HYDRA

DOOM Map Asset
Submission Guidelines

Contents Overview

Introduction

The following is a walkthrough of how to create and submit custom assets for the Doom map to be used during the upcoming Hydra® Doom Tournament, referred to as the 'Hydra Doom Cardano map' or Cardano.wad file. Input Output Global, Inc. (together with our subsidiaries and affiliates, referred to as 'IOG,' 'we,' or 'us' in this document) does not guarantee submissions will be included in the final Hydra Doom Cardano map used during the Hydra Doom Tournament. We reserve the right to use or exclude submissions at our discretion including, without limitation, submissions that violate the rules listed below. The final Cardano.wad file will be made available for anyone to download and play with, or make derivative works off, in the spirit of Doom modding, under the same permissive license as the underlying Freedoom2.wad (download and installation guide can be found in the 'Setting up Slade section' below).

Style guide and submission rules

Although the Hydra Doom Cardano map is intended as a celebration of the Cardano ecosystem, bear in mind that it will be used in the upcoming Hydra Doom Tournament as a deathmatch-type arena where players unfamiliar with Cardano (or blockchain itself) will compete for prizes. As such, submissions should adhere to a general 'Doom theme'. While what constitutes a 'Doom theme' is open to interpretation, the submission should aim to preserve immersion of the game and respect its universe's motifs. Bright colors, cheering mascots and similar 'un-Doom' themes might not fit well into the demon-slaying context of the game.

While it is possible to just scale existing art down to the right resolution, we encourage and appreciate your efforts to clean up your submission and make it look like proper pixel art, and to make sure it follows the style guidance in this document.

Submissions must be owned or licensed by you. You must have the full legal right to use the submission and the content in the submission, to submit them for use in the Hydra Doom Cardano map and to grant IOG the licenses and rights in the licensing agreement you are required to sign before submitting any content or materials to be used in the Hydra Doom Cardano map. IOG will not accept submissions without first receiving a signed licensing agreement.

Submissions' content should also follow some basic and standard rules:

- Is not unlawful, threatening, infringing, defamatory, false, misleading, fraudulent, abusive, hateful, discriminatory, harassing, vulgar, obscene, sexual, pornographic, profane, invades the privacy of another, or facilitates or promotes any of the foregoing.
- Does not violate, facilitate or promote conduct that would be considered a violation of any applicable law, rule, or regulation.
- Does not impersonate or misrepresent the identity of another user, person, or entity.
- Does not include a trade secret of, or confidential information of, another person or entity without their written permission.
- Is not targeted toward children.
- Does not include any political references.
- Does not include solicitations or commercial endorsements of any kind, such as 'BUY TOKEN X'.

Prerequisites

1. Creating and setting up the required files requires awareness of two important components:
- Doom engine version: the tournament will run on a fork of Chocolate Doom, which means that file resolution is considerably smaller than in later versions, such as GZDoom.
- Base assets: Freedoom2.wad is the base file, to which additions and derivations are made for the custom map.
2. Doom graphics need to be submitted as WAD files. This tutorial assumes use of the recommended Slade3 WAD editor.
3. You will also need the freely available Freedoom WAD.This file contains both Freedoom.wad and Freedoom2.wad.
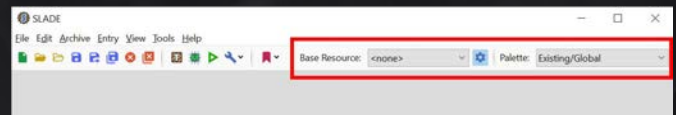
Creating custom assets

Some simple examples of what can be submitted include:

- Making a custom version of a wall texture that contains an added image, which can replace a wall section in the map. E.g., adding a poster to a wall.

- Replacing the static in-game pick-ups like health, armor, or ammo.

- Replacing the animated in-game pick-ups, such as power-ups.

- Replacing weapons, including in-game pick-up, in-hand firing and reload animations. This includes projectiles shown mid-air after firing the rocket launcher, plasma energy weapon and BFG, plus sounds.

- Monster sprites with animation frames rendered from 8 different angles, plus sounds.

Submissions may alter the map layout to change sections, add more pick-ups, etc. However, to preserve the integrity of the competition and prevent any unexpected or odd issues that may occur during gameplay due to the game engine design, submissions proposing direct map changes that aren't formatted correctly will not be accepted. In such instances, some components of the submission might be incorporated by IOG following IOG's consideration and feedback from the submitter or broader community, as appropriate.
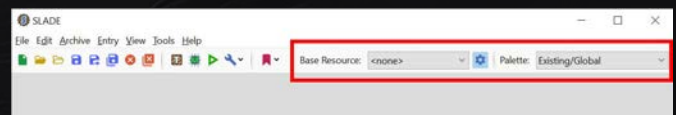
Setting up Slade

1. Click the cogwheel icon on the toolbar next to 'Base Resource'.

2. Click 'Add Archive' and add "freedoom2.wad" as a Base Resource Archive.
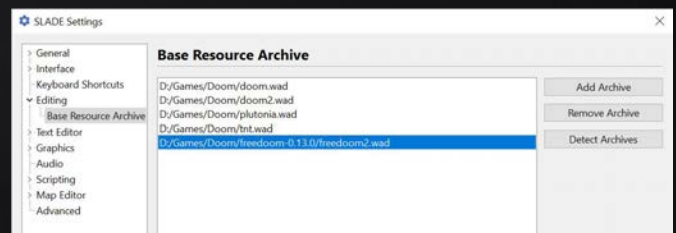
3. Select 'freedoom2.wad' as 'Base Resource' and 'Doom' as 'Palette' from the respective dropdowns on the toolbar in the main Slade window.
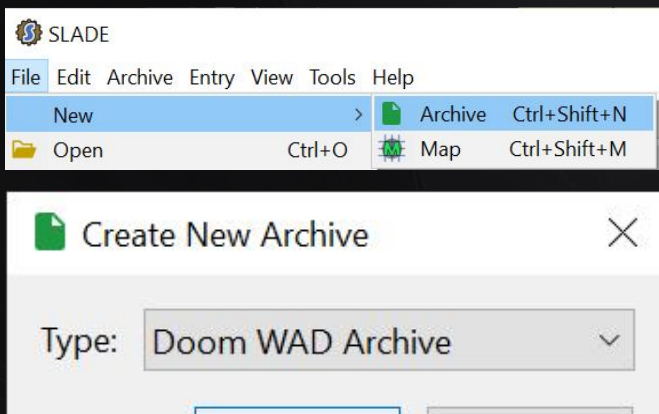
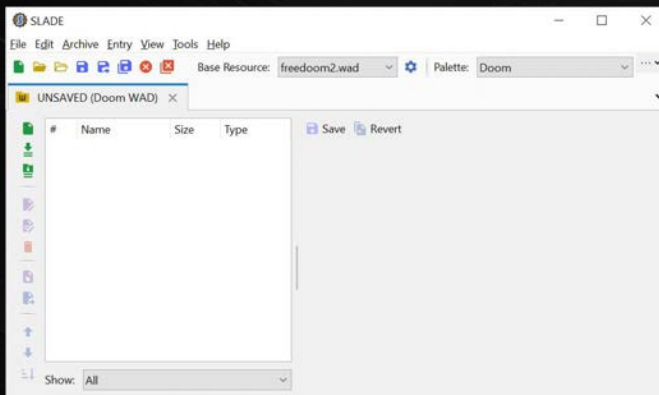# Creating custom assets cont...

Creating a new wall texture

Wall textures have certain constraints in Chocolate Doom, so it's best to stick to sizes 64×128 or 128×128 pixels. For more details, see the Doom Wiki article on wall textures.
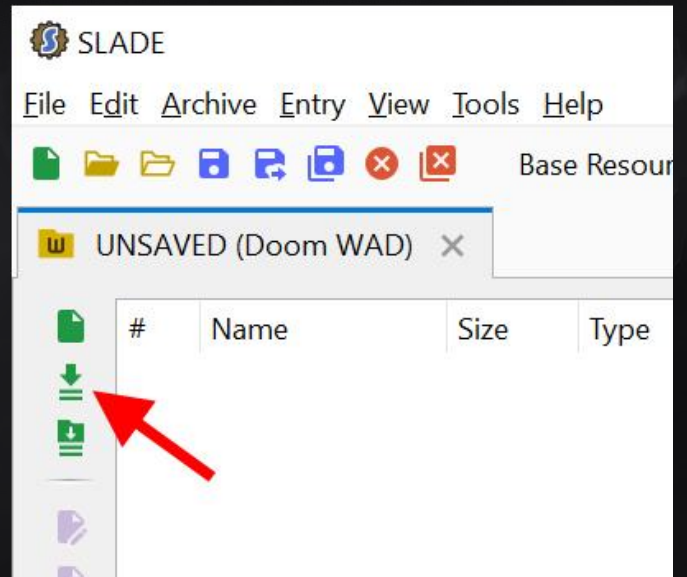
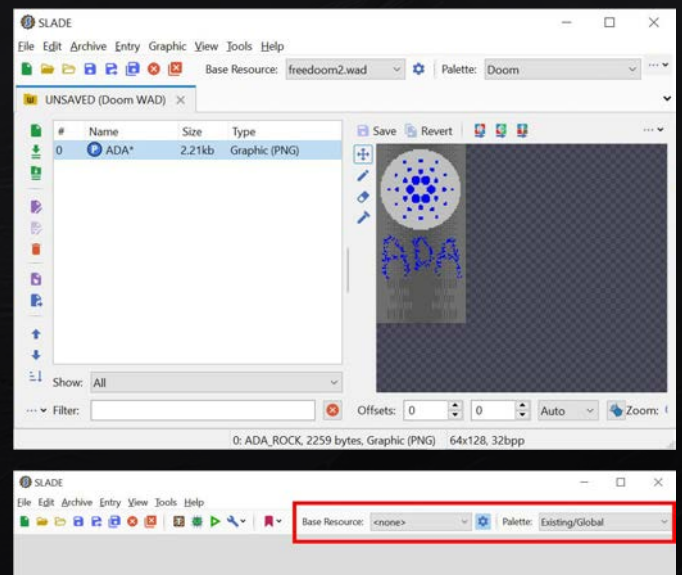1. Create a new Doom WAD Archive in Slade:

You will be presented with an empty WAD.

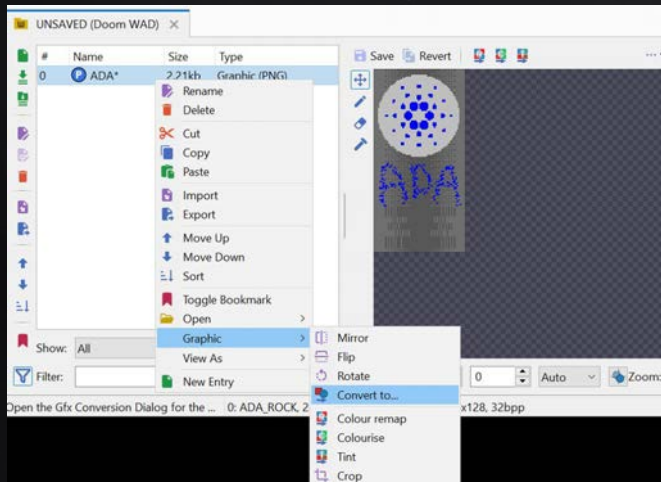2. Click the highlighted button to import your texture file, stored as a PNG.


After importing, you should see your texture listed:

Creating custom assets cont...

3. Note that the 'Type' column shows 'Graphic (PNG)', which is an unsupported graphic file format in Chocolate Doom. To fix this, right-click the texture and select **Graphic > Convert to...**

4. Select 'Doom' as palette under 'Converted to' and 'Converted Graphic'. Here, you can preview the changes to your texture if you used colors outside the Doom palette (more about this in the 'Notes about Doom's palette' section).
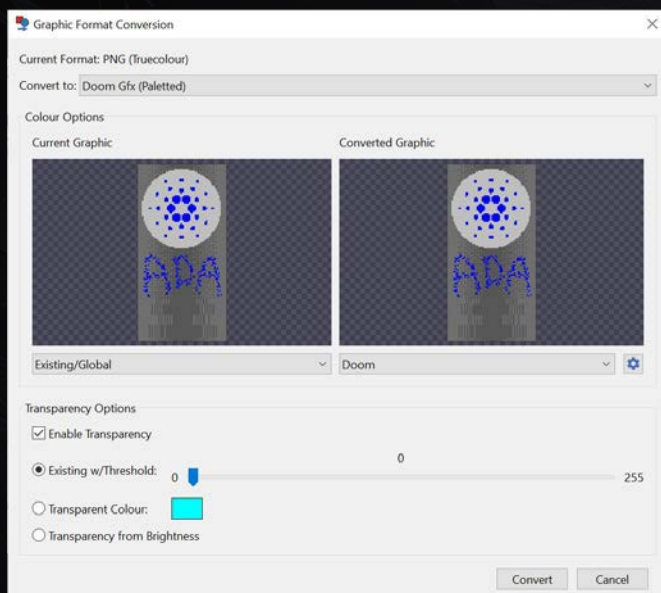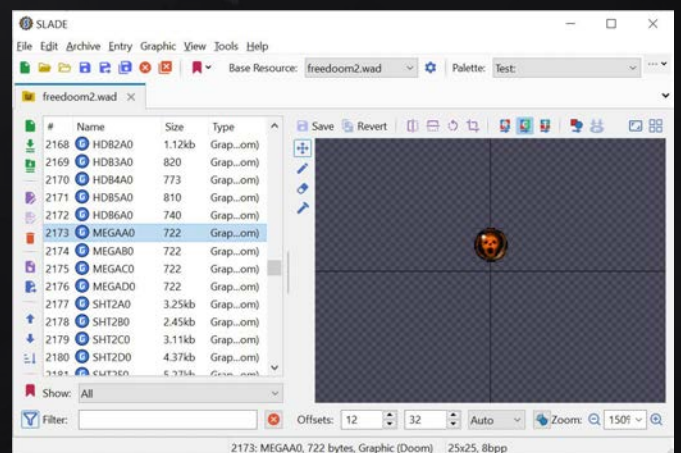

5. After converting the image, you can save your WAD and submit it for inclusion.

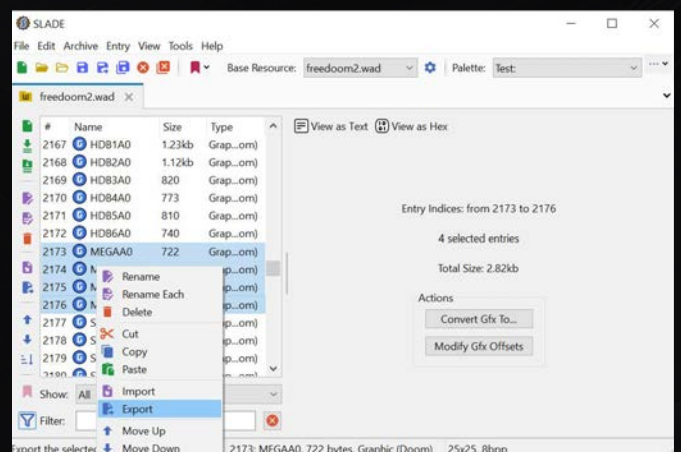## Creating an animated sprite replacement

There are many animated objects in the game, including power-ups, monsters, weapons, etc. These require multiple images to be replaced together to allow the game to render the animations.

1. Open IWAD in Slade and find the sprite to replace.

The picture above shows the first frame of the megasphere animation selected. This sprite is animated and consists of lumps MEGAA0, MEGAB0, MEGAC0, and MEGAD0.

2. Select all four frames and export them as PNG.
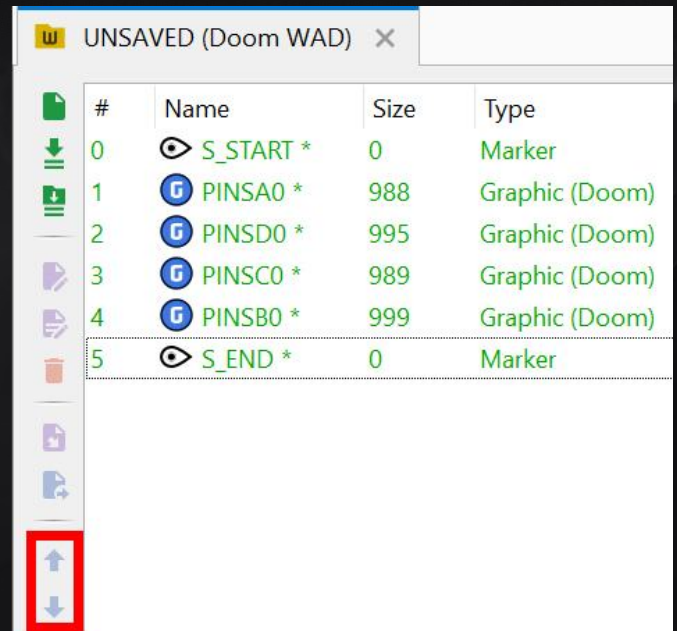
Creating custom assets cont...

3. Edit the graphics or just use them as reference.

4. Create a new WAD, import the graphics, and convert them to Doom format. Refer to 'Creating a new wall texture' for details.

5. Sprite replacements must be enclosed within S_START and S_END markers for Chocolate Doom's merge operation to work correctly.

6. Click the New Entry button.
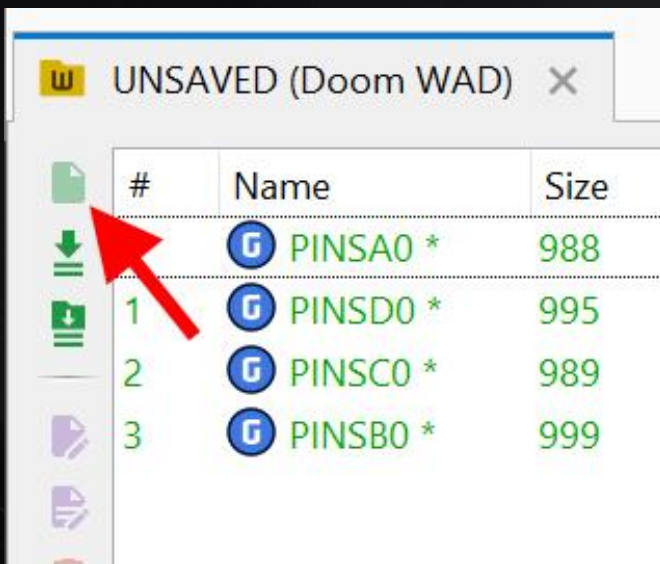
Fill in S_START with Empty as Type. Repeat the procedure with S_END.
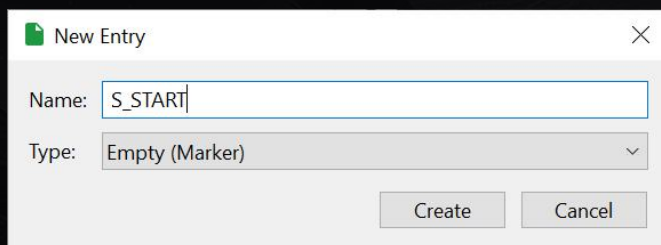
Use the arrow icons to enclose your sprites with the markers you just created like this:

7. You can now save your WAD file for submission.

Creating custom assets cont...

Replacing strings

Replacing the messages that appear on the top of the screen when an item or power-up is picked up, ie a 'string' in the game requires the creation of DeHackEd patch. The WhackEd tool can do this.

1. Select **File > New** to create a new patch. Select Doom 1.9 as Engine, add freedoom2.wad as the IWAD, and click OK.
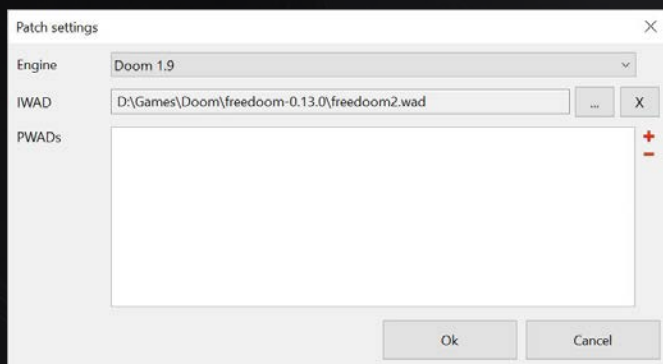

2. Select String on the left to see all strings in the game binary. You can scroll through and find a candidate for replacement. Double click to open for editing.
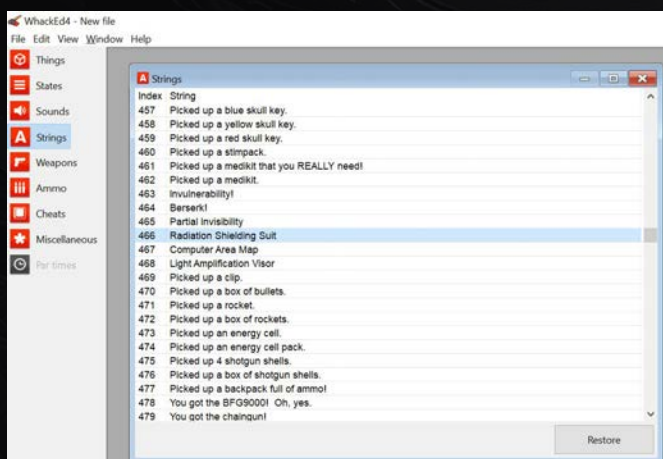
3. Come up with a substitution for the original string. Something to keep in mind is that, as the string replacement is done by patching the binary, **you cannot exceed the length of the original string.**
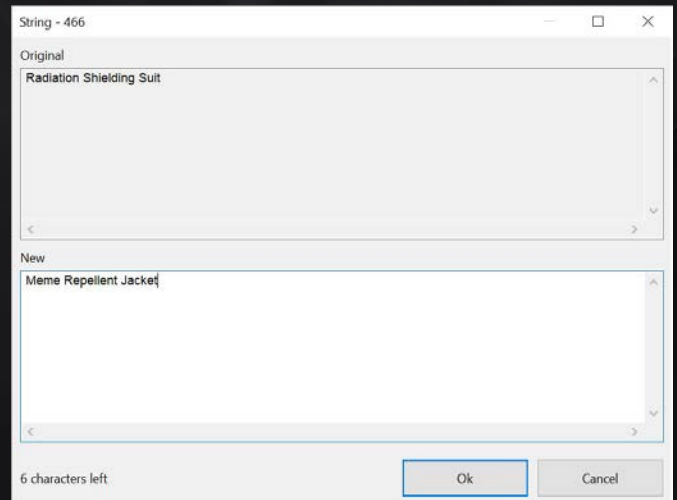
4. After you are done, save your patch as a **.deh** file.

5. Open a WAD of your choice in Slade, import the previously created patch file, right click on it, and rename it to DEHACKED. Save the WAD file.
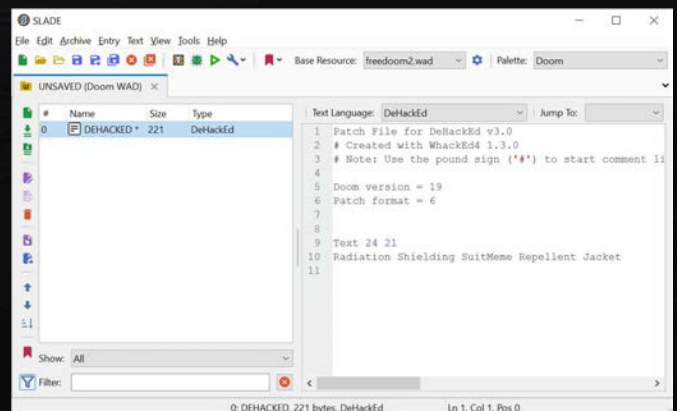

6. You can now load this WAD in Chocolate Doom. Be sure to include the -dehlump switch when running Chocolate Doom to get it to load.
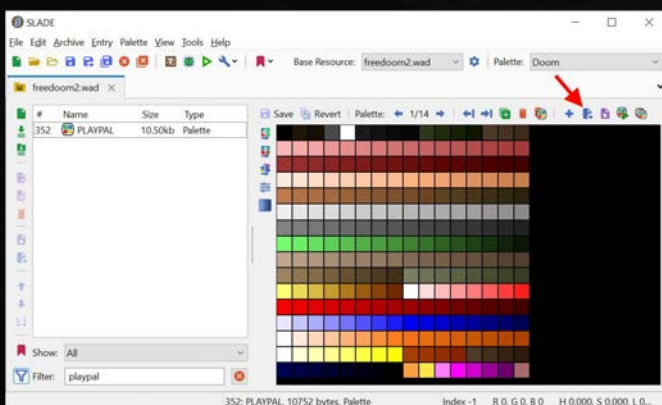
Notes about Doom's palette

Useful links

Doom uses an indexed image format with a preset palette of 256 RGB colors. After importing an arbitrary PNG file, it must be converted to the Doom palette. This will replace colors with their nearest match in the Doom palette.

For example:
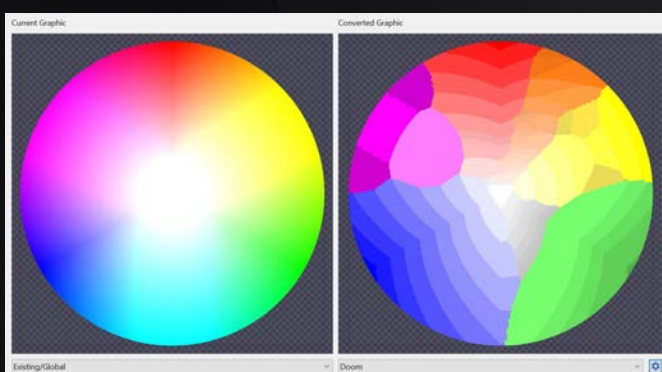
To avoid unexpected and unpleasant loss of color fidelity, you might want to use the Doom palette in the graphics software to create the art in the first place. Search the PLAYPAL lump and click export with the first palette selected. Make sure to export as a palette format supported by your editor .