Grafos Burrito — User Manual

Version: 1.0

Target Audience: End users who want to run and use the Grafos Burrito application to explore and edit constellation graphs.

Introduction

This document provides end users with a clear guide to installing, running, and using the **Grafos Burrito** application. The goal of this manual is to help users understand how to navigate the interface, explore constellations, and edit data related to stars, the burro object, and mission parameters.

Grafos Burrito combines the fun of interactive visualizations with the analytical depth of graph-based data. Whether you are a student exploring graph theory, or a user interested in constellation mapping, this manual will help you make the most out of the software.

1 Overview

Grafos Burrito is a desktop application that visualizes constellation graphs and allows editing and mission parameter inspection. The app uses **Pygame** for rendering and a simple view manager to switch between screens.

2 Quick Start

Requirements

- Python 3.10 or newer (3.11 tested in development environment)
- Dependencies listed in `requirements.txt` (at minimum: `pygame`, `imageio`)

Install Dependencies

1. Open a terminal (PowerShell on Windows).
2. From the project root, run:

```
pip install -r requirements.txt
```

Run the Application

From the project root, run:

```
python main.py
```

The application will open a window with the main menu.

3 Main UI and Screens

The app contains several screens (views). You can navigate between them using the menu or the keyboard shortcuts below.

- **Main Menu:** the initial screen with a background animation.
- **Constellation View:** browse and interact with constellation graphs.
- **Editor View:** create or edit constellation graphs.
- **Burro Editor:** edit "burro" related data (domain-specific object present in the data file).
- **Mission Params:** view and edit mission parameters read from the JSON file.

Keyboard Shortcuts

- `ESC`: quit the application.
- `F2`: switch to the Editor view.
- `F3`: switch to the Constellation view.
- `F4`: switch to the Burro Editor view.

Note: Some views may implement additional shortcuts or mouse interactions. When using a view, look for on-screen hints.

4 Typical User Tasks

Open and Explore Constellations

1. Start the app (see "Run the application").
2. From the main menu, go to the Constellation view (press `F3`).
3. Use the mouse and on-screen controls to explore nodes and links.

Edit a Constellation (Basic)

1. Switch to the Editor view (`F2`).
2. In the Editor you can create new stars, move existing ones, and create edges. (Exact editor controls depend on the implementation; try left-click to select, drag to move, and right-click or context menu for node operations.)

Edit Burro Data

1. Press `F4` to open the Burro Editor.
2. Modify parameters and save changes (if supported by the UI).

Edit Mission Parameters

1. Open the Mission Params screen from the main menu or through the UI.
2. Change numeric parameters and save. **Note:** Mission parameters are stored in `data/constellations.json`.

5 Data Files

- `data/constellations.json`: primary data file loaded at startup. It contains constellation definitions, star nodes, links, and optional `burro` and `missionParams` objects.
- `assets/`: images and audio used by the UI. Make sure required files (for example `assets/images/background/background.gif`) exist.

If you edit `data/constellations.json` externally, restart the app to reload changes.

6 Troubleshooting

- **App fails to start:** ensure Python and the packages in `requirements.txt` are installed.
- **Missing images or audio:** check `assets/images` and `assets/audio` for required files.
- **Pygame audio errors:** sound is optional; the app catches audio init errors and continues.

7 Known Limitations and Assumptions

- The editor's exact mouse and keyboard interactions may vary; if something doesn't work, consult the technical manual or inspect the `screens/` folder.
- External JSON edits require restarting the application to take effect.

8 Getting Help

If you need help, open an issue in the project repository or contact the maintainer listed in the README file.

End of User Manual