



## Tasks for the LISE<sup>++</sup> development assistance group

Facility for Rare Isotope Beams, Michigan State University, East Lansing, MI 48824 USA

2024

MICHIGAN STATE  
UNIVERSITY



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Science

# Week 2 (01/08/2024)

## Daniel

- SpecTk:
- New menu “Command” → tabs, refresh, reconnect (disconnect, and connect to last one)
- Purge a SpecTk file
- No archive files in the installation package
- **LISE size statistics**
- Continue work (study) on the Beam Dump utility

current week tasks

## Sasha

- FRIBlogo: resize, work on bugs
- PACE4 – pace4.pro -- profile, speed
- SpecTcl – linux –profiling?
- LISE video –
  - a. files from Brad
  - b. re-upload the VIDEO
- openGL

## Oleg's note

- Prepare LISE site logs to Daniel, and specify the task
- SpecTcl – linux –profiling? Tong, Elaine, Mallory
- Isomers to add from D. KAMEDA et al. PHYSICAL REVIEW C 86, 054319 (2012)

Last week report

- Did the following work on SpecTk 1.4.2
- Added the append option
- Began work on printing Roi Results to a text file
- Began work on the button to unstuck select tools (need a refresher on the process)
- Learned to make keybinds, but I am not sure if they work through remote connect
- Made some general improvements to how things work
  - No longer save when reordering
  - fixed an error where if tabs were disabled new through an error
  - began work on a trigger event for when the open window is closed so that disable tabs re-disable

- Research on signal handling for speed slider improvement in animation. Working on force restarting with running and to/from variables from timeline block.

Monday  
meeting  
participants

Daniel, Sasha

# Week 3 (01/15/2024)

Daniel

- SpecTk : complete 1.4.3 version
- Focus on LISE size statistics
- Continue work (study) on the Beam Dump utility

Sasha

- FRIBlogo: resize, work on bugs
- PACE4 – pace4.pro -- profile, speed
- SpecTcl – linux –profiling?
- LISE video –
  - a. files from Brad
  - b. re-upload the VIDEO
- openGL

Oleg's note

- Play with new Daniel's statistic files
- SpecTcl – linux –profiling? Tong, Elaine, Mallory
- Isomers to add from D. KAMEDA et al. PHYSICAL REVIEW C 86, 054319 (2012)

current week tasks

Last week report

- Finished 1.4.2
- Added the ROI print function to SpecTk it outputs all ROIs to the ROI results csv
- Added the unstick button under tools
- Investigated a possible memory leak with the client code (didn't find anything)
- Fixed a error with the New config button and not all lists being cleared
- Began work on the ability to remove appended configs
- Finished the site log analysis

- C++ optimization videos through new course resources
- New assignment introduction

Monday  
meeting  
participants

Daniel



# Week 4 (01/22/2024)

## Daniel

- SpecTk : complete 1.4.3 version
- Focus on LISE size statistics
- Continue work (study) on the Beam Dump utility

## Sasha

- FRIBlogo:
  - eliminate black window,
  - Create presentation → step by step how you created that : QtDesign, ...Qt Creator, Release)
  - Make full-window mode (double left button, escape -quit this mode)
  - Speed adjustment
  - Meet with Alex
- PACE4 – pace4.pro -- profile, speed
- SpecTcl – linux –profiling → make research
- LISE video – re-upload the VIDEO
- openGL

## Oleg's note

- Check new Sasha's video
- Discuss PACE4
- Play with new Daniel's statistic files
- SpecTcl – linux –profiling? Tong, Elaine, Mallory
- Isomers to add from D. KAMEDA et al. PHYSICAL REVIEW C 86, 054319 (2012)

current week tasks

Last week report

- Finished 1.4.0-1.4.3a documentation
- Finished up the remove button
- Finished the reconnect button
- Changed how append works so that saves are made to the initial file not the last
- Made some other general improvements
- Worked on double variable handling again(Still don't know how to do it)
- Continued work on the LISE site statistics(hopefully done next week)

- Awaiting creative department suggestions through email.
- Resolved error with presentation audio - First test shows clipped playback or no sound on one file.
- Video completed and can be found in drive.

Monday  
meeting  
participants

Daniel, Sasha

# Week 5 (01/29/2024)

## Daniel

- SpecTk : release version1.5
- (note) Display++
- Graph grid in ROW mode
- Come on Tuesday in the lab
- Check CTRL business
  
- Keep working on LISE statistics
  
- Kameda's isomers,
- Create an isomers brunch in GitHub
  
- Continue work (study) on the Beam Dump utility

## Sasha

- FRIBlogo:
  - eliminate black window,
  - Create presentation → step by step how you created that : QtDesign, ...Qt Creator, Release)
  - Make full-window mode (double left button, escape -quit this mode)
  - Speed adjustment
  - Meet with Alex
  
- PACE4 – pace4.pro -- profile, speed --- prepare a presentation with results
- SpecTcl – linux –profiling → make research
- OpenGL

## Oleg's note

- Tuesday meeting
  
- SpecTcl – linux –profiling? Tong, Elaine, Mallory
  
- Isomers to add from D. KAMEDA et al. PHYSICAL REVIEW C 86, 054319 (2012)

current week tasks

Last week report

- Fixed the axis Client bug in SpecTk 1.4.3c
- Continued work on the LISE site stats
- Continued to look for a fix for the error that occurs when appending two variables with the same name(I don't think it is possible)
- Started working a purge function

- Staff presentation video reviewed and uploaded.
  
- Beginning of profiling in progress for PACE4.
  
- Introduction to additional tasks for logo. Meeting scheduled.

Monday  
meeting  
participants

Daniel, Sasha

# Week 6 (02/05/2024)

## Daniel

- Keep working on LISE statistics
- Share the LISE statistics file
- Work on “dead” graphs
- Prevent empty ROIs
- Graph grid in ROW mode
- Check CTRL business
- SpecTk : release version 1.5
- Continue work (study) on the Beam Dump utility

## Sasha

- FRIBlogo: Create presentation → step by step how you created that : QtDesign, ...Qt Creator, Release)
- PACE4 – prepare a presentation with results
- LISE++ for Android
- SpecTcl – linux –profiling → make research
- OpenGL

## Oleg's note

- Take the isomer database which named as “isomer.db”
- Assist with LISE statistics

current week tasks

Last week report

- Continued work on the Lise Site Stats
  - Removed Microsoft and Google
  - Finished up the Pivot tables
- Updated the IsomerDB
- Did a little work on SpecTk 1.4.5

- Meeting with creative department complete, further meetings scheduled.
- New drafts for animations in progress.
- New tutorial presentation for QT Design Studio in progress.

Monday  
meeting  
participants

Daniel



# Week 7 (02/12/2024)

## Daniel

- Think about issue with integer counters: why Xamine shows, but SpecTk not
- Check how SpecTk handles messages
- Work on “dead” graphs
- Graph grid in ROW mode
- Check CTRL business
- SpecTk : release version 1.5
- Continue work (study) on the Beam Dump utility

## Sasha

- FRIBlogo: Create presentation → step by step how you created that : QtDesign, ...Qt Creator, Release)
- ~~PACE4 profiling for Win10~~
- PACE4 – prepare a presentation with results
- LISE++ for Android
- openGL

## Oleg's note

- LISE statistics
- Task: update of PACE – no swapping file

current week tasks

Last week report

- Finished the Lise Site stats
- Finished "SafeMode" checks to see if there are empty roi variables close to done with purge
- still trying to find what is causing the stuck displays
- \* Applicants for research position reviewed

- Animation program research and meeting scheduled next Tuesday.
- PACE profiling in lab pending with presentation completion following.
- Applicants for research position reviewed.

Monday  
meeting  
participants

Daniel, Sasha



# Week 8 (02/19/2024)

## Daniel

- Think about issue with integer counters: why Xamine shows, but SpecTk not
- Check how SpecTk handles messages
- Work on “dead” graphs
- Graph grid in ROW mode
- Check CTRL business
- Continue work (study) on the Beam Dump utility

## Sasha

- FRIBlogo: Create presentation → step by step how you created that : QtDesign, ...Qt Creator, Release)
- ~~PACE4 profiling for Win10~~
- PACE4 – prepare a presentation with results
- LISE++ for Android
- openGL

## Oleg's note

- LISE statistics
- Task: update of PACE – no swapping file

current week tasks

Last week report

- Made the download only file(forgot what in site states means)
- Made the SpecTk 1.5.0 documentation(<https://docs.google.com/presentation/d/1tDIXHD SwdPNZh7fd0Mo5kSoBJIsYATTENbcuG9p7tk/edit?usp=sharing>)
- Continued to work on fixing stuck displays
- Played around with capital page names
- Tried to fix keybinds
- LISE site downloads completed

Monday  
meeting  
participants

Daniel



# Week 9 (02/26/2024)

## Daniel

- Think about issue with integer counters: why Xamine shows, but SpecTk not
- Check how SpecTk handles messages
- Work on “dead” graphs
- Graph grid in ROW mode
- Continue work (study) on the Beam Dump utility

## Sasha

- FRIBlogo:
  - Update font,
  - Avoid terminal black window
  - Icon
- PACE4 – prepare a **presentation** with results
- LISE++ for Android
- Do care about details in Effort log
- **openGL**

## Oleg's note

- Update the Assistance page for Daniel's and Sasha's results, send links
- Add Linh and Arjun to the Assistance page
- Re-organize the assistance page
- Task: update of PACE – no swapping file

current week tasks

Last week report

- Fixed the stuck displays(for the most part will show in meeting)
- Played around with having for loops continue despite errors
- Fixed the clear selected and page bug
- Began work on the Write Roi Dialog
- Correct Disconnect/Connect command

- Presentation assistance : FRIB logo animation
- Final edits made on powerpoint tutorials – completed
  - QtDesign
  - Profilers

Monday  
meeting  
participants

Daniel, Sasha, Linh



# Week 10 (03/04/2024)

Daniel

Sasha

Oleg's note

current week tasks

- Continue to work on previous tasks
- Continue work (study) on the Beam Dump utility

- Continue to work on previous tasks
- openGL

- Add Linh and Arjun to the Assistance page
- Re-organize the assistance page
- Task: update of PACE – no swapping file

Last week report

- Found out how to ignore errors in Tcl
- Began Looking into the Xamine Integer counter
- Worked on grid graphs button
- Worked on save dialog for ROIs

Monday  
meeting  
participants

Daniel, Sasha, Linh

# Week 11 (03/11/2024)

## Daniel

- Xamine stuff (finish SpecTk upgrade)
- **work on the Beam Dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions

- Continued working on two bugs (Xamine-count and Xamine-Kenny)
- Finished up the Grid function
  - Added off/on ability
  - 1D or 2D display detection
  - Button added
- Logo making
- Fixed the clear error
- Played around with the catch function (mostly last week but I would like to discuss)

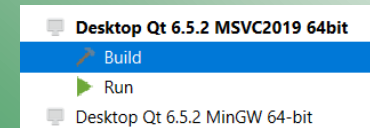
## Sasha

- Logo – is not high priority
- LISE for Android
- Plotting some 3D objects . (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, chatGPT

- Presentation for PACE reviewed - postponed until new version
- Awaiting logo font and image specifications
- Android SDK installation for QT configuration

## Arjun

- Install Qt – framework 6.5.2
- Qt.io
- Qt widgets example
- How to make dialogs with Designer
- Pay attention for layouts



## Oleg's note

- Add Linh and Arjun to the Assistance page
- Re-organize the assistance page
- Foster's source
- Task: update of PACE – no swapping file

Monday  
meeting  
participants

Daniel, Sasha,  
Arjun

# Week 12-13 (03/25/2024)

## Daniel

- Xamine stuff (finish SpecTk upgrade)
- Multiplicity Xamine vs. SpecTk
- **work on the Beam Dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions
- gitlab

- Looked over the beam dump excel
- Continued work with the beam dump
- Some questions:
  - How do I add the isotope widget to the beam dump tool (is it just copy and pasting)
  - Specify what parameters we want (number of charge states, isotope, ect.)
  - How do I calculate the charge state probabilities
  - A bit of help understanding the monte carlo structure. How data is configured in RFD(s\_RayFileData).
  - Worked on 1.5.1 documentation: <https://docs.google.com/presentation/d/12J8pI4sbH5wrpuGGuTzrcTzPNWwcpbTEty48f6dmcsc/edit?usp=sharing>
  - Worked on fixing the Kenny bug in SpecTk
  - Played around with the monte carlo and beam dump stuff in Qt

## Sasha

- Logo – is not high priority
- LISE for Android
- Documentation for FRIB logo
- Plotting some 3D objects . (lines, and so on) using OpenGL 3D in Qt --- studying Qt exapmles, ChatGPT
- OpenGL pdf book

- Outside commitments this week.
- Android Studio Emulator configuration awaiting review and support.
- Performance checking and comparison - possibly need to try new system, version, or physical tablet.
- Android Studio Emulator configuration with QT.
- QT Android Build ~1 hour as of now.
- Performance checking and comparison. Presentation on difference pending.

## Arjun

- Qt widgets example
- How to make dialogs with Designer
- Pay attention for layouts
- Create your own simple widget
- Get PACE4 source → introduction to parallelization --- small example

- Downloaded and familiarized myself with Qt.
- Finished familiarizing myself with Qt and learned how to make a dialogue box with Qt designer.

## Oleg's note

- Last Thursday meetings presence
- Linh
- SSH key for gitlab
- Put meetings in Effort Logs
- Daniel @ 5 pm: In person, AI, help with beam dump
- Drag-drop of buttons in Qt
- Using Quick in LISE (Linh?)
- Moving to version 6.6.3
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab - Sasha, Arjun
- Add Arjun and Linh names to FRIB computers
- LISE for Excel – library (Daniel?)
- → Oleg prepare PACE project
- PACE tasks: (Arjun?)
- no swapping file
- parallelization

Monday meeting participants

Daniel, Sasha, Arjun

# Week 14 (04/01/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Multiplicity Xamine vs. SpecTk
- **work on the Beam Dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions
- gitlab

- Logo – is not high priority
- LISE for Android
- Documentation for FRIB logo
- Plotting some 3D objects . (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Create your own simple Qt widget
- Study : introduction to parallelization ---understand, small example : long term process

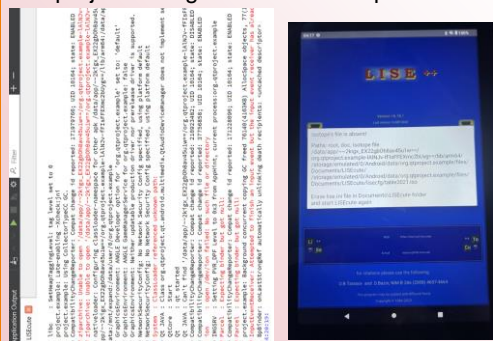
- Install Qt – framework 6.6.2
- Qt.io
- Qt widgets example
- How to make dialogs with Designer
- Pay attention for layouts
- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table  
2. copy (ctrl+mouse → release )

- Last Thursday meetings presence
- SSH key for gitlab
- Drag-drop of buttons in Qt (Linh)
- Using Quick in LISE (Linh?)
- Moving to version 6.6.3
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?
- Add Arjun and Linh names to global meetings
- LISE for Excel – library (Daniel?)
- → Oleg prepare PACE project
- PACE tasks: (Arjun?)
- no swapping file
- parallelization

Last week report

- Continued Work on the LISE Beam Dump Utility
- Finished most of the basic Calculations
- Began working on displaying the charge calculations
- Continued learning on how the code works mostly focusing on monte carlo, but also a bit on GLOBAL
- Questions for Monday:
  - GLOBAL and CHARGE give different charge probabilities.
  - Initial distance isn't in the excel along with 6 degree delta calculations
  - Can LISE read data from GLOBAL and CHARGE.

- QT Design Studio tutorial reviewed and added on to. Completely finished.
- Android Studio emulator gradle jdk and jre versions troubleshooting and QT project configuration now complete.



- Attended meetings.
- Started making my own simple widget on Qt.
- Learnt more about Qt and played around with it.

- Welcome week

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 15 (04/08/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Multiplicity Xamine vs. SpecTk
- **work on the Beam Dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions
- gitlab

- Logo – is not high priority
- \*short presentation (max 2 slides) including ArmRobot
- clean Download folders (backup to hard drive)
- optimize OneDrive
- install new version 6.6.3 MinGW, MSVC, Android, examples .. erase old one
- find out how to debug with Qt on Android
- what is default path for package location? (Linux - /bin, Windows - /Program Files )
- what is path to save user files? (like Documents in Windows)
- LISE for Android
- Plotting some 3D objects. (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Study : introduction to parallelization ---understand, small example : long term process

- Install Qt – framework 6.6.3
- Qt.io
- Qt widgets example
- How to make dialogs with Designer
- Pay attention for layouts
- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table 2. copy (ctrl+mouse → release )

- Last Thursday meetings presence
- SSH key for gitlab
- Drag-drop of buttons in Qt (Linh)
- Using Quick in LISE (Linh?)
- Moving to version 6.6.3
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?
- Add Arjun and Linh names to global meetings
- LISE for Excel – library (Daniel?)
- → Oleg prepare PACE project
- PACE tasks: (Arjun?)
- no swapping file
- parallelization

Last week report

- Began fixing SpecTk's binning and plotting
- Shifted the plot left
- Shifted the Bin left
- Currently attempting to shift the tool tip calculations left
- If possible I would like to look at Xamine's binning code

- Restarted progress to achieve correct configuration on QT for LISE android development. LISE is able to run on tablet now.
- Troubleshooting application output. Comparing process to other programs. Both QT example projects and CHARGE program run successfully. Going to dig deeper for the next steps.

- -Attended all meetings
- -Built a simple Qt widget and presented in meeting on Thursday
- -Played around more with Qt.

- Issue with log-effort submission : still no accounts

Monday meeting participants

Daniel, Arjun, Linh

# Week 16 (04/15/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Multiplicity Xamine vs. SpecTk
- **work on the Beam Dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions
- gitlab

- \*short presentation (max 2 slides) including ArmRobot
- clean Download folders (backup to hard drive)
- optimize OneDrive
- install new version 6.7 MinGW, MSVC, Android, examples ... erase old one
- find out how to debug with Qt on Android
- what is default path for package location? (Linux - /bin, Windows - /Program Files )
- what is path to save user files? (like Documents in Windows)
- **PATHs in Android**
- **Applet size**
- **Documentation**
- **Installation package for Charge**
- LISE for Android
- Plotting some 3D objects. (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Study : introduction to parallelization ---understand, small example : long term process
- Copy example to lisedev

- How to make dialogs with Designer
- Pay attention for layouts
- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table 2. copy (ctrl+mouse → release )

- SSH key for gitlab
- Drag-drop of buttons in Qt (Linh)
- Using Quick in LISE (Linh?)
- Moving to version 6.7
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?
- LISE for Excel – library (Daniel?)
- → Oleg prepare PACE project
- PACE tasks: (Arjun?)
- no swapping file parallelization

Last week report

- Attended Weekly meetings
- Participated in an experiment
- Read Shane's SpecTcl Presentation

- Meeting on Wednesday to review progress and ask questions.
- New subtasks assigned.
- Start to system maintenance and cleaning.

- -Attended Monday Meeting
- -Learning more about Parallelization
- Lisedev?

- Training for remote access to desktop.
- Install Qt framework.
- Make Qt widget example.
- How to make dialog with Designer
- Start drop and drag functions
- Lisedev?

Monday meeting participants

Daniel, Sasha, Arjun

# Week 17 (04/22/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Multiplicity Xamine vs. SpecTk
- **work on the Beam Dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions
- gitlab

- \*short presentation (max 2 slides) including ArmRobot
- clean Download folders (backup to hard drive)
- optimize OneDrive
- install new version 6.7 MinGW, MSVC, Android, examples ... erase old one
- find out how to debug with Qt on Android
- what is default path for package location? (Linux - /bin, Windows - /Program Files )
- what is path to save user files? (like Documents in Windows)
- **PATHs in Android**
- **Applet size**
- **Documentation**
- **Installation package for Charge**
- LISE for Android
- Plotting some 3D objects. (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Study : introduction to parallelization ---understand, small example : long term process
- Copy example to lisedev

- How to make dialogs with Designer
- Pay attention for layouts
- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table 2. copy (ctrl+mouse → release )

- SSH key for gitlab
- Drag-drop of buttons in Qt (Linh)
- Using Quick in LISE (Linh?)
- Moving to version 6.7
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?
- LISE for Excel – library (Daniel?)
- → Oleg prepare PACE project
- PACE tasks: (Arjun?)
- no swapping file
- parallelization

Last week report

attended weekly meetings

- Exam Week 1/2, only meetings.

- -Attended Monday meetings
- -Busy with final exams

- Meeting with Research Team
- Create example with Widget
- Using QPushButton and QWidgetTable for Drag-drop example

Monday meeting participants



# Week 18 (04/29/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Tong's request to repo
- **work on the Beam Dump utility**
- **Short presentation for beam-dump utility**
- Study excel-table
- Implement stuff to LISE
- Prepare questions
- gitlab

- find out how to debug with Qt on Android
- what is default path for package location? (Linux - /bin, Windows - /Program Files )
- what is path to save user files? (like Documents in Windows)
- **PATHs in Android**
- **Charge @ Android: Save and Read files**
- Applet size
- Documentation
- **Installation package for Charge**
- Next: Plotting some 3D objects. (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT

- Study : introduction to parallelization ---understand, small example : long term process
- Copy example to lisedev

- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table
- 2. copy (ctrl+mouse → release )
- Pay attention for layouts
- copy results to lisedev project

- SSH key for gitlab
- Drag-drop of buttons in Qt (Linh)
- Using Quick in LISE (Linh?)
- Moving to version **6.7**
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?
- → Oleg prepare PACE project
- PACE tasks: (Arjun?)
- no swapping file
- parallelization

Last week report

- Added the Remove ROI tool to SpecTk
- Fixed the how SpecTk displays Graphs in both 1D and 2D
- Prepared the SpecTk 1.6.0 Documentation
- Looked in the SpecTcl Server code and played around with it
- Refamiliarized myself with the Beam Dump code and project
- Began learning/relearning how to use the Charge cod

- Android-LISE documentation 1<sup>st</sup> part done

- Meeting with research team
- Continue with drag drop functionality.

Monday meeting participants

Daniel, Sasha, Linh



# Week 19 (05/06/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Multiplicity Xamine vs. SpecTk ?
- Creation of libraries : eloss, atima, global
- Use these libraries in LISE calculations
- Try to implement Global

- find out how to debug with Qt on Android
- what is default path for package location? (Linux - /bin, Windows - /Program Files )
- what is path to save user files? (like Documents in Windows)
- PATHs in Android
- Applet size
- Documentation
- Installation package for Charge
- Merge to main brunch. Modifications only in Charge
- Plotting some 3D objects (balls, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Study : introduction to parallelization ---understand, small example : long term process
- Compile PACE4 (separate version) with Qt. MSVC-compiler
- Learn profiling (from Sasha's projects) if you need, may be not right now
- Think, how to avoid using swap (intermediate) file

- Drag-drop functions – Example : QPushButton in widget table. Drag-drop inside this table 2. copy (ctrl+mouse → release )
- Complete effort log, when it will be available
- Start to work with the user Qbutton class and two-columns table

- Drag-drop of buttons in Qt (Linh)
- Using Quick in LISE (Linh?)
- Moving to version **6.7**
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?
- LISE for Excel – library (Daniel?)
- → Oleg prepare PACE project
- Why pace doesn't save?
- PACE tasks: (Arjun?)
- no swapping file
- parallelization

Last week report

- Made the Beam Dump Documentation (All files are in the Beam Dump folder found in \_Daniel)
- Finished the Beam Dump Charge State Calculations
- Did the Beam Dump Power and Power Loss calculations
- Added a QTableWidgetItem To display the data
- Added the doCalculations function
- Continued to play around with monte carlo but made no progress

- QT Android Presentation - complete
- Troubleshooting new tablet configuration for QT (different versions and packages tests, forms research)
- Meetings

- -Attended meeting
- -Intro and in depth learning of parallelization
- -Looked and understood examples provided to me on lisdev

- - Continue with Drag and Drop function.
- - Move button between different cell
- - Copy and paste button using Ctr+C/V
- - Text appear after clicking button
- - Meeting

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 20 (05/13/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Multiplicity Xamine vs. SpecTk ?  
May be just No randomizer???  
+0.0001
- Creation of libraries : eloss, atima, global
- Use these libraries in LISE calculations
- Try to implement Global

- Read and Write examples Charge for Android
- Applet size (font scheme)
- Documentation
- Installation package for Charge
- Push Charge-updates in your github (stick memory, mail... whatever)
- Performance check between LISE v16.18 and v17.5.5 and analyzation : results
- Plotting some 3D objects (lines, and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Study : introduction to parallelization --- understand, small example : long term process → Qt Python
- Check Daniel's folder for connection between C++ and Python in Qt
- **Compile** PACE4 (separate version) with Qt
- Learn profiling (from Sasha's projects) if you need, may be not right now
- Think, how to avoid using swap (intermediate) file

- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table  
2. copy (ctrl+mouse → release )
- Start to work with the user Qbutton class and two-columns table
- \* Learn insert, copy, creation of object in std::LIST with Qt (...)  
source, ChatGPT

- Ndll-project – fine and share with Daniel
- Update pace4-github for macOS
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- \* Reviewed previous work with VBA and .dll files
- Reviewed the LISE for excel VBA code
- Began work on the energy loss .dll
  - initially tried to bring in LISE files ,but their reliance on dialogs won't work
  - began work on "reste" function

- QT v6.7 update, LISE v17.5.5 update. (Multiple restarts and troubleshooting with build configurations and invalid files).
- Performance check between LISE v16.18 and v17.5.5 and analyzation.

- -Meetings attended
- -Finished learning parallalization
- -Started working on examples in Python and Qt
- -Produced results in Python, working on Qt.Also presented results in Thursday meet
- -Learning profiling
- -Working on compiling PACE4 on Qt

- - Format and change name of 2 column table
- - Create link between button in the table.
- - Update link when new button is inserted.
- - Complete 2 weeks effort logs.
- - Print out link list in terminal.
- - Fix the error when insert new button to the top of the table.
- - Meetings.

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 21 (05/20/2024)

## Daniel

- Creation of “small” libraries : a-increment, eloss, atima, global as separate projects
- Try connect the “incrementation” library to LISE a=a+1
- Step by step
- Use these libraries in LISE calculations
- Try to implement Global

## Sasha

- Read and Write examples Charge for Android
- Applet size (font scheme) - reinstall ChargeAndroid in my tablet
- Documentation
- Installation package for Charge
- Push Charge-updates in your github (stick memory, mail... whatever)
- Performance check between LISE v16.18 and v17.5.5 and analyzation : results
- Just compare spent time for one task with two version using “time option” from the LISE preference dialog
- Plotting some 3D objects: (balls and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

## Arjun

- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Check Daniel’s folder for connection between C++ and Python in Qt – short presentation
- Eliminate file PACE4event.dat
- Learn profiling (from Sasha’s projects) if you need, may be not right now
- Think, how to avoid using swap (intermediate) file

## Linh

- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table 2. copy (ctrl+mouse → release )
- Start to work with the user Qbutton class and two-columns table
- \* Learn insert, copy, creation of object in std::LIST with Qt (...)
- source, ChatGPT

## Oleg’s note

- No Monday meeting on the next week
- This Thursday meeting will be probably short
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

current week tasks

Last week report

- Continued Work On Lise for excel dlls
- Created a version of LISE that outputs a dll file.
- Created a resting energy function output (mostly for testing purposes the functions added are seen in the dll)
- Began attempting to connect the dll to VBA, but have been running into issues.
- Started work on a smaller version of the dll file because the current one is 440,000 KB

- Android kit for new QT v6.7 configuration.
- Android file location update in Charge - fixed save file issue.
- Research on content URIs and connecting file to C++ using Java Native Interface method. Learning how to fix reading the file after saving and closing on android.
- Experimenting with java and JNI classes for reading files for android.
- Reading on QAbstractFileEngine method for reading files for android
- Created three new sound files for LISE.

- -Meetings attended
- -Set up Qt for Python with Pyside
- -Looked at examples of connection between Python and C++ from Daniels folders
- -Worked on few basic introductory apps in Qt Python
- -Did programs and apps with parallelization(also recreated previous examples), used IDE's to run them as well
- -Compiled PACE4 in Qt.

- - Fixed the constructors for QButton.
- - Learned copy, constructor through Qt website.
- - Fixed debug executable failed.
- - Update Qt
- - Copy and paste button (using ctrl + C/V)
- - Meeting

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 22-23 (06/03/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Use these libraries in LISE calculations
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel
- “Global” Source files in Global.pro and LISE.pro

- Read and Write examples Charge for Android
- Applet size (font scheme) - reinstall ChargeAndroid in my tablet
- Documentation
- Installation package for Charge
- Push Charge-updates in your github (stick memory, mail... whatever)
- Plotting some 3D objects (lines, and so on) using OpenGL 3D in Qt → studying Qt examples, ChatGPT
- OpenGL pdf book

- Your source in github
- Presentation for mac profilers ?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Check Daniel's folder for connection between C++ and Python in Qt – short presentation
- Eliminate file PACE4event.dat
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Drag-drop functions – Example : QtPushButtons in widget table. Drag-drop inside this table
- 2. copy (ctrl+mouse → release )
- Start to work with the user Qbutton class and two-columns table
- Learn insert, copy, creation of object in std::LIST with Qt (...) source, ChatGPT
- QList , → buttons .. Your own class list. std::list
- Start QList

- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- (13) Finished the Atima, Global, and SCOEF dlls (merged the SCOEF dll into L\_loss)
- I am not sure which global was intended so I did the global project with the cross,qmean, and sigma functions currently being exported.
- Tested Atima and a bit of Global, haven't tested SCOEF
- Cleaned up L\_loss and began to clean up Atima
- Looked for the F\_... functions used in the original LISE for excel
- Messed a bit more with VBA in excel

- (15) Fixed up a bug with SpecTk and got v1.6.0a released(I will bundle the documentation with the next major release)
- Created the L\_loss dll
- Connected the L\_loss dll to excel and tested it out
- Connected L\_loss to a project in Qt
- Cleaned up the dll might still be able to trim it down
- Began work on the Atima dll

- (3) LISE performance check v.16-17 presentation updated with transmission times.
- Added title slides.
- Wait on build times.
- (12) Short LISE performance presentation for v.16.18 vs. v.17.5.5 from previous results.
- Implementing Java and JNI classes for reading files with android. More troubleshooting and trying to understand connections.
- Tried implementing QtAbstractFileEngine method for the same problem. Outdated or missing library header issue encountered. Need to start over and research an updated method.

- (8)- Looked for alternative performance validator for mac
- Made cover page for presentations
- (12) -Attended meetings
- -Cover page for presentation
- -Worked on removing file PACE4evt.dat(keep running into bugs)
- -Setup performance validator

- (20)- Learn insert, copy, creation of object in std::LIST with Qt and ChatGPT
- - Insert new line for moving instead of replacing
- - Add Ctrl + mouse for copy and paste
- - Link buttons in mainwindow.cpp
- - Continue with null pixmap
- (20)- Move design to mainwindow
- - Reconstruct button.
- - Try to fix null pixmap.
- - Start Ctrl+mouse copy and paste.
- - Meetings

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 24 (06/10/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Xamine – import, export
- SpecTk – config(directory) name
- “Saturation” bins in SpecTk/Xamine
- Use these libraries in LISE calculations
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel
- “Global” Source files in Global.pro and LISE.pro

- Read and Write examples Charge for Android
- Applet size (font scheme) – reinstall ChargeAndroid in my tablet
- Documentation (verified)
- **Window “About” – make clickable “Android – author” label**
- **Android Installation package for Charge**
- Push Charge-updates in your github (stick memory, mail, LISE dev... whatever)
- FRIB logo -- move from CmakeList.txt → \*.pro
- Plotting some 3D objects. (lines and so on) using OpenGL 3D in Qt --- studying Qt examples, ChatGPT
- OpenGL pdf book

- Your source in github
- Presentation for mac profilers ?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Check Daniel’s folder for connection between C++ and Python in Qt – short presentation
- Eliminate file PACE4event.dat
- Learn profiling (from Sasha’s projects) if you need, may be not right now

- Const ID – line – should be initialized at insertion. Like “order 1”
- Realize MOVE by drag-drop
- ID lines – is validator what you did correct

- Help Sasha with a clickable label
- Push efforts on student LinkedId
- Update the assistance page
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Briefly worked on creating a treste function for the dll
- Finished working on a function to export an xamine save
- Began work on an xamine save import
- Looked into Tclpro (doesn't work on windows 10 or 11)
- Began work on optimizing loading configs

- QAndroidJniObject vs. QJniObject research. Trying to figure out updates in QT version 6 related to android and qmake headers (the shift from qt += androidextras to core)
- Finding alternatives to outdated files and connection errors.
- Restart of project methods by recompiling project as separate package away from LISE directory.
- Permission manager java class and cpp classes created. Troubleshooting android-build-debug.apk and classes.dex to ensure java class is accessible at runtime.
- Android APK and gradle properties configuration.

- -I have loaded the updated PACE4 code from github.
- -I have loaded the new Charge code from github. I have run the code. Everything seems to be working well except that it cannot read the icon for the application, which I will fix.
- - I have updated the weekly one slide presentations as per how you showed me. I will keep updating it every week.
- - I made a new name page as well for my Monday presentations.
- -I am working on installing a windows emulator to run the profiler software from Saha's presentations, but will most likely use xcode to profile the code.

- Add checking column for previous and next button of list of buttons.
- Add id number for button with same name.
- Review source code.
- Rename and format the code.
- Meetings.

Monday meeting participants

Daniel, Sasha, Linh

# Week 25 (06/17/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Make documentation SpecTk 1.6.3
- Check run 2285 .. No one-dimensional spectra Z,q
- SpecTk performance

Pending:

- Use these libraries in LISE calculations
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel
- "Global" Source files in Global.pro and LISE.pro

- Charge: Read and Write command in menu and icons should be hidden in Android version
- install ChargeAndroid in 3rd tablet
- Documentation FRIBlogo, Android(verified)
- **Android Installation package for Charge for Google PlayStore**
- FRIB logo – eliminate a console window
- Prepare final FRIB logo package
- ~~FRIB logo~~ --- move from CmakeList.txt → \*.pro

- Study atomic physics : electron shells use LISE ionization database and the ETACHA code
- Equilibrium thickness, Criteria
- Presentation for mac profilers ?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Select and move several blocks
- Drag with Copy-option (holding ctrl-key on a keyboard)

- Implement the FRIBlogo code to the LISE package
- Find out Daniel's lodging options for the 82Se experiment
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Finished SpecTk 1.6.3 Which includes the following:
- Added the Export and Export all Xamine saves options
- Added the Import Xamine save option
- Fixed another graphing bug that occurs at the tail end of plots
- Fixed the file directory bug

- Continued work on spectk loading performance (I haven't made any improvements yet)
- Primarily focused on using threads to attempt to add multi threading to page loading

- Charge apk installation package set up
- Additional tests with charge file issue, submitted question on QT Forums
- Updated FRIB logo font and about menu configuration
- Testing restarting animation loop with new speed slider to timeline
- Research and first steps in converting cmake configuration to qmake for logo project
- Troubleshooting file and plugin transfers - in progress

- -Went through the Charge code
- -Learnt about the Charge in the "about" dialog

- Set ordered id for new buttons (text goes with button when moving to new order)
- Continued moving and deleting old row when moving (debug the crashes after few movements and manage the link between buttons, pointer went out of range when moving)
- Attended meetings

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 26 (06/24/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Poster presentation for Beam Dump
- Update help on menu "tools"
- Prepare a page of all versions, desirable have dates
- SpecTk performance

Then

- Use these libraries in LISE calculations
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel
- "Global" Source files in Global.pro and LISE.pro

- Charge: share a new version
- Install ChargeAndroid in a cell-phone
- **Android Installation package for Charge for Google PlayStore. Check other documens**
- **FRIB logo – eliminate a console window, Share the final FRIB logo package**
- Porting of the Global code to Android
- 3D objects implementation: as test -- create and implement a simple 3D object (format "obj"), simple application or implement in LISE
- OpenGL : simple application

- Study atomic physics : electron shells use LISE ionization database and the ETACHA code, Charge, Global. Read ETACHA papers 1996 & 2015
- Equilibrium thickness, Criteria
- Presentation for mac profilers : where are the Charge functions?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Select and move several blocks
- Drag with Copy-option (holding ctrl-key on a keyboard)

- Next meeting 07/08, Monday
- SpecTk mail to ARIS
- Daniel\Dll project make link
- Set dates on student projects
- Find Foster's source Disc golf
- Implement the FRIBlogo code to the LISE package
- Find out Daniel's lodging options for the 82Se experiment
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Created SpecTk 1.6.3 Documentation
- Looked for more graphing bugs in SpecTk
- Created a Tool help page to describe the functions of all the options in the tool menu
- Played around with creating a tooltip for menu items (Tcl doesn't recognize menu items)
- Tried to use the already implemented tooltip (doesn't work with menu items)
- Continued work with improving performance and was able to cut o48 config load times from about 100 seconds to about 70 (I will continue to look for improvements)

- Research on adding app to Google PlayStore
- Registration in Google PlayStore to bring Charge code in their repository
- Multiple verification applications
- Reading answers and methods from previously submitted question for reading files on android. Looking into their GitHub examples and playing with Charge code some more.
- Testing launch of version 1 of charge package on separate tablet
- Eliminating open/save features from menu on android version of charge (v.1.1 in progress)

- -Setup of mac profiler using Xcode Instruments.
- -Ran Charge code from Qt using time profiler and analyzed results. Presentation of profiling results.
- -Started looking into atomic physics ,using LISE as a reference.
- -Attended meetings

- Debugged the crashes after few movements and manage the link between buttons, pointer went out of range when moving.
- Research and first step selecting multiple columns using Shift + left mouse (not moving yet).
- Started modified code for copying multiple blocks.
- Add Ctrl + mouse command for copying
- Continued with moving multiple blocks

Monday meeting participants

Daniel, Sasha, Arjun



# Week 27-28 (07/08/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Poster presentation and Abstract for Beam Dump. Dead-line 08/02
- Participation in the 82Se 20kW experiment
- LISE for Excel →
- Use these libraries in LISE calculations
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel
- "Global" Source files in Global.pro and LISE.pro

- Android Installation package for Charge for Google PlayStore. Check other documents
- Porting of the Global code to Android
- Check acceptable 3D file format from the list was sent to you
- 3D objects implementation: as test -- create and implement a simple 3D object (format "obj"), simple application or implement in LISE
- OpenGL : simple application

- Try Profiler in Windows OS
- Work with GLOBAL code
- Equilibrium thickness, Criteria
- Presentation for mac profilers : where are the Charge functions?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Select and move several blocks
- Drag with Copy-option (holding ctrl-key on a keyboard)
- Working on bugs

- New zoom link
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- (15) Created the SpecTk 1.3.2-1.6.4 documentation slides
- Made the suggested changes to SpecTk and released 1.6.4
- Continued working on performance particularly updateALL
- Worked on LISE for excel ( The last few functions need LISE code.
- (15) Finished a slight improvement to SpecTk updateAll down to 22 seconds from 25 and configs can be used after 47-49 seconds of loading total time of 68-70 seconds (config o48\_01)
- Continued work on finishing the largest dll of LISE for Excel 20 functions added (In Borland isotope\_mass uses Ce.M() I am not sure what that corresponds to in LISE\_CUTE currently using Ce.Mnucl())
- Began work on shrinking down the dll size
- Began work on trying to connect these functions in excel

- (20) Merge Charge v.1 with new LISE update.
- Sync to final Charge version with new about page, new .xml file for app icon and name.
- Testing and deploying new font style changes for android compatibility.
- FRIB animation console window elimination and executable package configuration.
- Merging FRIB logo with LISE utilities in new version.
- (2) Reading through Global files and start of android deployment by comparing program with Charge app
- Start of moving files for Global installation package
- Waiting on Google Play Console organization account response

- (7) -Read ETCHA papers and atomic physics
- -Working on solution for no functions on profiler
- (8)-Functions are now showing for the profilers
- -More research into atomic physics using LISE ionization database, ETACHA code

- (12) Selected multiple columns using Shift + left mouse, allowing inserting to new positions.
- Researched on manage orders when inserting, deleted all original columns
- Continued with Ctrl + mouse command for copying
- Continued with moving multiple blocks
- (8) Allowed app to moved multiple blocks without crashed (there are few small bugs that I am still working on)
- Research on fixing duplicate value when moving multiple blocks. (update block id bugs)
- Research on bugs when choose 2 consecutive blocks. (When moving the first block to the second block position, it may delete the second block before it is used)

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 29 (07/15/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Poster presentation and Abstract for Beam Dump. Dead-line 08/02
- Participation in the 82Se 20kW experiment
- LISE for Excel →
- Use these libraries in LISe calculations
- Try to implement Global (charge states)
- global.dll → LISe.exe, global.exe, LISe for excel
- "Global" Source files in Global.pro and LISe.pro

- Android Installation package for Charge for Google PlayStore. Check other documents
- Porting of the Global code to Android
- Check acceptable 3D file format from the list was sent to you
- 3D objects implementation: as test -- create and implement a simple 3D object (format "obj"), simple application or implement in LISe
- OpenGL : simple application

- Try Profiler in Windows OS
- Work with GLOBAL code
- **Equilibrium thickness, Criteria one page presentation**
- Presentation for mac profilers : where are the Charge functions?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Select and move several blocks
- Drag with Copy-option (holding ctrl-key on a keyboard)
- Working on bugs

- New zoom link

Topic: Monday-students  
02:00 PM Eastern Time (US and Canada)

Join Zoom Meeting  
<https://msu.zoom.us/j/93656788183>

Meeting ID: 936 5678 8183  
Passcode: 123456

Last week report

- Finished the required training
- Began work on the Beam Dump DNP project(I couldn't find any guide lines on the abstract should it be just the standard 1 paragraph or should it be longer?)
- Fixed a bug with the LISe for excel code where some of the recently added functions were only returning 0
- Currently working on fixing a bug where using Celement or Compound causes Excel to crash

- Separate Global directory package made + files moved for android testing
- Configuration of .xml, permissions, and app appearance
- Disabling open/save for android functionality, removing them from menu bar
- Updating about page with similar style as the Charge program
- Testing different layouts, fonts, spacing, to make lettering fit correctly
- Debugging "execution" file error. Reading through the glo\_Run L\_Atima file to add conditionals
- Testing file formats for Qt 3D modeling. Widgets program troubleshooting and working with Assimp converter

- -Download and setup Qt for Windows OS
- -Download and setup of Performance Validator profiler and research on its working
- -Shift Global and PACE4 code to Windows OS system
- -Run Global and PACE4 code(Everything seems to be working fine except it cannot find LISeCute folder which i am working on)
- -Research on other Mac profilers inbuilt into Qt

- Finished adding function of selecting and moving multiple blocks in order.
- Fixed all bugs found, commented the code, and tested the program functions
- Added code for Ctrl+mouse for copying. (not yet working).
- Updated file to LiSe folder.
- Attended meetings.
- Continue to work on copying commands
- Continue testing all the existed functions to improve and complete the program

- Push efforts on student LinkedId
- Using Quick in LISe (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 30 (07/22/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Poster presentation and Abstract for Beam Dump. Dead-line 08/02
- Note- reimburse
- SpecTk 1.7.0
- LISE for Excel →
- Use these libraries in LISE calculations
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel

- Research on file system in Android OS
- **3D objects implementation:** as test -- create and implement a simple 3D object (format "obj") , simple application or implement in LISE
- OpenGL : simple application

- Work with GLOBAL code find bottle neck points
- **Equilibrium thickness, Criteria one page presentation**
- Profiling for Mac ?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Select and move (copy) several blocks
- Resolve index column content

- drag-drop – move to the next level
- Examples for tables
- Check CITI status
- Push efforts on student LinkedInd
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- e24605 experiment prep
- worked on the e24605 experiment
- Released SpecTk 1.6.6-1.6.8
- Finished and began testing SpecTk 1.6.9
- Began Work on SpecTk 1.7.0( or 1.6.10 I haven't decided on the name yet)
- Finished the first draft of the ARIS Beam Dump Abstract (How do I center an image in LaTeX)
- Briefly worked on fixing "redefinition of 'class TabCharge' and 'class TabChargeBase'" bug in LISEcute

- Switched from working on Global execution error back to Charge to work on initial file system problem.
- Restarted work with new permission handler, talking on Qt Forums with user to solve problem. Issue is with android api33, so looking into qt private apis. Directed to other website forum to post.

- -Worked on bugs related to Performance Validator for Windows(It is now fully functional)
- -Played around with Global on profiler
- -Worked on getting source code from results of profiling
- -Setting and MSVC(Plan to work using MSVC for easier understanding)
- -Responsible and Ethical Conduct of Research training in the CITI Program

- Added Ctrl+mouse function for copying a block.
- Added color for blocks for distinguishing.
- Attended meetings.
- Continue to work on copying commands (adding order for copying blocks, copy multiple blocks at same time).
- Continue testing all the existed functions to improve and complete the program.

Monday meeting participants

Daniel, Sasha, Arjun, Linh

# Week 31 (07/29/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- SpecTk - -complete full documentation
- LISE for Excel →
- Use a simple function in lise.dll
- Check for arguments
- Charge – do not use arguments  
-- Celement (internal)  
-- Compound → Celement (remember)
- Try to implement Global (charge states)
- global.dll → LISE.exe, global.exe, LISE for excel

- Make a table with beam-dump 3d-files analysis (some files no support for color)
- Try to convert Qt non-supported format files to obj?
- A short presentation?
- **3D objects implementation:**  
as test -- create and implement a simple 3D object (format "obj")
- Think about 3D presentation of the FRIB logo application
- OpenGL : simple application
- Research on file system in Android OS

- Work with GLOBAL code  
find bottle neck points  
  
windows?  
macOS?
- Study : introduction to parallelization ---  
understand, small example : long term  
process → Qt Python -- presentation
- Learn profiling (from Sasha's projects)  
if you need, may be not right now

- Select and move (copy) several blocks
- Resolve index column content
- Read/Write block configuration to/from file

- drag-drop – move to the next level
- Check CITI status
- Push efforts on student  
LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to  
MSU gitlab?

Last week report

- Finished Making changes to SpecTk 1.6.9
- Finished the documentation for SpecTk 1.6.6-1.6.9
- Made the advised changes to the Beam Dump Abstract and submitted it
- Continued working to resolve the LISE for excel error

- Restarting android file system project with Charge. Posts created for help and research made about api 33, permissions, and jni for android security. Detailed report completed and sent.
- Switch over to 3D .obj implementation.
- Created Frib logo in Blender program.
- Testing deployment of model in qt widgets application.
- Troubleshooting materials rendering on the model.

- -Research and presentation for Equilibrium thickness
- -More research into mac profiling(no significant results)
- -Meetings

- Completed CITI Program course
- Reconnect lab computer
- Still fixed error when inserting block at the end of the list
- Interchange the block id and name.
- Attended meetings

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 32 (08/05/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- LISE for Excel →
- Continue to work on main dll branch
- Check for inline in header file

- beam-dump stl.file plot in Qt have 3D-rotation option
- **3D objects implementation:** as test -- create and implement a simple 3D object (format "obj")
- Think about 3D presentation of the FRIB logo application
- OpenGL : simple application
- Research on file system in Android OS

- Work with GLOBAL code find bottle neck points  
windows?  
macOS?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Read/Write block configuration to/from file
- Explore Qt examples

- Optional: Attend LECM <https://indico.frib.msu.edu/event/73/page/816-program>
- drag-drop – move to the next level
- Check CITI status
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Updated the SpecTk Documentation slide
- Continued attempting to resolve the Lise for Excel bug
  - Discovered the issue is with reading data from DefRes variable from the s\_DefRes\_ structure
  - continued Attempting to resolve the issue

- Continuing 3D object implementation study with .obj model created previously.
- Research on Qt3D materials, .mtl files, and QMesh. Looking into QPhongMaterial and Qt qml examples.
- Testing display of various file formats converted to .obj

- -Attended meeting
- -Could not do much work due to final exams of summer courses

- Solved the bug appearing when selecting blocks, renaming blocks.
- Created menu bar for application with selections.
- Started save data to xml file. (not fully working)
- Meetings

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 33 (08/12/2024)

## Daniel

## Sasha

## Arjun

## Linh

## Oleg's note

current week tasks

- LISE for Excel →
- Continue to work on main dll branch
- Copy LISEcute project to LISEdll, rename,
- Optimize the LISEdll project with erasing Graph and Dialog files
- Merging will be done later

- beam-dump stl.file plot in Qt have 3D-rotation option
- **3D objects implementation:** as test -- create and implement a simple 3D object (format "obj")
- Think about 3D presentation of the FRIB logo application
- OpenGL : simple application
- Research on file system in Android OS

- Work with GLOBAL code find bottle neck points  
windows?  
macOS?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Read/Write block configuration to/from file
- Explore Qt examples

- No Monday meeting 8/19/2024
- Ask put Arjun and Linh in the Thursday meeting participant list
- Sasha's CITI status
- Young undergrads are welcome to ask Senior undergrads
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Attended the LECM Virtually
  - Wed Workshop of Fission Studies 1:00-5:30
  - Thur session 3 Nuclear Data 1:50-2:20
  - Thur session 4 FRIB status from Giordano Cerizza and AT-TPC update from Daniel Bazin
  - Fri Status through ARUNA Overview 9:30-11:45
- Fixed the Compound **bug??** and the charge bug in the LISE Excel t\_charge function
- Began work on correcting 2 new bugs reste, and the out of stack space bug(occurs even when the called function only returns 1 for both bugs)

- Undergrad meeting

- -Profiling of Charge code
- -Finding bottleneck points in charge code.
- -Working with mac profiler to see if bottleneck point results are same.
- -Tried QML profiler in mac, still working on it.
- -Meetings

- Continued attempting to save file to custom format(\*.lise)
- Looked into example file for blocks, saving, and opening files
- Researched material related to QFileDialog, file path
- Continued trying to test file and solve existed bugs

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 34-35 (08/26/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- LISE for Excel →
- Continue to work on main dll branch
- Copy LISEcute project to LISEdll, rename,
- Optimize the LISEdll project with erasing Graph and Dialog files
- Creation of a poster presentation
- Merging will be done later

- beam-dump stl.file plot in Qt have 3D-rotation option
- **3D objects implementation:** as test -- create and implement a simple 3D object (format "obj")
- Think about 3D presentation of the FRIB logo application -- play more
- OpenGL : simple application
- Research on file system in Android OS
- Think about a meeting with Nathan
- Try ChatGPT with downloading 3D-object

- Work with GLOBAL code find bottle neck points
- windows?  
macOS?
- Study : introduction to parallelization --- understand, small example : long term process → Qt Python -- presentation
- Learn profiling (from Sasha's projects) if you need, may be not right now

- Name file in the Windows frame
- Split Save As and Save
- Color information should be saved as well as
- Erase Signal message?
- "About" window (dialog)
- Tools menu → command "make reverse"

- Daniel: Boston?
- Check travel-training, talk to Paul to submit travel authorization
- Young undergrads are welcome to ask Senior undergrads
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- (15) • Resolved an issue with the reste function in the LISE dll
- briefly attempted to resolve an issue where charge returns nan
- began working on resolving issues with the stragglng energy functions
- (10) All functions in the LISE++ dll work in the C++ test code
- There is an issue with excel and opening the SQLite isomer and AME databases
  - Worked on resolving the issue

- (13) Start of integrating .obj into LISE 3D beam dump graph.
- Test of obj in simple application.
- Learning about LISE 3D Graph and Scatterplot files.
- Required CITI undergrad training complete.
- (10) Learning graph gallery example project on QT
- Learning custom items example with previous blender .obj model
- Integration of .obj and .stl models in custom items project. Comparison between the file formats and meshes rendered

- (15) -Monday Meeting
- -Research into functions of profiling and making presentation with details for Thursday meeting
- -Started on the optimization process of FDATA and RANGE
- -Spend most of my time trying to retrieve functions in mac profiler since I will not have access to windows laptop anymore.
- (0)

- (16) Wrote and read \*lise file containing table data including name and id in order for connection.
- Meetings
- Update file format
- Test all functions
- Played with lise application functions
- (24) - Saved and opened the save table data
- - Opened the table with connection updated.
- - Debugged and resolved bug when continue work after opened the saved file.
- - Looked into liSe application.
- - Reconnected the laptop with lab desktop.
- - Uploaded recent presentation and project file to desktop.
- - Looked into other functions in example files.

Monday meeting participants

Daniel, Sasha, Linh



# Week 36-37 (09/09/2024)

## Daniel

- LISE for Excel →
- Continue to work on main dll branch
- Copy LISEcute project to LISEdll, rename,
- Optimize the LISEdll project with erasing Graph and Dialog files
- Merging will be done later
- Prepare a short documentation how to detach a process from Qt

- (12) Have most of the excel working apart from some functions that use lisedata.xls which appears to no longer exist
- added 4 new functions (3 mass functions, and f\_delete)
- Fixed a few issues that were causing crashes or various other errors
- Began on making the code not reliant on exact file paths
- Setup a windows 32 bit virtual machine (almost done but MS 365 is stuck at 92%)
- (12) Did travel training
- Learned to use Microsoft Visual Studio debug outputs
- Finally fixed all issues with getting functions to run in C++ and Excel (they might not be correct but they run)
- Began work on creating the VBA and cleaning up the C++ functions

## Sasha

- beam-dump stl.file plot in Qt have 3D-rotation option
- **Scale in LISE x2 in X, scale \*1/2 in Y**  
**Examples of rotation**
- Think about 3D-object from the FRIB logo application to download in LISE 3D
- OpenGL: simple application
- Research on file system in Android OS
- Think about a meeting with Nathan  
Can he provide original SolidWorks file?
- Do we need to install SolidWorks on TARASOV\_LAP?

- Modified the custom items project with different method of implementation.
- Adapted the code to work for graphgallery project. Test of different models.
- Adding integration for ARIS Beam Dump.
- (3) Meetings. Illness this week

## Arjun

- Implement timer in GLOBAL calculations
- Find out time profit between parallelized and regular versions
- Work with GLOBAL code  
find bottle neck points
- Study : introduction to parallelization --- understand, small example : long term process → presentation

- (10) Finished and debugged RANGE DATA, fixed lag in function
- -Profiled in mac to see results in change in function
- -Meetings
- (10) -Profiling(parallelization) of FDATA and RANGE functions in GLOBAL.
- -Functions work smoothly without throwing any error, time test still to be done.
- -Tried setting up emulator for Windows to text functions for results.
- -Meetings

## Linh

- Split Save As and Save
- Erase Signal message?
- "About" window (dialog) mail, version and date
- Tools menu → command "make reverse"
- Icon will be useful
- Research on different ways to save initialization software parameters :  
- Qt "ini"  
- xml

- (5) Erase signal message on Menu options
- About pop-up about dialog and new option on menu bar
- Saving colors of the blocks
- Monday meeting
- (2) File's name appears when saving file or open the saved file
- Look into GitHub file
- Meetings
- Changing the save data format and rereading the file (not finish)

## Oleg's note

- Check status of Arjun's laptop
- Do we need to install SolidWorks on TARASOV\_LAP?
- Talk to Nathan?
- Young undergrads are welcome to ask Senior undergrads

- Push efforts on student LinkedId

- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Monday meeting participants

Daniel, Sasha, Arjun, Linh

current week tasks

Last week report

# Week 38 (09/16/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- LISE for Excel →
- Continue to work on main dll branch
- Fix Excel buttons for options
- Optimize the LISEdll project with erasing Graph and Dialog files
- Merging will be done later

- beam-dump stl.file plot in Qt have 3D-rotation option
- Rotate the pig with axes
- FreeCAD and Assimp software : play with the BamDump file
- Think about 3D-object from the FRIB logo application to download in LISE 3D -- figures on balls? Time moment they are not together
- OpenGL: simple application
- Research on file system in Android OS

- Implement timer in GLOBAL calculations --- button/command Execute
- Find out time profit between parallelized and regular versions
- Work with GLOBAL code find bottle neck points
- For pdf-literature : author\_journal14\_briefContent → year instead volume
- Study : introduction to parallelization --- understand, small example : long term process → presentation

- “About” window (dialog) →ABOUT1 make with resource as Widget class  
→ ABOUT2 make without resource as Widget
- Label 1, labe2 -> put them in your created layout
- Tools menu → command “make reverse”
- Icon will be useful
- Research on different ways to save initialization software parameters :  
- Qt “ini” -?  
- xml (JSON) – done

- Convenient time for disc golf
- Link Daniel's documentation how to detach a process from Qt
- I have to check a license again for SolidWorks
- Check status of Arjun's laptop
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Made Debug Documentation
- Fixed the few instances of #Value appearing in the Excel Sheet
- The Excel and dll are no longer reliant on direct file paths (currently using windows api function GetModuleHandleEx)
- Got LISE for Excel to run on my laptop(You have to have LISE already installed)
- Haven't been able to get LISE for Excel to run on TARASOV\_LAP2 (Can't debug, but I think it has to do with windows 10)
- Begun slowly shrinking the size of the dll(going slowly to avoid mistakes shooting for about 20% currently probably can go smaller)
- debug1 (the first test version of the Excel) and LISE\_EXCEL17.dll are in my project folder. To use them just put them in your like \_install folder, or anywhere with the required dlls. (You might also need to trust the location in Excel's trust center)

- Adapted customitems and graphgallery 3D model implementation methods to display custom 3D model in LISE Beam Dump graph. Added rotation and scaling examples to slides.
- Assimp configuring and testing how exports display in 3D graph.
- FreeCAD installation while waiting for SolidWorks licensing pool.
- Started looking into 3D implementation of logo animation. Trouble connecting camera property of animation with main file for it to follow mouse.

- -Changed the paper names in the lisedev file as per given instructions
- -Integrating the msec,chrono and time-elapsd to test the functions for time difference.
- -Meetings

- Meeting on Monday
- Separated Save() and Save As()
- Save to JSON file format

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 39 (09/23/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- LISE for Excel →
- Continue to work on main dll branch
- Fix Excel buttons for options
- Optimize the LISEdll project with erasing Graph and Dialog files
- Merging will be done later

- beam-dump stl.file plot in Qt have 3D-rotation option
- Rotate the pig with axes
- FreeCAD and Assimp software : play with the BamDump file
- Think about 3D-object from the FRIB logo application to download in LISE 3D -- figures on balls? Time moment they are not together
- OpenGL: simple application
- Research on file system in Android OS

- Implement timer in GLOBAL calculations --- button/command Execute
- Find out time profit between parallelized and regular versions
- Work with GLOBAL code find bottle neck points
- For pdf-literature : author\_journal14\_briefContent → year instead volume
- Study : introduction to parallelization --- understand, small example : long term process → presentation

- “About” window (dialog) →ABOUT1 make with resource as Widget class  
→ ABOUT2 make without resource as Widget
- Label 1, labe2 -> put them in your created layout
- Tools menu → command “make reverse” : realize two methods
- Icon will be useful
- Research on different ways to save initialization software parameters :  
- Qt “ini” -?  
- xml (JSON) – done

- Keep FRIB and MSU mailboxes together
- Convenient time for disc golf
- Link Daniel's documentation how to detach a process from Qt
- I have to check a license again for SolidWorks
- Check status of Arjun's laptop

Last week report

- Fixed the issue with the charge buttons
- Fixed an issue where LISE for Excel would say LISE++17.dll wasn't being found
- Tested to see if I could create a MSVC versions or use the MINGW version with MSVC LISE libraries/code
- Continued to reduce file size (currently stuck in a cascade that occurs when I try to remove graph.cpp)

- Meetings.
- Busy with school and building new computer. No update with work other than looking through the programs more. Save as STL feature added in folder to be tested.

- Applied timer function successfully to test for time profit between parallelized and original code.
- Displayed it on a new pop-up window. Function FDATA has no profit in time with Parallelization, but function RANGE has a time profit on the same.
- -Changed more file names in the lis-dev-literature folder.
- -Meetings

- Designed basic About dialog ui
- Connected About dialog with mainWindow
- Attended meetings
- Added Tools menu and Reverse option
- Debugged crashed program when reversing the table data

- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Monday meeting participants

Daniel, Sasha, Arjun, Linh



# Week 40 (09/30/2024)

## Daniel

- LISE for Excel →
- Continue to work on main dll branch
- **Optimize the LISEdll project with erasing Graph and Dialog files**
- Merging will be done later
- Keep in mind: dll project will be in LISE folder, and will use LISE project files.  
Do not erase information from LISE project files in dll-project:
  - Keep in dll-project only files you used
  - Apply in LISE cpp-files precompile macros add #if defined LISE\_library

- Tried to create the dll through addition instead of subtraction:
  - Currently stuck with issues I don't know how to resolve
  - 3+ attempts
- Fixed all of the issues with the release version currently at 14.6MB
- Began removing MainWindow from the dll code

## Sasha

- beam-dump stl.file plot in Qt have 3D-rotation option
- Blender software : play with the BamDump file to squeeze and use it in LISE
- 3D-object from the FRIB logo application : use it for the final presentation
- **OpenGL: simple application**
- **Research on file system in Android OS**

- Researching SolidWorks inside of lab. Exporting files, adding plugins, adding textures and materials.
- Configuring and troubleshooting Assimp program. Implementing it into LISE 3D graph for .obj and .mtl files.
- Opening beam dump solidworks files (.obj and .ply) in Blender program to assess missing maps. Worked on reducing vertices on high poly model.

## Arjun

- Resolve laptop issues
- Find out time profit between parallelized and regular versions
- Work with GLOBAL code find bottle neck points
- For pdf-literature : author\_journal14\_briefContent → year instead volume
- Study : introduction to parallelization --- understand, small example : long term process → presentation

- -Worked on making the save button save as a default file
  - -Changed more file-names in the new folder
  - -Collected laptop from FRIB
  - -Could not work more due to project submissions and exams throughout the last and upcoming week
- I have changed a lot of names of files in the new folder  
-i tried setting the laptop up but it seems like it needs a usb drive plugged in for me to login, so I think I will go to the helpme room sometime this week.

## Linh

- “About” window (dialog) used different fonts for labels . Now all bold and blacks. Mail no-bold , email size.
- Create version header file, and bring version and date information from this file to About dialog
- Tools menu → command “make reverse” : realize a Second method
- Fix bug at file opening
- xml (JSON) – done \*. → your own extension

- Add logo for about
- Improve the about window
- Finished the reverse function by 1st option
- Changing the reverse function (still working on create a new table)
- Meetings

## Oleg's note

- No meeting the next Monday
- Link Daniel's documentation how to detach a process from Qt
- I have to check a license again for SolidWorks
- Check status of Arjun's laptop
- Keep FRIB and MSU mailboxes together
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Monday meeting participants

Daniel, Sasha, Linh

current week tasks

Last week report

# Week 41 - 42 (10/14/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- LISE for Excel →
- Prepare a short presentation of dll-project
- Prepare of list of modified files
- Continue to work on main dll branch
- Optimize the LISEdll project with erasing Graph and Dialog files

- A brief presentation for 3D beam-dump including FRIB logo play
- Link the beam-dump object with LISE 3D-plot axis, provide rotation and scaling
- OpenGL: simple application
- Research on file system in Android OS

- Presentation for profiling and parallelization
- Push GLOBAL code updates to github
- Create FLAG to use parallelization features in GLOBAL
- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with GLOBAL code find bottle neck points
- pdf-literature : 2<sup>nd</sup> pat

- Tools menu → command "make reverse" : realize a Second method

- Update the assistance page
- Link Daniel's documentation how to detach a process from Qt
- Check status of Arjun's laptop
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- (10) Completed requested training
- Continued work on making the slim version of the dll
  - Added custom #includes and externs for certain files
  - Added L\_Calise and Charges\_tab and been adding the files and resolving the external variables
- (10) Kind of finished making the small dll in debug mode it is 13MB and release is 2MB
- MSVC compiles but the dll is missing some dependencies, so I haven't tried to test it yet
- MINGW does compile, but Excel crashes when attempting to use the dll
- Began attempting to resolve the issues

- (6) Unwrapped UV maps in Blender for missing UV coordinate issue in LISE.
- Looked into vert decimation and optimization. Scaled down Beam-dump part and added to 3D ScatterGraph in LISE.
- (0) No meetings, busy with school projects and presentation.

- (12)\_Finished renaming all files in the new folder
- -The save button now functions as a save as button when saved for the first time. Currently working on saving it as default in a default location.
- -Also researched into trying to get RANGE to run faster than the already updated code.
- (13) -Completed functioning of the save button, file saves as default name.
- -File replaced with new untitled file in same folder when saved under default name.
- -Completed setup of FRIB laptop, with qt and files.

- (6) Created an own extension for store data (still format the file)
- Use different fonts for About dialog
- Fix bug when opening
- Meetings
- (4) Weekly meetings
- (Busy with classes projects, working on format my own extension file)
- Reconnected with lab desktop

Monday meeting participants

Daniel, Sasha, Arjun



# Week 43-44 (10/28/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- LISE for Excel →
- Prepare a short presentation of dll-project
- Prepare of list of modified files
- Continue to work on main dll branch
- Optimize the LISEdll project with erasing Graph and Dialog files

- A brief presentation for 3D beam-dump including FRIB logo play
- Link the beam-dump object with LISE 3D-plot axis, provide rotation and scaling
- OpenGL: simple application
- Research on file system in Android OS

- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code find bottle neck points

- Tools menu → command “make reverse” : realize a Second method
- Prepare a brief presentation

- Update the assistance page
- Link Daniel's documentation how to detach a process from Qt
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Finished update 1.6.10 of SpecTk
- Finished training
- Began cleaning up the dll code(Originally commented out some code like CalculQreaction)
- Continued trying to fix the MSVC version of the dll
  - Can't compile even a simple dll in MSVC on my laptop
  - No missing libraries according to dependency walker
  - error occurs even when code is commented out
- \* Finished adding 2 new Energy Loss methods to LISE for Excel
- Finished prepping the LISE code and created a list of all of the Modified Files
- Continued work on getting reste and other functions to run in MSVC

- (3) Start of creating final presentation for object modeling to complete the project.
- Looking into the positioning model within the 3D graph.
- 0 hours - Fall break beginning of the week, and absent for Society of Women Engineers conference in Chicago until Sunday night 10/27.

- -Added tick-box in main-window to show program runtime.
- -Started working on presentation.
- -Was sick last week so could not work more.
- -I changed all the file names in the new2 folder
- -The presentation is ready, I will send it in by later today.
- -I am still trying to profile the ETACHA4 code. I keep running into unexpected errors.

- Create and format an own extension for DragDrop (\*ddg)
- Add version.h header for updated information on About page
- Change layout of default blocks in the main window
- Drop and replace old table with a reverse one when using reverse function
- Meetings
- Create presentation for Drag Drop project
- Problem with uploading presentation to\_Linh
- Research training
- (Working on class)

Monday meeting participants

Daniel, Sasha, Linh

# Week 45 (11/04/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Merge LISE project with LISE-Excel-dll project
- Take a new version 17.8.25

- Update : A brief presentation for 3D beam-dump including FRIB logo play
- Submit applications to schools
- Continue linking the beam-dump object with LISE 3D-plot axis, provide rotation and scaling :
  - \* setPositionAbsolute ?
  - \* use axis span to locate beamDump?
  - \* set of rotation operations : simple example in QCustom3Ditem
- OpenGL: simple application
- Research on file system in Android OS

- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code find bottle neck points

- Tools menu → command “make reverse” : realize a Second method
- Move Icons to Resource folder no files to read from disc at starting point
- Rename your project
- Create Reverse method without creation of new classes
- Bring a brief presentation to lisdev folder

- Update the assistance page
- Link Daniel's documentation how to detach a process from Qt
- Push efforts on student LinkedIn
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Finished LISE for Excel Documentation
- Finished resolving the MSVC issue (SQL plugins are different between MSVC and MINGW)
- Got a List of dlls needed for each version to work and created the separate versions

- Created final presentation for Beam dump 3D modeling.
- Tested and wrote down method of baking high poly mesh onto low poly model to preserve surface details.

- -Meetings
- -Completed and submitted presentation and Global profiling and Parallelization.
- -Could not do much more due to exams.

- Add second method in Tools menu
- Write description for Reverse methods
- Name files and variables from project
- Document all functions
- Meetings
- Make presentations for table

Monday meeting participants

Daniel, Sasha, Linh, Arjun



# Week 46 (11/11/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Merge LISE project with LISE-Excel-dll project
- Take a new version 17.8.25
- SpecTk 1.7 documentation
- Merge SpecTk documentation
- Preparation: Poster and 2(5) minute oral presentation
- Travel request

- Update : A brief presentation for 3D beam-dump including FRIB logo play
- Submit applications to schools
- Continue linking the beam-dump object with LISE 3D-plot axis, provide rotation and scaling :
  - \* setPositionAbsolute ?
  - \* use axis span to locate beamDump?
  - \* set of rotation operations : simple example in QCustom3Ditem
- OpenGL: simple application
- Research on file system in Android OS

- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code find bottle neck points
- Take one experimental shift

- Tools menu → command “make reverse” : realize a Second method
- Move Icons to Resource folder no files to read from disc at starting point
- Rename your project
- Create Reverse method without creation of new classes
- Bring a brief presentation to lisdev folder

- No need to provide details for absences—simply indicate 'busy with classes' if you have not attended any meetings
- Travel request for Daniel: contact to Mrs.Robinson
- No black software background
- No entire capital titles
- Update presentation with new template lisdev:/Presentations/Newl isotopesGroup\_template.ppt x
- Push efforts on student LinkedId
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Began combing the current version of LISE with the LISE for Excel code
- Currently resolving an issue where once combined the exe stops compiling

- Meetings this week
- Busy with school this week, one big project due on Monday 11/11, and one semester long team project for case capstone due Thursday 11/14.

- -Worked on trying to get the functions and source code to show on the profiler
- -Imported code to MSVC
- -Looked into inbuilt profiling tools

- Presentation uploaded
- Working on method 3 (memory leak bug)

Monday meeting participants

Daniel, Sasha, Linh, Arjun



# Week 47 (11/18/2024)

Daniel

Sasha

Arjun

Linh

Oleg's note

current week tasks

- Preparation: Poster (LISE for Excel & SpecTk) and 2(5) minute oral presentation
- LISE site statistics 01/31/24
- Access Latest database results
- Travel request

- Revise: presentation for 3D beam-dump including FRIB logo play
- Continue linking the beam-dump object with LISE 3D-plot axis, provide rotation and scaling :
  - \* setPositionAbsolute ?
  - \* use axis span to locate beamDump?
  - \* set of rotation operations : simple example in QCustom3Ditem
- OpenGL: simple application
- Research on file system in Android OS

- Revise presentation
- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code find bottle neck points
- Take one experimental shift

- No need to provide details for absences—simply indicate 'busy with classes' if you have not attended any meetings
- No black software background
- No entire capital titles
- Update presentation with new template  
lisedev:/Presentations/NewI  
sotopesGroup\_template.ppt  
x
- Push efforts on student LinkedIn
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Looked over and tried to understand LISE for Excel C++ and VBA changes.
- Began work on the LISE Excel/SpecTk slides and poster.
- What data can I use to demonstrate SpecTk

- Introduction review of new task, along with first start of positioning object with data in BeamDump and ScatterPlot files.

- -Meetings
- -Ported code to MSVC
- -Setup Valgrind
- -Still trying to figure out why the source code is not showing.

Monday meeting participants

Daniel, Sasha, Arjun



# Week 48-49 (12/02/2024)

## Daniel

- Preparation: Poster (LISE for Excel & SpecTk) and 2(5) minute oral presentation
- LISE site statistics 01/01/24
- Access Latest database results
- Travel request -- airfare
- Obtain Delta frequent flyer number
- Contact Mallory/Giordano Cerizza, Giordano <cerizza@frib.msu.edu>

- Finished the first draft of the Poster and Presentation
- Finished adding descriptions to statistics functions
- Began prep for LISE site statistics 2024. Organizing code and reformatting to fit standards.
- -----
- Continued preparing for LISE site statistics 2024
- Created a Debian virtual machine and began work on resolving some linux SpecTk bugs

## Sasha

- Prepare 20% transparent 3D-blocks for the ARIS separator: quads, dipoles, other
- OpenGL: simple application

- Worked on positioning object based on graph bounds.
- Testing scatter data bounds and dynamically scaling and positioning object by calculating data center and spread.
- Working through program crashes currently.
- -----
- Beam dump object dynamically aligned with scatterplot data, rendered transparent, and successfully scaled with aspect ratio slider.
- Beam dump slides updated
- LISE V.17.10.10 – with 3D Beamp Dump

## Arjun

- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code find bottle neck points
- Take one experimental shift (4:45 PM Tuesday 03)

- -Meetings
- -More work into setting up Valgrind
- -Could not do more because of exams
- -----
- -Setup Valgrind on Windows, yet to test it
- -Endsem projects and presentations, could not make more progress

## Oleg's note

- No meetings on 12/09 (!), 12/16 (?)
- Provide the latest Access14 base to Daniel
- Send LISE 2016 poster to Daniel
- Update presentations from Arjun, Sasha
- No need to provide details for absences—simply indicate 'busy with classes' if you have not attended any meetings
- No black software background
- No entire capital titles
- Update presentation with new template  
lisedev:/Presentations/NewIsotopeGroup\_template.pptx
- Push efforts on student LinkedIn
- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Monday meeting participants

Daniel, Arjun

current week tasks

Last week report

# Week 52 (12/23/2024)

Daniel

current week tasks

- LISE site statistics 01/01/24
- SpecTk under Debian

Sasha

- Prepare 20% transparent 3D-blocks for the ARIS separator:  
quads,  
dipoles,  
other (almost done)
- Insert separator 3D-blocks in LISE MC 3D envelope
- OpenGL: simple application

Arjun

- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code  
find bottle neck points

Oleg's note

- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Continued to work on SpecTk in Debian
- Almost finished with the LISE site Statistics
  - IP base almost done just 4 columns left
  - 1 vist per day complete

- Drafted new shape measurements for LISE 3D graph.
- Modeled first draft of shapes inside Blender.

- travelling

Monday meeting participants

Sasha, Arjun, Daniel (by mails)



# Week 53 (12/30/2024)

Daniel

current week tasks

- LISE site statistics 01/01/25 eliminate bots (Singapore, Netherlands)
- Poster

Sasha

- Remake the 3D dipole block
- Look at the modified LISE source
- Insert separator 3D-blocks in LISE MC 3D envelope
- OpenGL: simple application

Arjun

- ETACHA profiling
- Find out time profit between parallelized and regular versions
- Work with ETACHA code find bottle neck points

Oleg's note

- Using Quick in LISE (Linh?)
- Qt on LINUX, SpecTcl
- Migration from github to MSU gitlab?

Last week report

- Continued LISE Site statistics:
  - Finished processing both sets of data (A lot more visits this year)
  - Added new data to the access log
  - attempted to update the pivot tables, but have run into some issues
- Finished Stop work order training
- Continued work on SpecTk in Linux

- Modification of Beam Dump models
- Placement of models within LISE 3D graph.

- -Setup of Valgrind and transport of code

Monday meeting participants

Daniel, Sasha