

Label + Serial Number Change

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Overview

- The Label Serial Number Project is intended to streamline the printing document/label process for construction by printing all documents/labels needed at the time when the shop order is scanned
- The system will also handle serial numbers, and automatically update and reset the count when needed based on serial numbers given out, the week, and the year
- The scanner is setup to press F9 when it is in use, which will trigger the program to start
 - A manual shop order print can be executed by pressing F9, typing the shop order out, then pressing Enter/Carriage Return
- Follow the instructions on the command prompt window to print the desired documents/labels
- Two additional instructional documents included in Documents\labelSerialNumberProject

Example Label Outputs



MADE IN CANADA
CAGE CODE: L9460

Module 3Ux5HP VPX ChMC P0 VITA 48.2 CC



MODEL# SHM200-01-010-011



ASSY# 02A000509-A01



SERIAL# 021370102



ORDER# 7000525600



MADE IN CANADA
Cage Code: L9460

Module 3Ux5HP VPX ChMC P0 VITA 48.2 CC



MODEL# SHM200-01-010-011



ASSY# 02A000509-A01



SERIAL# 021370102

Input: 100-240 VAC 10 AMPS MAX



SN: 021390109



Firmware



22A000005-A01

@Ship

New Serial Number List

NO.	SO.	PART ID / DESCRIPTION				AMT.	Date Printed: 9/16/21		
500042290000	200041330101	VPX6VR180-282-PG2-C Chassis 6U Dual VPX 8 Slots P&G w 4 VITA 67..				4,00			
PART ID / DESCRIPTION					AMT.	Page 1 sur 1			
02A000659-A01 SA Custom Configuration Solder Shorts LM					2,00				
021350117	021350118	021350119	021350120	021350121	021350122	021350123	021350124	021350125	
18A000035-A01 PSU AC-DC Modular 6 Slots 1k2W					1,00				
36213383	86003836	86006123	86006227	86006255	86006305	86006324	86006358	86006372	
86006420	86006507	86006523	86006533	86006534	86006552	86006685	86006740	86006741	
86006760	86006780	86006781							
18A000038-A01 PSU Module Dual 24V (5.0-28.0) 3A 72W/72W					1,00				
20159976	20160061	20160062	20160065	20160066	20160067	20160079	20160080	20160082	
20160085	20160099	20161700	20161701	20161707	20161708	20161719	20162904	20162906	
18A000043-A01 PSU Module 5V (3.2-6) 40A 200W					2,00				
20158841	80002322	80002338	80002410	80002467	80002478	80002489	80002494	80002526	
80002608	80002634	80002677	80002679	80002684	80002722	80002725	80002730	80002831	
80002843	80002893	80002946	80002969	80003018	80003176	80003235			
18A000044-A01 PSU Module 12V (6.0-15.0) 20A 240W					3,00				
20241897	20243894	20243895	20243919	20243921	20243927	20243929	20243930	20243934	
20243935	20243941	20243942	20243943	20243945	20243946	20243947	20243948	20243950	
20243951	20243956	20243958	20243960	80003255	80003317	80003366	80003509	80003525	
80003575	80003866	80003886	80004015	80004070	80004098	80004136	80004174	80004334	
80004350	80004411	80004564	80009795	80009879	80009893	80009926	80010028		
18A000058-A01 PSU AC-DC 48V 80-264VAC 400W					1,00				
EC065C7538	EC0A2U2733	EC0A2U2734	EC0A2U2735	EC0A2U3176	EC0A2U3177	EC0A2U3185	EC0A2U3186	EC065C7535	
EC0A2U2732									

New Quality Assurance Inspection Sheet



Assembly # : 02A000050-A01

Chassis 6U Dual VPX 8 Slots P&G w 4 VITA 67.3C LM

Checked By _____
Visual Inspection _____

Date _____

QA Inspection Sheet

Date 2021-10-22

Doc# 01A000035-A02
Page 1 of 2

Serial # 021390102

OK

Overall Aesthetic Appearance

- Scratches
- Dents
- Finish
- Cables tied down neatly
- Fingerprints, smudges (visible surfaces inside and out)

OK

Backplane(s)

Not Applicable

- Scratches

- Model/Serial number label
- Mounting screws tightened
- Digital GND mounting holes connect per shop order (yes or no)
- Screws for power elements tightened (A/R)
- Option jumpers properly configured (refer to configuration sheet or user manual)

OK

Hardware

- Rails properly mounted
- Card/Power Supply latches engage horizontal rails correctly
- Check card alignment and ease of insertion and extraction
- Screws tightened w/lock tight, screws heads undamaged

OK

Component Related Flaws

- Incorrect components / BOM mismatch
- Incorrect component insertion / orientation
- Compare assembly to the configuration sheet (1st off only)
- No foreign object present

OK

Cables and Wire Connections

- Connectors fully inserted (snaps locked)
- Lock washers used on all screw and nut connections
- Screws and nuts tightened
- Spades fully inserted / tight connection

OK

Labeling

- Serial number label (A/R)
- Model number label (A/R)
- Safety inspection labels (A/R)
- Power label (A/R), label to have the correct information (voltage and current)
- All serial numbers recorded (page 2)
- All labels correctly aligned and applied

OK

ChMM Verification

Not Applicable

- Verify 22A000035-A02 sticker is applied after programming
- Fan speed check, verify that the speed changes only with uppersensor
- All sensors (voltage/temp/fan speed) read correctly
- No alarm conditions exist



Functional Test

QA Inspection Sheet

Doc# 01A000035-A02
Page 2 of 2

- ☐ Fan speed control check
- ☐ Fan noise check
- ☐ Measure voltages
- ☐ Power on/off switch
- ☐ Electric noise check
- ☐ Card insertion test
- ☐ Verify front inserts are correctly inserted

Voltage	Tolerance	Value
+12V	11.4V to 12.6V	
+5V	4.875V to 5.25V	
3.3V	3.13V to 3.45V	
3.3V, AUX	3.13V to 3.45V	
+12V, AUX	11.4V to 12.6V	
-12V, AUX	11.4V to 12.6V	

Regulatory Test

- ☐ Ground continuity test
- ☐ AD/DC Hi pot test (1001V for 60 sec dwell with a 15 sec ramp time)

Not Applicable

NOTE: Call Regulatory Eng. if either test fails

Packaging

- ☐ Check foam inserts, box type

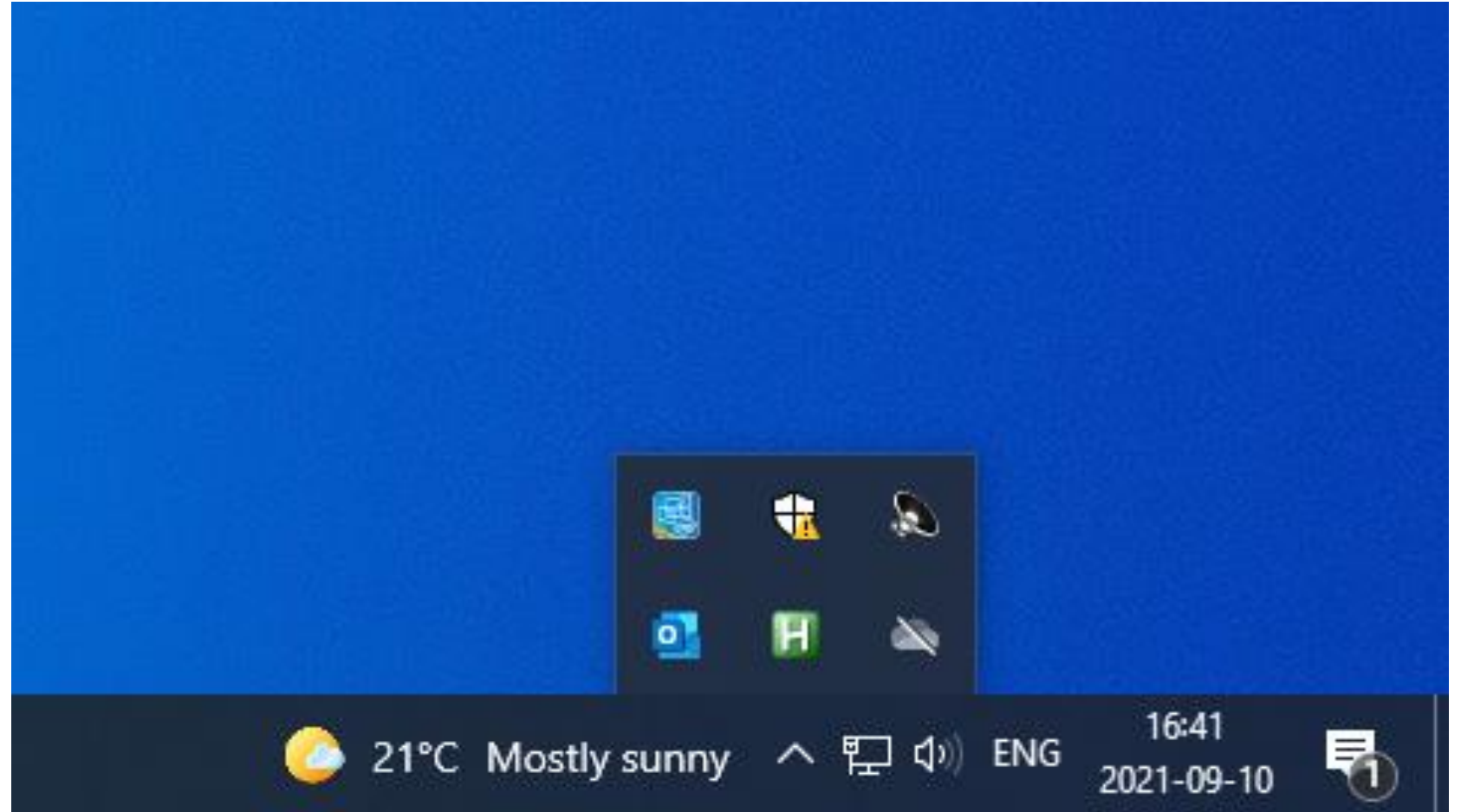
Notes:

How to Use the new Label Serial Number System

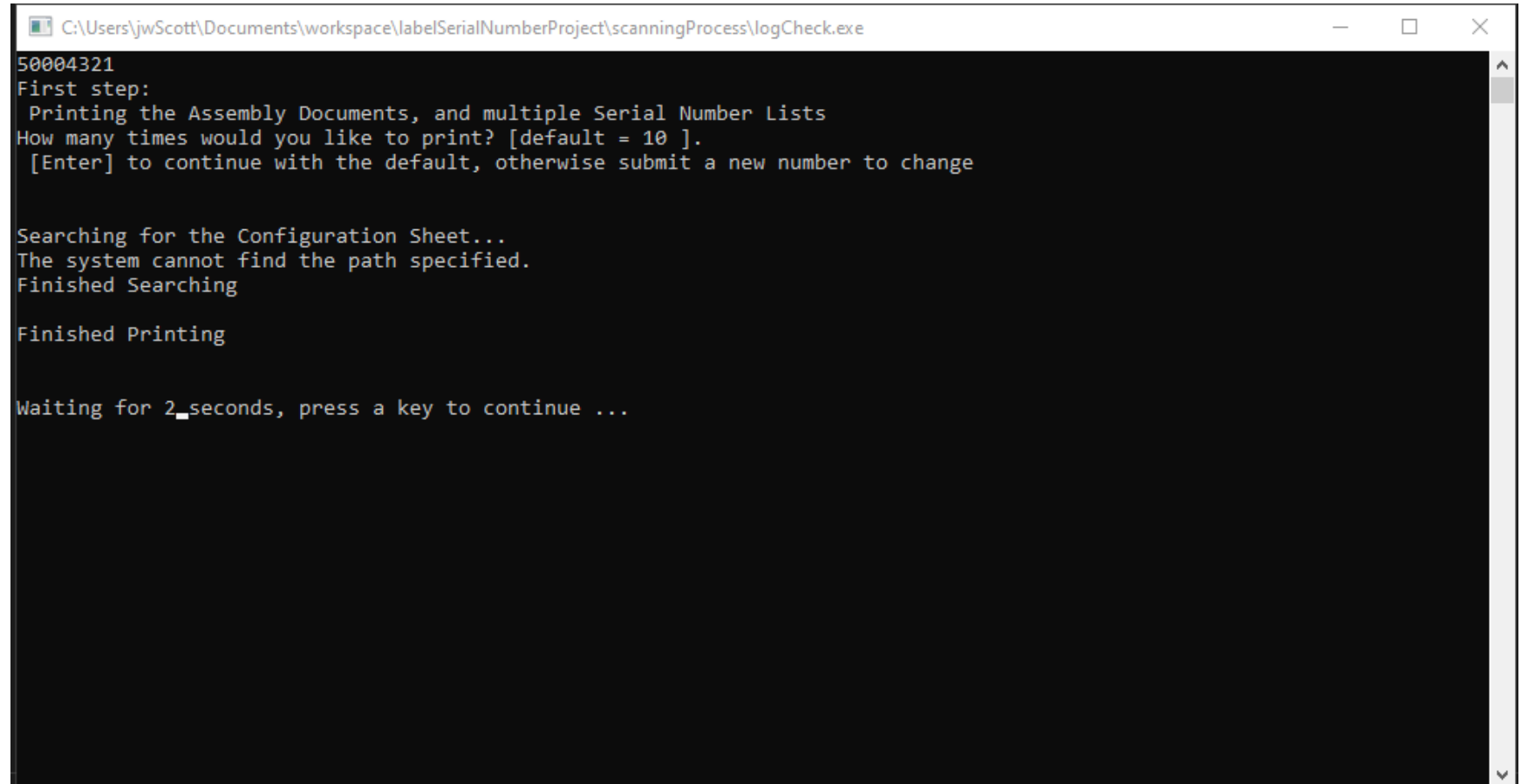
- Key Programs:
 - AutoHotkey
 - Command prompt window
 - Visual CUT
 - Adobe Acrobat
 - Microsoft Word
 - Task Scheduler
 - SQL
- The user generally only has to worry about the command prompt window, and it's parameters

AutoHotkey Running

Ensure AutoHotkey is running,
otherwise the program will not boot
up when scanned



Post Printing Stage 1



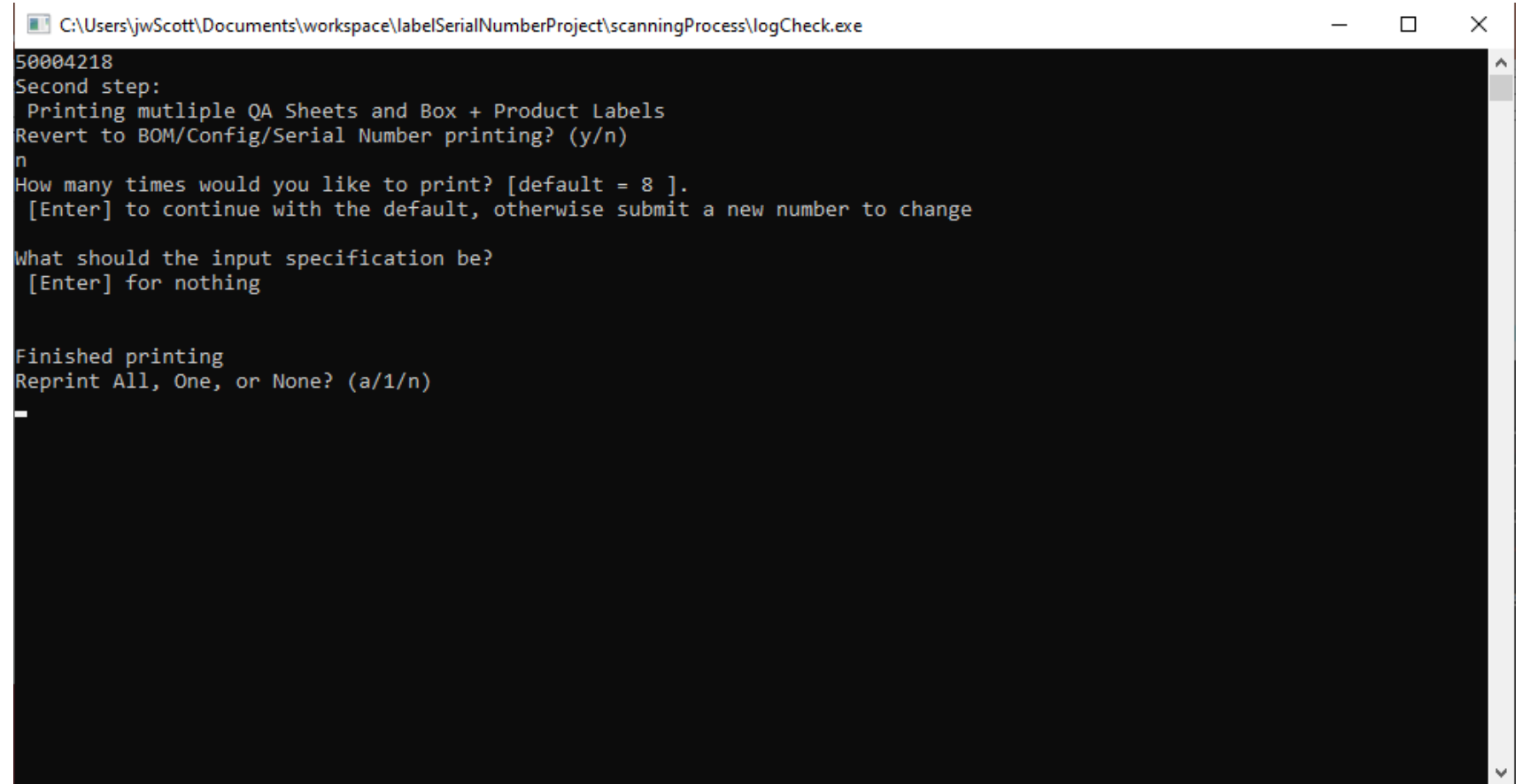
```
C:\Users\jwScott\Documents\workspace\labelSerialNumberProject\scanningProcess\logCheck.exe
50004321
First step:
  Printing the Assembly Documents, and multiple Serial Number Lists
How many times would you like to print? [default = 10 ].
[Enter] to continue with the default, otherwise submit a new number to change

Searching for the Configuration Sheet...
The system cannot find the path specified.
Finished Searching

Finished Printing

Waiting for 2 seconds, press a key to continue ...
```


Post Printing Stage 2



```
C:\Users\jwScott\Documents\workspace\labelSerialNumberProject\scanningProcess\logCheck.exe
50004218
Second step:
  Printing mutliple QA Sheets and Box + Product Labels
Revert to BOM/Config/Serial Number printing? (y/n)
n
How many times would you like to print? [default = 8 ].
[Enter] to continue with the default, otherwise submit a new number to change

What should the input specification be?
[Enter] for nothing

Finished printing
Reprint All, One, or None? (a/1/n)
-
```

Advance Features

- Booting the system yourself
 - Hit F9, then the shop order, then Enter
- Changing what's being printed
 - Go to Documents\labelSerialNumberProject\scanningProcess then edit the relevant database file (Labels, or Documents.txt) before confirming that your order number is correct on the start screen, but after booting the program
- Printing a single label through Visual CUT
 - Go to Visual CUT, and pick the label format you need to print to, then enter in the prompted relevant information, then go to the top left to print to the correct printer
- Changing the Serial Number manually
 - Go to Documents\labelSerialNumberProject\scanningProcess then edit SerialNumberCount.txt, the number is the next one that will be printed

Trouble-shooting

If there is an issue the user is faced with that is unexpected:

- AutoHotkey is not running
 - There is a shortcut called initialize Scan on the desktop to boot it up
 - Alternatively, you can navigate to the project folder*
- SQL does not query
 - Either the install has failed, or the connection is incorrect
 - Navigate to the project folder* to updateSQL.bat and update the username and password
 - Navigate to the install folder, and reinstall SQL Server, specifically SQLCMD.EXE
- Serial Numbers isn't updating
 - If it is not updating per week/year, check that the Task Scheduler task is still setup
- Word/PDF Documents aren't printing
 - Check to see if Word/Adobe is installed
 - Navigate to the project folder* and checkout printWIP.bat or printWIPDocuments.bat
- Crystal Reports...
 - If the report is pulling the wrong information, check the database
 - If the report isn't pulling information, check the database
 - If the report isn't printing, check the error associated with Visual CUT
 - The file printLabels.v2 may need to be adjusted if there is a new label type

*C:\Users\PXSPRNADM\Documents\labelSerialNumberProject\scanningProcess

Reoccurring Programs

Setup via Windows Task Scheduler

serialNumberYearlyUpdate.bat

- Runs once a year on January 1st, 1AM
- Updates the SN to the next year, resets week + number

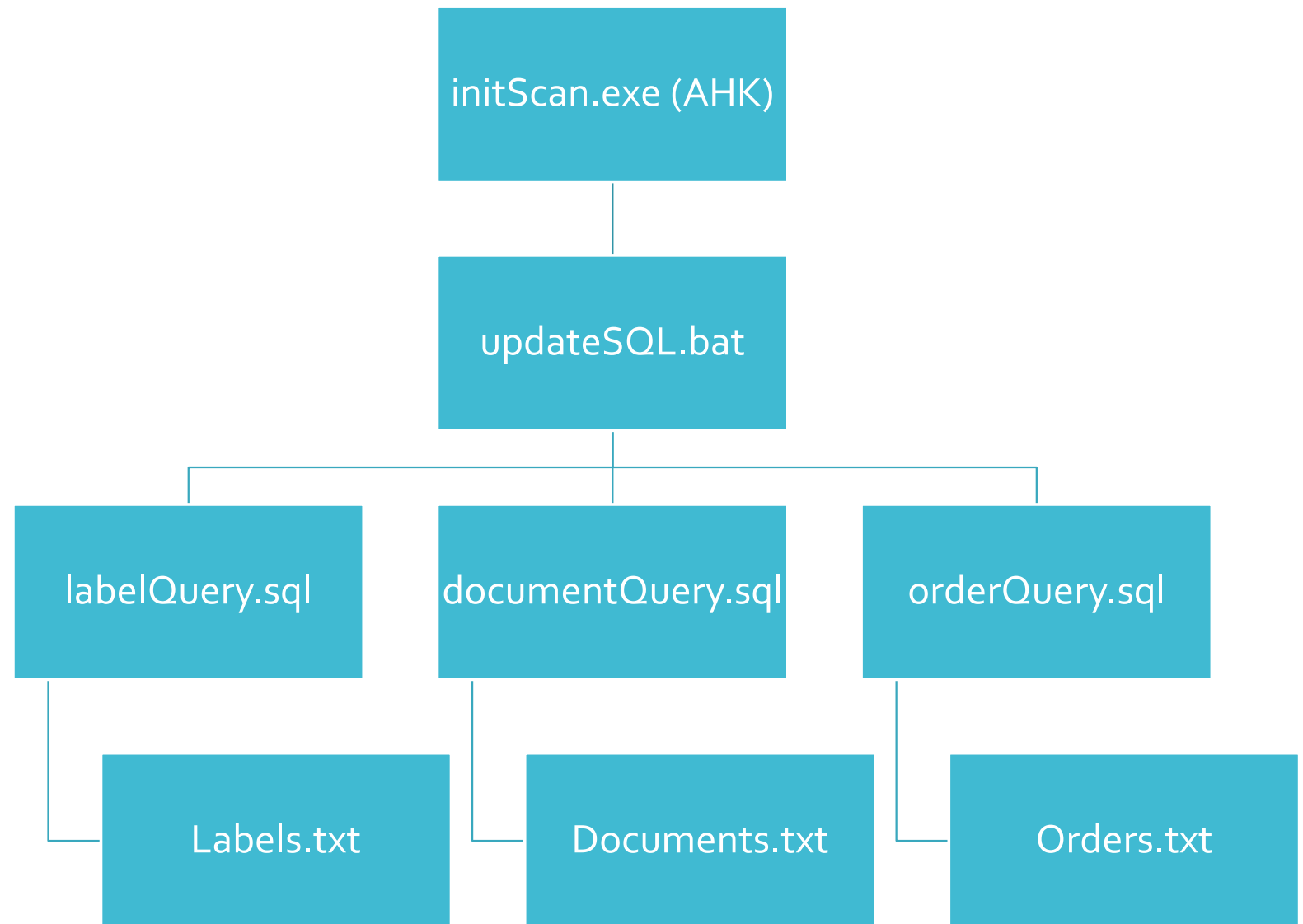
serialNumberWeeklyUpdate.bat

- Runs once a week, on Sunday at 1AM
- Updates the SN to the next week, resets number

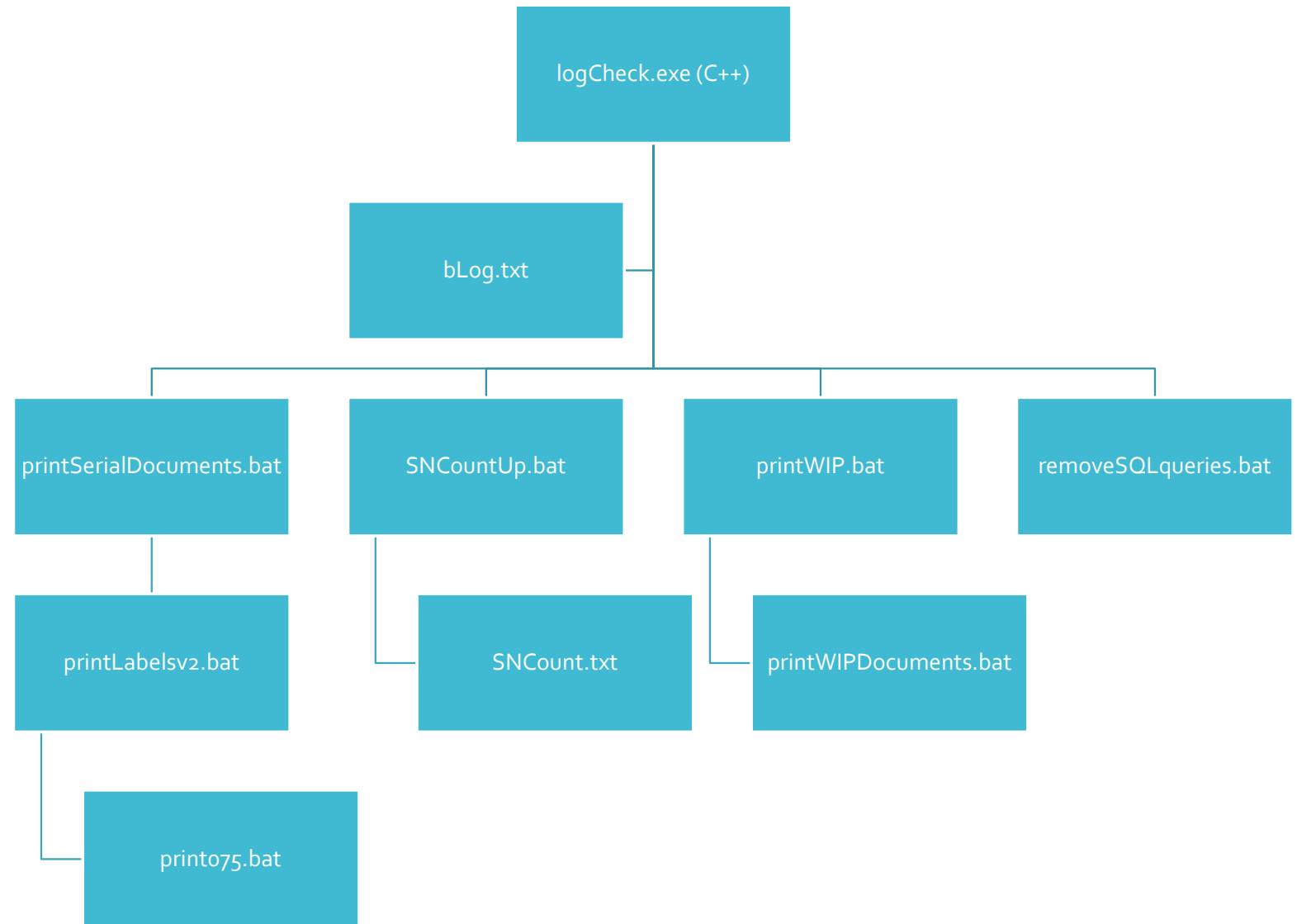
yearlyLogCleanup.exe — c++

- Runs once a year, on January 1st 1AM.
- Cleans bLog.txt of old barcodes, presumably not being used post SQL

Program Hierarchy SQL



Program Hierarchy Logic



Windows Task Scheduler

initScan.exe runs on bootup of outgoing scanning computer

serialNumberWeeklyUpdate.bat runs once a week, on Sunday morning, on the outgoing scanning computer

serialNumberYearlyUpdate.bat runs at the beginning of the year on the outgoing scanning computer

yearlyLogCleanup.exe runs at the beginning of the year on the outgoing scanning computer

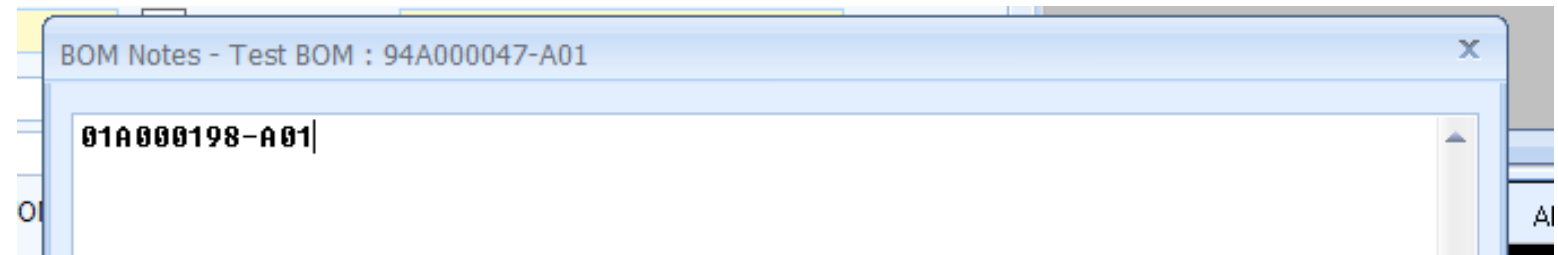
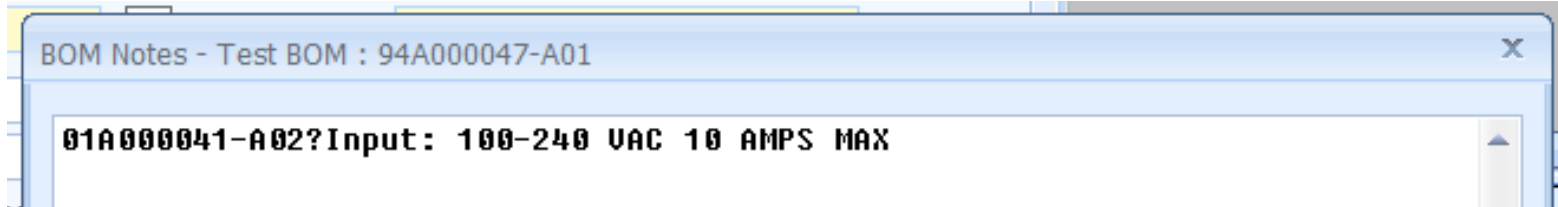
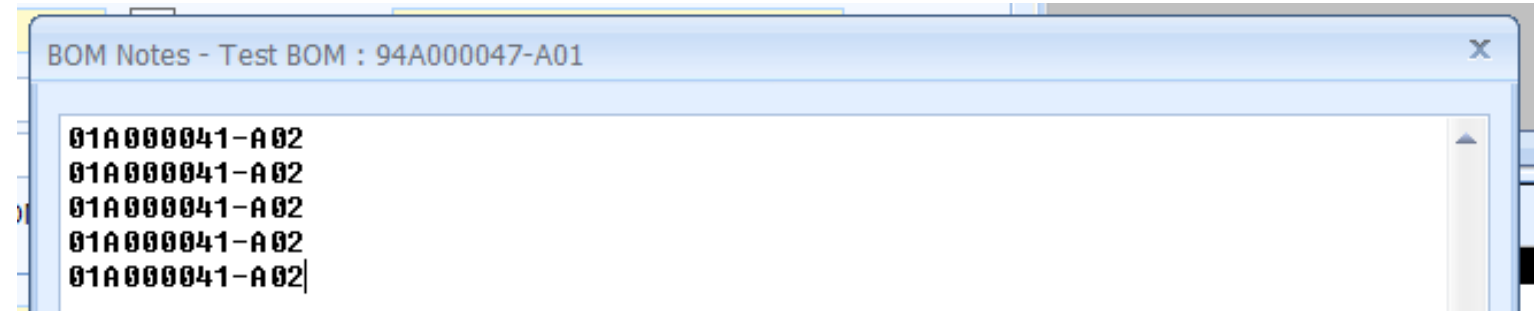
Technical Debt

- AutoHotkey needs to be installed on host computer
- Need MinGW compiler on host computer
- Git should be installed
- MSSQL needs to be installed ideally though VSCode
- Scanner needs to preamble with F9
- User needs to type number of prints they want, defaulted order amount via SQL
- Windows Task Scheduler will need to be setup on host computer, if it changes, the system will not work
 - Bat files cant execute on network computers thus needs to be local
- Percentage of barcodes removed every year is customizable
 - Easily found in code of scannerUsageCheck.cpp
 - And recompiled with g++
- Add MinGW\bin to Path
- Add Microsoft SQL Server\Client SDK\ODBC\170\Tools\Binn to Path
- All files required to install are in \install

Technical Debt Cont...

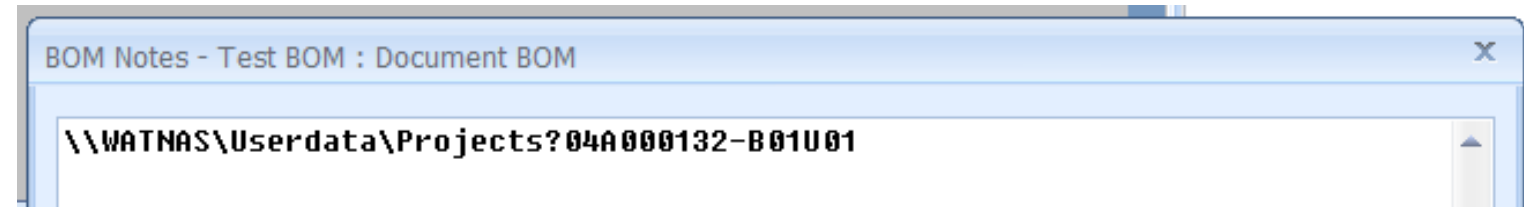
- Location of data and relevant files is hyper dependent on code
- System will be hard to move between computers
- Report extract from ExactMAX is impossible to work with
- Crystal reports wont intake a text file easily, serial number is being imported as a parameter from visual cut
 - Tried ODBC text file
- Ensure Microsoft Word is installed
- Install SQL Server 2019 for SQLCMD.EXE
- Ensure file paths are updated when downloading from GitHub
- Don't change any settings in Visual CUT for specific reports, as it can override the command line parameters
- Task Scheduler files are in \install
- Set paper printer to default to duplex
- <https://github.com/pixustechnologies/labelSerialNumberProject>

Utilizing the System from BOM - Labels



Use a ? to include parameters to the label if applicable
Do not exceed one line

Utilizing the System from BOM - Documents



Use as much of the file path to the document,
Then a ?,
Then a unique string to identify the document
Do not exceed one line

GitHub account details

For future use

GitHub account details

Username

- pixustechnologies

Email

- helpdesk@pixustechnologies.com

Password

- Start with the highest shelf 2nd.