

Put it Away with a Barcode

Barcode Locations in Aleph

Billy Rawles, Senior Database Engineer

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

Introduction

Billy Rawles, Senior Database Engineer

38 years IT experience

28 Years with Church History

The Church of Jesus Christ of Latter-day Saints

World Wide Church

14 Million Members

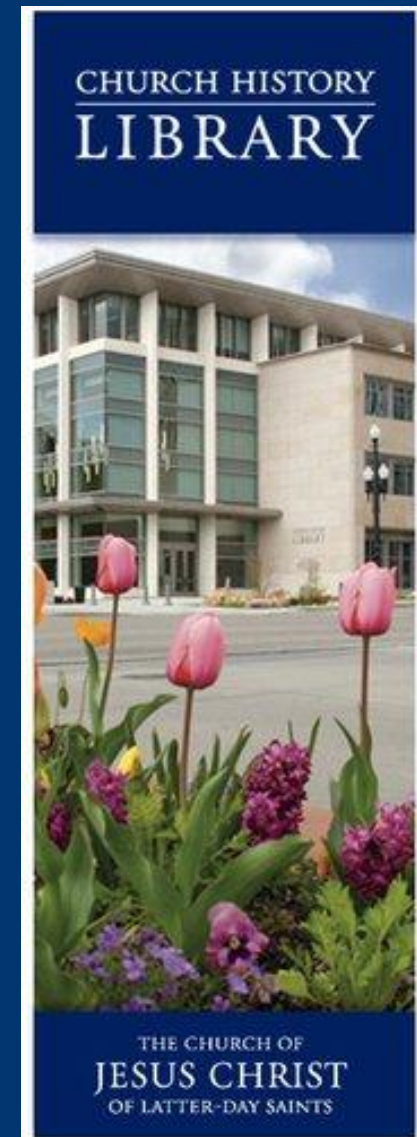
Church Headquarters in Salt Lake City. Utah.

Church History Library

Collections consist of manuscripts, books, Church records, photographs, oral histories, architectural drawings, pamphlets, newspapers, periodicals, maps, microforms, and audiovisual materials. The collection continues to grow annually and is a prime resource for the study of Church History. Our collection contains approximately:

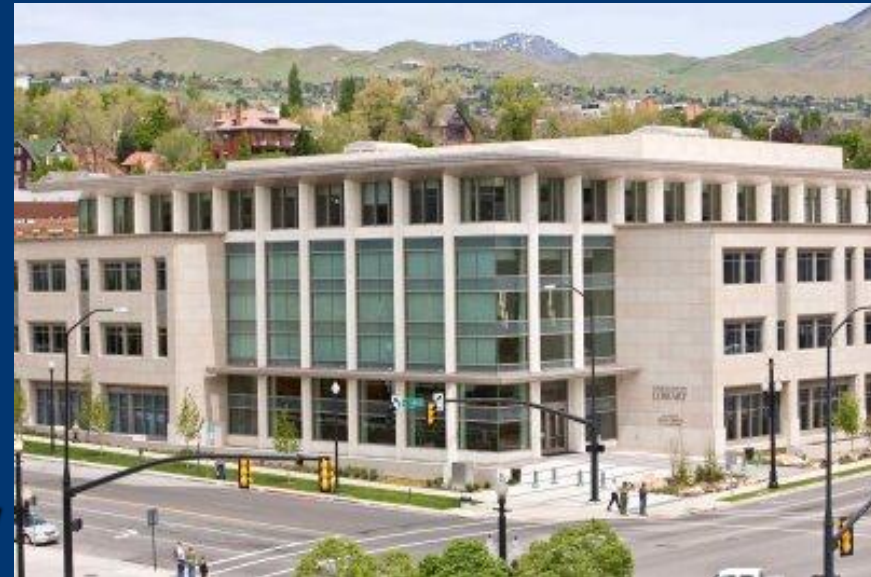
- 270,000 books, pamphlets, magazines, and newspapers
- 240,000 collections of original, unpublished records (journals, diaries, correspondence, minutes, etc.)
- 13,000 photograph collections
- 23,000 audiovisual items

- Library, Archives, and Museum collections



Storage Facilities

- Open Stacks in the Library
 - About 1000 books
 - Stored by call number
- Closed Stacks in the Library
 - Ten Main Rooms kept at 55 Degrees, 35% humidity
 - Two Rooms kept at -4 Degrees
- Granite Mountain Records Vault
 - Off site storage facility



History

- We implemented Aleph in October 2010
- Old System
 - Assigned barcode's to shelf locations
 - Items assigned to a location using the barcode
 - Audit of shelf done with barcodes

Storage Containers

A storage container is a box or microfilm reel that has material from multiple collections

Barcode Standard

Locations – 10 digit numeric

Items and Storage Containers – 12 digit numeric

Manage Locations and Storage Containers

- Locations and Containers are created as Items in Aleph
- Created BIB records

The screenshot shows the ALEPH Cataloging interface. The window title is 'ALEPH Cataloging - Version LDAP Library: Main BIB Library (LDS01) Server: alephstage.ldschurch.org:6991 (20.01) User: rawlesba'. The menu bar includes 'ALEPH View Cataloging Items Edit Actions Edit Text Record Manager Remote Services Help'. The main area displays a record for 'MX System No. 13 SSTKS - 2 S - location management only () Year:'. The record details are as follows:

<i>Leader</i>	LDR	----	^^^^^nam^a22^^^^^^a^4500
<i>Control No.</i>	001	----	000000013
<i>Control No. ID</i>	003	----	org.ldschurch.hmms
<i>Date and Time</i>	005	----	20101025
<i>Fixed Data</i>	008	----	^^^^^^n^^^^^^^xx^^^^^^^ ^^^^^^eng^^
<i>Main Title</i>	245	00 a	SSTKS - 2 S - location management only
<i>Owner</i>	OWN	a	LOCATION

- Two Material Types
 - LOC for locations
 - CONT for storage containers

Seq.	Barcode	Sublibrary	Item/Cont Desc
20841	1001399949	Secure Stacks	2 S 7 8 1
20842	1001399950	Secure Stacks	2 S 7 8 2
20843	1001399951	Secure Stacks	2 S 7 8 3
20844	1001399952	Secure Stacks	2 S 7 8 4
20845	1001399953	Secure Stacks	2 S 7 8 5
20846	1001399954	Secure Stacks	2 S 7 8 6
20847	1001399955	Secure Stacks	2 S 7 8 7

Columns used in Item Record (Z30)

- Call Number 2 – Location Description
 - Displayed in Aleph GUI and on Printed Call Slips
- Shelf Report Number – Location Barcode
 - To maintain the assigned location
- On Shelf Date – Date location assigned

Z30_COLLECTION
Z30_CALL_NO_TYPE
Z30_CALL_NO
Z30_CALL_NO_KEY
Z30_CALL_NO_2_TYPE
Z30_CALL_NO_2
Z30_CALL_NO_2_KEY
Z30_DESCRIPTION
Z30_NOTE_OPAC
Z30_NOTE_CIRCULATION
Z30_NOTE_INTERNAL
Z30_ORDER_NUMBER
Z30_INVENTORY_NUMBER
Z30_INVENTORY_NUMBER_DATE
Z30_LAST_SHELF_REPORT_DATE
Z30_PRICE
Z30_SHELF_REPORT_NUMBER
Z30_ON_SHELF_DATE
Z30_ON_SHELF_SEQ
Z30_REC_KEY_2
Z30_REC_KEY_3
Z30_PAGES
Z30_ISSUE_DATE

We do not use the Aleph Shelf Reports.

Database Trigger control of items

- Only the Put-Away program can:
 - Assign a location barcode (SHELF REPORT NUMBER)
 - Modify the location description (CALL NO 2)
- If location barcode (SHELF REPORT NUMBER) is assigned the item cannot be deleted
- Sub-library of the item is based on the sub-library of its location
- We have a barcode that will clear the location barcode (SHELF REPORT NUMBER) and location description (CALL NO 2)

Put-Away program

- JAVA application
- Changed the existing program to interface with Aleph
- Query data directly from the Oracle Database
- Update Z30 item table using the Aleph API
- Used on a wireless laptop on a cart in storage area

Put-Away Security

Staff user in Aleph are assigned privileges to execute Put-Away process

The screenshot shows a 'User Password Information' dialog box with the following fields and values:

User:	QA_LIB	Name:	QA Library Test User
Password:		Department:	AUDIT;PUTAWAY
User Library:	LDS50	Note 1:	
Cataloger Level:	00	Note 2:	
Function Proxy:	CIRCADM_QA	Email:	
Cataloger Proxy:		Address:	
Budget Proxy:		Telephone:	
Order Unit/Sublibraries:		Expiration Date:	00/00/0000
Cat. OWN ID:	LIBRARY	Last Alert Date:	00/00/0000
Cat. OWN Permission:	LIBRARY	<input type="checkbox"/> Blocked	
Circ. Override Level:	50	Block Reason:	
ILL Unit:		ERM User:	
		ERM Password:	

Buttons: OK, Cancel, Help

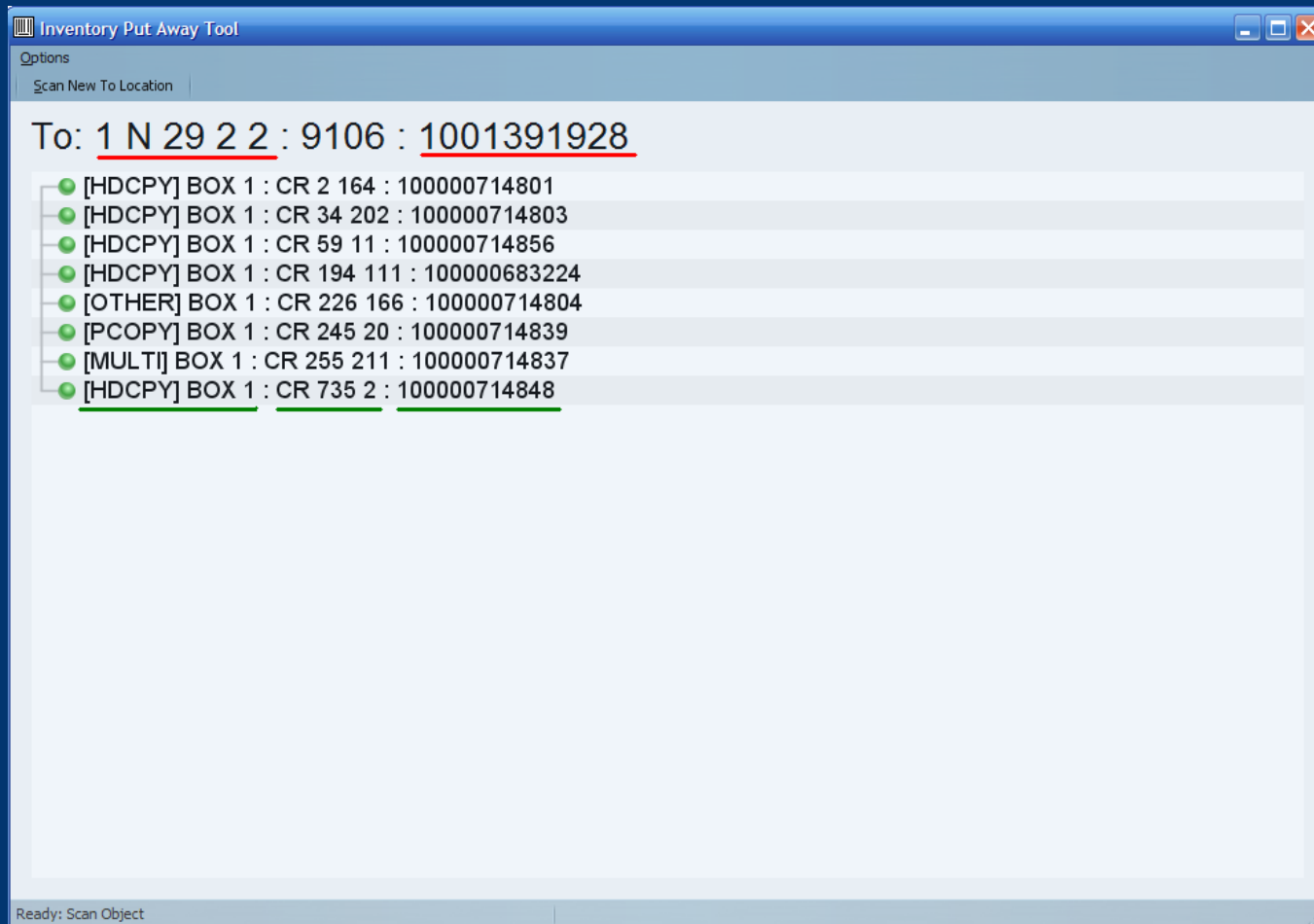
Put-Away Process

- Scan the barcode of the location
 - Displays the location scanned
 - Displays all the items currently at that location
- Scan the item to be placed at the location
 - The item is displayed
 - Item is updated
 - Shelf Report Number barcode of location
 - Call Number 2 description of location
 - On Shelf Date today's date
 - Sub-Library locations sub-library

Put-Away

Location – Description and Barcode

Items on Shelf – Description, Call Number, and Barcode



Put-Away

Scan item to location

The screenshot displays the 'Inventory Put Away Tool' interface. The window title is 'Inventory Put Away Tool' and the menu bar includes 'Options' and 'Scan New To Location'. The main content area shows the destination location 'To: 1 N 29 2 2 : 9106 : 1001391928' and a list of items to be scanned. Each item is preceded by a green circular icon. The list includes:

- [HDCPY] BOX 1 : CR 2 164 : 100000714801
- [HDCPY] BOX 1 : CR 34 202 : 100000714803
- [HDCPY] BOX 1 : CR 59 11 : 100000714856
- [HDCPY] BOX 1 : CR 194 111 : 100000683224
- [OTHER] BOX 1 : CR 226 166 : 100000714804
- [PCOPY] BOX 1 : CR 245 20 : 100000714839
- [MULTI] BOX 1 : CR 255 211 : 100000714837
- [HDCPY] BOX 1 : CR 735 2 : 100000714848

A second, smaller window is overlaid on the bottom right, showing the same interface but with an additional item highlighted in yellow:

- [PCOPY] BOX 1 : CR 302 137 : 100000714849

The status bar at the bottom left of the main window reads 'Ready: Scan Object'.

Put-Away

Shelf with Storage Containers



Put-Away

Storage Container with items



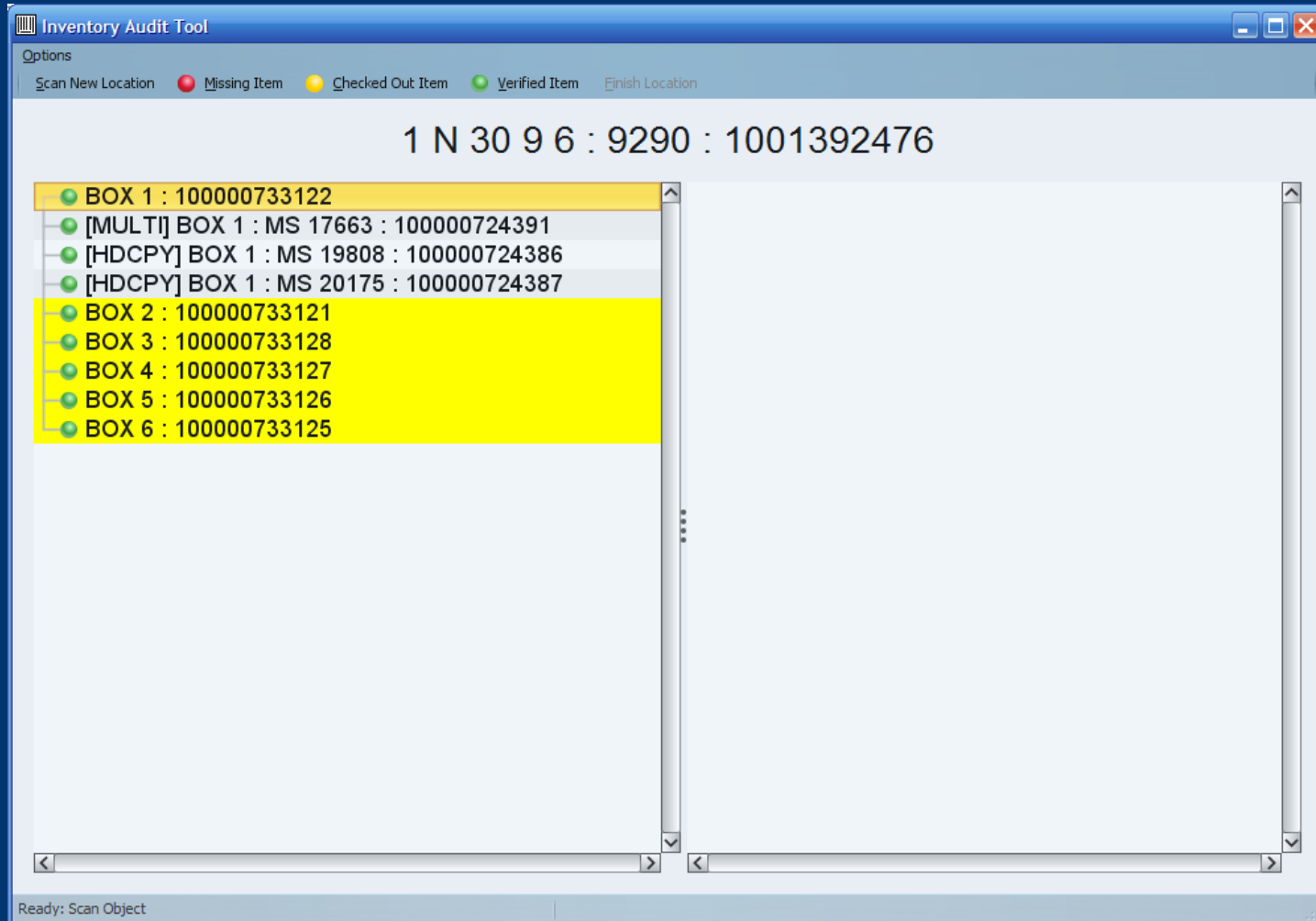
Shelf Audit

Shelf Audit Process

- Scan the location
 - Displays the location
 - Displays Items at the location in left column
- Scan the items
 - Moves the item to the right column
- Set status of items
 - Moves the item to the right column
- Finish Location
 - Sets the location as audit complete

Shelf Audit

Location Scan - Checked out Items



Shelf Audit

Last audit results

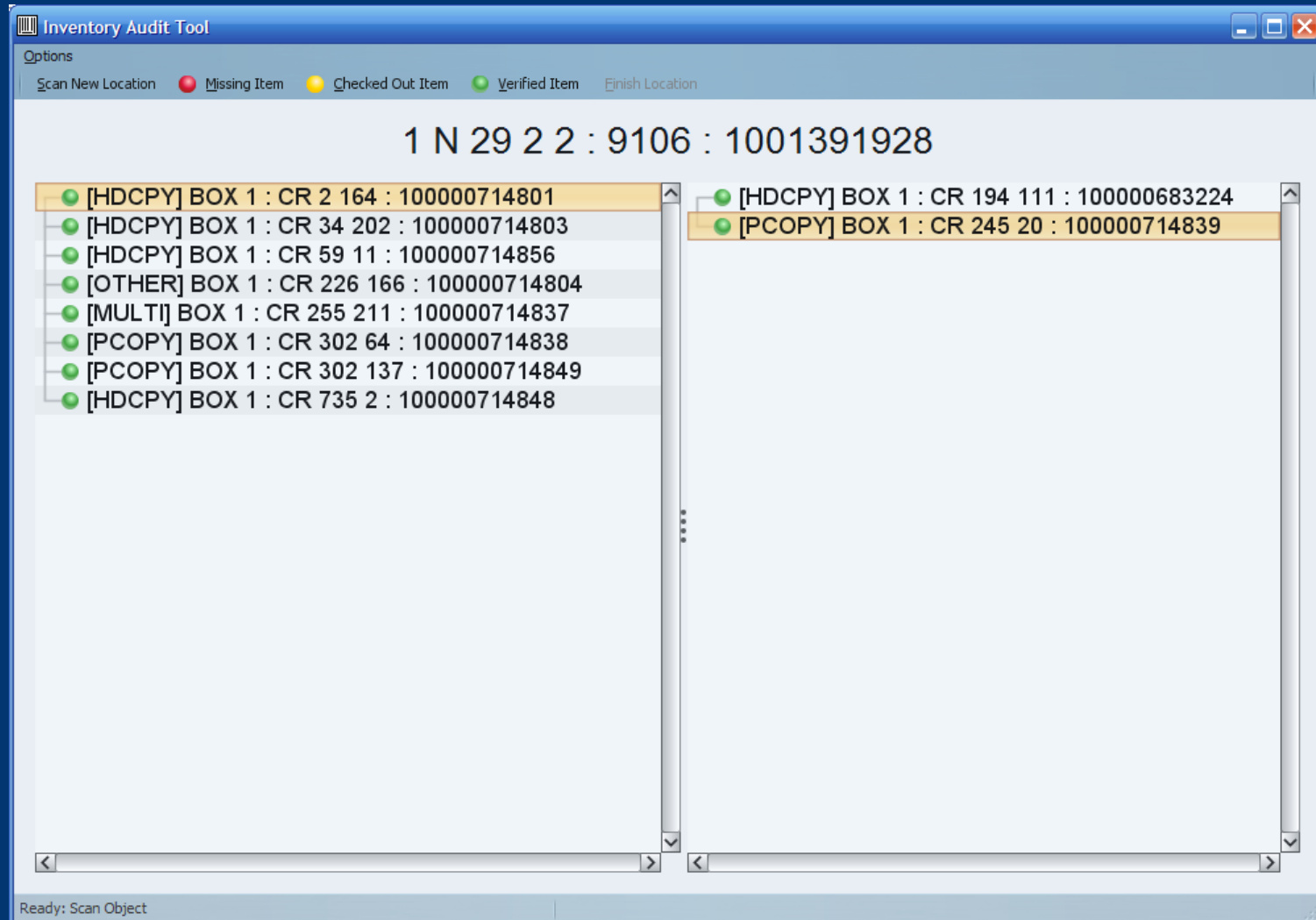
The screenshot shows the 'Inventory Audit Tool' window. At the top, there is a title bar and a menu bar with 'Options'. Below the menu bar, there are several status indicators: 'Scan New Location' (blue), 'Missing Item' (red circle), 'Checked Out Item' (yellow circle), 'Verified Item' (green circle), and 'Finish Location' (blue). The main area of the window displays the text '1 N 29 2 2 : 9106 : 1001391928'. Below this, there is a list of items, each with a status indicator and a text description. The first item is highlighted in yellow. The status indicators are: green for verified, red for missing, and yellow for checked out. The text descriptions are: '[HDCPY] BOX 1 : CR 2 164 : 100000714801', '[HDCPY] BOX 1 : CR 34 202 : 100000714803', '[HDCPY] BOX 1 : CR 59 11 : 100000714856', '[HDCPY] BOX 1 : CR 194 111 : 100000683224', '[OTHER] BOX 1 : CR 226 166 : 100000714804', '[PCOPY] BOX 1 : CR 245 20 : 100000714839', '[MULTI] BOX 1 : CR 255 211 : 100000714837', '[PCOPY] BOX 1 : CR 302 64 : 100000714838', '[PCOPY] BOX 1 : CR 302 137 : 100000714849', and '[HDCPY] BOX 1 : CR 735 2 : 100000714848'. The window also has a status bar at the bottom that says 'Ready: Scan Object'.

Status	Item Description
Verified	[HDCPY] BOX 1 : CR 2 164 : 100000714801
Verified	[HDCPY] BOX 1 : CR 34 202 : 100000714803
Verified	[HDCPY] BOX 1 : CR 59 11 : 100000714856
Verified	[HDCPY] BOX 1 : CR 194 111 : 100000683224
Verified	[OTHER] BOX 1 : CR 226 166 : 100000714804
Verified	[PCOPY] BOX 1 : CR 245 20 : 100000714839
Verified	[MULTI] BOX 1 : CR 255 211 : 100000714837
Missing	[PCOPY] BOX 1 : CR 302 64 : 100000714838
Verified	[PCOPY] BOX 1 : CR 302 137 : 100000714849
Verified	[HDCPY] BOX 1 : CR 735 2 : 100000714848

Shelf Audit

Item Scan

Each item scanned is moved to the right column



Shelf Audit

Item status

Missing Item

Check Out Item

Verified Item

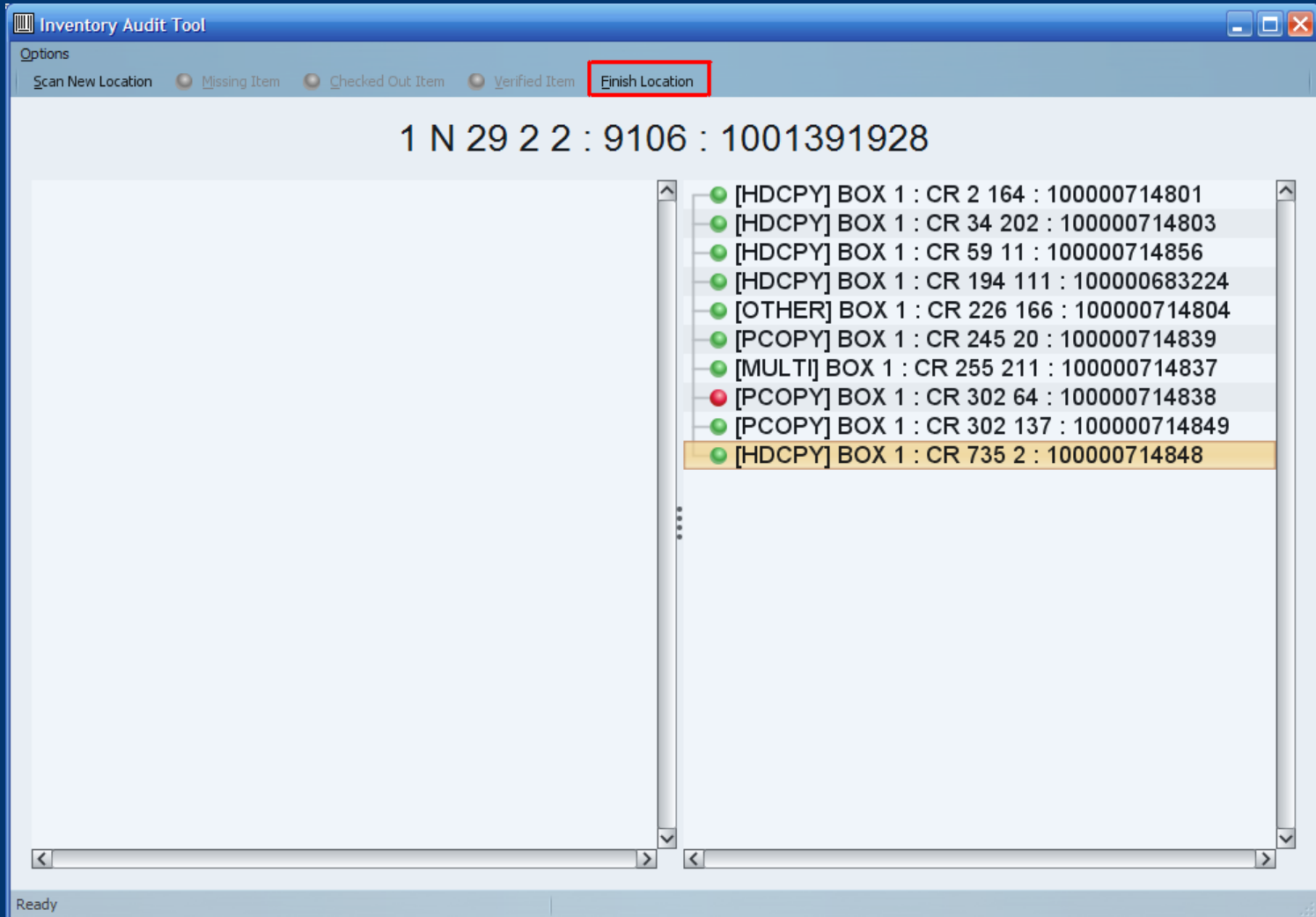
The screenshot shows the 'Inventory Audit Tool' window. At the top, there are options: 'Scan New Location', 'Missing Item' (red dot), 'Checked Out Item' (yellow dot), 'Verified Item' (green dot), and 'Finish Location'. The main display area shows a location identifier '1 N 29 2 2 : 9106 : 1001391928'. Below this, there are two columns of item lists. The left column contains items with green status indicators, and the right column contains items with green and red status indicators. The status of each item is determined by the color of the dot next to its ID.

Item ID	Status
[HDCPY] BOX 1 : CR 2 164 : 100000714801	Verified
[HDCPY] BOX 1 : CR 34 202 : 100000714803	Verified
[HDCPY] BOX 1 : CR 59 11 : 100000714856	Verified
[OTHER] BOX 1 : CR 226 166 : 100000714804	Verified
[MULTI] BOX 1 : CR 255 211 : 100000714837	Verified
[PCOPY] BOX 1 : CR 302 137 : 100000714849	Verified
[HDCPY] BOX 1 : CR 735 2 : 100000714848	Verified
[HDCPY] BOX 1 : CR 194 111 : 100000683224	Verified
[PCOPY] BOX 1 : CR 245 20 : 100000714839	Verified
[PCOPY] BOX 1 : CR 302 64 : 100000714838	Missing

Ready: Scan Object

Shelf Audit

Location Complete



Shelf Audit

We created two tables in the database

Item data stored in the database

USERNAME	AUDIT_DATE	AUDIT_TYPE	Z30_BARCODE	Z30_LOC_BARCODE
RAWLESBA	4/29/2011 7:44:15 AM	SCANNED	100000683224	1001391928
RAWLESBA	4/29/2011 7:44:43 AM	SCANNED	100000714839	1001391928
RAWLESBA	4/29/2011 7:47:03 AM	MISSING	100000714838	1001391928
RAWLESBA	4/29/2011 7:50:50 AM	VERIFIED	100000714801	1001391928
RAWLESBA	4/29/2011 7:50:52 AM	VERIFIED	100000714803	1001391928
RAWLESBA	4/29/2011 7:50:53 AM	VERIFIED	100000714856	1001391928
RAWLESBA	4/29/2011 7:50:54 AM	VERIFIED	100000714804	1001391928
RAWLESBA	4/29/2011 7:50:55 AM	VERIFIED	100000714837	1001391928
RAWLESBA	4/29/2011 7:50:56 AM	VERIFIED	100000714849	1001391928
RAWLESBA	4/29/2011 7:50:59 AM	VERIFIED	100000714848	1001391928

Location data stored in the database

USERNAME	AUDIT_DATE	AUDIT_TYPE	Z30_LOC_BARCODE
RAWLESBA	4/29/2011 7:51:11 AM	COMPLETE	1001391928

Reports have been created from this data to allow for the management of the audit process

Questions and Answers

Billy Rawles

rawlesba@ldschurch.org