Using an Interactive Excel Workbook and Alma Analytics for Inventory

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Limitations/Qualifications for this Inventory Tool

- Not a one-size-fits-all product
- Not real-time data retrieval
- Scalability not tested
- Single library, Institution Zone implementation
- Physical inventory, barcoded items

Presentation as implementation of an approach
Does require knowledge of VBA – used Web searches for coding ideas
To simplify security concerns, use of an Analytics Excel workbook data file
80k+ active item records in source file
Only Location Name data used as test, potential for use of Library
Object of inventory is to ensure cataloging information correct as well as presence in collection
Individual periodical issues not barcoded, will need different approach for inventory

Motivation for Physical Material Inventory

- Move to new building (with interim, temporary location)
- Weeding before some items put in temporary storage
- Migration 2019 to Alma (from Voyager)
- Review OCLC holdings, bibliographic record match
- Ensure accurate status of available items

Inspiration

Alma Inventory Tool

Anna Striker   (Team Leaders)   Terry Brady
(Project Manager)   (Developer)

Washington Research Library Consortium (WRLC) GitHub

https://github.com/WRLC/AlmaInventory

- Real-time API access to Alma data
- Flagged problem alerts
- Check item call number, title information
- Record of inventoried items, including problems

Conceptual Approach to Inventory Process

- Excel-based interface, intended for use with a laptop
- Uses Analytics report as basis for collection item information: avoid security implications for networked drive & API access
- Excel workbooks for the interface, standard Analytics report and inventoried item spreadsheet: flexibility of design
- Physical flags to identify problems, placed in materials brought to TS: combination color coding and text caption
- Use the inventoried list workbook to update item record 'Inventory date' as an Alma manual job and as record of problems (estimate investment of effort for corrections)

Excel VBA help/ideas readily available on Web, advantage of run-time testing
Use of OneDrive/other shared data sheets might allow multi-location inventory as well as simply access
Inventory done in the shelving area
Minimize need for authenticated networking access by using Analytics report
One day lag using Analytics
Manual Alma job to update item record Inventory date

Design Parameters for Interface

- Display Alma data associated with scanned barcode
- Use of visual indications for problems based on Analytics report data
- Ability to input select problems from physical item inspection
- Error message displays
- Add inventoried items to a list; manually batch process Alma item record inventory date

Inventoried Items.xlsm workbook used to record problem statistics – helpful to indicate work needed for corrections by staff

Interface – Opening Screen

	Stop Inventory		*Inventory Project*
Clear ⇨ [ ]	Enter Barcode *(Number begins 31745)*		<u>Reference</u>

	Check the Item			Problems to Flag				
	☐	☐	☐					
				Wrong Location	Not on Shelf/ on Loan	Sup-pressed	Process Error	Temp Loc Error
Barcode	Call Number	Title Page	Pieces					

Barcode	Call Number	Title Page	**Find Last Inventoried**
	Inventory Date		

Default active cell near Clear Button

The collection location name is displayed, the location name used as basis for identifying Wrong Location

Last Inventoried is based on last row of Inventoried workbook

Stop Inventory insured Inventoried workbook is saved before closing

Stop Inventory Clears interface and saves workbook

Clear button returns active cell

Not all cells are protected, currently conditional formatting data and saved inventory data are unprotected for macro processing tasks

Interface – Last Inventoried

	Stop Inventory			*Inventory Project*
Clear ⇨ [ ]	**Enter Barcode** *(Number begins 31745)*			<u>Reference</u>

	Check the Item			Problems to Flag				
	☐	☐	☐					
Barcode	*Call Number*	*Title Page*	*Pieces*	*Wrong Location*	*Not on Shelf/ on Loan*	*Sup-pressed*	*Process Error*	*Temp Loc Error*

745000531502	Z5064.C7 S54 1986 v. 1	The airline bibliography : the Salem College guide to sources on commercial aviation / Myron J. Smith, Jr. ; foreword by James P. Woolsey ; preface by R.E.G. Davies.	**Find Last Inventoried**
Barcode	*Call Number*	*Title Page*	
	2/13/2023		
	Inventory Date		

Based on the separate Inventoried Items.xlsm workbook.
The last row with data, not necessarily the item with the next call number/shelf mark.
If there was an error indicated in the Call Number (yellow) or Title (orange), it will be indicated. This is a signal to the inventory taker that data may have changed and an inventory manager should be consulted.

Interface – Localization

Stop Inventory

Clear ⇨ [ ]   **Enter Barcode** *(Number begins 31745)*

Streepjescode niet gevonden. ●Rode puntvlag en zoek volgend item.
[Google Translation 😊]

Inventory Project
Reference

	Check the Item			Problems to Flag				
☐		☐		☐				
Barcode	*Call Number*	*Title Page*	*Pieces*	*Wrong Location*	*Not on Shelf/ on Loan*	*Sup-pressed*	*Process Error*	*Temp Loc Error*

Barcode   *Call Number*   *Title Page*

Inventory Date

Find Last Inventoried

Most cells, and the buttons/message shapes, of the interface are protected. Editing requires unprotecting the worksheet.

Any of the text can be changed.

To expedite development, color-coded 'Problems to Flag' cells use conditional formatting, requiring data – not cell references. The data is camouflaged by using white font color.

Interface – Scanned Item

Stop Inventory

Clear ⇨   31745002405531   Enter Barcode *(Number begins 31745)*

Inventory Project
Reference

		Check the Item			Problems to Flag				
31745002405531	☑ QD65 .C72	☐ CRC handbook of chemistry and physics.	☐						
Barcode	*Call Number*	*Title Page*	*Pieces*	*Wrong Location*	*Not on Shelf/ on Loan*	*Sup-pressed*	*Process Error*	*Temp Loc Error*

Add Record to Inventoried

Find Last Inventoried

Barcode   *Call Number*   *Title Page*

Inventory Date

More than one problem to flag can be identified for shelved items
When physical item Call Number/Title Page/Pieces problems are found, the tick box is checked and flag color generated
Even with problems, items are recorded to the Inventoried workbook for statistical purposes and batch update to Alma item records
When item is added to Inventoried, the screen is automatically cleared
From the interface there is no facility to edit records (e.g., call number error identified and entry added to Inventory but tick box not checked)
Data, not color coding, added to the Inventoried workbook
Problem flagging by color based on Conditional Formatting in worksheet, would be better generated as a VBA routine

Organization of VBA Macros
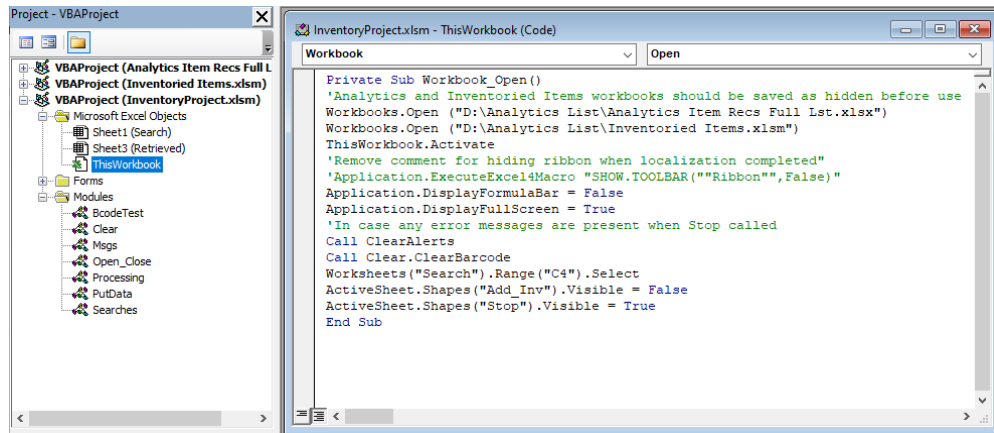
No orderly commenting in macros
Dead-end ideas commented out, left for future reference
Sheet2 was removed when separate Inventoried Items.xlsm workbook implemented
for recorded inventoried items

Alma Analytics Report and Inventoried Workbooks

'Analytics Item Recs Full Lst' – Report used for item data searching/retrieval

Physical Item Details								Location	Holding Details					Bibliographic Details		
Barcode	Base Status	Process Type	Inventory Date	Description	Pieces	Physical Item Id	Temporary Physical Location In Use	Location Name	Permanent Call Number	Normalized Call Number	Suppressed from Discovery	Suppressed from Discovery by Suppressed Location		MMS Id	Suppressed From Discovery	Title - 245

'Inventoried Data' – Replicates textual data transferred from 'Search' interface

When 'Exporting this analysis', Data for Excel is based on Criteria column arrangement

'Normal Call Number' and 'Description' sorted ascending – for personal use, not required for searching

Can use '=COUNTIF( )' formula for total of number of problems recorded in 'Inventoried Data' workbook for work statistics

Red Dot ('no barcode found') are tracked manually, not an option recorded
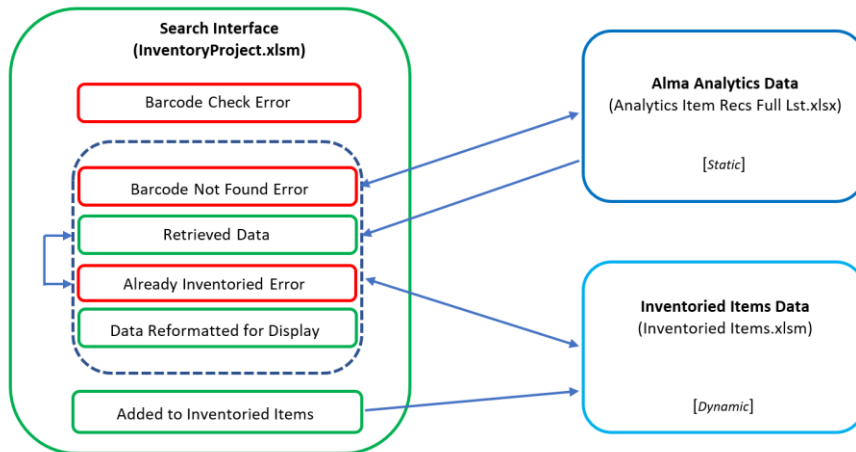
Because VBA macro ideas came from several WWW resources, coding is patchwork and could be streamlined

Barcode Check Error is based on local barcode prefix, used for staff who may accidentally scan ISBN or other publisher barcodes

Search interface Problems to Flag errors use conditional formatting in the worksheet, not VBA generated

Already Inventoried Error checks retrieved data from Analytics Item Recs Full Lst.xlsx for Inventoried date as well as Inventoried Items.xlsm

Inventoried Items Data workbook saved every time data is added from the interface

Inventory Equipment & Accessories

Red dot used both for item records not found and items which have lost the barcode
Flags are color coded and have captions

Follow-up Processing of Problems

- Red Dot Flags – 'No barcode found'
  - Cataloger reviewed
  - Acquisitions consulted for possible replacement or confirmed withdrawal
- Recorded call number/title problem flagged
  - Cataloger reviewed
  - Technician follow up
- Automatically generated problem flags
  - Technician correcting process problems
  - Cataloger involved with more technical problems
- For items on Loan, batch process item 'Fulfillment note' to pass materials to Technical Services when returned

- Red Dot Flags
  Possibly records deleted owing to Missing item, to be restored
  Items previously weeded in batch process to delete records but missed from physical removal
  Wrong barcode number entered previously or physically missing from item
- Recorded call number/title problems flagged
  Slight differences in series titles may cause flagging, perhaps a nuisance – better safe than sorry?
  Better choice of OCLC record now available
  Completely incorrect bibliographic record associated with item
  Spine label printed with incorrect information
  May not catch edition differences, work on principle that call number publication year might correlate
- Automatically generated problem flags
  Holdings collection location not updated in past
  Item not scanned when returned after loan
  Status such as Missing or Lost not updated from migration
  Other status may indicate types of follow-up: e.g., if materials are in transit

Questions

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Thank You

Graphic : https://huntlibrary.erau.edu/about/facilities