

## Change Request Form

### I. General Information

Project name: MacroMancer Project number: 15984  
Requestor name: Alexander N. Shelton  
Requestor's contact information: alexander.nathan.shelton@outlook.com (434) – 872 – 3582  
Date of request: 02/01/2025 Change request tracking number: 687-28  
Date request approved/denied: 2/5/2025

Section One—To Be Completed by the Requestor

### II. Description of Change Request *Include a detailed description of the requested scope change.*

The requested change involves adding an optional GUI interface alongside the existing CLI-based interface in MacroMancer. The original project scope focused solely on a command-line interface, but based on stakeholder feedback an additional graphical user interface is proposed to provide a more accessible alternative for users who prefer a visual interaction model.

This change will not replace the CLI but introduces a secondary method for users to configure and manage key bindings, macros, and other settings. The GUI will serve as a front end that interacts with the existing system, leveraging the same underlying JSON/YAML configuration files.

### III. Business Justification for Change *Describe how the business, project, or product will benefit from the requested change.*

The addition of a GUI will expand the usability of MacroMancer, making it more accessible to a wider audience, particularly users who may not be comfortable using the CLI.

#### Key benefits:

- **Improved Usability** – A visual interface simplifies interaction for non-technical users.
- **Wider Adoption** – Users who prefer graphical tools will be more likely to use MacroMancer.
- **Competitive Advantage** – Many similar macro tools offer GUI support; including this feature ensure MacroMancer remains competitive.
- **Enhanced Flexibility** – Users can choose between CLI and GUI based on preference and use case.

### IV. Impacts of Not Making the Change *Describe how the business, project, or product will be impacted if the change is not made.*

If this change is not implemented, MacroMancer may face:

- Limited user adoption, as a CLI-based tool can be intimidating for less experienced users.
- Higher support/training needs, since CLI-only interaction requires more user familiarity with commands.
- Missed market opportunities, as competitors with GUI-based alternatives may appeal to a broader audience.
- Reduced accessibility, particularly for users with disabilities who rely on UI-based input methods.

### V. Alternatives to Change *Describe any known alternatives to the change.*

Possible alternatives include:

1. **Integrating a Third-Party GUI** – Instead of developing a native GUI, an existing GUI macro manager could be modified to interact with MacroMancer's backend. However, this approach may limit flexibility and long-term scalability.

2. **Delaying GUI Development to a Future Phase** – Instead of integrating the GUI now, it could be planned for a later release to avoid impacting the current project timeline.
3. **Providing Web-Based Configuration** – Instead of a traditional GUI, a web-based front-end could allow users to configure settings through a browser. This could provide cross-platform compatibility but requires additional setup.

#### Section Two—To Be Completed by the Project Manager

VI. Impacts of the Change *Describe the impacts of this change to the project schedule, budget, and quality.*

**Project Schedule** – Introducing a GUI will require additional development and testing time, potentially extending the project timeline. A separate development cycle for the GUI may be needed.

**Budget** – Additional resources may be required for GUI framework selection, development, and testing. However, cost impact is expected to be manageable if leveraging open-source libraries such as PyQt, Tkinter, or GTK.

**Quality** – The introduction of a GUI will require rigorous testing to ensure feature parity with the CLI, maintain performance, and avoid introducing bugs related to UI interactions.

VII. Alternatives to Change *Describe alternative solutions to the change.*

See Section V for potential alternatives.

VIII. Recommendation to the Change Control Board *Describe the project manager's recommendation to approve or deny the change. Include justification for the recommendation.*

The project manager recommends approval of this change as a separate development phase rather than integrating it into the current release cycle.

#### **Justification:**

This change adds significant value to the project without affecting existing CLI functionality.

Deferring the GUI to a future phase ensures that the core CLI remains stable before expanding functionality.

Developing the GUI as a modular addition allows for smoother integration and testing without delaying the initial CLI release.

#### Section Three—To Be Completed by the Change Control Board

**Recommendation:**  
*Include a discussion concerning the goals of the project. Does this change significantly impact the goals of the project such that the project goals can no longer be met? Should this change be considered a new project or phase two of the existing project, etc.?*

#### **Discussions:**

*Does adding a GUI align with the original goals of MacroMancer?*

Adding a GUI aligns with MacroMancer's long-term goal of providing an accessible macro customization tool for Linux users.

*Should the GUI be considered a separate project phase after the CLI release, or should it be included in the current iteration?*

The GUI will be considered Phase 2 of development, allowing the CLI to reach full stability first.

*What GUI frameworks (e.g., PyQt, Tkinter, GTK) should be explored to ensure compatibility with existing system?*

PyQt and GTK were discussed as viable frameworks; a separate evaluation will be conducted before GUI development begins.

*Should the CLI and GUI development proceed in parallel, or should the GUI be developed after core CLI features are finalized?*

Current development resources will focus on CLI completion and testing before shifting to GUI implementation. Given resource constraints, the GUI will be developed after the CLI is finalized, rather than in parallel.

**Decision:**

After review, the Change Control Board has approved the proposed change request to add a GUI option. However, the implementation will be scheduled as a separate development phase after the initial CLI release to ensure that core functionality remains stable before expanding features.

Date of Review: 02/4/2025

Signature:

*Alexander N. Shelton*