Mask Generaton

Processes static masks and dynamic panoramic sequences

The generator processes static and sequence masks in real-time, combining them based on the current state provided by the viewer position tracking system (tmpl.log).
The results are saved sequentially in the specified output directory.

JSON Configuration Structure

The **mask_mapping.json** file is central to defining how elements of the landscape are represented and processed. It consists of two main sections: static_masks and sequence_masks.

Static Masks

The **static_masks** section maps specific elements of the landscape (e.g., clouds, snow, grass) to corresponding segmentation mask color IDs, as defined by the trained model.
These elements are static, meaning they do not change over time.

Key (e.g., "10", "50", "245"):
Represents a specific element of the landscape. For example:
- "10" might correspond to snow in the foreground.
- "245" might correspond to clouds.

Value (e.g., 1, 3, 8):
Represents the segmentation mask color ID used by the trained model to generate the associated element.

Sequence Masks (Dynamic Changes in the Landscape)

Unlike static masks, sequence masks are designed to handle dynamic changes in the landscape.
They can include both static files and directories containing sequences of images for a particular column.

Directory and File Structure

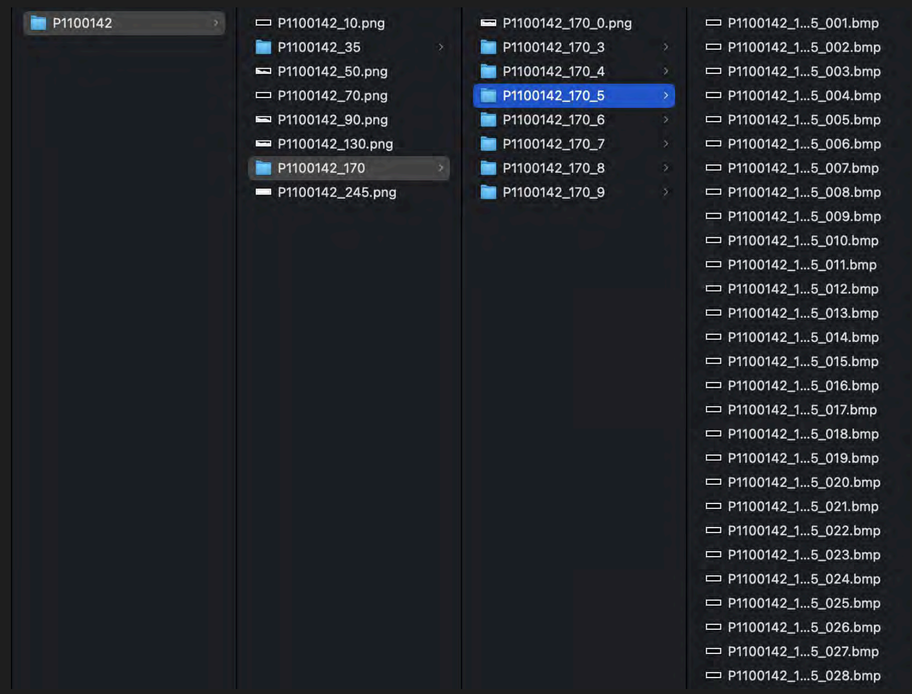
1. Static Images for Specific Columns
Example: **P1100142_170/P1100142_170_0.png**
For **column 0**, a static image (P1100142_170_0.png) is always used.

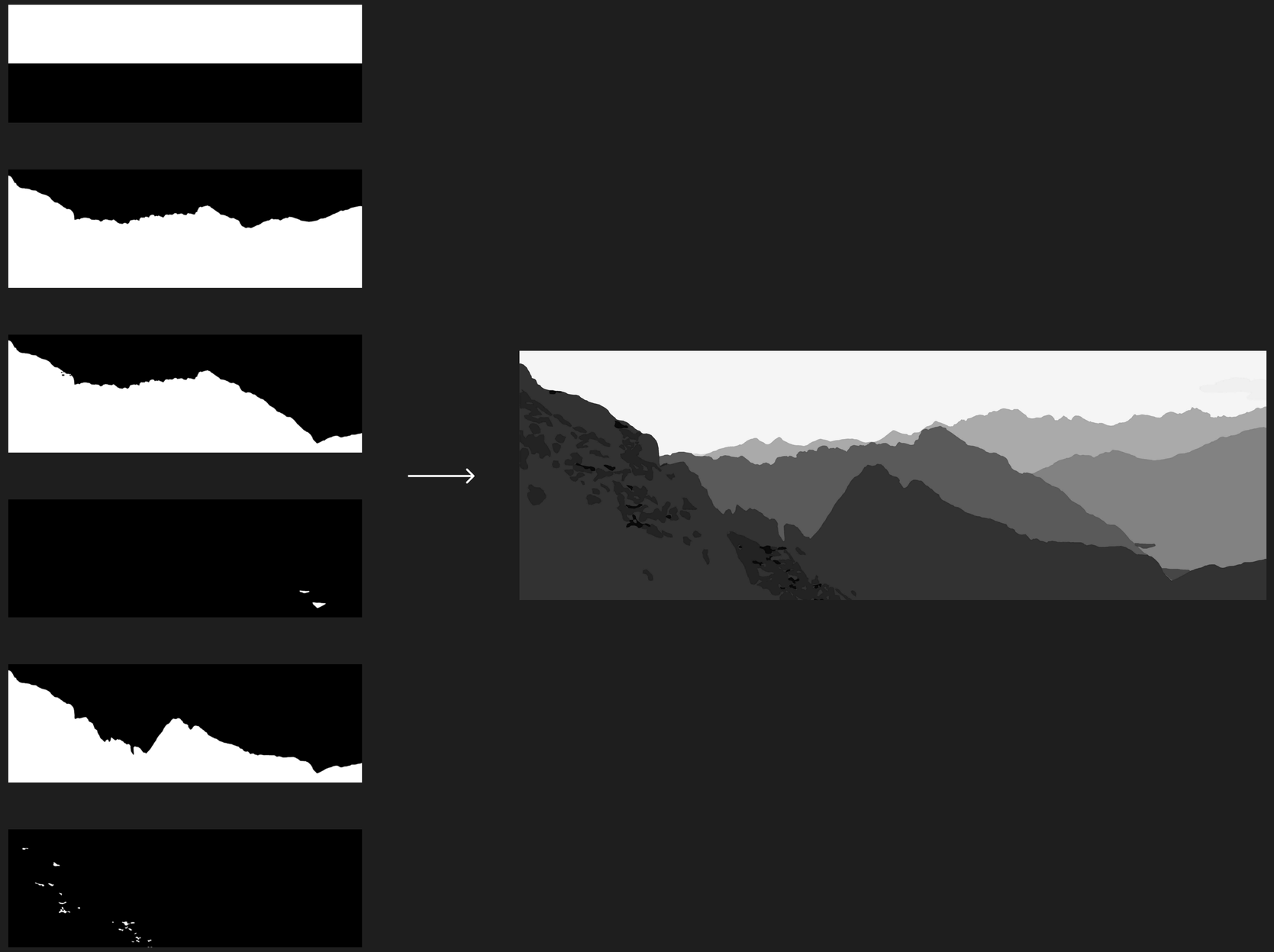
2. Folders Containing Image Sequences
Example: **P1100142_170/P1100142_170_9/**
This folder contains a sequence of .bmp files (e.g., P1100142_170_9_001.bmp, P1100142_170_9_002.bmp) that represent dynamic changes over time for **column 9**.

3. Empty or Missing Columns
If a column does not have a corresponding file or folder, a blank mask (black) is generated for that column.
Example: For **column 1**, since P1100142_170/P1100142_170_1 does not exist, a black mask will be used.

mask_mapping.json

```
{
    "P1100142": {
        "static_masks": {
            "10":  1,
            "50":  3,
            "70":  10,
            "90":  4,
            "130": 5,
            "245": 8
        },
        "sequence_masks": {
            "35":  2,
            "170": 6
        }
    },
    "0145": {
        "static_masks": {
            "35":  12,
            "38":  13,
            "55":  14,
            "195":  17,
            "200":  18,
            "245":  8,
            "250":  9
        },
        "sequence_masks": {
            "220": 19
        }
    }
}
```





Mask Generaton

Processes static masks and dynamic panoramic sequences

For the viewer sequence:

```
[ 0, 0, 3, 0, 0, 0, 2, 0, 0, 0 ]
```

The following masks are used:

- P1100142_10.png
- P1100142_35_2/P1100142_35_2_003.bmp → value 3 in column 2
- P1100142_35_6/P1100142_35_6_002.bmp → value 2 in column 6
- P1100142_50.png
- P1100142_70.png
- P1100142_90.png
- P1100142_130.png
- P1100142_170_2/P1100142_172_2_003.bmp → value 3 in column 2
- P1100142_170_6/P1100142_170_6_002.bmp → value 2 in column 6
- P1100142_245.png

For the viewer sequence:

```
[ 0, 0, 30, 0, 0, 0, 12, 0, 0, 3 ]
```

The following masks are used:

- P1100142_10.png
- P1100142_35_2/P1100142_35_2_030.bmp → value 30 in column 2
- P1100142_35_6/P1100142_35_6_012.bmp → value 12 in column 6
- P1100142_35_9/P1100142_35_9_003.bmp → value 3 in column 9
- P1100142_50.png
- P1100142_70.png
- P1100142_90.png
- P1100142_130.png
- P1100142_170_2/P1100142_172_2_030.bmp → value 30 in column 2
- P1100142_170_6/P1100142_170_6_012.bmp → value 12 in column 6
- P1100142_170_9/P1100142_170_9_003.bmp → value 3 in column 9
- P1100142_245.png

For the viewer sequence:

```
[ 0, 0, 300, 0, 0, 0, 12, 0, 0, 3 ]
```

The following masks are used:

- P1100142_10.png
- P1100142_35_2/P1100142_35_2_200.bmp → value 300 (the last file is e.g. 200) in column 2
- P1100142_35_6/P1100142_35_6_012.bmp → value 12 in column 6
- P1100142_35_9/P1100142_35_9_003.bmp → value 3 in column 9
- P1100142_50.png
- P1100142_70.png
- P1100142_90.png
- P1100142_130.png
- P1100142_170_2/P1100142_172_2_200.bmp → value 300 (the last file is e.g. 200) in column 2
- P1100142_170_6/P1100142_170_6_012.bmp → value 12 in column 6
- P1100142_170_9/P1100142_170_9_003.bmp → value 3 in column 9
- P1100142_245.png