if the patron is blocked. After viewing the status information, a patron may, subsequently, choose to pay fines/fees in one lump sum or one transaction at a time (if there are multiple fines/fees outstanding). The system dynamically processes each transaction and can provide summary status information when requested.

Error Processing

Error processing is handled consistent with current Voyager Circulation client guidelines such as the following:

- If the value of the fine/fee payment amount exceeds the total that the patron owes, the payment is not accepted.
- If the value of the fine/fee payment amount exceeds the balance of a specified fine/fee, the payment is not accepted.

SIP2 Magnetic Media and Sensitize Flags

6

SIP2 Magnetic Media and Sensitize Flags

6

Introduction

Voyager supports the 3M SIP2 (Standard Interchange Protocol, Version 2) standard with magnetic media and sensitize alerts. These options enable system flexibility for check-in, check-out, and renewal with third-party, self-check machines.

Implementation

Voyager provides self-check magnetic media and sensitize flags at the item-record level. This allows for different combinations of magnetic media and sensitize alerts in order to provide flexibility for interfacing with a variety of self-check machines.

The magnetic media and sensitize self-check flags can be set through any Voyager client that allows you to create and edit item records to include Acquisitions, Cataloging, and Circulation. See Figure 6-1.

Figure 6-1. Item record Self Check Magnetic Media and Sensitize options

Refer to the client user's guides for additional information.

Upgrade/Installation Considerations

Upon your upgrade or new installation, the Magnetic Media option value is set to N (No) which means the check box is unchecked; and the Sensitize option value is set to Y (Yes) which means that the check box is checked as shown in Figure 6-1.

⚠ **IMPORTANT:**
After your upgrade/installation, you need to update these options to meet your requirements for the self-check equipment that you have installed and its configuration requirements. See "Pick and Scan" on page 6-2 for more information regarding options for making any necessary changes.

⚠ **IMPORTANT:**
Be aware that given the variety of self-check machines, the Magnetic Media and Sensitize options may not be implemented in the same manner for all machines.

Pick and Scan

The Pick and Scan feature has been updated to assist with multiple, item-record updates specific to the Magnetic Media and Sensitize options for faster processing of these changes. See Figure 6-2.

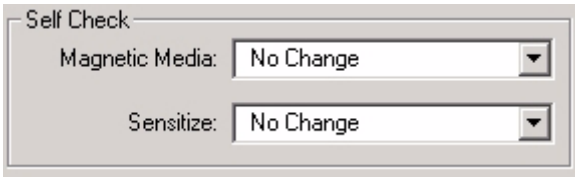

Figure 6-2. Pick and Scan Self Check options

From a drop-down list on the Pick and Scan **Item Options** tab, Yes, No, and No Change options are provided for both Magnetic Media and Sensitize. Refer to the Pick and Scan chapters of the Cataloging and Circulation user's guides for more details.

SIP2 Support in Voyager

A

3M Standard Interchange Protocol, Version 2, Voyager Support

See Table A-1 for a list of SIP2 command message support for Voyager, and refer to `http://solutions.3m.com/wps/portal/3M/en_US/library/home/resources/protocols/` for more information regarding the 3M Standard Interchange Protocol (SIP).

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Block Patron (01)			
	Card Retained		Supported. Y=Barcode to be blocked.
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Blocked Card Msg	AL	Supported. Stored in patron note.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Terminal Password	AC	Not referenced by Voyager.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Checkin (09)			
	No Block		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager. Date/time logged by Voyager.
	Return Date		Not referenced by Voyager. Determined by Voyager.
	Current Location	AP	Not referenced by Voyager. Based on the location code from Login Request.
	Institution ID	AO	Not referenced by Voyager.
	Item Identifier	AB	Supported. Voyager item barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Item Properties	CH	Not referenced by Voyager.
	Cancel	BI	Not referenced by Voyager. Unable to reverse a discharge.
Checkin Response (10)			
	OK		Supported. 1=OK.
	Resensitize		Supported.
	Magnetic Media		Supported.
	Alert		Supported. A value of Y if the item alert flag is set in the `selfchk.cfg` file.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Item Identifier	AB	Supported. Voyager item barcode.
	Permanent Location	AQ	Supported. Item's permanent location name.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Sort Bin	CL	Supported. See Table 4-1 on page 4-4 and Exceptional Status Processing on page 4-5.
	Patron Identifier	AA	Supported. Voyager patron barcode. See Patron Identifier on page 4-7.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Item Properties	CH	Supported. See Item Properties on page 4-7.
	Screen Message	AF	Supported. Block or fail messages.
	Print Line	AG	Not supported.
	Collection Code	CR	Supported. Current location (temporary or permanent) provided. See Collection Code on page 4-7.
	Call Number	CS	Supported. Voyager item call number. See Call Number on page 4-8.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Destination Location	CT	Supported. Where item should be sent. Included when the discharged item is to be routed to another Circulation happening location. **NOTE:** Only provided when item is discharged.
	Alert Type	CV	Supported. Type of alert for item. See Table 4-1 on page 4-4.
	Hold Patron ID	CY	Supported. Voyager patron ID. Included with response when discharged item has an active hold/recall request. (See Hold Patron Name/DA.) **NOTE:** Only provided when item is discharged.
	Hold Patron Name	DA	Supported. Voyager patron name (first, middle, and last). Included with response when discharged item has an active hold/recall request. (See Hold Patron ID/CY.) **NOTE:** Only provided when item is discharged.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Checkout (11)			
	SelfCheck System Renew Policy		Not referenced by Voyager. Handled by Voyager circulation policies.
	No Block		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager. Date/time logged by Voyager.
	NB Due Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Item Properties	CH	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
	Fee Acknowledged	BO	Not referenced by Voyager.
	Cancel	BI	Supported. Flags last charge transaction for this item/patron to be reversed. Y (Yes) or N (No).
Checkout Response (12)			
	OK		Supported. 1=OK
	Renewal OK		Supported.
	Magnetic Media		Supported.
	Desensitize		Supported.
	Transaction Date		Supported. Current date/time.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Due Date	AH	Supported. In Voyager date format, `YYYY-MM-DD HH24:MI:SS`.
	Fee Type	BT	Not supported.
	Security Inhibit	CI	Not supported.
	Currency Type	BH	Not supported.
	Fee Amount	BV	Not supported.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Item Properties	CH	Not supported.
	Transaction ID	BK	Not supported.
	Screen Message	AF	Supported. Block or fail messages.
	Print Line	AG	Not supported.
Hold (15)			Not supported.
Hold Response (16)			Not supported.
Item Information (17)			
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Item Identifier	AB	Supported. Voyager item barcode.
	Terminal Password	AC	Not referenced by Voyager.
Item Information Response (18)			
	Circulation Status		Supported. `00-99`.
	Security Marker		Supported. Returned as `00` or `other`.
	Fee Type		Supported. Returned as `01` or unknown.
	Transaction Date		Supported. Current date/time.
	Hold Queue Length	CF	Supported. Length of item's request queue.
	Due Date	AH	Supported. In Voyager date format, `YYYY-MM-DD HH24:MI:SS`.
	Recall Date	CJ	Supported. In the format `YYYYMMDDZZZZHHMMSS`.
	Hold Pickup Date	CM	Not supported.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Owner	BG	Supported. Bibliographic record's owning library name.
	Currency Type	BH	Not supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Fee Amount	BV	Not supported.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Permanent Location	AQ	Supported. Item's permanent location name.
	Current Location	AP	Supported. Item's current location name.
	Item Properties	CH	Not supported.
	Screen Message	AF	Supported. Only if the transaction fails.
	Print Line	AG	Not supported.
Item Status Update (19)			Not supported.
Item Status Update Response (20)			Not supported.
Patron Status Request (23)			
	Language		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
Patron Status Response (24)			
	Patron Status		Supported.
	Language		Supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Transaction Date		Supported.
	Institution ID	AO	Supported.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Personal Name	AE	Supported. Patron name (first, middle, last).
	Valid Patron	BL	Not supported.
	Valid Patron Password	CQ	Not supported.
	Currency Type	BH	Not supported.
	Fee Amount	BV	Supported. Total fees. Decimal number in base currency.
	Screen Message	AF	Supported.
	Print Line	AG	Not supported.
Patron Enable Response (26)			Not supported.
Renew (29)			
	Third Party Allowed		Not referenced by Voyager. Handled by Voyager circulation policies.
	No Block		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager. Date/time logged by Voyager.
	NB Due Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Patron Password	AD	Not referenced by Voyager.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Not referenced by Voyager.
	Terminal Password	AC	Not referenced by Voyager.
	Item Properties	CH	Not referenced by Voyager.
	Fee Acknowledged	BO	Not referenced by Voyager.
Renew Response (30)			
	OK		Supported. 1=OK.
	Renewal OK		Supported.
	Magnetic Media		Supported.
	Desensitize		Supported.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Due Date	AH	Supported. In Voyager date format, YYYY-MM-DD HH24:MI:SS.
	Fee Type	BT	Not supported.
	Security Inhibit	CI	Not supported.
	Currency Type	BH	Not supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Fee Amount	BV	Not supported.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Item Properties	CH	Not supported.
	Transaction ID	BK	Not supported.
	Screen Message	AF	Supported. Block or fail messages.
	Print Line	AG	Not supported.
End Patron Session (35)			
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
End Session Response (36)			
	End Session		Supported. Y=Successful.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Screen Message	AF	Supported. Only if the transaction fails.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Print Line	AG	Not supported.
Fee Paid (37)			
	Transaction Date		Not referenced by Voyager.
	Fee Type		Supported.
	Payment Type		Supported. Based on [Payment Type Mapping] stanza in `selfchk.cfg` file.
	Currency Type		Supported. The Voyager base currency setting is applied.
	Fee Amount	BV	Supported.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Patron barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
	Fee Identifier	CG	Supported.
	Transaction ID	BK	Not referenced by Voyager.
Fee Paid Response (38)			
	Payment Accepted		Supported.
	Transaction Date		Supported.
	Institution ID	AO	Supported. Blank.
	Patron Identifier	AA	Supported. Patron barcode.
	Transaction ID	BK	Supported. Number.
	Screen Message	AF	Not supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Print Line	AG	Not supported.
Patron Information (63)			
	Language		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager.
	Summary		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
	Start Item	BP	Not referenced by Voyager.
	End Item	BQ	Not referenced by Voyager.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Patron Information Response (64)			
	Patron Status		Supported. The Patron Status is a series of numbered blocks that get reported to 3M. A Y in any position indicates that the condition is true. A blank in any position means that the condition is not true. With a few exceptions, Voyager blocks are easily mapped to 3M status numbers. The following statuses by position number are as follows: 0=Charge privileges denied. 1=Renewal privileges denied. 2=Recall privileges denied. 3=Hold privileges denied. 4=Card reported lost. 5=Too many items charged. 6=Too many items overdue. 7=Too many renewals. 8=Too many claims of items returned. 9=Too many items lost. 10=Excessive outstanding fines. 11=Excessive outstanding fees. 12=Recall overdue. 13=Too many items billed.
	Language		Supported. 000 (unknown) always.
	Transaction Date		Supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Hold Items Count		Supported. Number of pending hold items.
	Overdue Items Count		Supported.
	Charged Items Count		Supported.
	Fine Items Count		Supported. Not presently used but sent.
	Recall Items Count		Supported. Not presently used but sent.
	Unavailable Holds Count		Supported. Number of active holds.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Patron barcode.
	Personal Name	AE	Supported. First, middle, and last.
	Hold Items Limit	BZ	Not supported.
	Overdue Items Limit	CA	Supported. From policy group information.
	Charged Items Limit	CB	Supported. From policy group information.
	Valid Patron	BL	Supported. An `N` value is sent only when the barcode has a non-active status.
	Valid Patron Password	CQ	Supported. An `N` value is sent only when the received PIN does not match the stored PIN (invalid PIN).

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Currency Type	BH	Not supported.
	Fee Amount	BV	Supported.
	Fee Limit	CC	Not supported.
	Hold Items	AS	Supported. Barcode sent for each hold item.
	Overdue Items	AT	Supported. Barcode sent for each overdue item.
	Charged Items	AU	Supported. Barcode sent for each charged item.
	Fine Items	AV	Supported. Format based on description provided by 3M. Each element within the string shall be comma delimited. If a comma is part of a field, quotes must surround the text of that field. The following fields must appear in the order shown below: • Fee ID • Fee amount • Fee type • Item ID • Title ID • Fine description
	Recall Items	BU	Supported. Barcode sent for each recall item.
	Unavailable Hold Items	CD	Supported. Barcode sent for each active hold.
	Home Address	BD	Not supported.
	E-mail Address	BE	Not supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Home Phone Number	BF	Not supported.
	Screen Message	AF	Not supported.
	Print Line	AG	Not supported.
	Patron Type	PT	Voyager proprietary field. Voyager patron group code. Variable length, required field, 1-10 characters.
Renew All (65)			Not supported.
Renew All Response (66)			Not supported.
Login (93)			
	UID Algorithm		Not referenced by Voyager.
	PWD Algorithm		Not referenced by Voyager.
	Login User ID	CN	Supported. Voyager operator ID.
	Login Password	CO	Supported. Voyager operator password.
	Location Code	CP	Supported. Voyager circulation location code.
Login Response (94)			
	OK		Supported. 1=OK.
Request SelfCheck System Resend (96)			Not supported.
Request Circulation System Resend (97)			Not supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Circulation System Status (98)			
	On-line Status		Supported. 0=OK.
	Checkin OK		Supported.
	Checkout OK		Supported.
	Circulation System Renewal Policy		Supported.
	Status Update OK		Supported.
	Off-line OK		Supported.
	Timeout Period		Supported.
	Retries Allowed		Supported.
	Date / Time Sync		Supported. In the format YYYYMMDDZZZZHHMMSS.
	Protocol Version		Supported. In the format x.xx.
	Institution ID	AO	Supported. Returned with no data.
	Library Name	AM	Not supported.
	Supported Messages	BX	Supported.
	Terminal Location	AN	Not supported.
	Screen Message	AF	Supported.
	Print Line	AG	Not supported.
SelfCheck System (SC) Status (99)			
	Status Code		Supported. 0=OK.
	Max Print Width		Supported.

Table A-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Protocol Version		Supported. In the format x.xx.

ESIP Support in Voyager

B

Voyager ESIP Support

Optionally, you may use the enhanced SIP (ESIP) standard for command message support between your self-check system and Voyager Circulation. See Table B-1 for a list of ESIP command message support for Voyager. This is an extension of the 3M Standard Interchange Protocol, Version 2 (SIP2). Refer to `http://solutions.3m.com/wps/portal/3M/en_US/library/home/resources/protocols/` for more information regarding the 3M Standard Interchange Protocol.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Block Patron (01)			
	Card Retained		Supported. Y=barcode to be blocked.
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Blocked Card Msg	AL	Supported. Stored in patron note.
	Patron Identifier	AA	Supported. Voyager patron barcode.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Terminal Password	AC	Not referenced by Voyager.
Checkin (09)			
	No Block		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager. Date/time logged by Voyager.
	Return Date		Not referenced by Voyager. Determined by Voyager.
	Current Location	AP	Not referenced by Voyager. Based on the location code from Login Request.
	Institution ID	AO	Not referenced by Voyager.
	Item Identifier	AB	Supported. Voyager item barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Item Properties	CH	Not referenced by Voyager.
	Cancel	BI	Not referenced by Voyager. Unable to reverse a discharge.
	Staff Identifier		Supported. Voyager operator ID.
Checkin Response (10)			
	OK		Supported. 1=OK.
	Resensitize		Supported. Y/N/U.
	Magnetic Media		Supported. Y/N/U. Always sent as "U" or unknown.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Alert		Supported. A value of `Y` if the item alert flag is set in the `selfchk.cfg` file.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.
	Item Identifier	AB	Supported. Voyager item barcode.
	Permanent Location	AQ	Supported. Item's permanent location name.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Sort Bin	CL	Supported. See Table 4-1 on page 4-4 and Exceptional Status Processing on page 4-5.
	Patron Identifier	AA	Supported. Voyager patron barcode. See Patron Identifier on page 4-7.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Item Properties	CH	Supported. See Item Properties on page 4-7.
	Screen Message	AF	Supported. Block or fail messages.
	Print Line	AG	Not supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Collection Code	CR	Supported. Current location (temporary or permanent) provided. See Collection Code on page 4-7.
	Call Number	CS	Supported. Voyager item call number. See Call Number on page 4-8.
	Destination Location	CT	Supported. Where item should be sent. Included when the discharged item is to be routed to another Circulation happening location. **NOTE:** Only provided when item is discharged.
	Alert Type	CV	Supported. Type of alert for item. See Table 4-1 on page 4-4.
	Hold Patron ID	CY	Supported. Voyager patron ID. Included with response when discharged item has an active hold/recall request. (See Hold Patron Name/DA.) **NOTE:** Only provided when item is discharged.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Hold Patron Name	DA	Supported. Voyager patron name (first, middle, and last). Included with response when discharged item has an active hold/recall request. (See Hold Patron ID/CY.) **NOTE:** Only provided when item is discharged.
	Bib ID		Supported. MARC bibliographic field 001.
	ISBN		Supported. MARC bibliographic field 020‡a.
	LCCN		Supported. MARC bibliographic field 010‡a.
	Vendor Number		Not supported.
Checkout (11) **NOTE:** This request may only be called after a successful Patron Status Request.			
	SelfCheck System Renew Policy		Not referenced by Voyager. Handled by Voyager circulation policies.
	No Block		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager. Date/time logged by Voyager.
	NB Due Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Item Properties	CH	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
	Fee Acknowledged	BO	Not referenced by Voyager.
	Cancel	BI	Supported. Flags last charge transaction for this item/patron to be reversed. Y (Yes) or N (No).
	Staff Identifier		Supported. Voyager operator ID.
Checkout Response (12)			
	OK		Supported. 1=OK.
	Renewal OK		Supported. Y/N.
	Magnetic Media		Supported. Y/N/U. Always sent as "U" or unknown.
	Desensitize		Supported. Y/N/U.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Due Date	AH	Supported. In Voyager date format, YYYY-MM-DD HH24:MI:SS.
	Fee Type	BT	Not supported.
	Security Inhibit	CI	Not supported.
	Currency Type	BH	Not supported.
	Fee Amount	BV	Not supported.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Item Properties	CH	Not supported.
	Transaction ID	BK	Not supported.
	Screen Message	AF	Supported. Block or fail messages.
	Print Line	AG	Not supported.
	Bib ID		Supported. MARC bibliographic field 001.
	ISBN		Supported. MARC bibliographic field 020‡a.
	LCCN		Supported. MARC bibliographic field 010‡a.
	Vendor Number		Not supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Hold (15) **NOTE:** This request may only be called after a successful Patron Status Request.			
	Hold Mode		Limited support. Plus (+) and minus (-) are supported.
	Expiration Date	BW	Supported. In the format YYYYMMDDZZZZHHMMSS. (not needed after date)
	Pickup Location	BS	Voyager location code.
	Patron Identifier	AA	Voyager patron barcode.
	Article Identifier		Supported (partial). Field position that contains one of the following fields: <item identifier>=Voyager item barcode. <item key id>=Voyager item record ID (Voyager enhancement). Not supported: <ISBN>, <vendor number>, <LCCN>, and <Bib Id> (sent in addition to the article ID).

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Bibliographic ID		Voyager enhancement. MARC bibliographic field 001. **NOTE:** The <Bib Id> and an optional article identifier must be sent in order to place a hold. If the <Bib Id> is sent without and article identifier, a title-level hold is placed. If the article identifier is also sent, a copy-level hold is placed.
	Staff Identifier		Supported. Voyager operator ID.
	Transaction Date		Not referenced by Voyager.
	Hold Type	BY	Not referenced by Voyager. If the title identifier (Bib ID) is sent, the request is applied for any copy of the title. If the item identifier (item barcode) is sent, the request is applied to the specified copy. This particular field is ignored.
	Institution ID	AO	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
	Title Identifier	AJ	Not referenced by Voyager.
	Terminal Password	AC	Not referenced by Voyager.
	Fee Acknowledged	BO	Not referenced by Voyager.
Hold Response (16)			
	OK		Supported. 1=OK.
	Available		Supported. Y/N.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Transaction Date		Supported. Current date/time.
	Expiration Date	BW	Supported. In the format YYYYMMDDZZZZHHMMSS.
	Pickup Location		Not supported.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Screen Message	AF	Supported. Only if the transaction fails.
	Bibliographic ID		Supported. MARC bibliographic field 001.
	ISBN		Supported. MARC bibliographic field 020‡a.
	LCCN		Supported. MARC bibliographic field 010‡a.
	Queue Position	BR	Not supported.
	Print Line	AG	Not supported.
	Vendor Number		Not supported.
Item Information (17)			
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Item Identifier	AB	Supported. Voyager item barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Group-level Identifier		Support (partial). Field position that contains the following field: <BibId>, MARC bibliographic field 001. Not supported: <Title>, <ISBN>, <vendor number>, and <LCCN>.
	Staff Identifier		Not supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Item Information Response (18) If more than one item information record is being returned in the same response message: 18<ok><item information record><delimiter><item information record><delimiter> <delimiter>=\t (horizontal tab) <item information record>=<circulation status><security marker><fee type><transaction date><hold queue length><due date><recall date><hold pickup date><item identifier><title identifier><owner><currency type><fee amount><media type><permanent location><current location><item properties><screen message><print line>.			
	Circulation Status		Supported. `00-99`.
	Security Marker		Supported. Returned as `00` or `other`.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Fee Type		Supported. Returned as `01` or unknown.
	Transaction Date		Supported. Current date/time.
	Hold Queue Length	CF	Supported. Length of item's request queue.
	Due Date	AH	Supported. In Voyager date format, `YYYY-MM-DD HH24:MI:SS`.
	Recall Date	CJ	Supported. In the format `YYYYMMDDZZZZHHMMSS`.
	Hold Pickup Date	CM	Not supported.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.
	Owner	BG	Supported. Bibliographic record's owning library name.
	Currency Type	BH	Not supported.
	Fee Amount	BV	Not supported.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Permanent Location	AQ	Supported. Item's permanent location name.
	Current Location	AP	Supported. Item's current location name.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Item Properties	CH	Not supported.
	Screen Message	AF	Supported. Only if the transaction fails.
	Print Line	AG	Not supported.
	OK		Supported. 1=OK.
	Bib ID		Supported. MARC bibliographic field 001.
	ISBN		Supported. MARC bibliographic field 020‡a.
	LCCN		Supported. MARC bibliographic field 010‡a.
	Item Key ID		Voyager enhancement. Voyager item record ID number.
	Vendor Number		Not supported.
Item Status Update (19)			Not supported.
Item Status Update Response (20)			Not supported.
Patron Status Request (23)			
	Language		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Patron Group Code	ML	Supported. Patron group code. **NOTE:** This tag is referenced only if the immediately preceding patron status response resulted in a Valid Patron flag of “M” being returned (multiple match). This field indicates which patron group code to use for this validation attempt since the patron has more than one active patron group with the same barcode.
Patron Status Response (24)			
	Patron Status		Supported.
	Language		Supported.
	Transaction Date		Supported.
	Institution ID	AO	Supported.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Personal Name	AE	Supported. Patron name (first, middle, last).
	Valid Patron	BL	Supported. Y/N/M **NOTE:** If “M,” the patron has the same barcode linked to multiple active patron codes. The Patron Group Code field contains a list of group codes with “\t” delimiters.
	Valid Patron Password	CQ	Not supported.
	Currency Type	BH	Not supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Fee Amount	BV	Supported. Total fees. Decimal number in base currency.
	Screen Message	AF	Supported.
	Print Line	AG	Not supported.
	Patron Address	BD	Supported.
	Patron Email	BE	Supported.
	Patron Group Code	ML	Supported.
Patron Enable (25)			Not supported.
Patron Enable Response (26)			Not supported.
Renew (29) **NOTE:** This request may only be called after a successful Patron Status Request.			
	Third Party Allowed		Not referenced by Voyager. Handled by Voyager circulation policies.
	No Block		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager. Date/time logged by Voyager.
	NB Due Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Patron Password	AD	Not referenced by Voyager.
	Item Identifier	AB	Supported. Voyager item barcode.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Title Identifier	AJ	Not referenced by Voyager.
	Terminal Password	AC	Not referenced by Voyager.
	Item Properties	CH	Not referenced by Voyager.
	Fee Acknowledged	BO	Not referenced by Voyager.
	Staff Identifier		Supported. Voyager operator ID.
Renew Response (30)			
	OK		Supported. 1=OK.
	Renewal OK		Supported. Y/N.
	Magnetic Media		Supported. Y/N/U. Always sent as “U” or unknown.
	Desensitize		Supported. Y/N/U.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Item Identifier	AB	Supported. Voyager item barcode.
	Title Identifier	AJ	Supported. MARC bibliographic field 245‡a.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Due Date	AH	Supported. In Voyager date format, `YYYY-MM-DD HH24:MI:SS`.
	Fee Type	BT	Not supported.
	Security Inhibit	CI	Not supported.
	Currency Type	BH	Not supported.
	Fee Amount	BV	Not supported.
	Media Type	CK	Supported. Based on Voyager item type. See [Media Type] Stanza (CK) on page 4-5.
	Item Properties	CH	Not supported.
	Transaction ID	BK	Not supported.
	Screen Message	AF	Supported. Block or fail messages.
	Print Line	AG	Not supported.
	Bibliographic ID		Supported. MARC bibliographic field 001.
	ISBN		Supported. MARC bibliographic field 020‡a.
	LCCN		Supported. MARC bibliographic field 010‡a.
	Vendor Number		Not supported.
End Patron Session (35)			
	Transaction Date		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Terminal Password	AC	Not referenced by Voyager.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Patron Password	AD	Not referenced by Voyager.
End Session Response (36)			
	End Session		Supported. Y=Successful.
	Transaction Date		Supported. Current date/time.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Voyager patron barcode.
	Screen Message	AF	Supported. Only if the transaction fails.
	Print Line	AG	Not supported.
Fee Paid (37)			
	Transaction Date		Not referenced by Voyager.
	Fee Type		Supported.
	Payment Type		Supported. Based on [Payment Type Mapping] stanza in `selfchk.cfg` file.
	Currency Type		Supported. The Voyager base currency setting is applied.
	Fee Amount	BV	Supported.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported. Patron barcode.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Fee Identifier	CG	Supported.
	Transaction ID	BK	Not referenced by Voyager.
Fee Paid Response (38)			
	Payment Accepted		Supported.
	Transaction Date		Supported.
	Institution ID	AO	Supported. Blank.
	Patron Identifier	AA	Supported. Patron barcode.
	Transaction ID	BK	Supported. Number.
	Screen Message	AF	Not supported.
	Print Line	AG	Not supported.
Patron Information (63)			
	Language		Not referenced by Voyager.
	Transaction Date		Not referenced by Voyager.
	Summary		Not referenced by Voyager.
	Institution ID	AO	Not referenced by Voyager.
	Patron Identifier	AA	Supported.
	Terminal Password	AC	Not referenced by Voyager.
	Patron Password	AD	Not referenced by Voyager.
	Start Item	BP	Not referenced by Voyager.
	End Item	BQ	Not referenced by Voyager.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Patron Information Response (64)			
	Patron Status		Supported. The Patron Status is a series of numbered blocks that get reported to 3M. A Y in any position indicates that the condition is true. A blank in any position means that the condition is not true. With a few exceptions, Voyager blocks are easily mapped to 3M status numbers. The following statuses by position number are as follows: 0=Charge privileges denied. 1=Renewal privileges denied. 2=Recall privileges denied. 3=Hold privileges denied. 4=Card reported lost. 5=Too many items charged. 6=Too many items overdue. 7=Too many renewals. 8=Too many claims of items returned. 9=Too many items lost. 10=Excessive outstanding fines. 11=Excessive outstanding fees. 12=Recall overdue. 13=Too many items billed.
	Language		Supported. 000 (unknown) always.
	Transaction Date		Supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Hold Items Count		Supported. Number of pending hold items.
	Overdue Items Count		Supported.
	Charged Items Count		Supported.
	Fine Items Count		Supported. Not presently used but sent.
	Recall Items Count		Supported. Not presently used but sent.
	Unavailable Holds Count		Supported. Number of active holds.
	Institution ID	AO	Supported. Returned with no data.
	Patron Identifier	AA	Supported. Patron barcode.
	Personal Name	AE	Supported. First, middle, and last.
	Hold Items Limit	BZ	Not supported.
	Overdue Items Limit	CA	Supported. From policy group information.
	Charged Items Limit	CB	Supported. From policy group information.
	Valid Patron	BL	Supported. An `N` value is sent only when the barcode has a non-active status.
	Valid Patron Password	CQ	Supported. An `N` value is sent only when the received PIN does not match the stored PIN (invalid PIN).

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Currency Type	BH	Not supported.
	Fee Amount	BV	Supported.
	Fee Limit	CC	Not supported.
	Hold Items	AS	Supported. Barcode sent for each hold item.
	Overdue Items	AT	Supported. Barcode sent for each overdue item.
	Charged Items	AU	Supported. Barcode sent for each charged item.
	Fine Items	AV	Supported. Format based on description provided by 3M. Each element within the string shall be comma delimited. If a comma is part of a field, quotes must surround the text of that field. The following fields must appear in the order shown below: • Fee ID • Fee amount • Fee type • Item ID • Title ID • Fine description
	Recall Items	BU	Supported. Barcode sent for each recall item.
	Unavailable Hold Items	CD	Supported. Barcode sent for each active hold.
	Home Address	BD	Not supported.
	E-mail Address	BE	Not supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Home Phone Number	BF	Not supported.
	Screen Message	AF	Not supported.
	Print Line	AG	Not supported.
	Patron Type	PT	Voyager proprietary field. Voyager patron group code. Variable length, required field, 1-10 characters.
Renew All (65)			Not supported.
Renew All Response (66)			Not supported.
Create Bib Record Request (81) (Voyager enhancement. Fields supported as described.)			
	Staff Identifier		Voyager operator ID.
	Title Identifier		MARC bibliographic field 245‡a.
	Item Identifier		Voyager item barcode.
	ISBN		MARC bibliographic field 020‡a.
	LCCN		MARC bibliographic field 010‡a.
	Bibliographic Type		MARC bibliographic leader 06. Default value when field is not sent=a - book.
	Bibliographic Level		MARC bibliographic leader 07. Default value when field is not sent=m - monograph

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Location Code		MARC holdings 852‡a. Default value when field is not sent=default location code as defined in the Voyager configuration for the log-in location.
	Call Number		MARC holdings 852‡h. Default value when field is not sent=blank.
	Call Number Type		MARC holdings 852‡ indicator 1. Default value when field is not sent=blank.
	Transaction Date		Not supported.
	Institution ID		Not supported.
	Terminal Password		Not supported.
	Vendor Number		Not supported.
Create Bib Record Response (82) (Voyager enhancement. Fields supported as described.)			
	OK		1=OK.
	Item Key ID		Voyager item ID.
	Bibliographic ID		MARC bibliographic field 001.
	Item Identifier		Not supported.
	Title Identifier		Not supported.
	Vendor Number		Not supported.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Hide Bib Record Request (83) (Voyager enhancement. Fields supported as described.) **NOTE:** This request may not be necessary since the bibliographic record can easily be hidden (suppressed) during the create process.			
	Bibliographic ID		MARC bibliographic field 001.
	Staff Identifier		Voyager operator ID.
Hide Bib Record Response (84) (Voyager enhancement. Fields supported as described.)			
	OK		1=OK.
	Bibliographic ID		MARC bibliographic field 001.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Delete Bib Record Request (85) (Voyager enhancement. Fields supported as described.) **NOTE:** Cascades delete of the specified bibliographic record and any linked holds and item records provided that those records are eligible for deletion (not involved in any outstanding circulation transactions).			
	Staff Identifier		Voyager operator ID.
	Item Identifier		Voyager item barcode.
	Bibliographic ID		MARC bibliographic field 001.
	Transaction Date		Not supported.
	Institution ID		Not supported.
	Title Identifier		Not supported.
	Terminal Password		Not supported.
Delete Bib Record Response (86) (Voyager enhancement. Fields supported as described.)			
	OK		1=OK.
	Bibliographic ID		MARC bibliographic field 001.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
Recall Request (87) (Voyager enhancement. Fields supported as described.) **NOTE:** This request may only be called after a successful Patron Status Request and should be handled in the same manner as Hold Request. The only difference between a recall and a hold is that the recall is always placed on a specific item while a hold may be placed on a specific item or all items linked to a title.			
	Recall Mode		Limited supported. Plus (+) and minus (-) are supported. Asterisk (*) hold editing is not supported.
	Expiration Date	BW	In the format YYYYMMDDZZZZHHMMSS. (not needed after date)
	Pickup Location	BS	Voyager location code.
	Patron Identifier	AA	Voyager patron barcode.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Article Identifier		Supported: Field position that contains one of the following fields: <item identifier>=Voyager item barcode <item key id>=Voyager item record ID Not supported: <ISBN>, <vendor number>, <LCCN>, and <Bib Id>
	Bibliographic ID		MARC bibliographic field 001.
	Staff Identifier		Voyager operator ID.
	Transaction Date		Not supported.
	Institution ID	AO	Not supported.
	Due Date	AH	Not supported.
	Terminal Password	AC	Not supported.
Recall Response (88) (Voyager enhancement. Fields supported as described.)			
	OK		1=OK.
	Transaction Date		Current date/time.
	Expiration Date	BW	In the format YYYYMMDDZZZZHHMMSS. (not needed after date)
	Pickup Location	BS	Not supported.
	Institution ID	AO	Returned with no data.
	Patron Identifier	AA	Voyager patron barcode.
	Item Identifier	AB	Voyager item barcode.
	Title Identifier	AJ	MARC bibliographic field 245‡a.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Screen Message	AF	Only if the transaction fails.
	Bibliographic ID		MARC bibliographic field 001.
	ISBN		MARC bibliograhic field 020‡a.
	LCCN		MARC bibliographic field 010‡a.
	Print Line	AG	Not supported.
	Vendor Number		Not supported.
Login (93)			
	UID Algorithm		Not referenced by Voyager.
	PWD Algorithm		Not referenced by Voyager.
	Login User ID	CN	Supported. Voyager operator ID.
	Login Password	CO	Supported. Voyager operator password.
	Location Code	CP	Supported. Voyager circulation location code.
Login Response (94)			
	OK		Supported. 1=OK.
Request SelfCheck System Resend (96)			Not supported.
Request Circulation System Resend (97)			Not supported.
Circulation System Status (98)			
	On-line Status		Supported. 0=OK.
	Checkin OK		Supported. Y/N.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Checkout OK		Supported. Y/N.
	Circulation System Renewal Policy		Supported. Y/N.
	Status Update OK		Supported. Y/N.
	Off-line OK		Supported. Y/N.
	Timeout Period		Supported.
	Retries Allowed		Supported.
	Date / Time Sync		Supported. In the format YYYYMMDDZZZZHHMMSS.
	Protocol Version		Supported. In the format x.xx.
	Institution ID	AO	Supported. Returned with no data.
	Library Name	AM	Not supported.
	Supported Messages	BX	Supported.
	Terminal Location	AN	Not supported.
	Screen Message	AF	Supported.
	Print Line	AG	Not supported.
SelfCheck System (SC) Status (99)			
	Status Code		Supported. 0=OK.
	Max Print Width		Supported.
	Protocol Version		Supported. In the format x.xx.

Table B-1. SIP2 Command Messages Support

Command	Field	Field ID	Description/Notes
	Enhanced		Voyager enhancement. Y/N value options. Y=CPS enhancements to existing 3M messaging is utilized. N=Only standard 3M SIP messaging utilized.

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