

INNOVATION AT WORK

Connecting Visionaries in Radiation Safety, Science and Industry

Conrad Orlando Resort, FL – July 28th – August 1st



How to Make Alpha/Beta Workflows Work for You

31 July 2025

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Product Line Manager
Alpha/Beta Counting and Alpha Spectroscopy

Mirion Connect | Annual Users' Conference 2025 Orlando, Florida



Other Things You COULD BE DOING

Theme Park D

Yet you chose to be with me!

THANK YOU!!!

- Theme Park Sea
- Theme Parks U



Om the last full day of the meeting!

Nap



Agenda

- Introduction
- Historical Software Philosophy
- Hardware Compatibility
- Hardware Specific Features
- Hardware Specific Challenges



Interactive Q&A Policy

Feel free to ask questions as I go... I promise it does not bother me!

• We will ALSO have interactive Q&A at the end, time permitting...



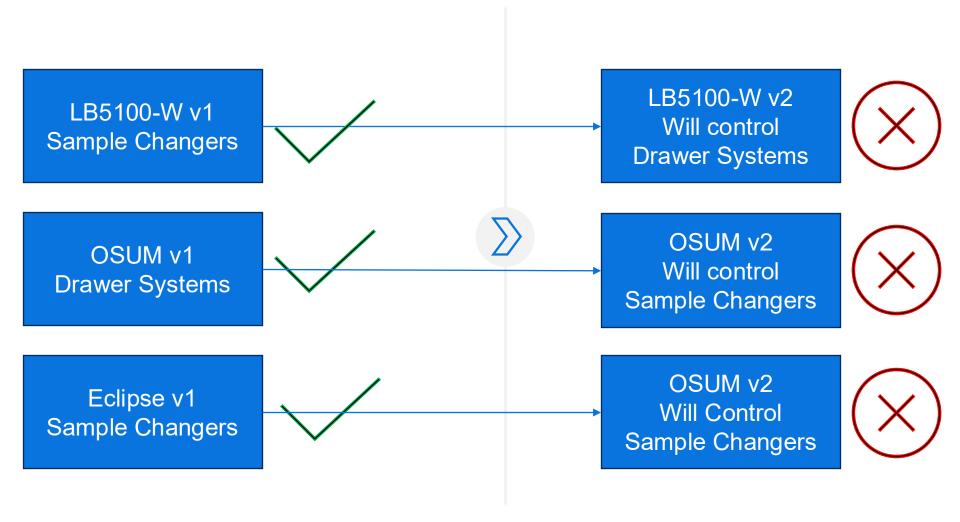
Who am I?



- Electronics Tech
- Field Service
- Production Manager
- Tech Support Manager
- Alpha/Beta Product manager 2006



How things have worked in the past...





Apex-Alpha/Beta Same Story?

Apex-Alpha/Beta v1
Drawer Systems

Apex-Alpha/Beta v2
Sample Changers







Hardware Compatibility



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LB4200TM

Series 5 LB5500™



Legacy



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Incompatible













Incompatible (Untested)

Should assume "no"













What is important?

Workflow Touch Points

- Each Sample is Unique How to KEEP it that way?
 - Sample Collection Routine?
 - Batch Loading
 - Batch (Sample Recounts)
- Sample Data Entry or Import
- Data Review and Report
- Data Export



Different Toolboxes

Each System Type - Unique Options

- Manual Drawer Systems
 - User MUST identify sample
 - Associate sample with detector
- Automatic Changer Systems
 - User must associate samples to...
 - BCD to Specific Sample or reference
 - Barcode to Specific Sample or reference
 - Predefined Key (barcode encoding?)
 - Data Push/Pull





Drawer Based



Location Location

User must KNOW which is which (sample)

Apex-Alpha/Beta

View

Express Count

Procedure: 60000 s

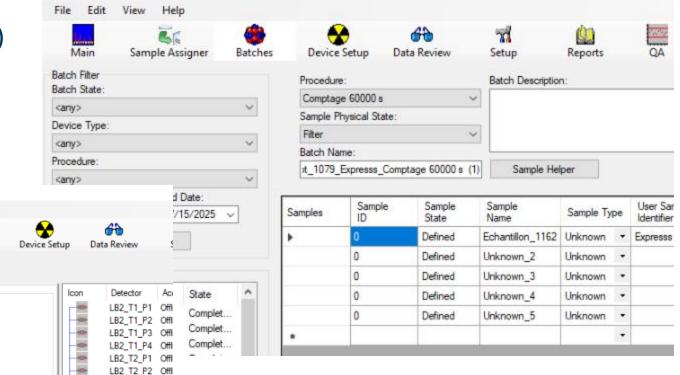
Print Assignment Rpt: Yes

Sample Assigner

COUNT -

File Edit

- Sample must be assigned
- Assignment protocol must be followed
- Assign by SAMPLE
- Loose Chain of Custody
- How to Improve?



Apex-Alpha/Beta

LB2_T2_P3 Offi LB2_T2_P4 Offi



Changer Based

Sample vs Sample Holders

- Assign by BATCH/GROUP
- Holder/Carrier Built In Coding
 - 2 inch "Tennelec" Style Carriers use BCD 1-150
 - 5 inch Carriers use binary 1-255
- Available Special Carriers for Barcode
 - SMS/AQ/"NFS/RPS"
 - PAS
 - SAS (Used in iCAM)
- What's NOT available?
 - Bird & Tolle
 - RFID

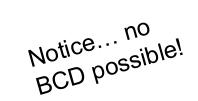










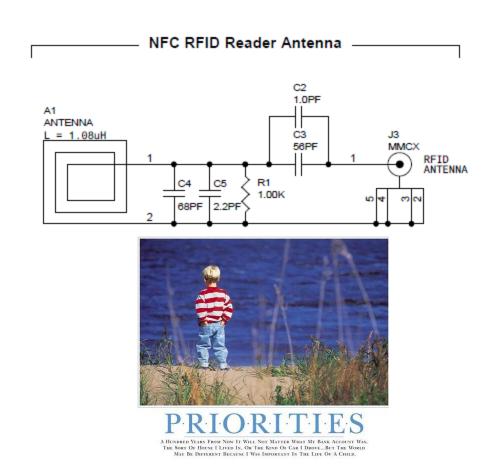




About RFID/NFC

Hardware BUILT INTO the Series 6LB

- Hardware present, but programming never completed
- Zero requests/complaints about lacking functionality
- Perfect solution but no one is interested (LOL)
- Eventually COULD SOLVE chain of custody issues by embedding collection information into sample
 - Maybe I will make this my retirement project if I ever retire...





Automation and Simplification

Calibration/QC Features

- Manual Drawer
 - Plateau Integration
 - Auto ROI
 - Simplified QC Runs
- Sample Changer
 - AutoCal
 - AutoQC

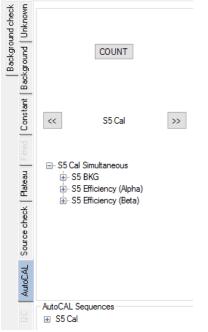
Sample Counting Features

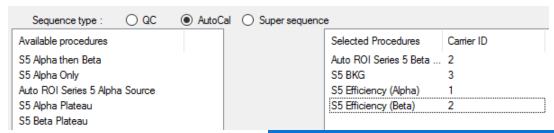
- All
 - Batch Pre-Entry
 - Express Counts
- S6LB Only
 - QA Count Integrated into sample count procedure
 - Batch Recounts
 - Batch Delay
 - Batch Start @ Time



Automatic Calibration using an AutoCal Sequence

Setup, walk away, come back to a calibrated instrument...







Or Step through calibration manually



We DO need stinkin' batches

Pre-Entered Batch

- Assign sample information
- Associate SAMPLE with BCD (or barcode)
- Can be PUSHED into the database from LIMS (SQL script?)

Express Batch

- Assign LATER or NEVER
- Requires one time procedure entry
 - Sample User Identifier
 - Physical State
 - Sample Measurement Units

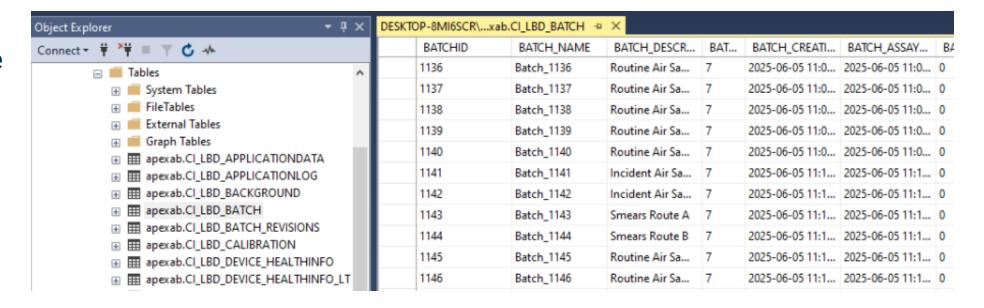
Batch [baCH] noun

- 1. A quantity or consignment of goods produced at one time: "a batch of cookies" the company undertakes thirty-six separate quality control checks on every batch"
- 2. A quantity of samples collected, processed and/or analyzed at the same time. See also Sample Changer GROUP.



Batch Tables in Database

- ExecutionContext
- Batch
- Sample

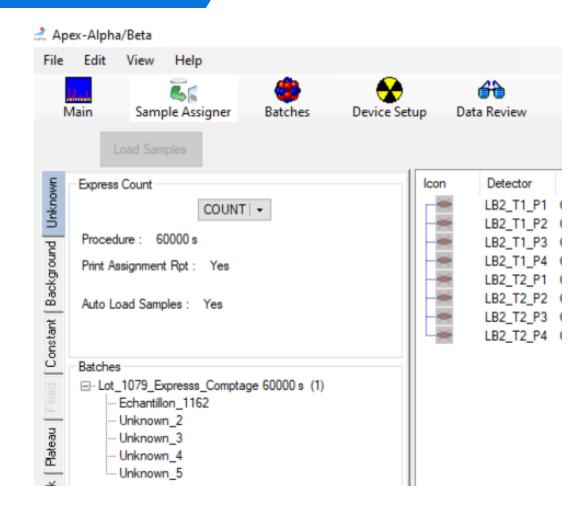




Sample Assignment

Drag and Drop Batch

- Drag and Drop to Detectors (manual drawer) or Groups (Sample Changer)
- Express Batch





V2.2 Shortcoming of Pre-entered Batch FYI

- Series 6LB Can't assign from front panel
- Next Version?







Featured Suggestions...

"Tennelec Mode"

- Special Mode to Simplify Operations
- Links Each Group 1-1 to Procedure
- Press "Go" Counts Everything on Changer

Embedded Count Information

- Each sample can have unique parameters
- Details embedded in QR code, RFID or ?
- Would not use BCD encoding

- Count everything on changer
- Tmode = really simple
- Embedded = complex infrastructure setup
- More complexity could be integrated (day of the week etc.)

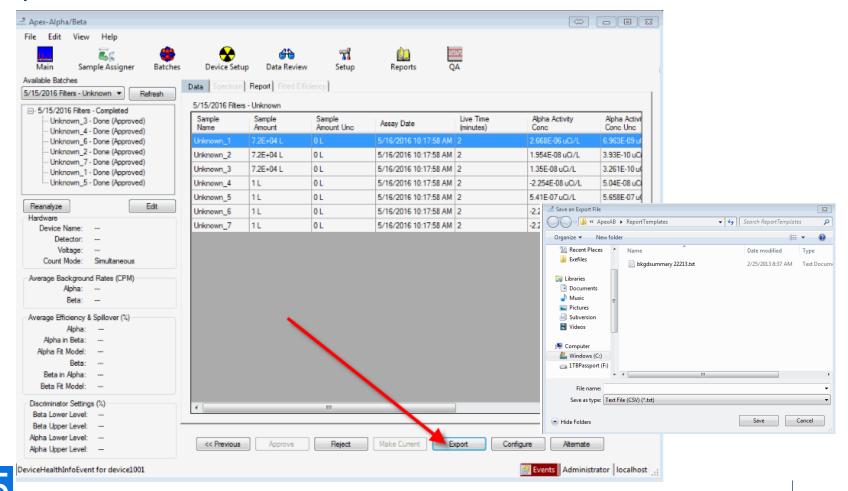


And on the 8th day, samples were counted... How can we export the data?



APEX Data (Direct) Export

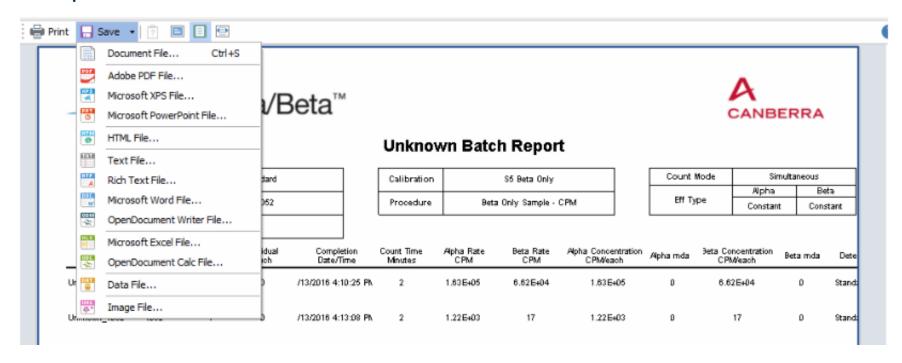
Simple Export from Data Review DATA tab



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APEX Data Export

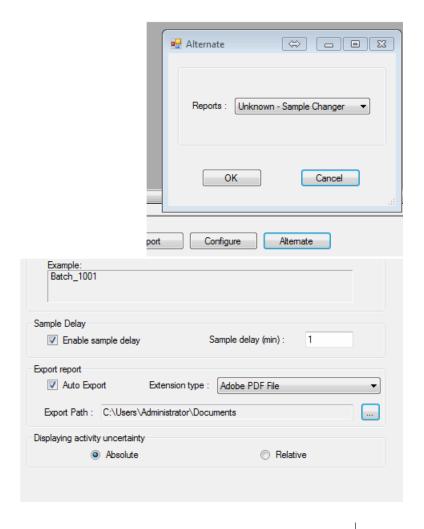
Export from Report Tab





APEX Data Export

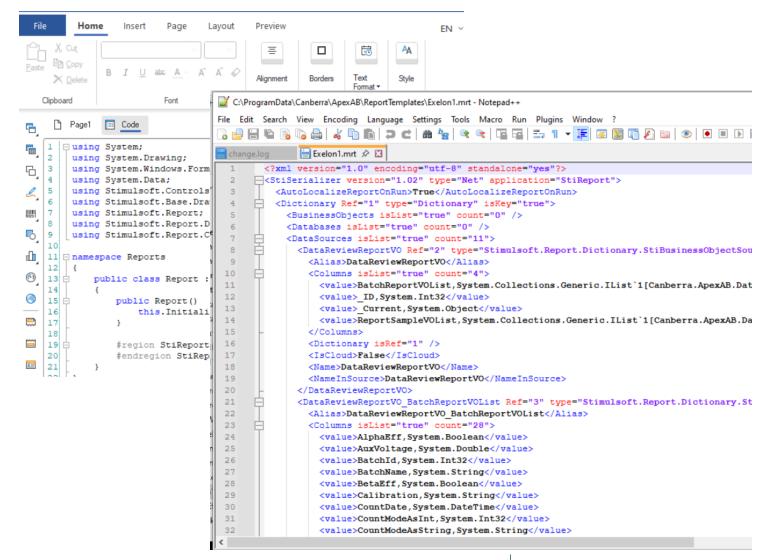
- Automatic (Unattended)Export
 - PDF
 - Excel
 - Text File





Data Export Embedded in Stimulsoft Report

- Directly and Automatically
 - Must use external editor to setup



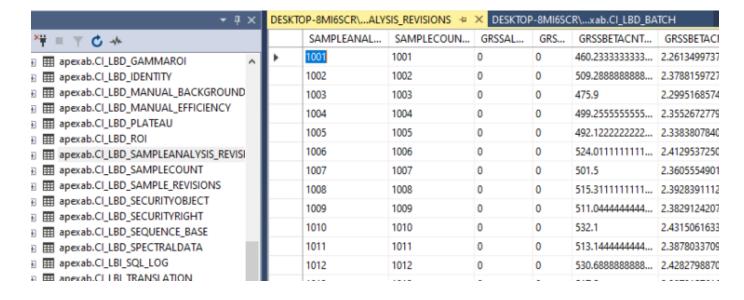


LIMS Link to Database



Could be PUSH or PULL

- Batch
- Sample (revisions)
- Sample Count
- Sample Analysis (revisions)



Closing Q&A

How to talk to me?



Text

Outlook Meeting Invite



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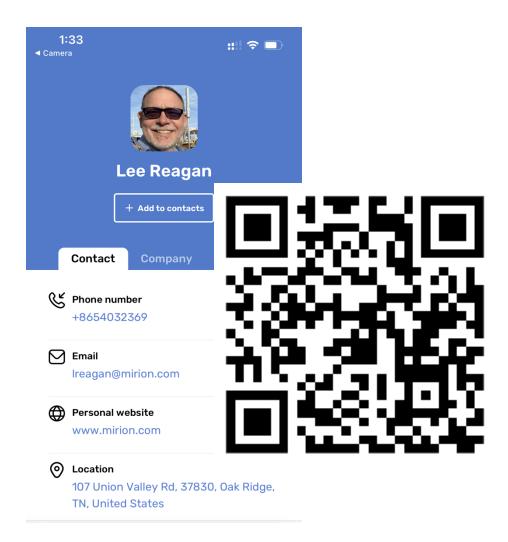
★★★ ■ Phone Call



2025 Unread: 1032

One star... would not recommend!





Thank you





