Objectives

1. Address the simultaneous removal issue in the neighbor method to ensure only user-selected lines and their widths are processed.

2. Implement a pointer-based approach for handling selected lines to enhance efficiency and compatibility.

3. Debug and resolve crashes related to the direct stitch process and invalid dimensions in the DarkLineArray creation.

4. Refactor the control panel for better modularity and simplified function integration.

Activities

1. Investigated and updated the removeDarkLinesSequential function to strictly process only selected lines and their widths.

   o Added mechanisms to store and send user-selected lines for targeted processing.

2. Created a SelectedLines struct for managing line selection efficiently.

   o Modified the removeDarkLinesSequential function to use a pointer instead of a vector for compatibility with the new struct.

   o Updated the control panel to support pointer-based SelectedLines integration.

3. Debugged the direct stitch process to address crashes and error messages like "Error in line removal: Invalid dimensions for DarkLineArray creation."

   o Worked on potential fixes but deferred further debugging to the next day due to unresolved issues.

4. Refactored and modularized control panel setup functions:

   o Separated functionalities into smaller, focused functions, including:

       ▪ handleDirectStitchRemoval, generateDarkLineInfo, handleRemoveLinesDialog, createRemovalTypeBox,

       ▪ createMethodSelectionBox, createLineSelectionBox, connectDialogControls, updateDialogVisibility,

- updateLineList, handleNeighborValuesRemoval, handleIsolatedLinesRemoval,

- generateRemovalSummary, and countLinesInArray.

Achievements

1. Successfully restricted the removeDarkLinesSequential function to process only selected lines, enhancing user control.

2. Introduced a pointer-based approach with the new SelectedLines struct, streamlining line selection management.

3. Refactored control panel functions, improving modularity and readability for easier integration and maintenance.

4. Identified potential areas of failure in the direct stitch process, narrowing the scope for further debugging.

Problems & Solutions

1. **Problem:** Neighbor method removed all lines instead of only user-selected ones.
   Solution: Updated the function to include selected line storage and processing logic.

2. **Problem:** The removeDarkLinesSequential function did not support the pointer method for selectedLine.
   Solution: Added a SelectedLines struct and modified the function signature and implementation for pointer-based handling.

3. **Problem:** Crashes and errors occurred in the direct stitch process due to invalid DarkLineArray dimensions.
   Solution: Debugging is ongoing; issue deferred for further investigation.

4. **Problem:** Control panel setup was cumbersome due to overly large functions.
   Solution: Refactored the setup process into smaller, manageable functions for better clarity and reusability.