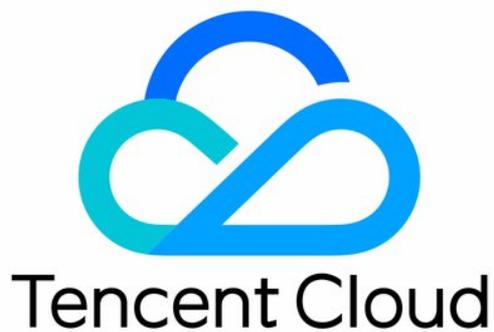


Tencent Effect SDK

Feature Guide

Product Documentation



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Feature Guide

Reducing SDK Size

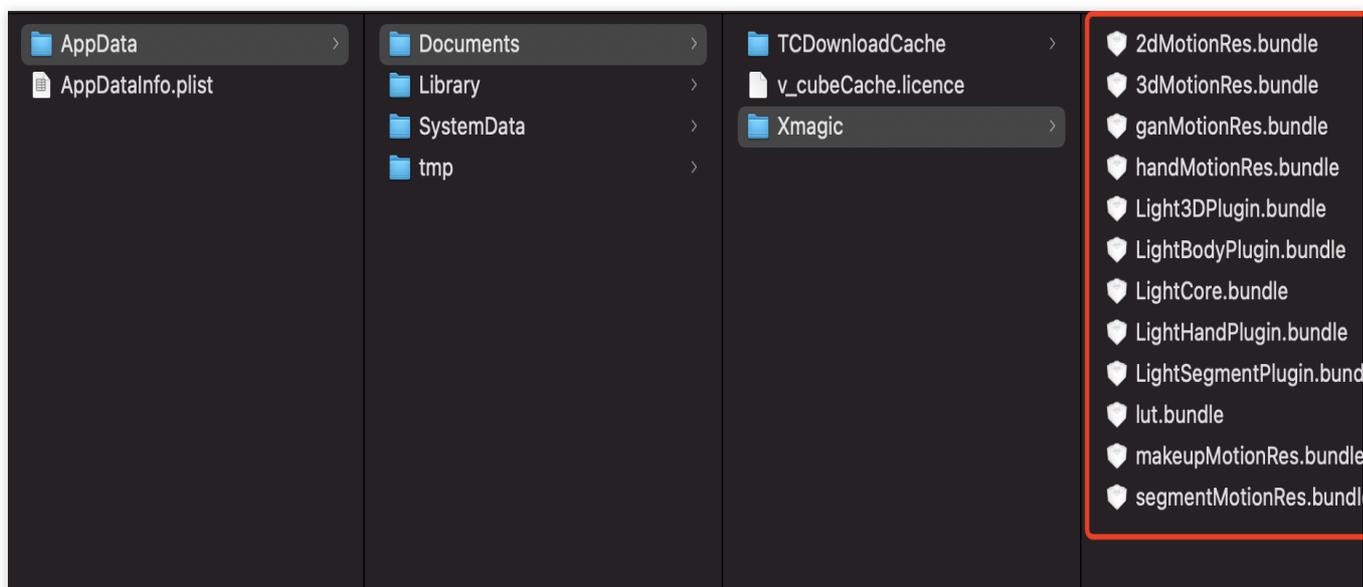
iOS

Last updated : 2022-07-22 12:04:37

Dynamically downloading resources

To reduce the SDK package size, you can dynamically download the necessary module resources and animated effect resources (`MotionRes` , not available in some basic editions of the SDK) from a URL and, after download, pass the path of the resources to the SDK.

1. Upload a ZIP file of the effect resources to the cloud and generate a URL such as `https://server address/LightCore.bundle.zip` .
2. In your project, download the file from the URL and decompress it to the sandbox (for example: `Documents/Xmagic`).



3. When initializing the SDK, pass in the path of the sandbox to `root_path` .

```
NSDictionary *assetsDict = @{@"core_name":@"LightCore.bundle",
                             @"root_path":_filePath ,//_filePath is the folder to whi
                             @"tnn_"
                             @"beauty_config":beautyConfigJson
};
```

```
// Init beauty kit                                     @"root_path":Documents/Xmagic,
self.beautyKit = [[XMagic alloc] initWithRenderSize:_inputSize assetsDict:assetsDi
```

4. Set the icons for different effects and get the images from the downloaded files.

```
NSMutableArray *arrayModels = [NSMutableArray array];
for (NSDictionary* dict in motionArray) {
    BeautyCellModel* model = [BeautyCellModel beautyWithDict:dict];
    // Load default mainbundle path of motionres
    if ([model.title isEqualToString:NSLocalizedString(@"item_none_label",nil)]) {
        model.icon = [NSString stringWithFormat:@"%d/%d.png", [[NSBundle mainBundle] b
            [arrayModels addObject:model];
    } else {
        if(_useNetResource && _filePath != nil){ //When using resources from the inter
            NSString *DirPath = [_filePath stringByAppendingPathComponent:@"2dMotionRe
            model.icon = [NSString stringWithFormat:@"%d/%d/template.png", DirPath, mo
        }else{
            model.icon = [NSString stringWithFormat:@"%d/%d/template.png", [[NSBundle
        }
        if ([fileManager fileExistsAtPath:model.icon]) {
            [arrayModels addObject:model];
        }
    }
}
```

5. Set parameters for effects (For details, see [API Documentation](#)).

```
/// @brief Configure effects
/// @param propertyType: The effect type, which is a string. Valid values: beauty,
/// @param propertyName: The effect name.
/// @param propertyValue: The effect value.
/// @param extraInfo: A reserved parameter, which can be used for dictionary config
/// @return: If 0 is returned, the configuration is successful. If other values are
/// @note: Notes
/**
| Effect Type | Effect Name | Effect Value | Description | Remarks |
| :---- | :---- | :---- | :---- | :---- |
| beauty | Name of beautification effect | Effect strength | Beautification effect
| lut | Filter path + Filter name | Filter strength | Filter API | - |
| motion | Name of animated effect | Path of animated effect | Animated effect AP
**/
- (int)configPropertyWithType:(NSString *_Nonnull)propertyType withName:(NSString *
```

Examples

Configuring a beautification effect

No extra configuration is needed for beautification or body retouch effects. The SDK will automatically use the resource files downloaded. Below is a request sample for the skin brightening effect.

```
[self.beautyKitRef configPropertyWithType:@"beauty" withName:@"beauty.whiten" withD
```

Request parameters:

| Parameter | Value |
|---------------|---------------|
| propertyType | beauty |
| propertyName | beauty.whiten |
| propertyValue | 30 |
| extraInfo | nil |

Configuring filter effects

For filter effects, you need to configure `key` first. You can use the SDK's built-in effect resources or resources downloaded from the internet.

```
NSString *key = [_model.lutIDs[index] path];
if (key != nil) {
    key = [@"lut.bundle/" stringByAppendingPathComponent:key]; //The relative path o
}
if(_useNetResource && _filePath != nil){ //If a resource downloaded from the intern
    key = [_filePath stringByAppendingPathComponent:key]; //Get the absolute path of
}
[self.beautyKitRef configPropertyWithType:@"lut" withName:key withData:[NSString
stringWithFormat:@"%f",value] withExtraInfo:nil];
```

Configuring the brightening filter

Request parameters:

| Parameter | Value (Local Resource) | Value (Internet Resource) |
|---------------|------------------------|---|
| propertyType | lut | lut |
| propertyName | lut.bundle/n_baixi.png | /var/mobile/Containers/Data/Application/25C7D01A-73F6-4F1B-AEB6-5EE03A221D18/Documents/Xmagic/lut.bundle/n_baixi.pr |
| propertyValue | 60.000000 | 60.000000 |

| | | |
|-----------|------|------|
| extraInfo | null | null |
|-----------|------|------|

Configuring animated, makeup, and keying effects

For animated, makeup, and keying effects, you need to configure `propertyValue` first. You can use the SDK's built-in effect resources or resources downloaded from the internet.

```
NSString *key = [_model.motionIDs[index] key];
NSString *path = [_model.motionIDs[index] path];
NSString *motionRootPath = path==nil?[[NSBundle mainBundle] pathForResource
if(_useNetResource && _filePath != nil){ //If a resource downloaded from th
    motionRootPath = [_filePath stringByAppendingPathComponent:@"2dMotionRe
}
[self.beautyKitRef configPropertyWithType:@"motion" withName:key withData:m
```

Configuring the animated 2D cute effect

Request parameters:

| Parameter | Value (Local Resource) | Value (Internet Re |
|---------------|--|--|
| propertyType | motion | motion |
| propertyName | video_keaituya | video_keaituya |
| propertyValue | <code>/private/var/containers/Bundle/Application/FD2D7912-E58E-4584-B7E4-8715B8D2338F/BeautyDemo.app/2dMotionRes.bundle</code> | <code>/var/mobile/containers/Bundle/Application/73F6-4F1B-AEB5EE03A221D18/1</code> |
| extraInfo | nil | nil |

Android

Last updated : 2022-07-20 15:11:19

To downsize the package, you can download the `assets` resources, `so` libraries, and animated effect resources `MotionRes` (unavailable in some basic SDKs) required by the SDK online. After successful download, set the paths of the above files in the SDK.

We recommend you reuse the download logic of the demo. You can also use your existing download service.

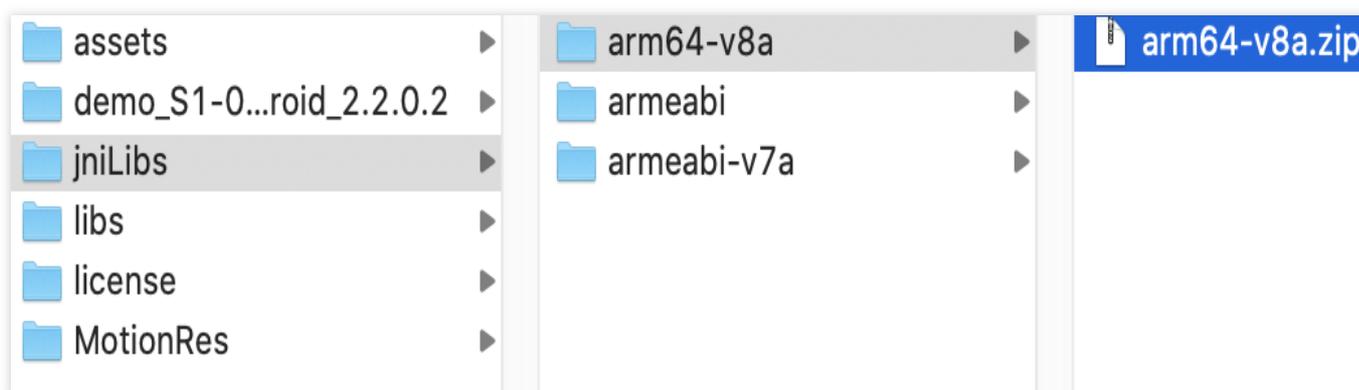
If you reuse the demo download logic, note that the checkpoint restart feature is enabled by default in the demo, so that a download can be resumed later if it is interrupted. To use this feature, make sure that your download server supports the checkpoint restart capabilities.

Check method

```
Check whether the web server supports range requests. If range requests are support
curl -i --range 0-9 https://your server address/name of the file to be download
For example:
curl -i --range 0-9 https://mediacloud-76607.gzc.vod.tencent-cloud.com/TencentEffec
If the returned content contains the `Content-Range` field, the server supports che
```

Dynamically Downloading .so Libraries

`.so` library packages are in `jniLibs/arm64-v8a` and `jniLibs/armeabi-v7a` .



To reuse the download service in the demo

To use your own download service

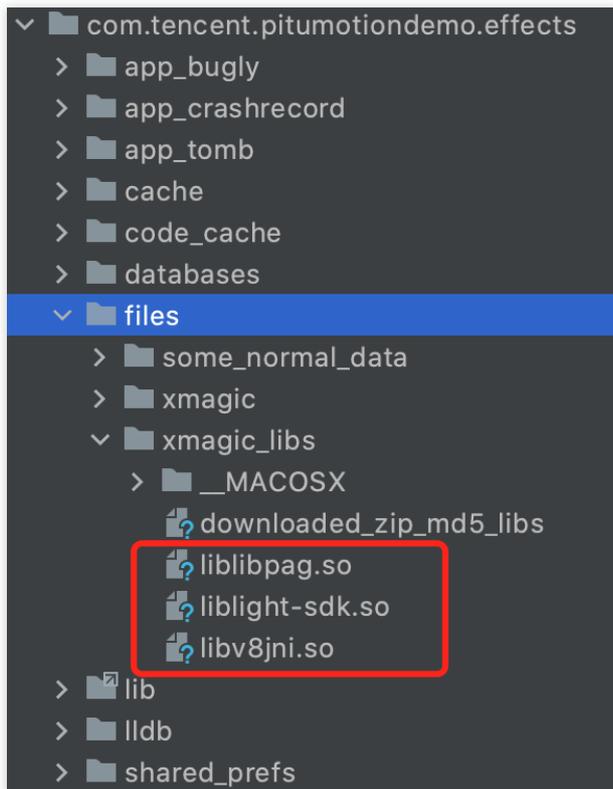
1. Calculate the MD5 value of the two ZIP packages. To do so on macOS, directly run `MD5 file path/filename` in Terminal or use an applicable tool.
2. Upload the packages to your server and get the download URLs.

3. Update the values of the following constants in `ResDownloadConfig` in the demo project:

```
public class ResDownloadConfig {
    //Directory structure
    //
    //---mylibs.zip(You can give it a custom name)
    //-----liblibpag.so
    //-----liblight-sdk.so
    //-----libv8jni.so
    //
    // You, A minute ago • Uncommitted changes
    public static final String DOWNLOAD_URL_LIBS_V8A = "https://
    public static final String DOWNLOAD_URL_LIBS_V7A = "https://
    //MD5 checksum of the ZIP file
    public static final String DOWNLOAD_MD5_LIBS_V8A = "libs-v8
    public static final String DOWNLOAD_MD5_LIBS_V7A = "libs-v7
```

4. Call `ResDownloadUtil.checkOrDownloadFiles` to start download.

1. Download and decompress the packages and set their paths in the SDK. For example, after decompressing a package, set `so path =`
`/data/data/com.tencent.pitumotionDemo.effects/files/xmagic_libs` .

**Note:**

We strongly recommend you download `.so` libraries to the private directory of your app rather than an external storage device to prevent them from being mistakenly deleted by clearing tools. We also recommend you download the `.so` libraries of v8a or v7a based on the CPU architecture of user mobile phones to expedite downloads. You can refer to `LaunchActivity` in the demo project.

2. Call the following code to load `.so` libraries and authenticate the license.

```
XmagicApi.setLibPathAndLoad(path);  
auth();
```

Note:

When the SDK version is updated, the corresponding `.so` libraries may also change, and you need to download the `.so` libraries again. We recommend you refer to the method in the demo and use the MD5 value for verification. Regardless of whether you choose to download `.so` libraries on your own or reuse the download service in the demo, check whether they have been downloaded before calling the `auth` API of the SDK. `ResDownloadUtil` provides the following method for checking. If they have been downloaded, set their paths in the SDK as shown below:

```
String validLibsDirectory = ResDownloadUtil.getValidLibsDirectory(LaunchActivity.this  
  
isCpuV8a() ? ResDownloadConfig.DOWNLOAD_MD5_LIBS_V8A : ResDownloadConfig.DOWNLOAD_M  
if (validLibsDirectory == null) {  
    Toast.makeText(LaunchActivity.this, "Libraries are not downloaded. Download the  
    return;
```

```
}  
XmagicApi.setLibPathAndLoad(validLibsDirectory);  
auth();
```

Dynamically Downloading `assets` Resources

You can dynamically download `assets` resources as follows:

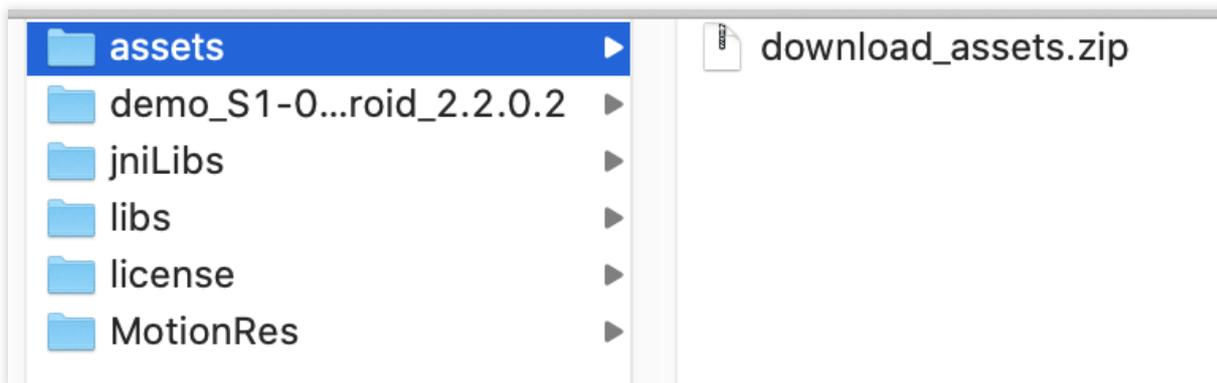
1. Configure the following in `assets` in your local project:

On 2.4.0 or later: No files in the local `assets` directory need to be retained.

On versions earlier than 2.4.0: You need to retain the license file and four JSON configuration files:

`brand_name.json` , `device_config.json` , `phone_info.json` , and `score_phone.json` .

2. Find the `download_assets.zip` package in the SDK.



3. Calculate the MD5 value of the ZIP package in the same way as described above for the [.so files](#), Then, upload the packages to the server to get the download addresses.

To reuse the download service in the demo

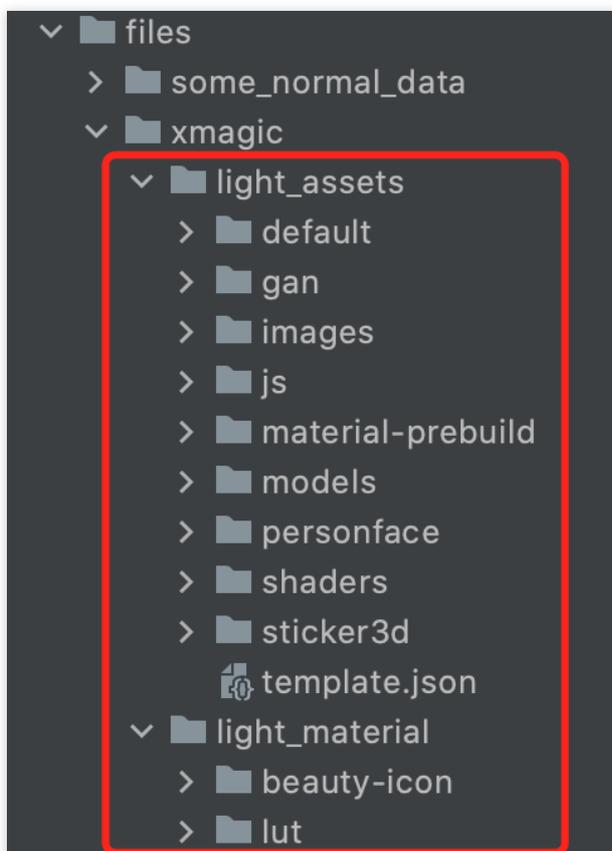
To use your own download service

1. Update the download address and MD5 value in the following figure.

```
//Directory structure
//
//---myassets.zip(You can give it a custom name)
//-----Light3DPlugin
//-----LightCore
//-----LightHandPlugin
//-----LightSegmentPlugin
//-----lut
// You, Moments ago • Uncommitted changes
public static final String DOWNLOAD_URL_ASSETS = "https://
//MD5 checksum of the ZIP file
public static final String DOWNLOAD_MD5_ASSETS = "ass
```

2. Call `ResDownloadUtil.checkOrDownloadFiles` to start download and call `ResDownloadUtil.getValidAssetsDirectory` to get the path of the downloaded `assets`. For detailed directions, see `LaunchActivity.java`.

After downloading and decompressing the above ZIP package, you need to reorganize the file structure as follows:



Here, names in the red box such as `light_assets` and `light_material` cannot be changed arbitrarily. We recommend you directly reuse the `organizeAssetsDirectory` method in `ResDownloadUtil` to organize the structure.

Note:

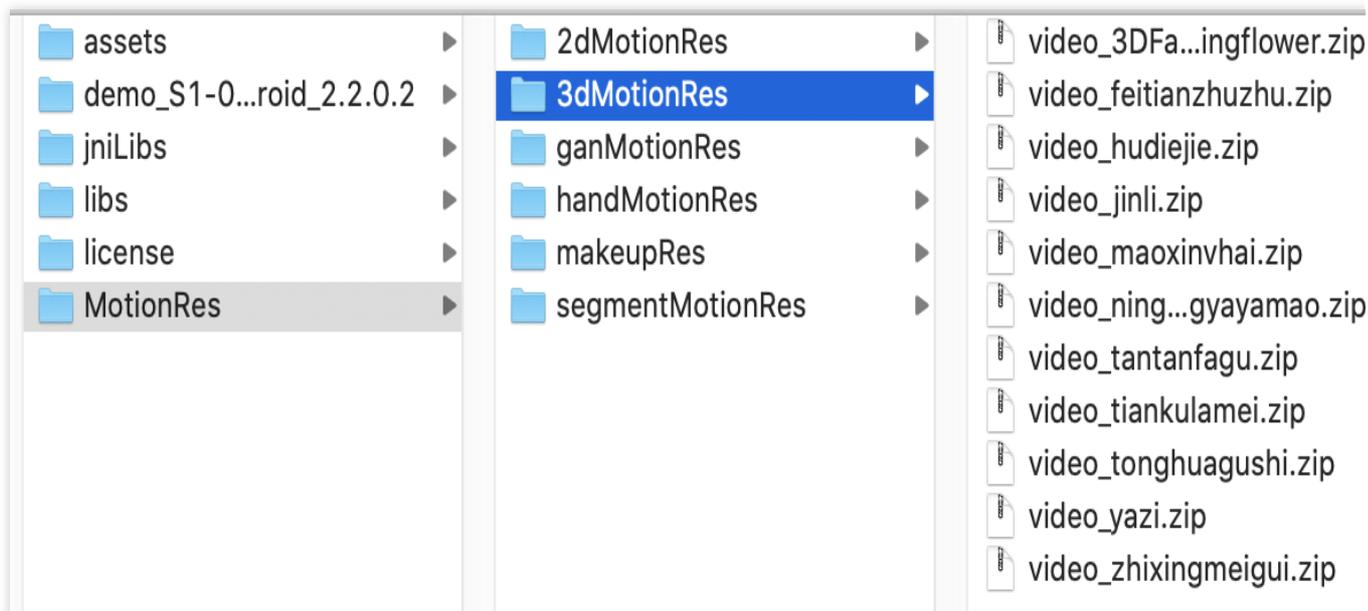
When the SDK version is updated, the corresponding `assets` may also change, and you need to download the `assets` again to ensure compatibility. We recommend you refer to the method in the demo and use the MD5 value for verification.

Regardless of whether you choose to download the `assets` on your own or reuse the download service in the demo, check whether `assets` have been downloaded before capturing video. `ResDownloadUtil` provides the following method for checking. If they have been downloaded, set their paths in the SDK. For detailed directions, see `LaunchActivity.java`.

```
String validAssetsDirectory = ResDownloadUtil.getValidAssetsDirectory(LaunchActivity.this);
if (validAssetsDirectory == null) {
    Toast.makeText(LaunchActivity.this, "The `assets` are not downloaded. Download them first.",
        Toast.LENGTH_SHORT).show();
    return;
}
XmagicResParser.setResPath(validAssetsDirectory);
startActivity(intent);
```

Downloading Animated Effect Resources `MotionRes`

Some basic editions don't have animated effect resources. You can skip this section based on your actual conditions. Animated effects are divided into six types, and each type has several ZIP packages, each of which contains an animated effect. The file content varies by your purchased edition.

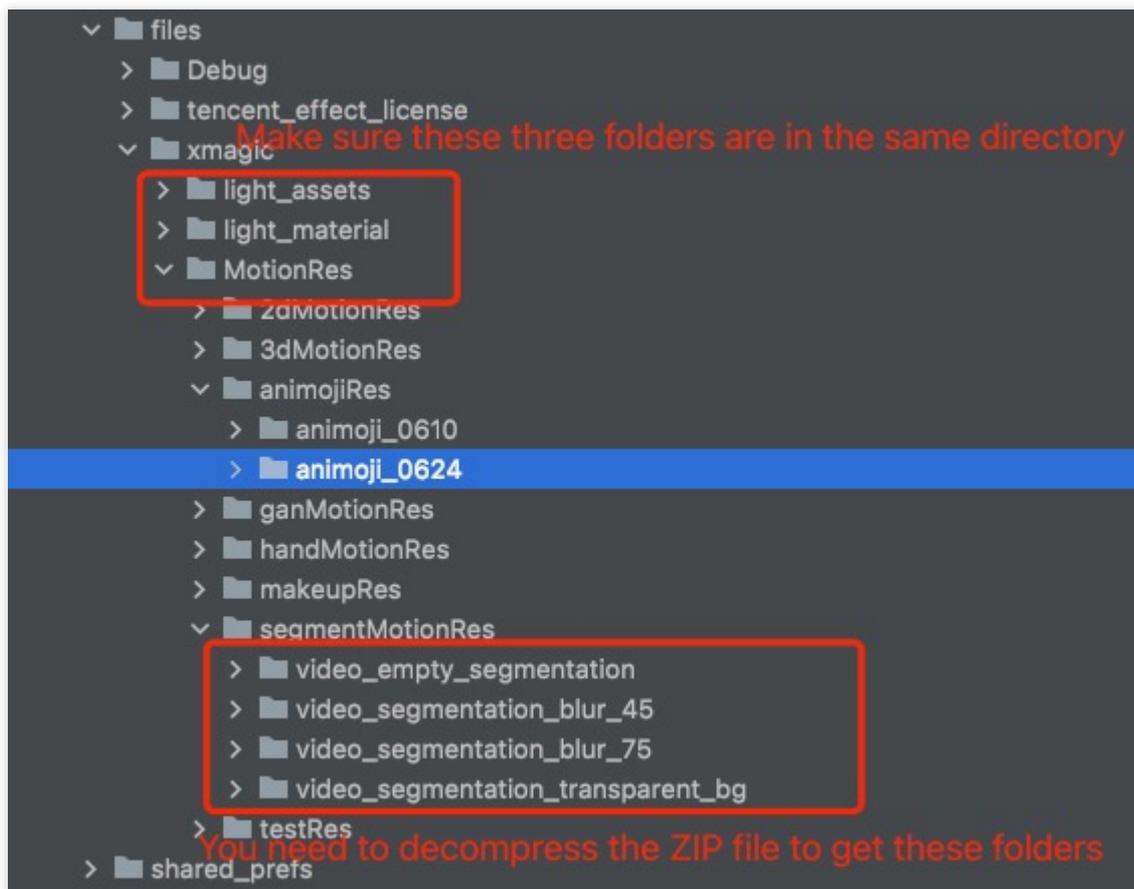


Animated effect resources can be downloaded as needed. For example, download can start after a user enters the relevant feature page or after clicking the icon of an animated effect.

You need to upload these ZIP packages to the server and get the download address of each ZIP package.

Note:

The `MotionRes` directory of downloaded animated effect resources must be at the same level as `light_assets` and `light_material` described in the previous section. In addition, each animated effect needs to be extracted and cannot be placed in the same ZIP package.



To download `MotionRes`, refer to the `ResDownloadUtil.checkOrDownloadMotions` method. We recommend you download such resources one by one.

To reuse the download service in the demo, replace the value of the `MOTION_RES_DOWNLOAD_PREFIX` constant in `ResDownloadConfig` with your download URL prefix.

Flutter

Last updated : 2025-03-03 17:55:23

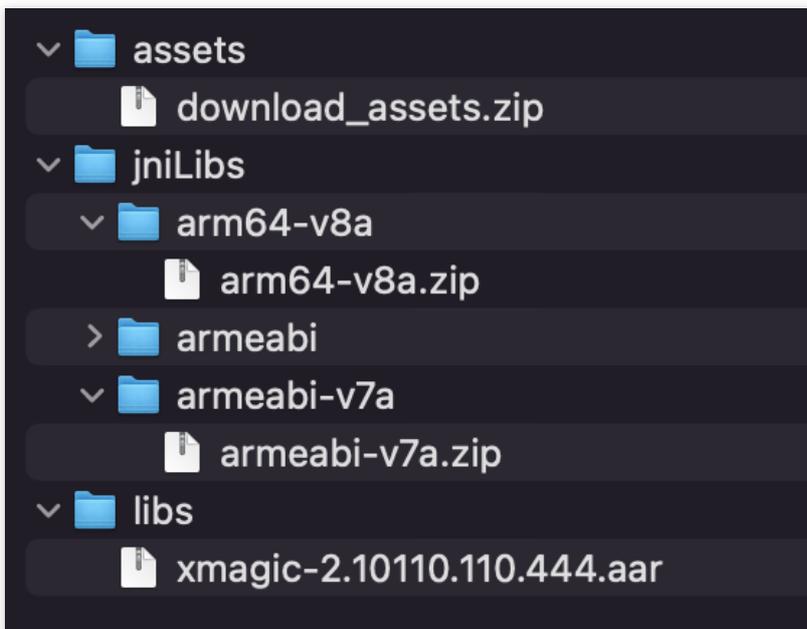
To minimize the package size, you may opt to download the SDK-required .so libraries (present in Android, absent in iOS), model resources, and material resources (such as filters and stickers) via the internet.

Android

iOS

SDK Integration

[Download SDK](#), decompress it, and then find the .zip compressed package in the "SDK" directory and decompress it again. You will see the following files. Compress the model files in `assets` and the `so` file compressed package in `jniLibs` on your server, and then download and use them online. Copy `xmagic-xxxx.aar` under `libs` to the `android/app/libs` folder, and add `api fileTree(dir: "libs", include: ['*.aar'])` in `dependencies` of `app/build.gradle`



Dynamic Loading of Shared Objects

Download the compressed shared object (SO) package to the application installation directory and extract it.

Subsequently, invoke the `setLibPathAndLoad` method of the `TencentEffectApiAndroid` object to load the SO.

```
/**
 * @param libPath is the folder path used to store the .so files, for example: xxx/x
```

```
/**/  
Future<bool> setLibPathAndLoad(String libPath);
```

Dynamic Model Loading

Download the model files to the application installation directory and extract them. Invoke the

`TencentEffectApiAndroid` object's `addAiMode` to copy the model files to a specified directory.

```
/**  
 * @param inputDir The path of the folder to be copied, referring to the "Light3DPl  
 * @param resDir This path should be consistent with the path set by the setResourc  
 * @param callBack Callback for the result of the copy, 0 indicates a successful co  
 **/  
void addAiMode(String inputDir, String resDir, AddAiModeCallBack callBack) ;
```

Dynamic Material Loading

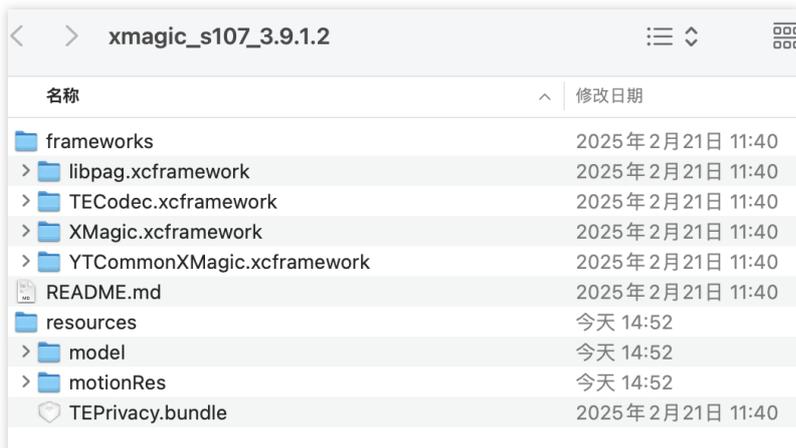
Materials must be downloaded by the user, saved to the SD card or the installation directory, and unzipped. When utilizing the materials, invoke the `setEffect` method, specifying the material path in the `resPath` parameter.

Note:

1. If you are utilizing the panel from the demo, the panel by default employs the path configured via `setResourcePath` combined with the path specified in the `json` configuration. Therefore, when using the panel and dynamically downloading materials, it is necessary to download the materials to the path designated by `setResourcePath + json` configuration file.
2. The term "materials" here refers to filter resources and sticker resources.

SDK Integration

[Download the SDK](#), and extract it. As illustrated below, `frameworks` contains the SDK, while under `resources`, `model` refers to the model files, and `motionRes` encompasses materials for **testing purposes**.



Launch your Xcode project and incorporate the `xcframework` from the `frameworks` folder into the actual project. Select the target you wish to run, navigate to the General section, and expand the `Frameworks, Libraries, and Embedded Content` section by clicking on it. Then, click the "+" icon below to add the necessary libraries.

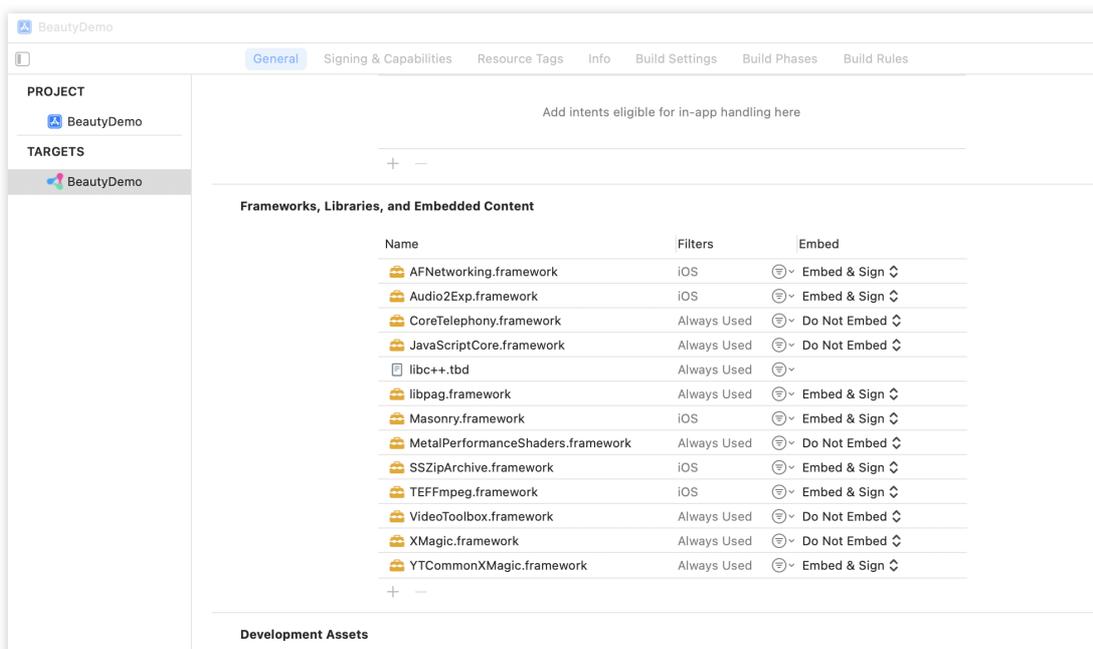
To integrate the SDK, include:

`XMagic.xcframework` , `YTCommonXMagic.xcframework` , `libpag.xcframework` ,
`Audio2Exp.xcframework` , `TECodec.xcframework`

To add the required libraries, include:

`MetalPerformanceShaders.framework` , `CoreTelephony.framework` ,
`JavaScriptCore.framework` , `VideoToolbox.framework` , `libc++.tbd`

Depending on your needs, you may also add other utility libraries such as `Masonry.framework` (a layout library) and `SSZipArchive` (a file decompression library).



Dynamic Model Loading

Download the model files to the sandbox, and extract them (for example, to the sandbox path

`Document/Xmagic`). By setting this path when using `setResourcePath` , the beautification features can utilize the downloaded model files upon initialization.

Dynamic Material Loading

Download the material files independently, download and extract them to the sandbox, and use the `setEffect` method when employing the materials, filling in the `resPath` parameter with the material path.

Note:

1. If you are using the panel from the demo, the panel in the demo by default uses the path set by `setResourcePath` combined with the path configured in the `json` . Therefore, when using the panel and dynamically downloading materials, you need to download the materials to the path specified by `setResourcePath + json` configuration file.
2. The materials referred to here include filter resources and sticker resources.

Note:

Model files must be processed prior to the activation of the beautification features, while .so files require handling before authentication, thus they should be addressed at the earliest opportunity.

SDK Integration Issue Troubleshooting

Android

Last updated : 2024-07-05 12:40:00

How to resolve the problem when the Android release package reports errors about missing certain methods?

If you enable compilation optimization (setting `minifyEnabled` to `true`) when packaging the release, it will trim some code that is not called in the Java layer. This code may possibly be called by the native layer, thus causing the `no xxx method` error.

If you enabled such compilation optimization, you should add these keep rules to avoid trimming xmagic's code:

```
-keep class com.tencent.xmagic.** { *;}
-keep class org.light.** { *;}
-keep class org.libpag.** { *;}
-keep class org.extra.** { *;}
-keep class com.gyailib.**{ *;}
-keep class com.tencent.cloud.iai.lib.** { *;}
-keep class com.tencent.beacon.** { *;}
-keep class com.tencent.qimei.** { *;}
-keep class androidx.exifinterface.** { *;}
```

2. How to resolve the conflict of the gson library when integrating Android SDK into the host project?

Add the following code into the `build.gradle` file of the host project:

```
Android{
    configurations {
        all*.exclude group: 'com.google.code.gson'
    }
}
```

3. Why did the .so library fail to load or why can't GAN-type effects (such as fairytale visage and childhood bubble gum) be used when Android targetSdkVersion is 31 or later?

When Android `targetSdkVersion` is 31 or later, locate the `AndroidManifest.xml` file under the app module, and then insert the following tag within the application tag:

```
<uses-native-library
    android:name="libOpenCL.so"
    android:required="false" />
```

```
//true indicates that libOpenCL is essential for the current app. Without t
//false indicates that libOpenCL is not essential for the current app. The
//For information about uses-native-library, refer to the Android official
```

Refer to [Development Guide](#) for further details.

4. When I use the beauty filter, the texture passed is a horizontal texture. How can this be resolved?

You can use the convert method of the tool class `TextureConverter.java` in the demo to rotate the texture, convert it to portrait mode, and then pass it to the beauty SDK.

```
/**
 * This method is used to rotate and mirror 'RGBA' textures. The process is as
 * Use case: Some streaming SDKs return horizontal textures or the orientation
 *
 * @param srcID   RGBA texture
 * @param width   Texture width
 * @param height  Texture height
 * @param rotation Degrees of required rotation
 * @return Rotated texture. Note: If rotated by 90 or 270 degrees, the width an
 */
public int convert(int srcID, int width, int height, @RotationDegreesValue int
```

5. When I use the beauty filter, the texture passed is an OES texture. How can this be resolved?

You can use the oes2Rgba method of the tool class `TextureConverter.java` in the demo to convert the texture into an RGBA texture, and then pass it to the beauty SDK.

```
/**
 * This method is used to convert OES textures to RGBA textures.
 *
 * @param srcID   OES texture
 * @param width   Texture width
 * @param height  Texture height
 * @return RGBA texture ID
 */
public int oes2Rgba(int srcID, int width, int height)
```

6. If I want to use a different version of PAG, how can I resolve it? Versions 3.5.0 and later are supported.

When integrating the Beauty SDK for customers:

For integration via Maven, PAG can be imported by implementation TencentEffect. If you do not want to use the PAG dependency of TencentEffect, you can exclude it and then introduce the version of PAG you need in your app's build.gradle:

```
implementation ('com.tencent.mediacloud:TencentEffect_S1-04:version number'){
    exclude group:      "com.tencent.tav", module: "libpag"
}
```

For manual integration by downloading the beauty SDK's aar, the integration is dependent on TencentEffect.aar in the project. This aar does not include PAG, and you need to add an implementation PAG statement in your app's build.gradle to use PAG:

```
implementation 'com.tencent.tav:libpag:4.3.33-noffavc'
```

If you want to dynamically download the PAG's .so files, go to [the PAG official website](#) to find the version you need, download the .aar, rename the .aar to .zip, extract it, remove the .so files, compress the remaining files back into a .zip, and then rename it back to .aar. Finally, import this .aar of PAG without the .so files, the PAG's .so files will then be downloaded dynamically over the internet.

iOS

Last updated : 2024-07-05 12:40:20

1. What should I do if an error occurs after the running of iOS import resources?

Xcode 12.X compilation prompt: **Building for iOS Simulator, but the linked and embedded framework '.framework'...**

Navigate to **Build Settings > Build Options > Validate Workspace**, and set Validate Workspace to 'Yes' and press **Run**.

Note:

Once 'Validate Workspace' is set to 'Yes' and the compilation is completed, you can set it back to 'No' and the application will work normally.

2. What should I do if the filter settings don't take effect?

Check whether the values are set properly (value range: 0-100). You may have set too small a value so the effect is not obvious.

3. What should I do if there's an error upon dSYM generation during compilation of the iOS Demo?

Error message:

```
PhaseScriptExecution CMake\ PostBuild\ Rules build/XMagicDemo.build/Debug-iphoneos
  cd /Users/zhenli/Downloads/xmagic_s106
  /bin/sh -c /Users/zhenli/Downloads/xmagic_s106/build/XMagicDemo.build/Debug-iphon
Command /bin/sh failed with exit code 1
```

Problem analysis: The cause is the failure of re-signing `libpag.framework` and `Masonry.framework`.

Solution:

1.1 Open `demo/copy_framework.sh`.

1.2 Change `$(which cmake)` to an absolute local cmake path.

1.3 Replace the `Apple Development:` signature with your own account's signature.

4. What should I do if a license error is displayed when I enter the homepage of the iOS Demo?

Check the license failure error code printed in the log. If you are using a local license file, check whether the file has been added to the project.

5. What should I do upon a compilation error in the iOS Demo?

Error message:

```
unexpected service error: build aborted due to an internal error: unable to write m
```

Solution:

- 1.1 Navigate to **File > Project settings > Build System**, and select **Legacy Build System**.
- 1.2 For Xcode 13.0 and later versions, navigate to **File > Workspace Settings** and check **Do not show a diagnostic issue about build system deprecation**.

Performance Fine-Tuning

Low-End Device Performance Optimization

Practice Guide

Last updated : 2025-06-25 09:38:46

Beauty effects involve AI detection, Image Process, 2D and 3D graphics rendering, animation effects, etc., which consume certain CPU and GPU resources. If the system load is already high during live streaming or shooting, adding beauty effects may cause lag or frame drops on devices with poor performance. Therefore, we have compiled a Low-End Device Performance Optimization Practice Guide to minimize the performance overhead of the beauty effects SDK on low-end devices, ensuring a good user experience.

Definition of Low-End Devices

The SDK provides the `getDeviceLevel` API to obtain the device level (API description: [Android](#), [iOS](#)). The level ranges from 1 to 5, with 1 being the lowest-end device and 5 being the highest-end device. We recommend considering devices with a level of 3 or below as low-end devices.

You can also determine the current device level based on your product data and the performance consumption of your app.

By determining different device levels, reduce performance consumption on low-end devices with the following measures:

Measure One: Using the SDK's Normal Mode

Starting from SDK V3.9.0, when creating an SDK, you must specify `EffectMode`, which has two values:

`EffectMode_Normal` and `EffectMode_Pro`.

`EffectMode_Normal` is equivalent to the "High Performance Mode" of the older SDK version.

`EffectMode_Pro` is equivalent to the default mode of the old SDK version.

It is recommended to use `EffectMode_Normal` on low-end devices. For more details, see: [EffectMode \(High Performance Mode\) Usage Guide](#).

Measure Two: Disabling Certain Advanced Features of the SDK

Disable certain advanced features through the `setFeatureEnableDisable` API:

```
FeatureName.SEGMENTATION_SKIN
```

Skin segmentation capability, when enabled, makes the skin smoothing and whitening areas more precise, reducing the impact on the surrounding environment. The SDK enables it by default when the device level is 4 or higher. It is not recommended to enable it on low-end devices.

```
FeatureName.SEGMENTATION_FACE_BLOCK
```

Face occlusion detection capability, when enabled, prevents makeup from being applied to occlusions. The SDK enables it by default when the device level is 5 or higher. It is not recommended to enable it on low-end devices.

```
FeatureName.WHITEN_ONLY_SKIN_AREA
```

Whitening only affects the skin. It is disabled by default. It is not recommended to enable it on low-end devices.

```
FeatureName.SMART_BEAUTY
```

Intelligent beauty (reduces beauty and makeup effects for men and babies). It is disabled by default. It is not recommended to enable it on low-end devices.

Additionally, the "tanning" capability will also trigger the FeatureName.SEGMENTATION_SKIN capability. It is not recommended to use the tanning capability on low-end devices.

Measure Three: Using Light Makeup Instead of Full Makeup

Light makeup is a new feature introduced in version 3.9.0 of the Tencent Effect SDK. Compared to the previous "full makeup effect," light makeup performs better and can be well integrated with other effects.

For more details, see: [Light Makeup Usage Instructions](#).

Measure Four: Using Higher Performance Effect Materials

We offer a variety of effects for customers to choose from. Some effects are relatively simple and can run smoothly on low-end devices. However, some effects consume more CPU and GPU resources and are not recommended for use on low-end devices, such as 3D effects, GAN effects (e.g., baby face transformation, comic face transformation), background segmentation effects, etc.

We provide a low-end device section for customers to choose from. For details, see the Beauty Effects Demo.

Other Optimization Measures

In addition to the above beauty effects optimization measures, you can also pay attention to external factors affecting performance/smoothness:

Choosing the Appropriate Resolution

The higher the resolution, the more pixels the SDK needs to process. For live streaming or shooting on low-end devices, it is recommended not to exceed 540P resolution.

Setting an Appropriate Log Switch

The SDK provides the `setXmagicLogLevel` API ([Android](#), [iOS](#)) to set the log level. The default level is WARN or INFO. You can further elevate it to the ERROR level to reduce log output. Be sure not to set it to the DEBUG level, as excessive logs will affect performance.

Checking the Pushed Stream Frame Rate

Check if the setting is relatively low, and it is recommended to adjust it to above 24fps. If your application is not smooth even without beauty effects, you need to check the camera frame rate of the capture module. You can appropriately increase the camera frame rate to achieve smooth video. If you are using TRTC, you can refer to [this documentation](#) to adjust the frame rate.

Checking the Performance of Modules Other Than Beauty Effects

If your application is already lagging or the CPU usage is high before using beauty effects, it indicates that the app's performance is already problematic. Using beauty effects in this situation will only make it worse. Therefore, it is recommended to first optimize the performance of modules other than beauty effects.

EffectMode (High-Performance Mode) Usage Guide.

Last updated : 2025-06-25 09:38:46

EffectMode

Starting from SDK V3.9.0, when creating an SDK, you must specify EffectMode, which has two values:

EffectMode_Normal and EffectMode_Pro.

EffectMode_Normal is equivalent to the "High Performance Mode" of the older SDK version.

EffectMode_Pro is equivalent to the default mode of the old SDK version.

The differences between the two are as follows:

High performance mode

"High performance mode" was a concept before SDK V3.9.0. At that time, the SDK had two modes: high performance mode and default mode.

From V3.9.0 onwards, high performance mode became EffectMode_Normal and default mode became EffectMode_Pro.

For the differences between high performance mode and default mode, please refer to the differences between EffectMode_Normal and EffectMode_Pro mentioned above.

How to set EffectMode in V3.9.0 and later versions

Android

iOS

Flutter

uniapp

Method 1

If you are directly using the `XmagicApi` object, then **please specify EffectMode when creating the**

`XmagicApi` object in the constructor method:

```
public XmagicApi(Context context, EffectMode effectMode, String resDir)

public XmagicApi(Context context, EffectMode effectMode, String resDir, OnXmagicPro
```

Method 2

If you are using the `TEBeautyKit` object, you can call the following method to enable high performance mode.

```
public TEBeautyKit(Context context, EffectMode effectMode)

public static void create(@NonNull Context context, EffectMode effectMode, @NonNull
```

The `EffectMode` is defined as follows:

```
public enum EffectMode{
    NORMAL(0),
    PRO(1);

    private final int value;

    EffectMode(int value) {
        this.value = value;
    }

    public int getValue() {
        return value;
    }
}
```

Method 1

If you are directly using the `XMagic` object, then you need to specify `EffectMode` when initializing `XMagic`, as shown in the following code:

```
NSDictionary *assetsDict = @{@"core_name":@"LightCore.bundle",
                             @"root_path":[[NSBundle mainBundle] bundlePath],
                             @"effect_mode":@"(effectMode)"};

self.xmagic = [[XMagic alloc] initWithRenderSize:CGSizeMake(720, 1280) assetsDict:a
```

Method 2

If you are using the `TEBeautyKit` object, please pass in the `EffectMode` parameter when calling the `createXMagic` method.

```
+ (void)createXMagic:(EffectMode)effectMode onInitListener:(OnInitListener _Nullable)
```

The `EffectMode` is defined as follows:

```
typedef NS_ENUM(NSUInteger, EffectMode) {
    EFFECT_MODE_NORMAL = 0,
    EFFECT_MODE_PRO = 1,
};
```

You can enable it by calling the `TencentEffectApi` method `setDowngradePerformance` .

Note:

This method needs to be called before activating beauty features, i.e., before the `enableCustomVideoProcess` method in `TRTC` or `Live` .

You can enable it by calling the `XmagicApi` method `setDowngradePerformance` .

Note:

This method needs to be called before activating beauty features, i.e., before the `enableCustomVideoProcess` method.

How to enable high performance mode before V3.9.0

Android

iOS

Flutter

uniapp

Method 1

If you are directly using the `XmagicApi` object, then **please call** the following interface immediately after creating the `XmagicApi` object to enable high-performance mode:

For SDK 3.7.0 and later: Call the `enableHighPerformance` method.

For SDK before 3.7.0: Call the `setDowngradePerformance` method.

Method 2

If you are using the `TEBeautyKit` object, you can call the following method to enable high performance mode.

```
/**
 * @param context      ApplicationContext
 * @param isEnabledHighPerformance Does it enable high-performance pattern?
 */
public TEBeautyKit(Context context, boolean isEnabledHighPerformance)

/**
 *
 * Asynchronously create a TEBeautyKit object
 * @param context Android application context
 * @param isEnabledHighPerformance Whether to enable enhanced mode
 * @param initListener Initialization callback interface
 */
public static void create(@NonNull Context context, boolean isEnabledHighPerformance
```

Method 1

If you are directly using the `XMagic` object, you can enable it during the initialization of `XMagic` :

For SDK 3.7.0 and later: please set `enableHighPerformance` to YES in the `assetsDict` dictionary.

For SDK prior to 3.7.0: please set `setDowngradePerformance` to YES in the `assetsDict` dictionary.

```
NSMutableDictionary *assetsDict = @{
    @"core_name":@"LightCore.bundle",
    @"root_path":[NSBundle mainBundle] bundlePath],
    @"setDowngradePerformance":@"(YES)//YES: Enables high-performance mode; NO: Does not
};
self.xmagic = [[XMagic alloc] initWithRenderSize:CGSizeMake(720, 1280) assetsDict:a
```

Method 2

If you are using the `TEBeautyKit` object, you can call the following method to enable high performance mode.

```
/**
 *
 * Create a TEBeautyKit object
 * @param isEnabledHighPerformance Whether to enable high-performance mode. YES: Ena
 * @param initWithListener Initialization callback interface
 */
+ (void)create:(BOOL)isEnabledHighPerformance initWithListener:(OnInitListener _Nonnull
```

You can enable it by calling the `TencentEffectApi` method `setDowngradePerformance` .

Note:

This method needs to be called before activating beauty features, i.e., before the `enableCustomVideoProcess` method in `TRTC` or `Live` .

You can enable it by calling the `XmagicApi` method `setDowngradePerformance` .

Note:

This method needs to be called before activating beauty features, i.e., before the `enableCustomVideoProcess` method.

Performance Issue Troubleshooting

Last updated : 2024-07-05 14:16:07

If you find that the beauty filter processing takes a considerable amount of time, you can troubleshoot using the following methods.

Step 1: Check the resolution of the image being processed by the beauty filter.

Reason: Resolution refers to the number of pixels in an image or video, typically represented by width and height. Beauty filter processing involves complex algorithmic computations and treatments on the image, such as skin smoothing, whitening, and removing blemishes. Therefore, the size of the resolution directly affects the duration of beauty filter processing.

A higher resolution means more pixels in the image, requiring more computations and processing. This results in a longer duration needed for beauty filter processing. Conversely, a lower resolution means fewer pixels in the image, needing less computational effort and therefore, a shorter duration for beauty filter processing.

Additionally, beauty filter processing often involves treating multiple areas of the image, such as face detection and facial feature point localization. In images with a higher resolution, more pixels and more complex image details need to be processed, which may require more time to complete.

Therefore, it is necessary to balance the resolution and beauty effects to achieve satisfactory processing speed and image quality.

Step 2: Check the log switch.

When the log is set to `Log.DEBUG`, the beauty filter will print a large amount of log information during processing, thus affecting performance. So, it is advised to set it to `LOG.WARN` when releasing the application package.

Step 3: 3D/GAN stickers are resource-intensive and may cause lag on low-end devices. Whether to enable them can be determined based on the actual situation.

Step 4: If experiencing screen lag, check if the push stream frame rate is set too low. It is recommended to adjust it to above 24 fps.

If your application is not smooth even without the Beauty Filter, it is necessary to check the camera frame rate in the RTC module. You may improve the smoothness of the video by appropriately increasing the camera frame rate.

If you are using TRTC, you can refer to [this document](#) for frame rate adjustment.

Effect Fine-Tuning

Enhanced Mode Usage Guide

Last updated : 2024-07-05 14:19:26

What is Enhanced Mode?

In the SDK, it is recommended to set the beauty parameters in the range of 0 to 100 or -100 to 100 (see [Beauty Effect Parameters](#)). Adjusting parameters within this range typically achieves satisfactory beauty effects. If adjusting a parameter to the maximum or minimum value still does not meet your needs, you may consider using Enhanced Mode. Enhanced Mode can make the beauty effects more pronounced, such as more noticeable skin smoothing and slimming the face further.

How to Use Enhanced Mode

In versions after SDK 3.5.0, we have optimized the method of using Enhanced Mode. **You just need to set larger values in the SDK**, for example, if the suggested value range is -100 to 100, then you can set -120 to 120 in the SDK.

Android

iOS

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1. If you are using our UI component **TEBeautyKit**:

Call the `enableEnhancedMode` method of `TEBeautyKit`. After the call, `TEBeautyKit` will multiply the value displayed on the panel by an appropriate multiplier before setting it in the SDK. For example, if the Face Slimming Value set on the UI panel is 80, `TEBeautyKit` will multiply it by 1.2 to make it 96 before setting it in the SDK.

2. If you are not using **TEBeautyKit** but are directly using **XmagicApi** instead:

When calling the `setEffect` method of `XmagicApi`, just multiply the value by an appropriate multiplier.

1. If you are using our UI component **TEBeautyKit**:

In `TEPanelView`, call the `setEnhancedMode` method. After the call, `TEBeautyKit` will multiply the value displayed on the panel by an appropriate multiplier before setting it to the SDK. For example, if the Face Slimming Value set on the UI panel is 80, `TEBeautyKit` will multiply it by 1.2 to make it 96 before setting it to the SDK.

```
/**  
*
```

```

* Enabling Enhanced Mode
* @param enhancedMode Whether to enable Enhanced Mode. YES: Enable Enhanced Mode;
*/
[self.tePanelView setEnhancedMode:YES];

```

2. If you are not using TEBautyKit but are directly using XMagic object:

When calling the setEffect method, just multiply the value by an appropriate multiplier.

1. Call the enableEnhancedMode method of TencentEffectApi to enable Enhanced Mode.
2. When you set beauty parameters with the setEffect method, the maximum value of effectValue can be the maximum value recommended in the table below.

```
void setEffect(String effectName,int effectValue,String? resourcePath,Map<String,St
```

1. Call the enableEnhancedMode method of XmagicApi to enable Enhanced Mode.
2. When you set beauty parameters with the setEffect method, the maximum value of effectValue can be the maximum value recommended in the table below.

```

/**
 * Updating Beauty Object
 * @param effect Structure as follows
 * {
 *   effectName:"", Non-empty string. Refer to the Beauty Parameters table.
 *   effectValue: Numerical value, usually in the range of -100 to 100. Refer to
 *   resourcePath: Path of the resource file. Refer to the Beauty Parameters tabl
 *   extraInfo: A map collection. For specific values, refer to the Beauty Parame
 * }
 */
static setEffect(effect)

```

Recommended Enhancement Multiplier for Enhanced Mode

We provide a reference value for the enhancement multiplier. It is not recommended to exceed our suggested value.

Otherwise, the beauty effect may deteriorate. See below for the reference value:

| Beauty Item Name | Recommended Maximum Enhancement Multiplier |
|---|--|
| Whitening, shortening the face, V-face, eye distance, nose position, removal of laugh lines, lipstick, three-dimensional appearance | 1.3x |
| Eye lightening | 1.5x |
| Blush | 1.8x |

| | |
|--------|------|
| Others | 1.2x |
|--------|------|

Effect Issue Troubleshooting

Last updated : 2024-09-13 15:11:04

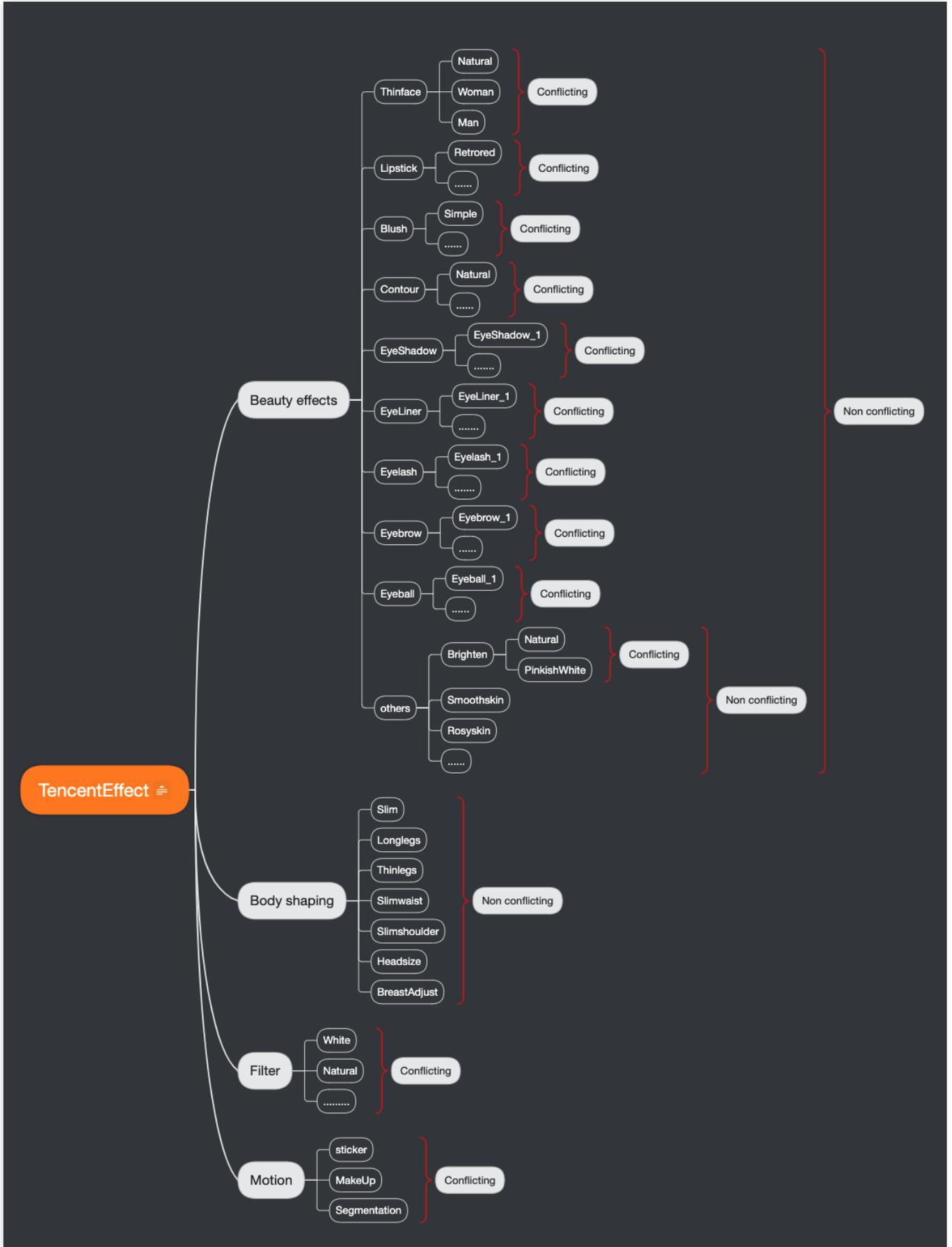
1. What to do if noise appears in the image?

If you are in a low-light environment and noise appears in the image, you can enable the noise reduction attribute.

2. What to do if the segmentation effect is not very good?

When the background segmentation effect is used, it is recommended not to have a too complex background. The background color and clothing color should not be too similar. Otherwise, the segmentation effect will be reduced.

3. What is the relationship between beauty makeup materials and beauty filter?



4. What to do if using a certain beauty filter has no effect?

This could be a license permission issue or a parameter issue (for example, the path issue with filters and animation effects). It is recommended to check the property parameters.

5. What to do if the edges of the screen are blurry after the beauty filter is applied?



This situation occurs because the face slimming effect is on (face slimming effect leads to the stretching of pixels around the face). If the face is too close to the edge of the screen, there's more stretching at the edge. This can be handled by cropping the edge of the screen. For the cropping method, refer to the demo.

6. What to do if the face has no effect in horizontal screen mode?

Check the direction of the face in the screen and set the corresponding offset angle.

Android

iOS

1. In Android, you can use the `readTexture` method to retrieve the current screen, check the direction of the face, and set the corresponding angle according to the picture below.

```
public static Bitmap readTexture(int texture, int width, int height) {
    int[] frame = new int[1];
    GLES20.glGenFramebuffers(1, frame, 0);
    GLES20.glBindFramebuffer(GLES20.GL_FRAMEBUFFER, frame[0]);
    GLES20.glFramebufferTexture2D(GLES20.GL_FRAMEBUFFER, GLES20.GL_COLOR_ATTACHMENT0, GLES20.GL_TEXTURE_2D, texture, 0);
    byte[] data = new byte[width * height * 4];
    ByteBuffer buffer = ByteBuffer.wrap(data);
    GLES20.glPixelStorei(GLES20.GL_PACK_ALIGNMENT, 1);
    GLES20.glReadPixels(0, 0, width, height, GLES20.GL_RGBA, GLES20.GL_UNSIGNED_BYTE, buffer);
    Bitmap bitmap = Bitmap.createBitmap(width, height, Bitmap.Config.ARGB_8888);
    bitmap.copyPixelsFromBuffer(buffer);
    GLES20.glBindFramebuffer(GLES20.GL_FRAMEBUFFER, 0);
    GLES20.glDeleteFramebuffers(1, frame, 0);
    return bitmap;
}
```

2. Call the `setImageOrientation` method in Android.



1. In iOS, you can use the `readTexture` method to retrieve the current screen, check the direction of the face, and set the corresponding angle according to the picture below.

```
#import <OpenGLES/ES2/gl.h>
-(void)readTexture:(int)textureId width:(int)width height:(int)height{
    glBindTexture(GL_TEXTURE_2D, textureId);
    GLuint framebuffer;
    glGenFramebuffers(1, &framebuffer);
    glBindFramebuffer(GL_FRAMEBUFFER, framebuffer);
    glFramebufferTexture2D(GL_FRAMEBUFFER, GL_COLOR_ATTACHMENT0, GL_TEXTURE_2D, tex
    GLenum status = glCheckFramebufferStatus(GL_FRAMEBUFFER);
    if (status != GL_FRAMEBUFFER_COMPLETE) {
        NSLog(@"Framebuffer is not complete.");
    }
    GLubyte *pixels = (GLubyte *)malloc(width * height * 4 * sizeof(GLubyte));
    glReadPixels(0, 0, width, height, GL_RGBA, GL_UNSIGNED_BYTE, pixels);
    glBindFramebuffer(GL_FRAMEBUFFER, 0);
    glDeleteFramebuffers(1, &framebuffer);
    CVPixelBufferRef pixelBuffer = NULL;
    CVPixelBufferCreateWithBytes(NULL, width, height, kCVPixelFormatType_32BGRA, pi
    free(pixels);
    CVPixelBufferRelease(pixelBuffer);
}
```

2. Call the `setImageOrientation` method in iOS.



Light Makeup Instructions

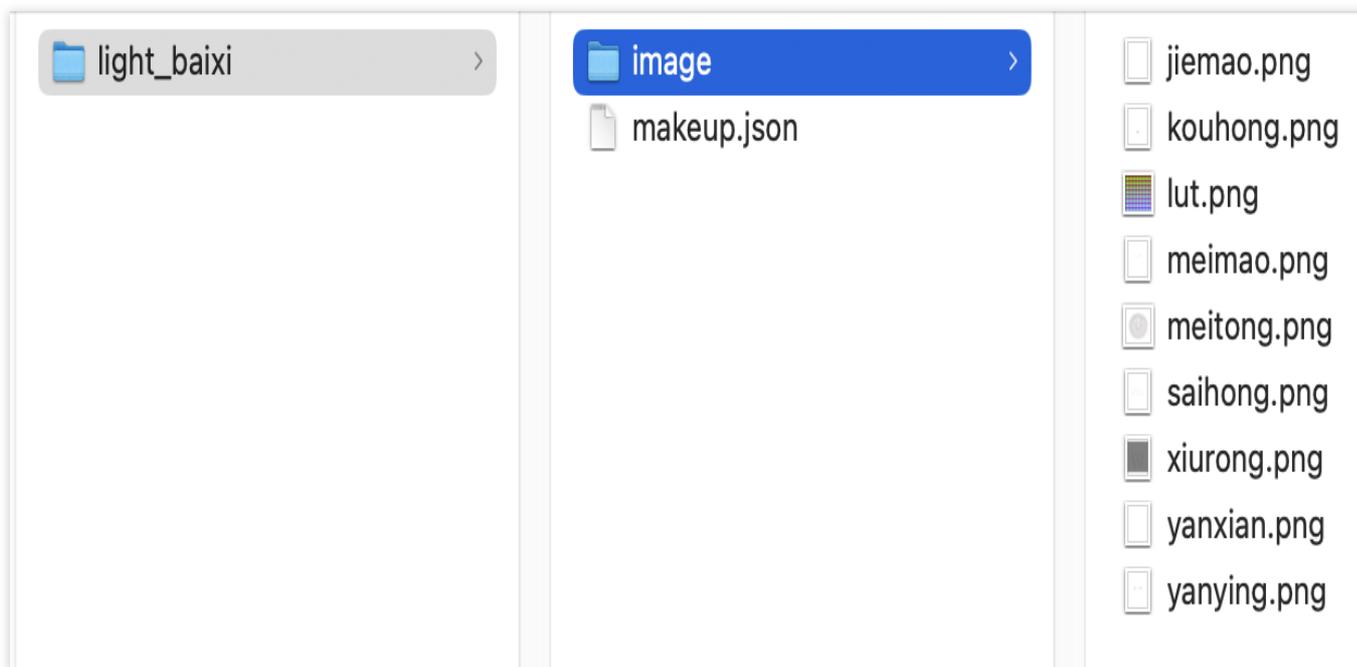
Last updated : 2025-02-20 16:32:13

What is Light Makeup

Light Makeup is a new feature introduced in version V3.9.0 of the Tencent Effect SDK. A set of Light Makeup can include these makeup items: filter, lipstick, blush, sculpted, eyeshadow, eyeliner, mascara, eyebrows, colored contact lenses, double eyelids, eye bags. Essentially, Light Makeup is the same capability as the SDK's existing "single-point makeup", which can be understood as a combination of multiple single-point makeup items.

Compared to the previous "complete makeup effects", **Light Makeup has better performance and can overlay well with other effects.**

A set of Light Makeup material includes several makeup images and a json configuration file. For example, the configuration of the "light_baixi" Light Makeup is as follows:



How to use light makeup

Please call the [setEffect](#) interface of the SDK to use light makeup:

effectName is `EFFECT_LIGHT_MAKEUP`.

effectValue is the makeup intensity, ranging from 0 to 100.

resourcePath is the path to the light makeup material, i.e., path/to/your_light_makeup.

extraInfo is optional. If you only want to modify the filter strength in light makeup without changing the makeup intensity, add a key-value pair in extraInfo, where the key is "makeupLutStrength" and the value is the filter strength, ranging from 0 to 100. Note that the value is also in string format.

Precautions

1. The relationship between light makeup and single-point makeup

Light makeup is essentially a collection of single-point makeup, so the latter settings will overwrite the former ones, as follows:

Scenario 1: If several single-point makeups are set first, and then a set of light makeup is applied, the light makeup effect will overwrite the single-point makeup effect.

Scenario 2: If a set of light makeup is applied first (assuming it includes lipstick, eyeshadow, eyebrows, etc.), and then a single-point makeup (e.g., lipstick) is set, the final effect will be: the newly set lipstick + the eyeshadow in the light makeup + the eyebrows in the light makeup.

For scenario 2, our demo handles it by clearing light makeup when setting single-point makeup. You can choose whether to clear light makeup based on your actual product situation.

2. Overlay relationship between light makeup and other effects

Light makeup can be overlaid with any other effects, including: beauty filter, aesthetic shape, body shaping, stickers, virtual background, camera movement effects, etc.

3. Relationship between light makeup and "stylish makeup" in sticker effects

Before V3.9.0, our full makeup was "stylish makeup," which is essentially an effect that cannot be overlaid with other effects, or the overlay does not meet expectations. However, light makeup can be overlaid with any other effects, including stylish makeup (though it is not recommended). In demos from V3.9.0 and later, we placed the experience entry for "stylish makeup" together with 2d stickers and 3d stickers.

Green Screen Keying V2 Instructions

Last updated : 2025-07-01 11:14:05

Feature Overview

Green Screen Keying V2 supports users to adjust **similarity, smoothness, edge elimination strength, grayscale ratio, and shadow removal**—five parameters in total. The parameter meanings are as follows:

Similarity: Controls the strength of green screen keying (default value 40, adjustable range 0-100).

Smoothness: Controls the smoothness of the transition area between the foreground and background in green screen scenarios (default value 8, adjustable range 1-100).

Edge elimination strength: Used to optimize potential jagged edges or green edges in the edge region after keying (default value 1, adjustable range [0,1,2,3]).

Grayscale ratio: Used to optimize potential green edges or green overflow in certain regions after keying (default value 10, adjustable range 0-100).

Shadow removal: Used to optimize the cutout effect caused by shadow areas in the curtain (default value 1, adjustable range [0,1,2,3,4,5]).

Parameter Adjustment Effect Comparison

Note:

Note: Adjust near the default value. If the value is too large or too small, it can cause poor viewing effect.

Similarity: The larger the similarity, the stronger the green screen keying. If the green screen area is not cleanly removed, increase appropriately. If obvious miskeying occurs in the foreground, decrease appropriately.

| Input Image | Similarity: 20 | Similarity 40 (Default Value) | Similarity 50 |
|-------------|----------------|-------------------------------|---------------|
| | | | |

Smoothness: Lower smoothness makes the transition area between the foreground and background more obvious. Higher smoothness makes the transition area smoother.

Note:

The figure below shows the edge region of hair as the transition area between the foreground and background. When smoothness is low, segmentation traces are distinct, with green hair showing clearly. When smoothness is increased,

the transition area becomes smoother, segmentation traces weaken, and green showing is reduced.

| | | |
|-------------------------------|----------------|----------------|
| Smoothness: 8 (Default Value) | Smoothness: 10 | Smoothness: 15 |
| | | |

Edge elimination strength: The larger the edge elimination strength, the more the edge region is removed. When black borders, green edges, jagged edges, or other issues appear around portraits or items, try increasing it.

| | | |
|--|------------------------------|------------------------------|
| Edge Elimination Strength: 1 (Default Value) | Edge Elimination Strength: 2 | Edge Elimination Strength: 3 |
| | | |

Grayscale ratio: When green overflow occurs in certain regions or green edges appear at the edges, try increasing it.

| | | |
|-------------------------------------|---------------------|---------------------|
| Grayscale Ratio: 10 (Default Value) | Grayscale Ratio: 50 | Grayscale Ratio: 90 |
| | | |

Shadow Removal: Try increasing when shadow areas exist on the green screen and the cutout effect is poor.

| | | | |
|-------------|-------------------|-----------------------------------|-------------------|
| Input Image | Shadow Removal: 0 | Shadow Removal: 1 (Default Value) | Shadow Removal: 3 |
| | | | |

Material Usage

Material Integration Guide

Android

Last updated : 2024-07-05 14:33:26

Filters

Each filter is an image in png format. When using it, you need to pass the image path to the SDK. See below for the operation steps.

Scenario1: Using TEBeautyKit

TEBeautyKit is a UI panel library for Tencent Effect. It is designed for users to use and manage beauty features quickly and conveniently.

See below for the operation steps.

1. Refer to [Integrating TEBeautyKit](#).

2. Adding Filter Resources

Place the newly added filter image in your project's `assets/lut` directory. Then, modify the panel configuration file `assets/beauty_panel/lut.json`, adding a new item based on the existing content in json. When the APP runs, calling the `TEBeautyKit`copyRes` method will copy the filter image from the assets directory to the `downloadPath` directory configured in `lut.json`.

3. Configuring Filter Icons

The icon field in `lut.json` represents the icon of the filter. Place the icon in the

`assets/beauty_panel/panel_icon/lut_icon` directory. The value of the icon field can also be the URL of the icon, starting with `http` or `https`, and TEBeautyKit will fetch the icon from the internet.

4. Configuring Filter Resources

The `resourceUri` field in `lut.json` is the path where the filter image is saved in the app's private directory.

Configure the resources based on the existing items and change the suffix of `resourceUri` from "xxx.png" to the file name of the newly added filter, avoiding conflicts with existing filters in `lut.json`. The `resourceUri` field can also be the URL of the filter image, starting with `http` or `https`. When the URL is clicked, the filter image will be downloaded from the internet and saved in the `downloadPath` directory configured in `lut.json`.

Scenario 2: Integrating the Tencent Effect SDK Directly

1. Place the newly added filter image in any directory of your project's assets. Then, upon app initialization, copy the image to the app's private directory or SD card to get the image path, marked as

`/path/to/your/lut_xxx.png` . For simplicity, it is recommended to place the image in the `assets/lut` directory and then copy the `copyRes` code of `TEBeautyKit` from the demo project for use.

2. When using a filter, call the SDK's [setEffect](#) method and pass the filter image path to the SDK.

Animation Stickers

Each animation is a folder. When using it, you need to pass the path of the folder to the SDK. See below for the operation steps.

Scenario 1: Using TEBeautyKit

`TEBeautyKit` is a UI panel library for Tencent Effect. It is designed for users to use and manage the beauty features quickly and conveniently.

See below for the operation steps.

1. Refer to [Integrating TEBeautyKit](#).

2. Adding Animation Materials

Place the newly added animation folder in the `assets/MotionRes` directory of your project. Then, modify the panel configuration file `assets/beauty_panel/motions.json` , adding a new item based on the existing content. When the APP runs, calling the `TEBeautyKit` 's `copyRes` method will copy the animation folder from the `assets` directory to the `downloadPath` directory configured in `motions.json` .

3. Configuring Animation Icons

The `icon` field in `motions.json` represents the icon of the animation. Place the icon in the `assets/beauty_panel/panel_icon/motions_icon` directory. The value of the `icon` field can also be the URL of the icon, starting with `http` or `https` , and `TEBeautyKit` will fetch the icon from the internet.

4. Configuring Animation Materials

The `resourceUri` field in `motions.json` is the path where the animation is saved in the app's private directory. Configure the materials based on the existing items, avoiding conflicts with existing animations in `motions.json` . The `resourceUri` field can also be the URL of the animation zip file, starting with `http` or `https` . When the URL is clicked, the zip file will be downloaded from the internet and saved in the `downloadPath` directory configured in `motions.json` .

Scenario 2: Integrating the Tencent Effect SDK Directly

Place the newly added animation folder in any directory of your project's assets. Then, upon app initialization, copy the folder to the app's private directory or SD card to get the animation folder, marked as `/path/to/your/motion` . When using the animation, call the SDK's [setEffect](#) method and pass the path to the SDK.

Beauty Makeup and Background Segmentation

Their usage is the same as the Animation Sticker described above, with the corresponding json files being `makeup.json` and `segmentation.json`, respectively.

iOS

Last updated : 2024-07-05 14:35:45

Filters

Each filter is an image in png format. When using it, you need to pass the image path to the SDK.

Scenario 1: Using TEBeautyKit

`TEBeautyKit` is a UI panel library for Tencent Effect. It is designed for users to use and manage beauty features quickly and conveniently. See below for the operation steps.

1. Refer to [Integrating TEBeautyKit](#).

2. Adding Filter Materials

Place the newly added filter image in your project's `lut.bundle` directory. Then, modify the panel configuration file `TEBeautyKit/Assets/json/lut.json`, adding a new item based on the existing content in json.

3. Configuring Filter Icons

The icon field in `lut.json` represents the icon of the filter. Place the icon in the

`TEBeautyKit/Assets/BeautyRes` directory. The value of the icon field can also be the URL of the icon, starting with http or https, and `TEBeautyKit` will fetch the icon from the internet.

4. Configuring Filter Resources

The `resourceUri` field in `lut.json` is the path where the filter image is saved in the app's private directory. Configure the resources based on the existing items in json and change the suffix of `resourceUri` from "xxx.png" to the file name of the newly added filter, avoiding conflicts with existing filters in lut.json. The `resourceUri` field can also be the URL of the filter image, starting with http or https. When the URL is clicked, the filter image will be downloaded from the internet and saved in the `downloadPath` directory configured in `lut.json`.

Scenario 2: Integrating the Tencent Effect SDK Directly

1. Place the newly added filter image in your project's `lut.bundle` directory. If using a dynamic download approach, download the filter image to the sandbox and record the path of the filter image.

2. When using a filter, call the SDK's `setEffect` method and pass the path of the filter image to the SDK. For the method of operation, refer to [Beauty Parameter Description](#).

Animation Stickers

Each animation is a folder. When using it, you need to pass the path of this folder to the SDK. See below for the operation steps.

Scenario 1: Using TEBautyKit

TEBeautyKit is a UI panel library for Tencent Effect. It is designed for users to use and manage the beauty features quickly and conveniently.

1. Refer to [Integrating TEBautyKit](#).

2. Adding Animation Resources

Place the newly added animation folder in the corresponding `resource bundle` directory of your project: in `2dMotionRes.bundle` for 2D animations, in `3dMotionRes.bundle` for 3D animations, in `ganMotionRes.bundle` for fun animations, or in `handMotionRes.bundle` for gesture animations. Then, modify the panel configuration file `TEBeautyKit/Assets/json/motions.json`, adding a new item based on the existing content.

3. Configuring Animation Icons

The `icon` field in `motions.json` represents the icon of the animation. Place the icon in the `TEBeautyKit/Assets/BeautyRes` directory. The value of the icon field can also be the URL of the icon, starting with `http` or `https`, and `TEBeautyKit` will fetch the icon from the internet.

4. Configuring Animation Resources

The `resourceUri` field in `motions.json` is the path where the animation is saved in the app's private directory. Configure the resources based on the existing items, avoiding conflicts with existing animations in `motions.json`. The `resourceUri` field can also be the URL of the animation zip file, starting with `http` or `https`. When the URL is clicked, the zip file will be downloaded from the internet and saved in the `downloadPath` directory configured in `motions.json`. The animation zip file needs to be unzipped before use.

Scenario 2: Integrating the Tencent Effect SDK Directly

Place the newly added animation folder in the corresponding `resource bundle` directory of your project: in `2dMotionRes.bundle` for 2D animations, in `3dMotionRes.bundle` for 3D animations, in `ganMotionRes.bundle` for fun animations, or in `handMotionRes.bundle` for gesture animations. In Tencent Effect SDK of version 3.6.0 or earlier, if the animation file is encrypted, you need to copy it to the sandbox and record its path. If using a dynamic download approach, download the animation file to the sandbox and unzip it, and then record the path of the unzipped animation folder. When using the animation, call the SDK's `setEffect` method and pass the path to the SDK. Refer to [Beauty Parameter Table](#).

Beauty Makeup and Background Segmentation

Their usage is the same as the Animation Sticker described above, with the corresponding json files being `makeup.json` and `segmentation.json`, respectively.

Material Overlay Guide

Last updated : 2024-07-05 14:40:29

Animation Material Overlay refers to the simultaneous activation of multiple animation materials.

Points to Note on Material Overlay:

1. Users shall manage the compatibility of their materials for overlaying. Here are two examples:

Example 1: Effect A turns a face into a royal visage, while Effect B turns a face into a fairytale visage. The overlay of these two effects may result in an unnaturally distorted image.

Example 2: Effect A represents rabbit ears, while Effect B represents pig ears. The overlay of these two effects presents two types of ears.

In Example 1 and Example 2, Material Overlay is not suitable. If Effect A is a pair of rabbit ears, and Effect B is blowing a kiss, these two effects won't conflict and are hence suitable for overlay.

2. Only the overlay of simple materials is supported. Simple materials refer to single animation effects, or single makeup effects, or single background, etc. Complex materials refer to those that contain multiple effects. There is no clear distinction between simple and complex materials. It is recommended that users thoroughly test and manage which materials can be overlaid and which cannot.

3. In Material Overlay, effects triggered by actions (such as stretching out a hand or smiling) are classified as complex effects and need to be placed first, with simple effects applied on top of them.

4. Example: The anchor uses Effect A, and then the audience gifts Effect B. Effect B is applied on top of Effect A. After a period of time, Effect B disappears and only Effect A is used. The setting process is as follows:

4.1 Setting Effect A: Set `mergeWithCurrentMotion` to false.

4.2 Setting Effect B: Set `mergeWithCurrentMotion` to true.

4.3 After a brief period, proceed with setting Effect A by setting `mergeWithCurrentMotion` to false.

How to Configure for Simultaneous Activation?

v3.5.0 or later versions

v3.0.1 or later versions

1. If you are using the `setEffect` method to update Beauty Properties, to implement the Material Overlay feature, you can add the `mergeWithCurrentMotion` field in `extrainfo` and set it to `"true"`.

2. If you are using the `updateProperty` method, you can refer to the methods listed in [V3.0.1](#).

Android:

If you want to overlay a certain animation, make-up, or segmentation material on the current material, then set 'mergeWithCurrentMotion' of the **XmagicProperty** object of the material to true. For other property settings, see [Beauty Parameter Settings](#).

```
XmagicProperty xmagicProperty = new XmagicProperty(XmagicProperty.Category.MOTION, "
xmagicProperty.mergeWithCurrentMotion = true;
```

```
mXMagicApi.updateProperty(xmagicProperty);
```

iOS:

If you want to overlay a certain animation, make-up, or segmentation material on the current material, then while setting the material, in the `withExtraInfo` dictionary, set `mergeWithCurrentMotion` to `true`. Here is an example:

```
NSString *key = _xmagicUIProperty.property.Id;
NSString *value = [[NSBundle mainBundle] pathForResource:@"makeupMotionRes" ofType:
NSDictionary* extraInfo = @{@"mergeWithCurrentMotion":@(true)};
[self.beautyKitRef configPropertyWithType:@"motion" withName:key withData:[NSStrin
```

Effect Parameters

Android & iOS

Last updated : 2025-07-02 17:50:03

When using the `setEffect` feature to refresh the beautification effects, you may refer to the following parameter table. The `effectName` constants, as delineated in the parameter table, are defined within the `XmagicConstant.java` file for Android, and within the `XmagicConstant.h` file for iOS.

Note:

If the SDK version you're using is V3.3.0 or earlier, please consult the [Android Legacy Beautification Parameter Table](#), [iOS Legacy Beautification Parameter Table](#).

Beautification, Body Beautification

| Type | Name | effectName | |
|---------------|--------------------------------|----------------|----------------------------|
| | | Constant Name | Constant Value |
| Beauty filter | Brighten - Bright White | BEAUTY_WHITEN0 | beauty.lutFoundationAlpha0 |
| | Brighten - Natural | BEAUTY_WHITEN | beauty.lutFoundationAlpha |
| | Brighten - Pinkish White | BEAUTY_WHITEN2 | beauty.lutFoundationAlpha2 |
| | Brighten - Cool White | BEAUTY_WHITEN3 | beauty.lutFoundationAlpha3 |
| | Black (V3.7.0) | BEAUTY_BLACK_1 | beauty.lutBlackAlpha1 |
| | Brown (V3.7.0) | BEAUTY_BLACK_2 | beauty.lutBlackAlpha2 |
| | Smooth skin | BEAUTY_SMOOTH | smooth.smooth |

| | | | |
|---------------------|-----------------------------|--------------------------|---------------------------|
| | Smooth skin2 (V3.9.3) | BEAUTY_SMOOTH2 | smooth.smooth2 |
| | Smooth skin3 (V3.9.3) | BEAUTY_SMOOTH3 | smooth.smooth3 |
| | Smooth skin4 (V3.9.3) | BEAUTY_SMOOTH4 | smooth.smooth4 |
| | Gan Beauty Skin (V3.9.3) | BEAUTY_FACE_SKIN_RETOUCH | beauty.skinRetouch |
| | Rosy skin | BEAUTY_ROSY | smooth.rosy |
| Screen Adjustment | Contrast | BEAUTY_CONTRAST | beauty.imageContrastAlpha |
| | Saturation | BEAUTY_SATURATION | smooth.saturation |
| | Sharpness | BEAUTY_CLEAR | beauty.lutClearAlpha |
| | Sharpen | BEAUTY_SHAPE | smooth.sharpen |
| | Brightness (V3.8.0) | BEAUTY_IMAGE_BRIGHTNESS | beauty.imageBrightness |
| | Denoise (V3.6.0) | BEAUTY_IMAGE_DENOISE | postEffect.denoise |
| | Warmth | BEAUTY_IMAGE_WARMTH | beauty.imageWarmth |
| | Tint | BEAUTY_IMAGE_TINT | beauty.imageTint |
| Advanced Aesthetics | Big eyes | BEAUTY_ENLARGE_EYE | basicV7.enlargeEye |
| | Bright eyes | BEAUTY_EYE_LIGHTEN | beauty.eyeLighten |
| | Eye distance | BEAUTY_EYE_DISTANCE | basicV7.eyeDistance |
| | Eye corners | BEAUTY_EYE_ANGLE | basicV7.eyeAngle |
| | Eye width | BEAUTY_EYE_WIDTH | basicV7.eyeWidth |
| | Eye height | BEAUTY_EYE_HEIGHT | basicV7.eyeHeight |

| | | |
|----------------------------|-----------------------------|--------------------------|
| Eye position (V3.8.0) | BEAUTY_EYE_POSITION | basicV7.eyePosition |
| Eye out corner (V3.9.0) | BEAUTY_EYE_OUT_CORNER | basicV7.eyeOutCorner |
| Eye bags | BEAUTY_FACE_REMOVE_EYE_BAGS | beauty.removeEyeBags |
| Angle of eyebrows | BEAUTY_EYEBROW_ANGLE | basicV7.eyebrowAngle |
| Eyebrow distance | BEAUTY_EYEBROW_DISTANCE | basicV7.eyebrowDistance |
| Eyebrow height | BEAUTY_EYEBROW_HEIGHT | basicV7.eyebrowHeight |
| Eyebrow length | BEAUTY_EYEBROW_LENGTH | basicV7.eyebrowLength |
| Thickness of the eyebrows | BEAUTY_EYEBROW_THICKNESS | basicV7.eyebrowThickness |
| Eyebrow ridge | BEAUTY_EYEBROW_RIDGE | basicV7.eyebrowRidge |
| Nose size | BEAUTY_NOSE_THIN | basicV7.thinNose |
| Nose wings | BEAUTY_NOSE_WING | basicV7.noseWing |
| Nose position | BEAUTY_NOSE_HEIGHT | basicV7.noseHeight |
| Nasal bridge | BEAUTY_NOSE_BRIDGE_WIDTH | basicV7.noseBridgeWidth |
| Nasion | BEAUTY_NASION | basicV7.nasion |
| White teeth | BEAUTY_TOOTH_WHITEN | beauty.toothWhiten |
| Lip shape | BEAUTY_MOUTH_SIZE | basicV7.mouthSize |
| Lip height | BEAUTY_MOUTH_HEIGHT | basicV7.mouthHeight |
| Lip Width | BEAUTY_MOUTH_WIDTH | basicV7.mouthWidth |

| | | | |
|------------------------|--------------------------------|-----------------------------|-----------------------------|
| | Lip position | BEAUTY_MOUTH_POSITION | basicV7.mouthPosition |
| | Smiling lips | BEAUTY_SMILE_FACE | basicV7.smileFace |
| | Face width | BEAUTY_FACE_THIN | basicV7.thinFace |
| | Slim face - Natural | BEAUTY_FACE_NATURE | basicV7.natureFace |
| | Slim face - Goddess | BEAUTY_FACE_GODNESS | basicV7.goddessFace |
| | Slim face - Handsome | BEAUTY_FACE_MALE_GOD | basicV7.maleGodFace |
| | V-shaped face | BEAUTY_FACE_V | basicV7.vFace |
| | Slim jaw | BEAUTY_FACE_JAW | basicV7.faceJaw |
| | Face length | BEAUTY_FACE_SHORT | basicV7.shortFace |
| | Face shape | BEAUTY_FACE_BASIC | liquefaction.basic3 |
| | Chin | BEAUTY_FACE_THIN_CHIN | basicV7.chin |
| | Forehead | BEAUTY_FACE_FOREHEAD | basicV7.forehead |
| | Forehead2 (V3.9.1) | BEAUTY_FACE_FOREHEAD2 | basicV7.forehead2 |
| | Wrinkles | BEAUTY_FACE_REMOVE_WRINKLE | beauty.removeWrinkle |
| | Smile lines | BEAUTY_FACE_REMOVE_LAW_LINE | beauty.removeLawLine |
| | Cheekbones | BEAUTY_FACE_THIN_CHEEKBONE | basicV7.cheekboneThin |
| Single-point makeup | Lipstick | BEAUTY_MOUTH_LIPSTICK | beauty.faceFeatureLipsLut |
| | Blush | BEAUTY_FACE_RED_CHEEK | beauty.faceFeatureRedCheek |
| | Contour | BEAUTY_FACE_SOFTLIGHT | beauty.faceFeatureSoftlight |

| | | | |
|------------------------|-----------------------|------------------------------|--------------------------------|
| | HairColor (V3.7.0) | BEAUTY_HAIR_COLOR_LUT | beauty.hairColorLut |
| | Eyeshadow | BEAUTY_FACE_EYE_SHADOW | beauty.faceFeatureEyesMakeup.e |
| | Eyeliner | BEAUTY_FACE_EYE_LINER | beauty.faceFeatureEyesMakeup.e |
| | Eyelashes | BEAUTY_FACE_EYELASH | beauty.faceFeatureEyesMakeup.e |
| | Eyebrows | BEAUTY_FACE_EYEBROW | beauty.faceFeatureEyesMakeup.e |
| | Eyeball | BEAUTY_FACE_EYEBALL | beauty.faceFeatureEyesMakeup.e |
| | Eyelids (V3.8.0) | BEAUTY_FACE_MAKEUP_EYELIDS | beauty.faceFeatureEyesMakeup.e |
| | Wocan (V3.8.0) | BEAUTY_FACE_MAKEUP_EYEWOCAN | beauty.faceFeatureEyesMakeup.e |
| Body beautification | One-click slimming | BODY_AUTOETHIN_BODY_STRENGTH | body.autothinBodyStrength |
| | Long legs | BODY_LEG_STRETCH | body.legStretch |
| | Thin legs | BODY_SLIM_LEG_STRENGTH | body.slimLegStrength |
| | Slim waist | BODY_WAIST_STRENGTH | body.waistStrength |
| | Slim shoulders | BODY_THIN_SHOULDER_STRENGTH | body.thinShoulderStrength |
| | Breast Adjust | BODY_ENLARGE_CHEST_STRENGTH | body.enlargeChestStrength |
| | Head size | BODY_SLIM_HEAD_STRENGTH | body.slimHeadStrength |

Filters, Cosmetics, Motion Effects, Segmentation

| Type | effectName | | effectValue | resourcePath |
|--|---------------------|----------------|------------------|---|
| | Constant Name | Constant Value | Effect Intensity | Resource Path |
| Filter | EFFECT_LUT | lut | 0 ~ 100 | The absolute path of the filter /data/user/0/com.tencent If you wish to cancel the filter |
| Light makeup (v3.9.0) | EFFECT_LIGHT_MAKEUP | light.makeup | 0~100 | Absolute path to beauty mate To cancel beauty makeup, fil |
| Makeup | EFFECT_MAKEUP | makeup | 0 ~ 100 | Absolute path to beauty mate To cancel beauty makeup, fil |
| Motion | EFFECT_MOTION | motion | No | The absolute path of the moti /data/user/0/com.ten If you wish to cancel the moti |
| Background Demarcation (ordinary) | EFFECT_SEGMENTATION | segmentation | No | The absolute path of the back If you want to cancel the segr |
| Background Demarcation (Green Screen_1) | EFFECT_SEGMENTATION | segmentation | No | The absolute path of the back fill in null here |

| | | | | |
|---|---------------------|--------------|----|---|
| | | | | |
| <p>Background Demarcation (Green Screen V2) (V3.9.2)</p> | EFFECT_SEGMENTATION | segmentation | No | The absolute path of the back If you want to cancel the segmentation |
| <p>Background Demarcation (Custom)</p> | EFFECT_SEGMENTATION | segmentation | No | The absolute path of the back If you want to cancel the segmentation |

Recommended Parameters in Beautification Scenarios

Last updated : 2024-07-05 14:51:09

Below is the parameter table for one-click beauty effect in the project demo. If you want to achieve the one-click beauty effect in the application, you can configure the corresponding beauty effects according to the parameters below.

Default Demo Effects:

| Feature Type | Recommended Parameter |
|----------------------------|-----------------------|
| Whitening/natural | 40 |
| Smooth skin | 40 |
| Clarity | 80 |
| Sharpening | 30 |
| Narrow face | 5 |
| Slim face/natural | 30 |
| V-shaped face | 20 |
| Eliminate nasolabial folds | 30 |
| Big eyes | 20 |
| Bright eyes | 40 |
| Remove eye bags | 50 |
| Slim nose | 20 |
| White teeth | 40 |

UGSV Enterprise Edition Migration Guide

Last updated : 2022-07-18 10:06:18

UGSV Enterprise Edition has been discontinued, and its beauty filter module has been decoupled to form Tencent Effect SDK. Tencent Effect SDK has more natural beautification effects, more powerful features, and more flexible integration methods. This document describes how to migrate from UGSV Enterprise Edition to Tencent Effect SDK.

Notes

1. Modify the version number of the `glide` library in the `xmagic` module to make it the same as the actual version number.
2. Modify the earliest version number in the `xmagic` module to make it the same as the actual version number.

Integration steps

Step 1. Decompress the demo project

1. Download the [UGSV demo](#) which has integrated the Tencent Effect SDK. This demo is built based on the Tencent Effect SDK S1-04 edition.

2. Replace the SDK files in the demo with the files for the SDK you actually use. Specifically, follow the steps below:
Replace the `.aar` file in the `libs` directory of the `Xmagic` module with the `.aar` file in `libs` of your SDK.

Replace all the files in `../src/main/assets` of the `Xmagic` module with those in `assets/` of your SDK. If there are files in the `MotionRes` folder of your SDK package, also copy them to the `../src/main/assets` directory.

Replace all the `.so` files in `../src/main/jniLibs` of the `Xmagic` module with the `.so` files in `jniLibs` of your SDK package (you need to decompress the ZIP files in the `jinLibs` folder to get the `.so` files for arm64-v8a and armeabi-v7a).

3. Import the `Xmagic` module in the demo into your project.

Step 2. Upgrade the SDK edition

Upgrade the SDK from Enterprise Edition to Pro Edition.

Before replacement: `implementation`

```
'com.tencent.liteav:LiteAVSDK_Enterprise:latest.release'
```

After replacement: `implementation`

```
'com.tencent.liteav:LiteAVSDK_Professional:latest.release'
```

Step 3. Set the beauty filter license

1. Call the `oncreate` method in `application` in the project as follows:

```
XMagicImpl.init(this);
XMagicImpl.checkAuth(null);
```

2. Replace the content in the `XMagicImpl` class with your obtained Tencent Effect SDK license URL and key.

Step 4. Implement the code

Take the UGSV recording page `TCVideoRecordActivity.java` as an example:

1. Add the following variable code to the `TCVideoRecordActivity.java` class:

```
private XMagicImpl mXMagic;
private int isPause = 0; // 0: not paused; 1: paused; 2: pausing; 3: to be terminate
```

2. Add the following code after the `onCreate` method in the `TCVideoRecordActivity.java` class:

```
TXUGCRecord instance = TXUGCRecord.getInstance(this);
instance.setVideoProcessListener(new TXUGCRecord.VideoCustomProcessListener() {
    @Override
    public int onTextureCustomProcess(int textureId, int width, int height) {
        if (isPause == 0 && mXMagic != null) {
            return mXMagic.process(textureId, width, height);
        }
        return 0;
    }

    @Override
    public void onDetectFacePoints(float[] floats) {
    }

    @Override
    public void onTextureDestroyed() {
        if (Looper.getMainLooper() != Looper.myLooper()) { // Not the main threa
            if (isPause == 1) {
                isPause = 2;
                if (mXMagic != null) {
                    mXMagic.onDestroy();
                }
                initXMagic();
                isPause = 0;
            } else if (isPause == 3) {
                if (mXMagic != null) {
                    mXMagic.onDestroy();
                }
            }
        }
    }
}
```

```
    }  
    }  
});  
XMagicImpl.checkAuth((errorCode, msg) -> {  
    if (errorCode == TELicenseCheck.ERROR_OK) {  
        loadXmagicRes();  
    } else {  
        TXCLog.e("TAG", "Authentication failed. Check the authentication URL and  
    }  
});
```

3. Add the following code to the `onStop` method:

```
isPause = 1;  
if (mXMagic != null) {  
    mXMagic.onPause();  
}
```

4. Add the following code to the `onDestroy` method:

```
isPause = 3;  
XmagicPanelDataManager.getInstance().clearData();
```

5. Add the following code at the beginning of the `onActivityResult` method:

```
if (mXMagic != null) {  
    mXMagic.onActivityResult(requestCode, resultCode, data);  
}
```

6. Add the following two methods to the end of this class:

```
private void loadXmagicRes() {  
    if (XMagicImpl.isLoadedRes) {  
        XmagicResParser.parseRes(getApplicationContext());  
        initXMagic();  
        return;  
    }  
    new Thread(() -> {  
        XmagicResParser.setResPath(new File(getFilesDir(), "xmagic  
XmagicResParser.copyRes(getApplicationContext());  
XmagicResParser.parseRes(getApplicationContext());  
XMagicImpl.isLoadedRes = true;  
        new Handler(Looper.getMainLooper()).post(() -> {  
            initXMagic();  
        });  
    }).start();
```

```
}  
/**  
 * Initialize the beauty filter SDK  
 */  
private void initXMagic() {  
    if (mXMagic == null) {  
        mXMagic = new XMagicImpl(this, mUGCKitVideoRecord.getBeaut  
    }else {  
        mXMagic.onResume();  
    }  
}
```

Step 5. Modify other classes

1. Change the `mBeautyPanel` type in the `AbsVideoRecordUI` class to the `RelativeLayout` type and the response type of the `getBeautyPanel()` method to `RelativeLayout`. You also need to modify the corresponding XML configuration to comment out the code that reports errors.
2. Comment out the code that reports errors in the `UGCKitVideoRecord` class.
3. Modify the code in the `ScrollFilterView` class to delete the `mBeautyPanel` variable and comment out the code that reports errors.

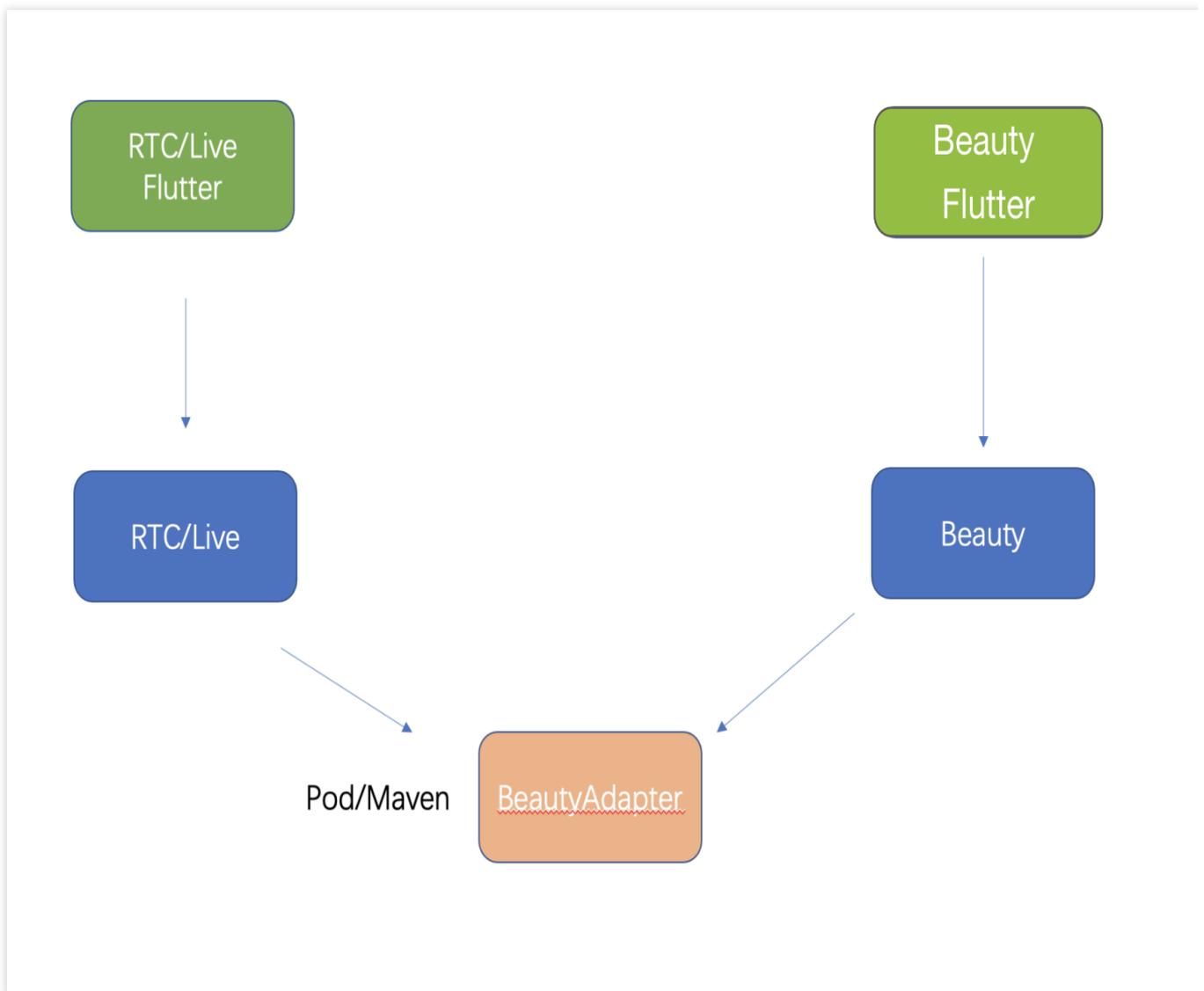
Step 6. Delete the dependencies on the `beautysettingkit` module

Delete the dependencies on the `beautysettingkit` module in the `build.gradle` file in the `ugckit` module and compile the project to comment out the code that report errors.

Integrating Tencent Effect for Third-Party Publishers (Flutter)

Last updated : 2022-11-30 18:02:11

Because the Flutter OpenGL environment is isolated from a native environment, you cannot integrate the Tencent Effect SDK directly into Flutter. You need to establish connections between them at the native side.



How It Works

1. Create an API abstraction layer and implement the API at the Tencent Effect SDK side.

2. When the application is launched, register the API with the third-party publisher so that the third-party publisher can use it to create, use, and terminate an effect instance.
3. The third-party publisher exposes the capabilities of creating and terminating effect instances to the Flutter side.
4. Use the Tencent Effect Flutter SDK to configure effects.

Example (TRTC)

API defined at the Tencent Effect side

```
public interface ITXCustomBeautyProcessorFactory {

    /**
     * Create an instance
     * @return
     */
    ITXCustomBeautyProcessor createCustomBeautyProcessor();

    /**
     * Terminate an instance (this API must be called in the OpenGL thread)
     */
    void destroyCustomBeautyProcessor();
}

public interface ITXCustomBeautyProcessor {

    // Get the pixel formats supported for video frames. Tencent Effect supports Ope
    TXCustomBeautyPixelFormat getSupportedPixelFormat();
    // Get the container formats supported for video frames. Tencent Effect support
    TXCustomBeautyBufferType getSupportedBufferType();
    // Call this API in the OpenGL thread (`srcFrame` must include RGBA textures and
    void onProcessVideoFrame(TXCustomBeautyVideoFrame srcFrame, TXCustomBeautyVideo
}
```

1. TRTC offers a registration method. When the application is launched, register

`com.tencent.effect.tencent_effect_flutter.XmagicProcessorFactory`, the implementation class of `ITXCustomBeautyProcessorFactory` with TRTC (at the native side).

```

package com.tencent.effect.tencent_effect_flutter_example;

import android.os.Bundle;

import androidx.annotation.Nullable;

import com.tencent.effect.tencent_effect_flutter.XmagicProcesserFactory;
import com.tencent.lite.TXLivePluginManager;
import io.flutter.embedding.android.FlutterActivity;
import com.tencent.trtcplugin.TRTCCLoudPlugin;

public class MainActivity extends FlutterActivity {

    @Override
    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        TXLivePluginManager.register(new XmagicProcesserFactory());
        TRTCCLoudPlugin.register(new XmagicProcesserFactory());
    }
}

```

2. At the Flutter layer, provide `Future<V2TXLiveCode> enableCustomVideoProcess(boolean enable)`, which is used to enable or disable custom effects.

3. Enable or disable effects at the TRTC native side.

```

public void enableCustomVideoProcess(MethodCall call, MethodChannel.Result result) {
    boolean enable = CommonUtil.getParam(call, result, "enable");
    ITXCustomBeautyProcessorFactory processorFactory = TRTCCLoudPlugin.getBeautyProcessorFactory();
    mCustomBeautyProcessor = processorFactory.createCustomBeautyProcessor();
    TXCustomBeautyBufferType bufferType = mCustomBeautyProcessor.getSupportedBufferType();
    TXCustomBeautyPixelFormat pixelFormat = mCustomBeautyProcessor.getSupportedPixelFormat();
    if(enable) {
        ProcessVideoFrame processVideo = new ProcessVideoFrame(mCustomBeautyProcessor);
        int ret = trtcCloud.setLocalVideoProcessListener(convertTRTCPixelFormat(pixelFormat), convertTRTCBufferType(bufferType), processVideo);
        result.success(ret);
    } else {
        int ret = trtcCloud.setLocalVideoProcessListener(convertTRTCPixelFormat(pixelFormat), convertTRTCBufferType(bufferType), null);
        // processorFactory.destroyCustomBeautyProcessor();
        mCustomBeautyProcessor = null;
        result.success(ret);
    }
}

```

When set to null, the `onGLContextDestroy` method of the `ProcessVideoFrame` will be called back

```
dart x ProcessVideoFrame.java x
package com.tencent.trtcplugin.listener;
import com.tencent.live.beauty.custom.TXCustomBeautyDef;
import com.tencent.trtc.TRTCCLoudDef;
import com.tencent.trtc.TRTCCLoudListener;

import com.tencent.live.beauty.custom.ITXCustomBeautyProcesserFactory;
import com.tencent.live.beauty.custom.ITXCustomBeautyProcesser;
import com.tencent.trtcplugin.TRTCCLoudPlugin;

import static com.tencent.live.beauty.custom.TXCustomBeautyDef.TXCustomBeautyBufferType;
import static com.tencent.live.beauty.custom.TXCustomBeautyDef.TXCustomBeautyPixelFormat;
import static com.tencent.live.beauty.custom.TXCustomBeautyDef.TXCustomBeautyVideoFrame;

public class ProcessVideoFrame implements TRTCCLoudListener.TRTCVideoFrameListener {
    private ITXCustomBeautyProcesser mCustomBeautyProcesser;

    public ProcessVideoFrame(ITXCustomBeautyProcesser processer) {
        mCustomBeautyProcesser = processer;
    }

    private static TXCustomBeautyVideoFrame createCustomBeautyVideoFrame(TRTCCLoudDef.TRTCVideoFrame frame) {...}

    public int onProcessVideoFrame(TRTCCLoudDef.TRTCVideoFrame srcFrame,
        TRTCCLoudDef.TRTCVideoFrame dstFrame) {...}

    public void onGLContextCreated() {}

    public void onGLContextDestory() {...}
}
```

Appendix

The abstraction layer dependency provided by Tencent Effect

```
///  
implementation 'com.tencent.liteav:custom-video-processor:latest.release'
```

Integrating Beauty AR Web into Mini Programs

Last updated : 2023-04-11 16:08:06

Preparations

For more information on how to get started with mini program development, see the [Weixin Mini Program documentation](#).

Read [Overview](#) to learn about how to use the Beauty AR Web SDK.

Getting Started

Step 1. Configure the domain allowlist on the mini program backend

As the SDK internally will request the backend to perform authentication and load resources, you need to configure the domain allowlist on the mini program backend after creating the mini program.

1. Open the [mini program backend](#) and go to **Development > Development Management > Development Settings > Server Domain Name**.

2. Click **Modify**, configure the following domain names, and save them.

Request domain name:

```
https://webar.qcloud.com;
https://webar-static.tencent-cloud.com;
https://aegis.qq.com;
The URL of the authentication signature API (`get-ar-sign`)
```

downloadFile domain name:

```
https://webar-static.tencent-cloud.com
```

Step 2. Install the SDK and build the npm

For more information on the mini program npm package, see [Using npm in Mini Program](#).

1. Install:

```
npm install tencentcloud-webar
```

2. Build:

Open the DevTools tool and select **Tools > Build npm** on the topbar.

3. Configure the path of `workers` in `app.json` :

```
"workers": "miniprogram_npm/tencentcloud-webar/worker"
```

Step 3. Import files

```
// The import method for versions earlier than 0.3.0 (one file)
// import "../../miniprogram_npm/tencentcloud-webar/lib.js";
// The import method for v0.3.0 or later (two files and the 3D module, which can be
import '../../miniprogram_npm/tencentcloud-webar/lib.js';
import '../../miniprogram_npm/tencentcloud-webar/core.js';
// Initialize the 3D plugin as needed. If 3D is not needed, the following can be sk
import '../../miniprogram_npm/tencentcloud-webar/lib-3d.js';
import { plugin3d } from '../../miniprogram_npm/tencentcloud-webar/plugin-3d'
// Import `ArSdk`
import { ArSdk } from "../../miniprogram_npm/tencentcloud-webar/index.js";
```

Note

As mini programs require that a single file cannot exceed 500 KB, the SDK is provided through two JS files. Starting from v0.3.0, the SDK is further split to support 3D, and the 3D module can be loaded as needed. Before import, check the current SDK version and select the corresponding import method.

Step 4. Initialize the SDK

Note

Before initializing the SDK in the mini program, you must configure the mini program `APPID` in the console as instructed in [Getting Started](#).

You need to insert the `camera` label into the page to open the camera, and then set the camera parameters as detailed in [Overview](#).

Mini programs do not support `getOutput` , so you need to pass in an onscreen WebGL canvas, and the SDK will directly output the image onto this canvas.

Sample code:

```
// wxml
// Open the camera and hide it through `position`
<camera
  device-position="{{'front'}}"
  frame-size="large" flash="off" resolution="medium"
  style="width: 750rpx; height: 134rpx;position:absolute;top:-9999px;"
/>
// The SDK outputs the processed image to the canvas in real time.
<canvas
  type="webgl"
  canvas-id="main-canvas"
```

```
    id="main-canvas"
    style="width: 750rpx; height: 1334rpx;">
</canvas>
// Take a photo to draw the `ImageData` object onto the canvas
<canvas
  type="2d"
  canvas-id="photo-canvas"
  id="photo-canvas"
  style="position:absolute;width:720px;height:1280px;top:-9999px;left:-9999px;">
</canvas>
// js
/** ----- Authentication configuration ----- */

/**
 * `APPID` of your Tencent Cloud account
 *
 * Go to the [Account Center](https://console.cloud.tencent.com/developer) to view
 */
const APPID = ''; // Enter your own parameter

/**
 * Web LicenseKey
 *
 * On the [Web licenses](https://console.cloud.tencent.com/vcube/web) page of t
 */
const LICENSE_KEY = ''; // Enter your own parameter

/**
 * The token used to calculate the signature
 *
 * Note: Here, it is used for demo debugging only. In the production environment, k
 * [Signature algorithm](https://cloud.tencent.com/document/product/616/71370#.E7.A
 */
const token = ''; // Enter your own parameter

Component({
  data: {
    makeupList: [],
    stickerList: [],
    filterList: [],
    recording: false
  },
  methods: {
    async getCanvasNode(id) {
      return new Promise((resolve) => {
        this.createSelectorQuery()
          .select(`#${id}`)

```

```
        .node()
        .exec((res) => {
            const canvasNode = res[0].node;
            resolve(canvasNode);
        });
    });
},
getSignature() {
    const timestamp = Math.round(new Date().getTime() / 1000);
    const signature = sha256(timestamp + token + APPID + timestamp).toUpperCase();
    return { signature, timestamp };
},
// Initialize the camera type
async initSdkCamera() {
    // Get the onscreen canvas. The SDK will output the processed image to
    const outputCanvas = await this.getCanvasNode("main-canvas");
    // Get the authentication information
    const auth = {
        licenseKey: LICENSE_KEY,
        appId: APP_ID,
        authFunc: this.getSignature
    };
    // Construct SDK initialization parameters
    const config = {
        auth,
        camera: {
            width: 720,
            height: 1280,
        },
        output: outputCanvas,
        // Initial beauty effects (optional)
        beautify: {
            whiten: 0.1, // The brightening effect. Value range: 0-1.
            dermabrasion: 0.3, // The smooth skin effect. Value range: 0-1.
            lift: 0, // The slim face effect. Value range: 0-1.
            shave: 0, // The V shape effect. Value range: 0-1.
            eye: 0.2, // The big eyes effect. Value range: 0-1.
            chin: 0, // The chin effect. Value range: 0-1.
        }
    };
};
const ar = new ArSdk(config);
// The list of built-in effects and filters can be obtained in the `create`
ar.on('created', () => {
    // Get the list of built-in makeup effects and stickers
    ar.getEffectList({
        Type: 'Preset'
    }).then((res) => {
```

```
        const list = res.map(item => ({
          name: item.Name,
          id: item.EffectId,
          cover: item.CoverUrl,
          url: item.Url,
          label: item.Label,
          type: item.PresetType,
        }));
        const makeupList = list.filter(item=>item.label.indexOf('makeup') > -1);
        const stickerList = list.filter(item=>item.label.indexOf('stick') > -1);
        // Render the list of effects
        this.setData({
          makeupList,
          stickerList
        });
      }).catch((e) => {
        console.log(e);
      });
      // Built-in filters
      ar.getCommonFilter().then((res) => {
        const list = res.map(item => ({
          name: item.Name,
          id: item.EffectId,
          cover: item.CoverUrl,
          url: item.Url,
          label: item.Label,
          type: item.PresetType,
        }));
        // Render the list of filters
        this.setData({
          filterList: list
        });
      }).catch((e) => {
        console.log(e);
      });
    });
    // You can set beauty filters and effects in the `ready` callback.
    ar.on('ready', (e) => {
      this._sdkReady = true
    });

    ar.on('error', (e) => {
      console.log(e);
    });

    this.ar = ar
  },
```

```
// Change the beauty filter parameters. Make sure the SDK is ready.
onChangeBeauty(val){
    if(!this._sdkReady) return
    // You can set beauty effects through `setBeautify`. Six attributes are
    this.ar.setBeautify({
        dermabrasion: val.dermabrasion, // The smooth skin effect. Value ra
    });
},
// Change the makeup style. Make sure the SDK is ready.
onChangeMakeup(id, intensity){
    if(!this._sdkReady) return
    // Use `setEffect` to configure the effect. Its input parameters can be
    this.ar.setEffect([id, intensity]);
},
// Change the sticker. Make sure the SDK is ready.
onChangeSticker(id, intensity){
    if(!this._sdkReady) return
    // Use `setEffect` to configure the effect. Its input parameters can be
    this.ar.setEffect([id, intensity]);
},
// Change the filter. Make sure the SDK is ready.
onChangeFilter(id, intensity){
    if(!this._sdkReady) return
    // Use `setFilter` to configure the filter. The second parameter indica
    this.ar.setFilter(id, 1);
}
}
})
```

Step 5. Implement the photo capturing and recording features

Sample code:

Camera

Recording

The SDK will return an object containing the width, height, and buffer data, and you can draw the data on the preset 2D canvas (in the above code, `id` is `photo-canvas` .) on your page and export it as an image file.

```
async takePhoto() {
    const {uint8ArrayData, width, height} = this.ar.takePhoto(); // The `takePhoto`
    const photoCanvasNode = await this.getCanvasNode('photo-canvas');
    photoCanvasNode.width = parseInt(width);
    photoCanvasNode.height = parseInt(height);
    const ctx = photoCanvasNode.getContext('2d');
    // Create the `ImageData` object with the data returned by the SDK
    const imageData = photoCanvasNode.createImageData(uint8ArrayData, width, height
    // Draw the `ImageData` object onto the canvas
```

```
ctx.putImageData(imageData, 0, 0, 0, 0, width, height);
// Save the canvas as a local image
wx.canvasToTempFilePath({
  canvas: photoCanvasNode,
  x: 0,
  y: 0,
  width: width,
  height: height,
  destWidth: width,
  destHeight: height,
  success: (res) => {
    // Save the photo
    wx.saveImageToPhotosAlbum({
      filePath: res.tempFilePath
    });
  }
})
}
```

```
Component({
  methods: {
    // Start recording
    startRecord() {
      this.setData({
        recording: true
      });
      this.ar.startRecord()
    }
    // Stop recording
    async stopRecord() {
      const res = await this.ar.stopRecord();
      // Save the recording
      wx.saveVideoToPhotosAlbum({
        filePath: res.tempFilePath
      });
      this.setData({
        recording: false
      });
    }
  }
})
```

When the mini program is switched to the background or the screen is locked, `stopRecord` needs to be called to stop recording, and the SDK can be started again when the page is opened again.

```
onShow() {
```

```
    this.ar && this.ar.start();
  },
  onHide() {
    this.ar && this.ar.stop();
  },
  async onUnload() {
    try {
      this.ar && this.ar.stop();
      if (this.data.recording) {
        await this.ar.stopRecord({
          destroy: true,
        });
      }
    } catch (e) {
    }
    this.ar && this.ar.destroy();
  }
}
```

Sample Code

You can download the [sample code](#), decompress it, and view the `ar-miniprogram` code directory.

Tencent Effect Studio Utilize

Tencent Effect Studio Introduction

Last updated : 2024-09-06 18:02:13

Product Introduction

Tencent Effect Studio is a material creation tool that supports customers to customize 2D and 3D stickers for personalized material production. After completing the production, the materials can be imported into the SDK for use.

Tool features

AI Configuration: AI capability modular editing

3D Editing: Design 3D model materials

Process Control: Rich process control options for creating various complex dynamic effects

Dynamic Effect Import: Support importing local dynamic materials to preview effects

Tool Download

| Windows | Mac |
|--------------------------|--------------------------|
| DOWNLOAD | DOWNLOAD |

Note:

After downloading, please [contact sales](#) to obtain your Studio Key.

Product Capability Introduction

1、2D stickers & Beauty Special Effects Design

Code environment panel visualization, even novice designers can easily get started.



2、3D Interactive Special Effects

Supports rendering of various materials, achieving rich special effects production effects.



3、List of Material Production Capabilities

| Type | Items | Type | Items |
|---------|-----------------|------|----------------------------------|
| Gnenral | Filter Music | AI | Segmentataion Facial features |

| | | | |
|----------|--|-----------------|--|
| | Workflow Script | | Head AI face change Face merging Expression migration |
| Stickers | Foreground sticker Face-tracking sticker Hand-tracking sticker Body-tracking sticker Cat face-tracking sticker | Special effects | Capture one frame Frame capture Face customization Liquify Post-processing Avatar2D |
| Make up | Full-face makeup Eyebrow makeup Eye makeup Eye color Lipstick | 3D | Camera Light source 3D head |
| Beautify | Face beautification Body beautification Hair color | 3D module | Cube Sphere Cylinder Plane |

Tencent Effect Studio Video Tutorial

Last updated : 2024-03-12 14:32:05

We have provided a **Video Tutorial** on how to utilize our material creation tools, along with pertinent resources, which can be examined by selecting the download option.

| Item | Download to View | | |
|------------------------|--|--|--|
| Interface Introduction | <p data-bbox="304 551 663 584">The user interface introduction</p>  | | |
| 2D Effects | <p data-bbox="304 1043 544 1077">Face customization</p>  | <p data-bbox="836 1043 938 1077">Makeup</p>  | <p data-bbox="1378 1043 1517 1077">Face-track</p>  |
| | <p data-bbox="304 1424 424 1458">Hair color</p>  | <p data-bbox="836 1424 900 1458">Filter</p>  | <p data-bbox="1378 1424 1517 1458">Music setti</p>  |
| | <p data-bbox="304 1794 560 1827">Background removal</p> | | |

| | | | |
|--------------------------|---|--|--|
| |  | | |
| <p>3D Effects</p> | <p>How to create 3D effects</p>  | | |
| <p>Related Resources</p> | <p>Related resources that may be used in the tutorial experience</p> | | |

Tencent Effect Creator's Complete Guide

Software Usage

Beginner's Guide

Last updated : 2024-03-22 18:45:44

Introduction to Tencent Effect

Tencent Effect is a tool for combining and configuring short video gameplay materials. It can help you create template gameplay, shooting gameplay, and more for short video platforms. It allows creators ranging from AE professionals to Photoshop enthusiasts to create their own customized gameplay projects.

Customized Gameplay Requires Downloading Tools

PAG Plugin [Download](#).

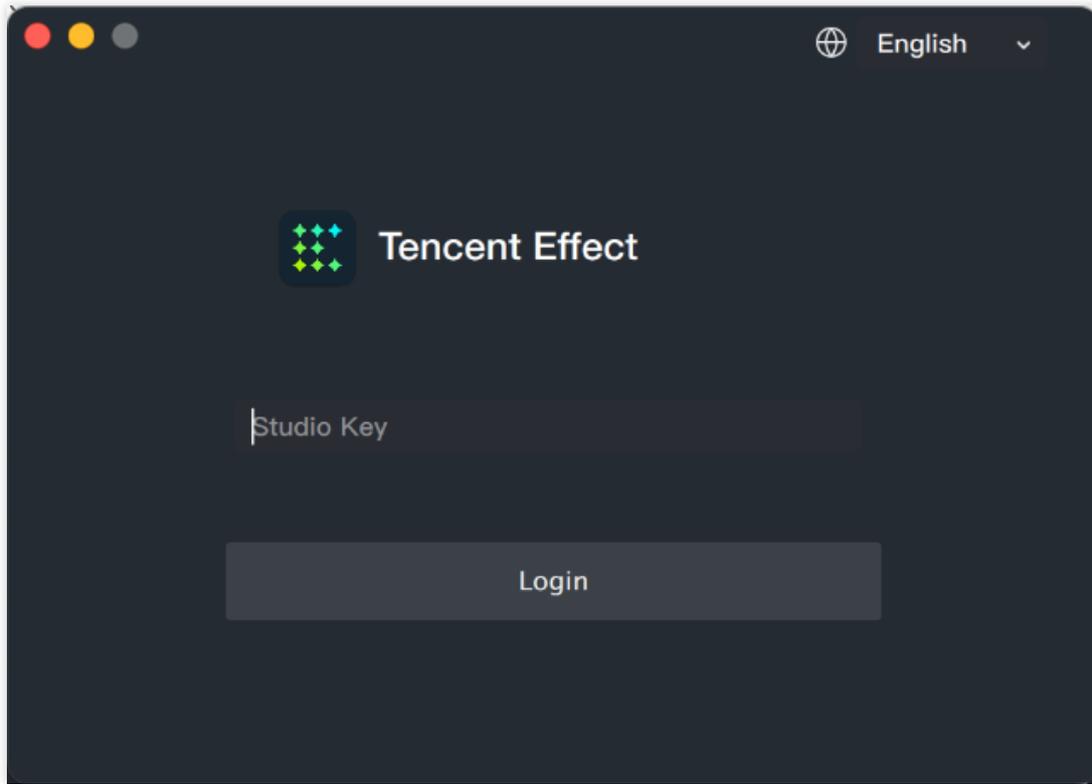
Contract Signing and Authentication

Log in

Open TE, the login page pops up.

Enter Studio Key

Login successful: Enter TE Homepage.



Panel Introduction

Last updated : 2024-03-25 11:43:19

Home Introduction

The home page of Tencent Effect includes the following Features :

New Project

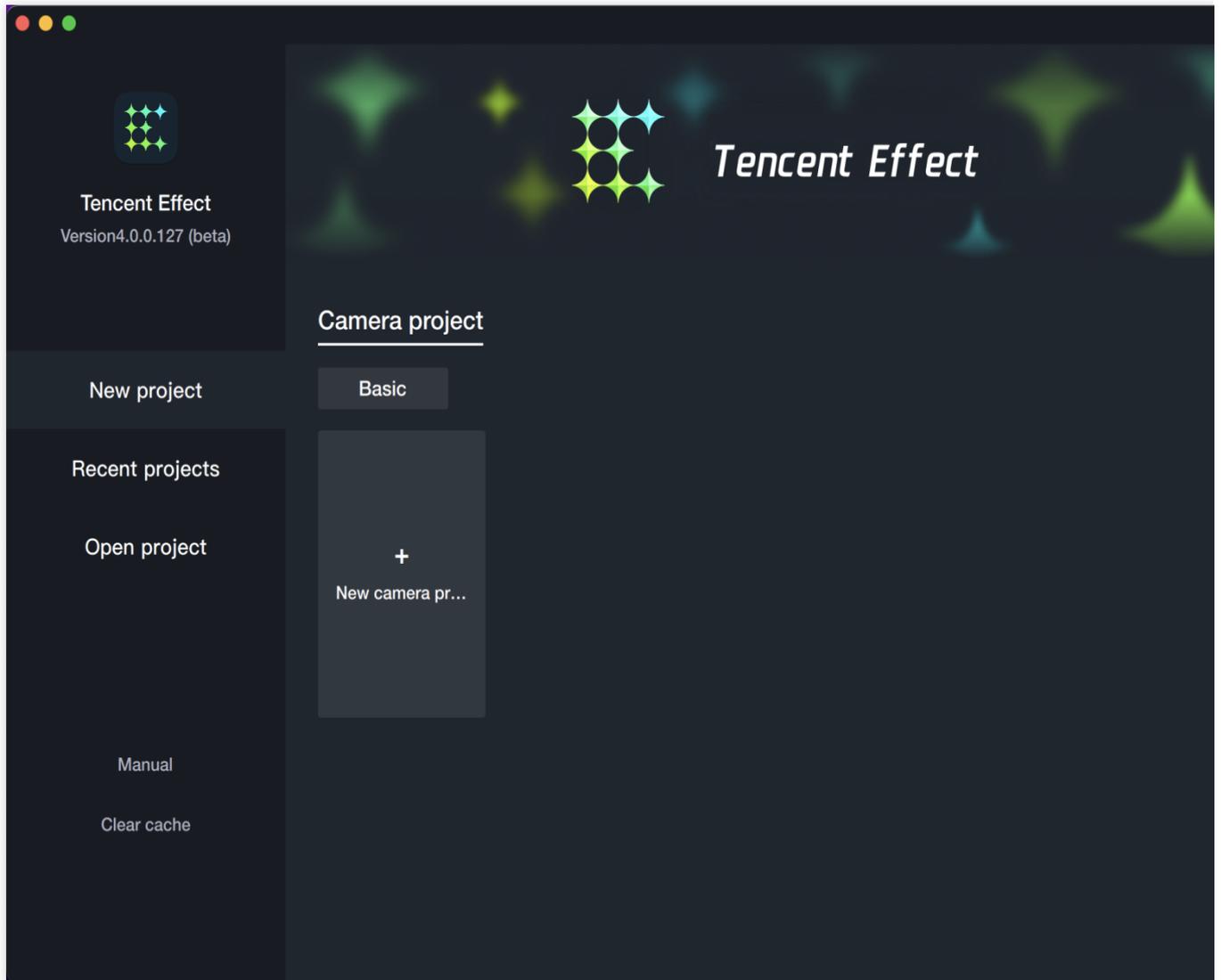
Camera Project

Recent Projects: Support saving recently opened projects, allowing for quick open next time.

Open Project: Support opening local saved projects.

Manual

Clear cache

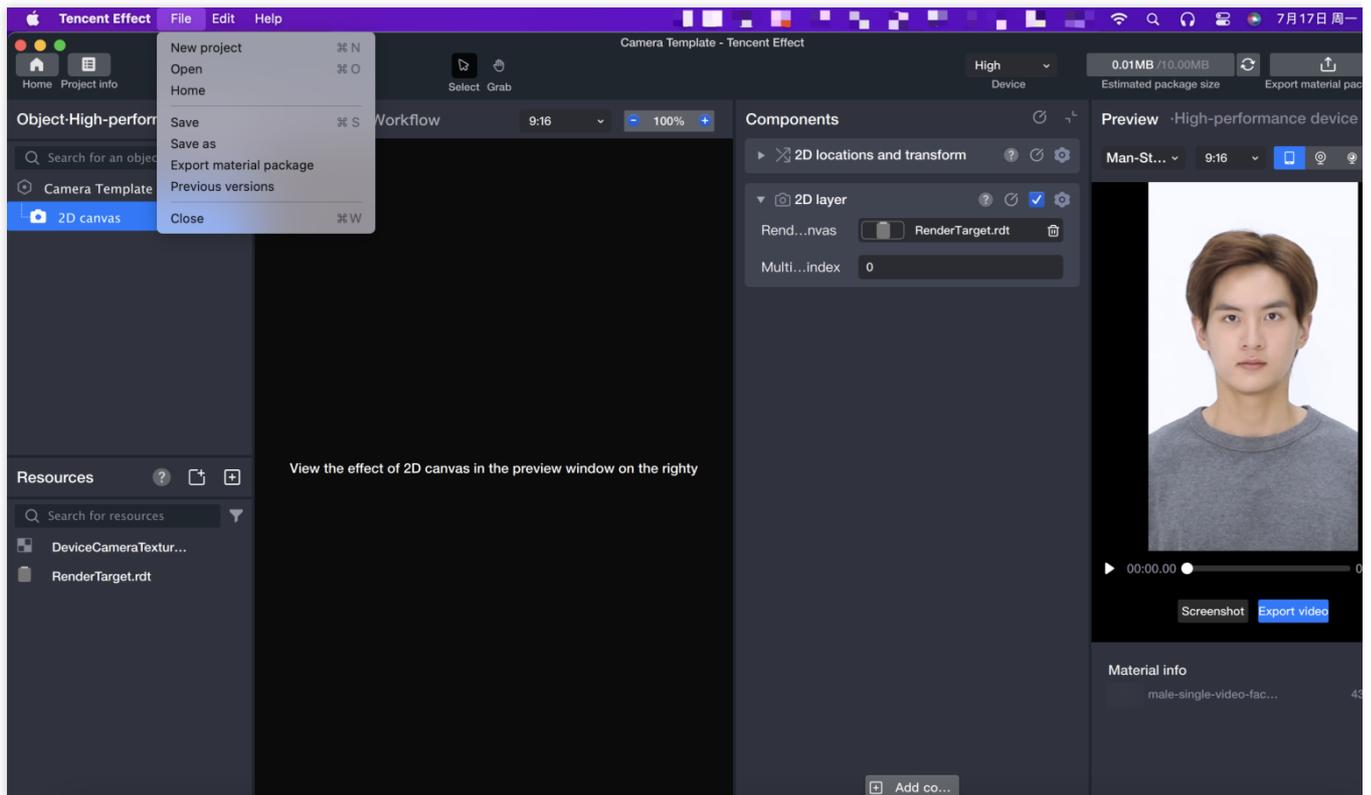


Work Panel Introduction

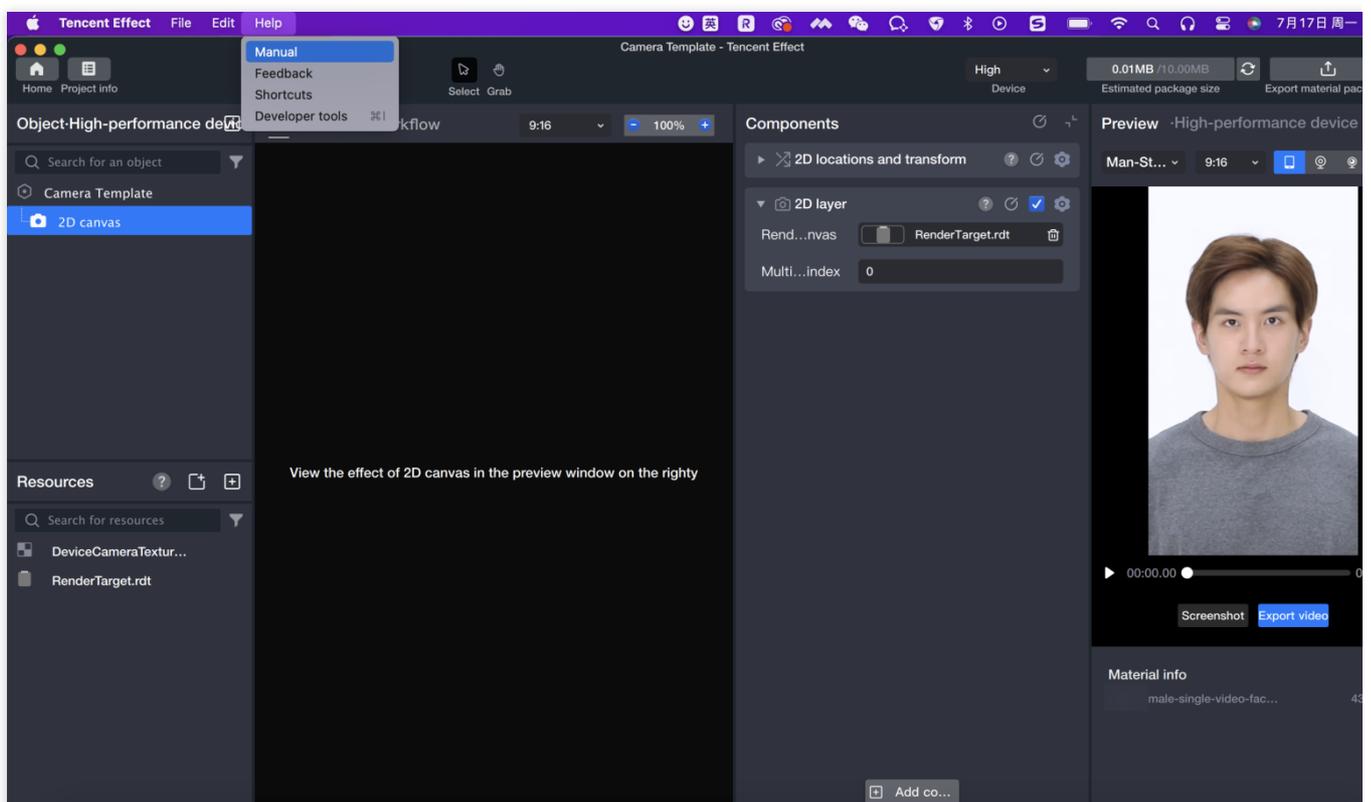
The workspace of Tencent Effect is composed of a set of modular panels. The panels are the main working area for production editing in Tencent Effect. All panels can be scaled, and the preview panel also supports hiding and expanding.

Menu Bar

The Menu Bar mainly provides some file and project-related operations to help you better manage project, including: New project, Open, Home, Save, Save as, Export material package, previous versions and close.

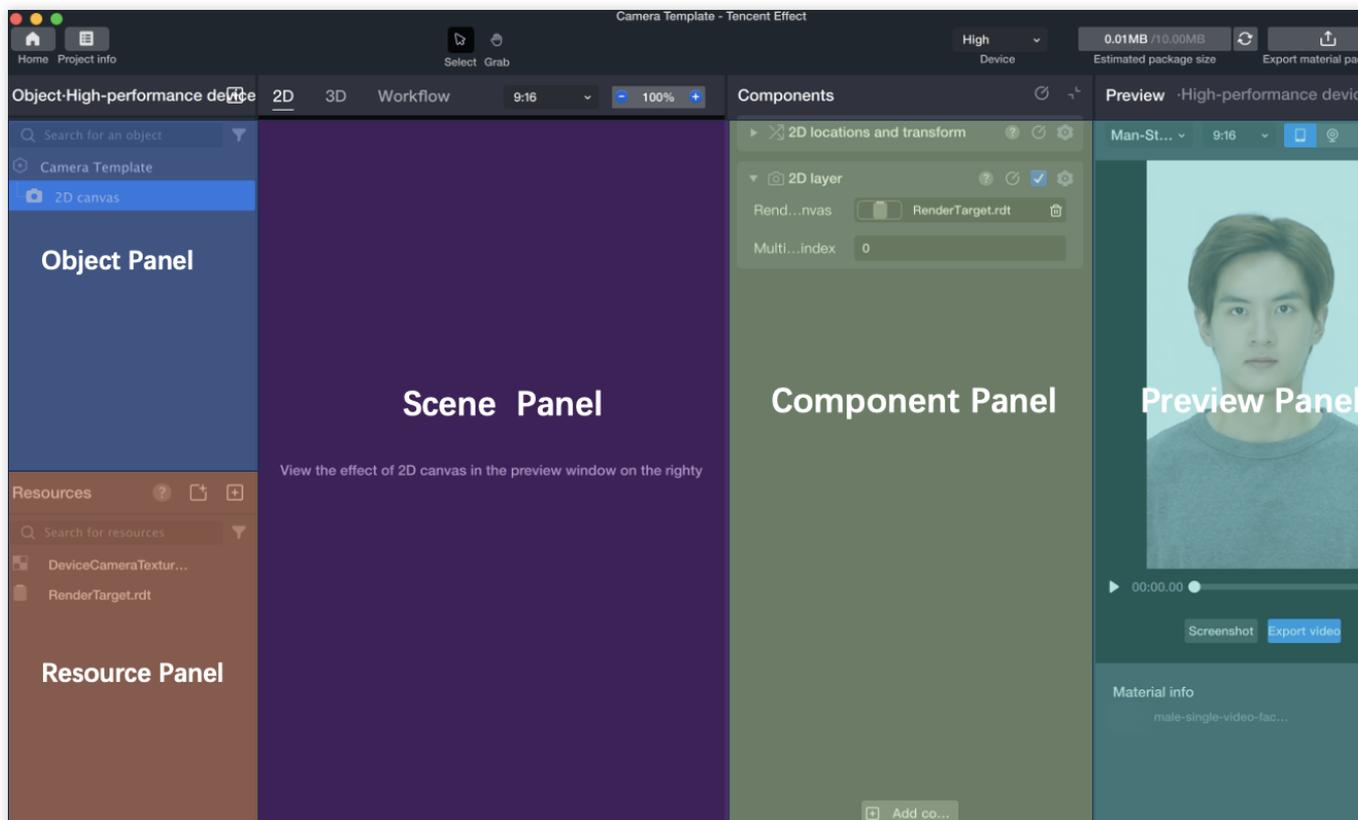


The **Manual** in the **Help** can help you quickly get started with production steps:



Work Panel

Camera Project Panel



Object Panel

The Object Panel is used to build the video structure of gameplay projects in the operation area. It structures the display of all objects in the scene through the hierarchical structure on the panel. The Object Panel also controls the rendering order, which is from top to bottom, with the bottom object appearing at the top layer of the screen. The basic operations are as follows:

Add Object: Create a new object by dragging resources to the Object Panel, or add from the Add Object Mini Panel, or right-click to add.

Drag Object: Adjust the up and down position of the object by simple drag and drop, or adjust the objects as parent objects to each other.

Copy/Paste/Delete/Rename Object: Select the object and right-click to complete the related operations.

Enable/Disable Object: Click the small eye icon on the right side of the object to enable or disable it.

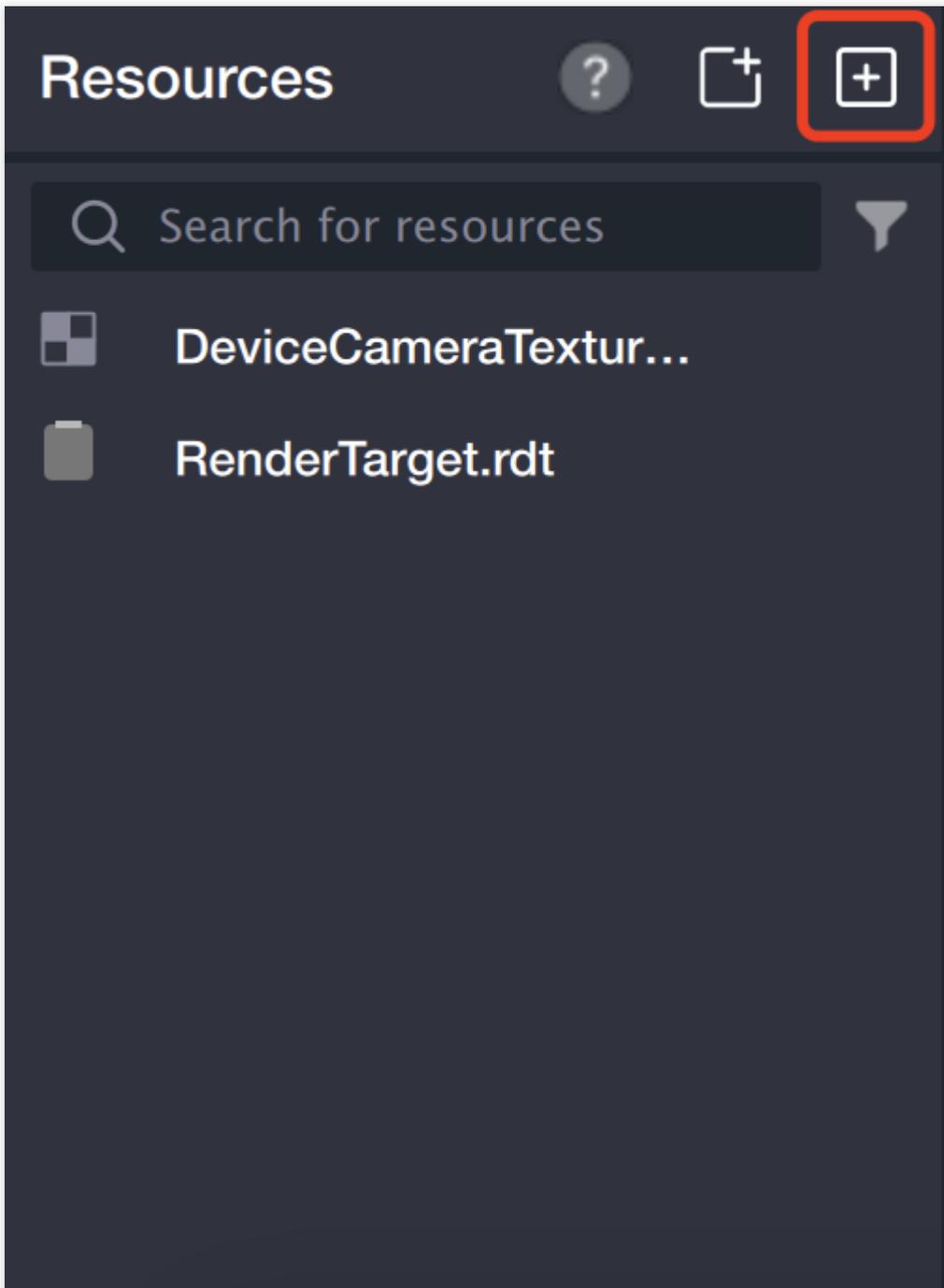
The Add Object Mini Panel comes with preset common objects that you can directly add and use, or you can choose to add an empty object and combine related components yourself.

Resource Panel

Can import configuration resources into the current project.

Addition Method:

Click the resource panel's [Add button] to add resources, which can be used to add the resources needed for the project to the resource panel in advance for standby.



Transfer computer files or folders directly to the Resource panel, and it will automatically recognize the resource type and add it.

When dragging the sequence frame resource folder to the Resource panel, it will automatically convert to the PAG format with better performance, and you can set the frame rate.

Resource Base Management:

You can perform the following operations on the Resource Panel by right-clicking on the Resource File:

Copy, cut, delete, rename.

Group selected objects: Create folders to categorize resources.

Resource editing: Image resource supports compression.

Scene Panel

The Scene Panel displays the visual effects of different objects on the Object Panel:

General:

You can view the effects of makeup, filters, liquify, etc.

You can adjust the position, size, and rotation angle of foreground materials, face stickers, etc.

In the 3D Panel, you can adjust the position, size, and rotation angle of 3D props, as well as the effects of materials, lighting, etc.

In Animation Mode, you can display the animation playback effect.

In a General Template Project:

You can view frames at different time points by adjusting the Positioning Line on the Timeline.

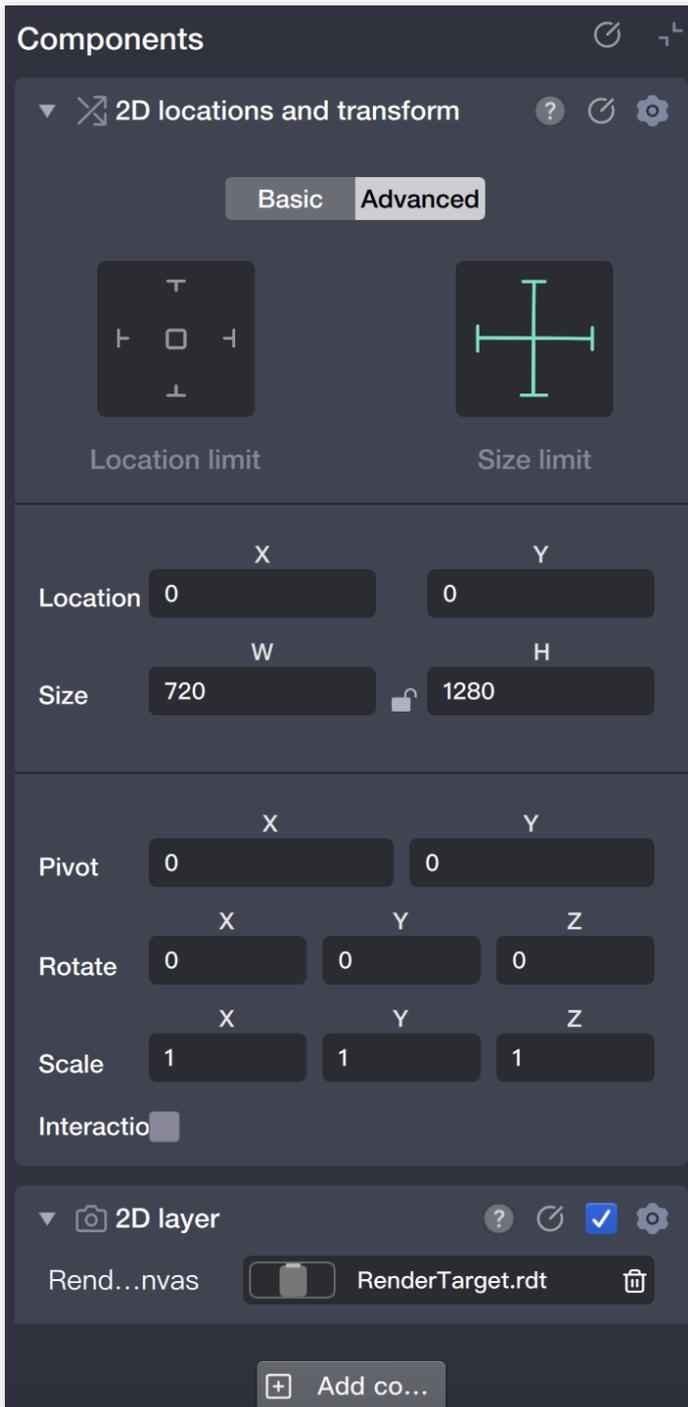
Pressing the Spacebar can control the Play and Pause of the video in the Scene Panel.

The Scene Panel provides editing capability for different objects, such as Select, Move, Scale, Bind, etc., allowing users to operate more Conveniently.

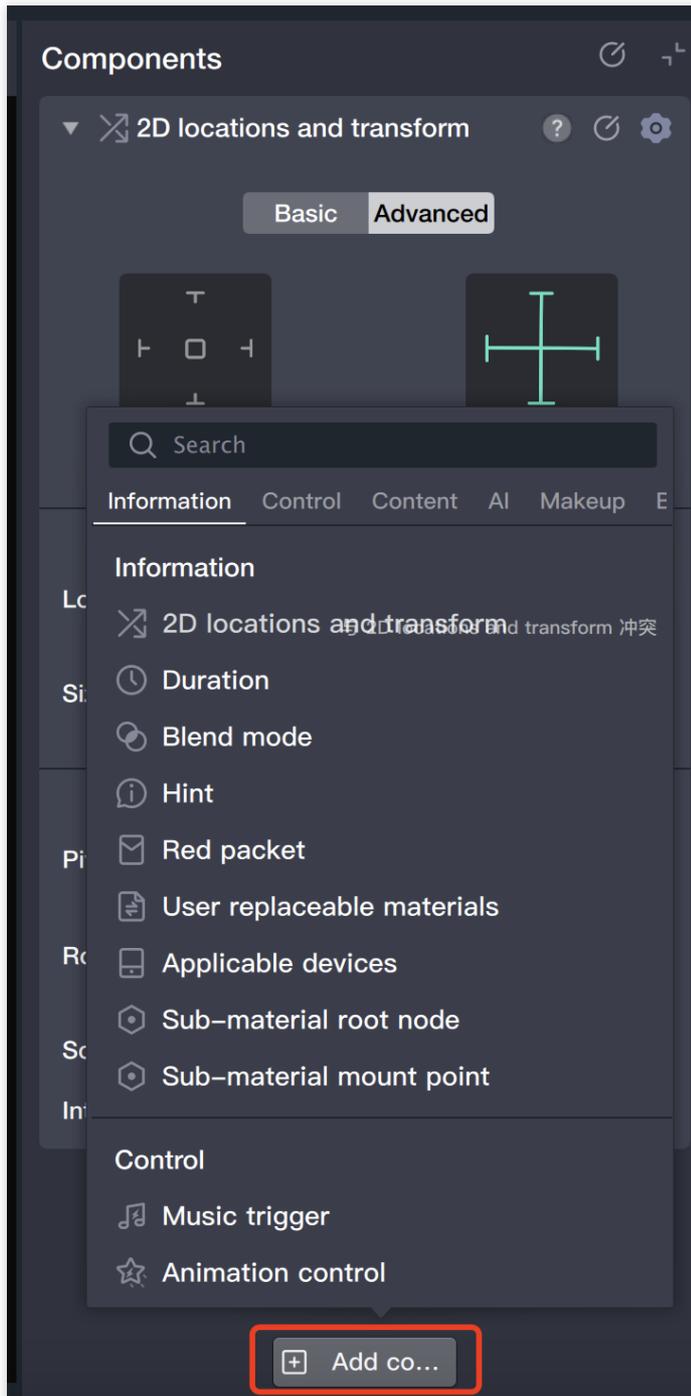
Component Panel

On the Component Panel, there are a number of freely Combinable components, which are Atomic Capability Units used to define the functions and properties of the objects you create.

Through the Component Panel, you can edit any selected object and modify any parameter on it:



You can also add new components to any selected object by using the **Add Component** feature:



Preview Panel

The Preview Panel can real-time display your gameplay experience.

Tencent Effect has preset a series of preview videos and images, which can be used to experience the work effect by switching different videos and images:

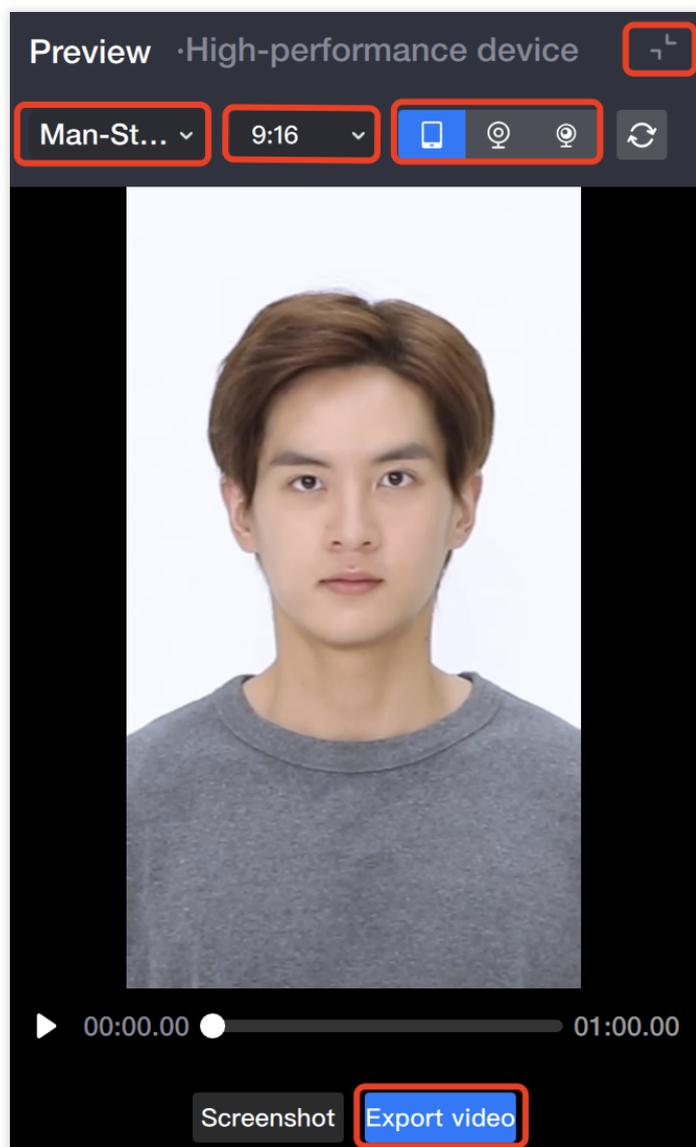
You can switch materials through the dropdown option.

You can also upload your own preview materials, such as photos or videos compressed into a zip file.

Satisfactory preview videos can be directly exported as HD videos for promotion or showcase use.

Turn on the PC camera or external camera for preview.

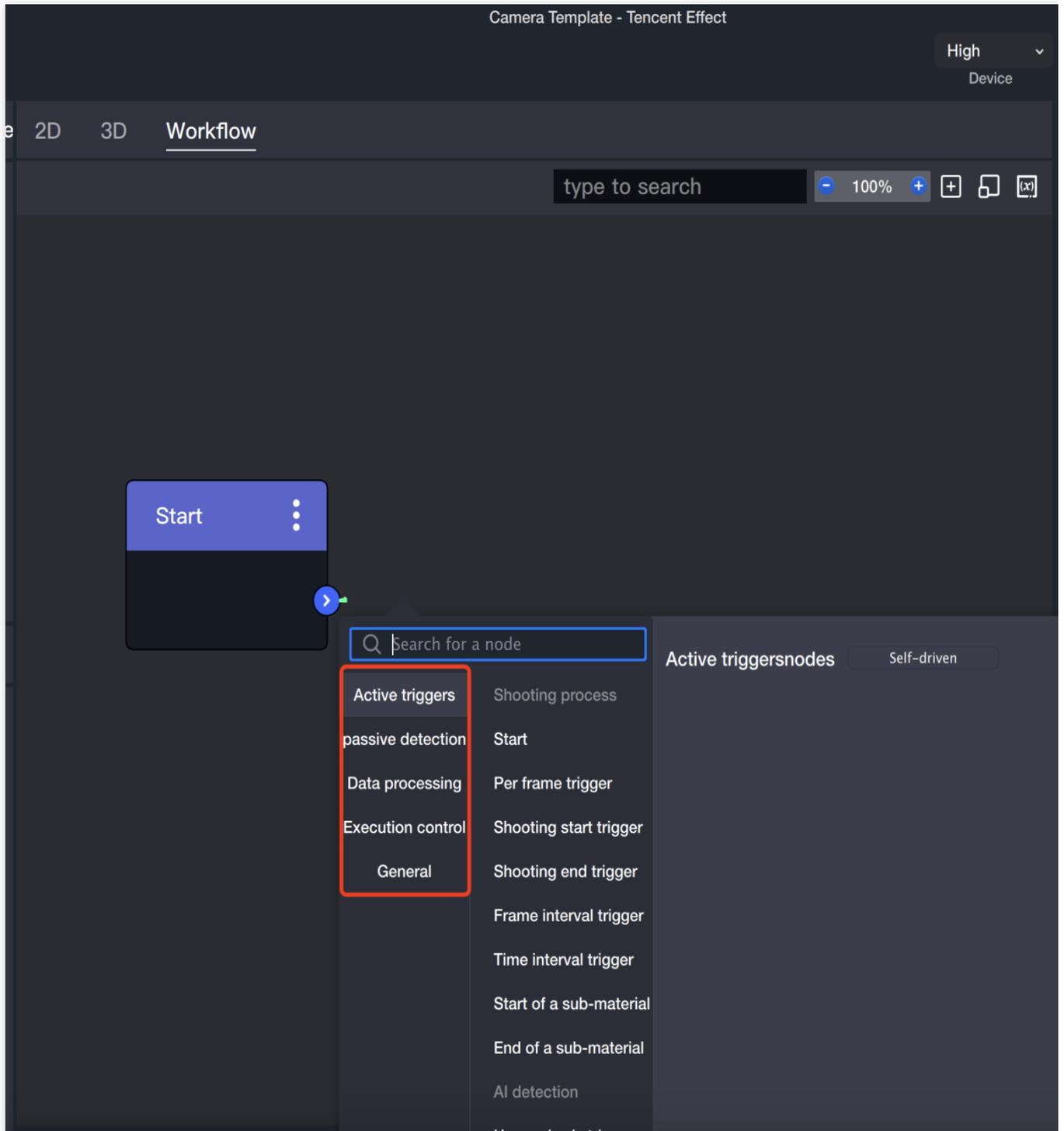
In the shooting project scene, you can also turn on the PC camera or external camera for real-time preview. Through the small button in the upper left corner, you can hide or expand the preview panel:



Workflow Panel

In short video gameplay, besides the flat and straightforward effect display, there are often some plots or trigger logic. At this time, the workflow panel is needed. The main function of the workflow panel is to allow users to organize their design effects in an orderly and regulated manner, presenting a complete plot script for the gameplay.

The workflow panel provides four major elements for building gameplay process: trigger condition, logic judgment, trigger result, and value definition. With these four elements, the design of gameplay process can be relatively simple, such as timing trigger, specific condition trigger, visibility, switch, etc.



Add node method:

Right-click any blank area - Add Node.

Click the "+" in the top right corner of the panel to add.

Timeline Panel

In a General Template Project:

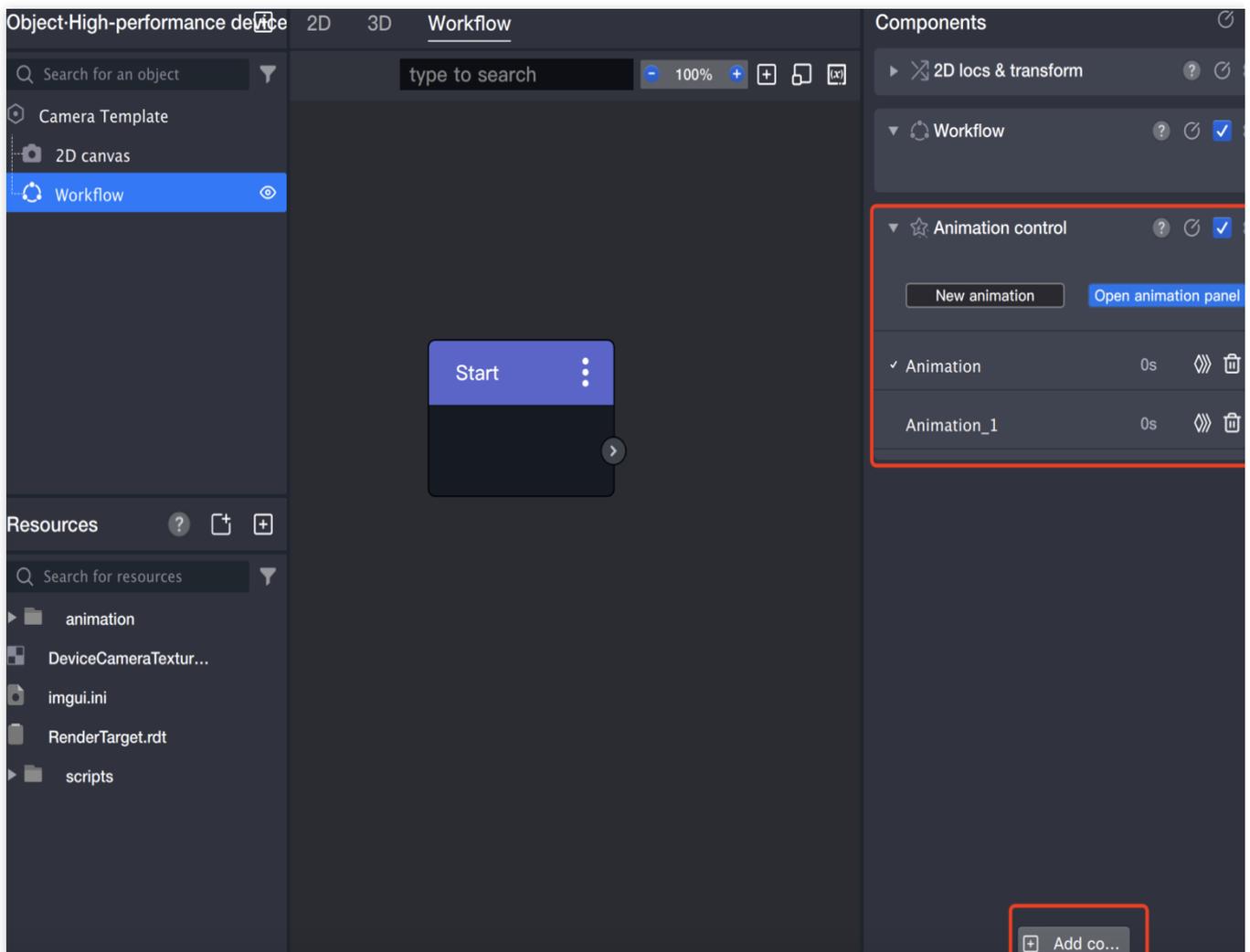
The Timeline Panel will display the relationship between all objects on the Object Panel in terms of time and rendering space, to better help you adjust time parameters and rendering relationships.

By adjusting the duration component on the Component Panel, it can be displayed in real-time on the Timeline Panel. Similarly, dragging or stretching different objects on the Timeline Panel will also cause the parameters of the duration component on the Component Panel to change in real-time.

Animation Panel

The function of the Animation Panel is to create animations, mainly targeting the editable attributes of objects in the Scene Panel. It can set these attributes to gradually change between different values or states, and record the process of the change to be saved as an animation file for use.

The switch for the Animation Panel is located on the Animation Control Component, supporting both collapsing and expanding.



Material Package Download

Last updated : 2024-03-22 18:45:44

Special Effects Props Category Material Package:

[Icon Model Image\(Copyrighted\)](#)

[Makeup Package](#)

[Filter Package](#)

Material Specification

2D Makeup and Filter Specification

Last updated : 2024-03-22 18:45:44

Model Picture



Expressionless state



Mouth open state

The makeup PSD internal source file contains the above two images, take as needed.

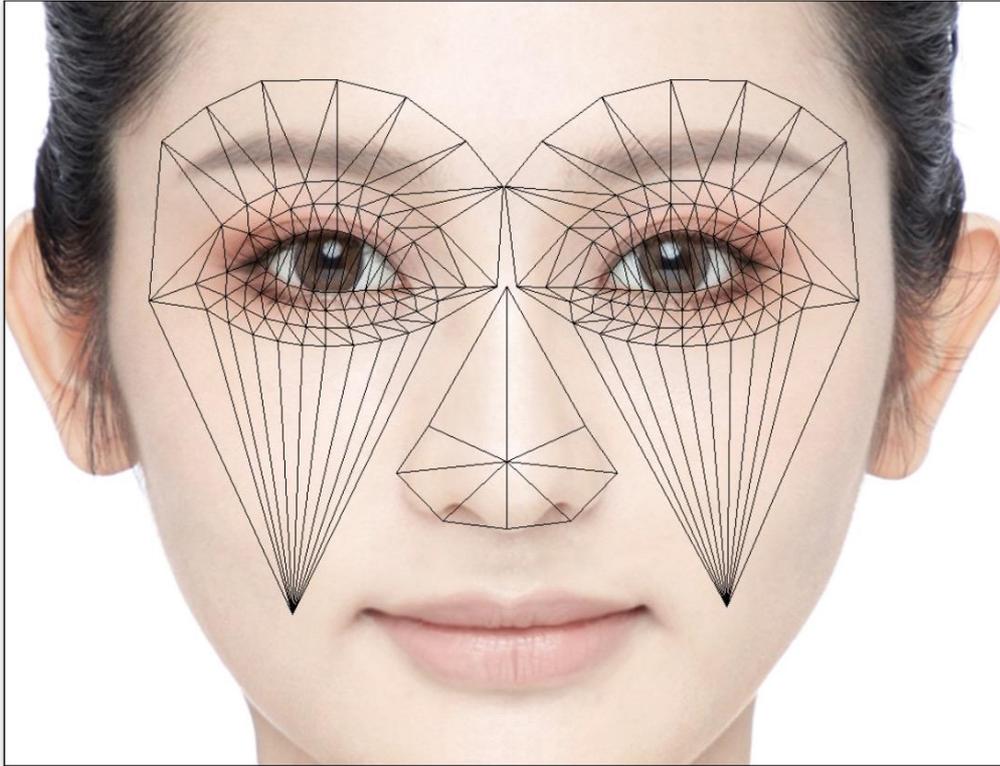
(Open-mouth pictures are generally used for effect verification, and the actual makeup needs to be drawn on the expressionless model image.)

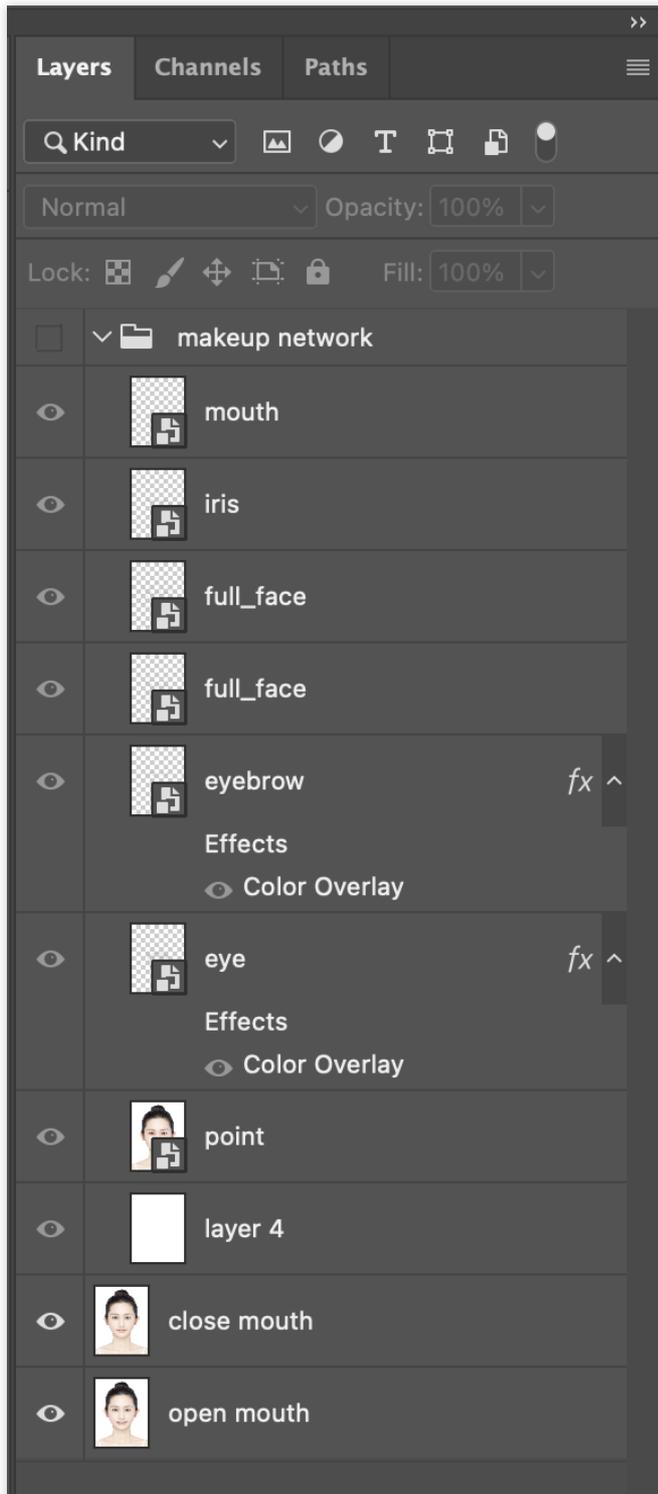
The output size of the standard makeup png is: 1536x2048.

(Please ensure the output PNG size, otherwise the makeup preview will not be available.)

Makeup PSD template [download link](#).

Model Image Grid Description





Makeup should be drawn within the grid protection range, exceeding it may cause stretch distortion risk.
(PSD file contains grid maps for various parts, refer as needed.)

Colored Contact Lens Material Production



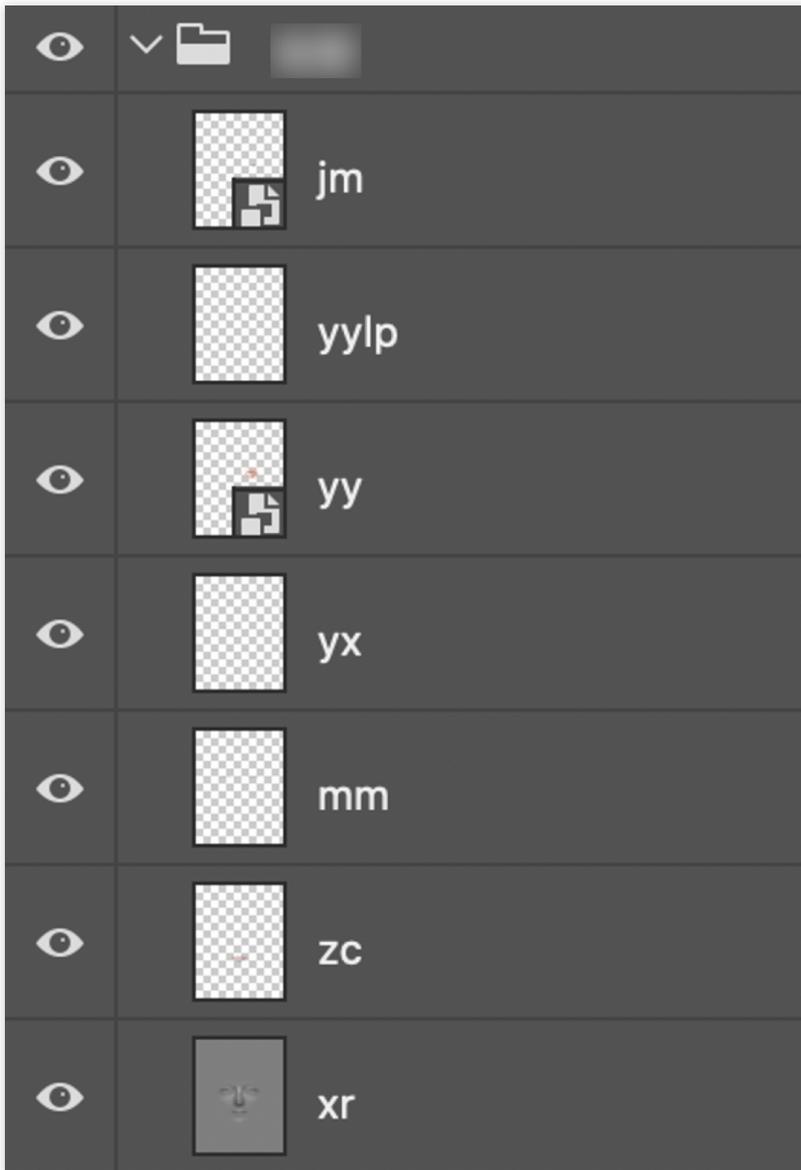
Colored contact lens material output size: 125x125.

Colored contact lens effect should be drawn in the white area of the image above, the black area is the instant transition area, and the material is not displayed.

Colored contact lens PSD template [download link](#).

Makeup Output





Makeup grid is divided into five parts: eyes, eyebrows, lips, full face makeup, and colored contact lenses.

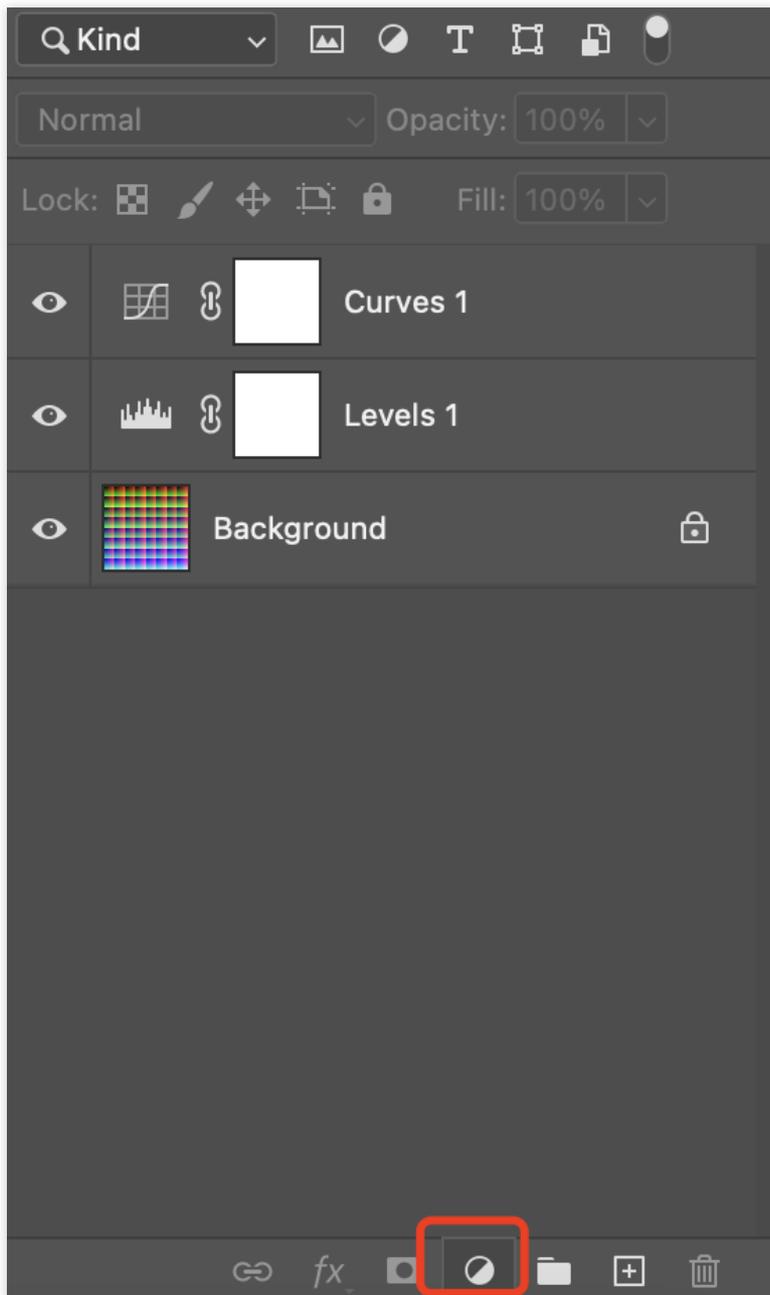
When exporting from Photoshop, it is recommended to use layer export to file and check Visible Layers Only.



The file structure of the exported makeup package can refer to the above figure.

In general, the blending mode for contouring parts such as eyeshadow, blush, and contouring is multiply; the highlight category for brightening parts is color burn or soft light.

Filter Output



Apply color adjustment files in PS, apply to LUT, and export PNG image.

Do not compress the LUT image.

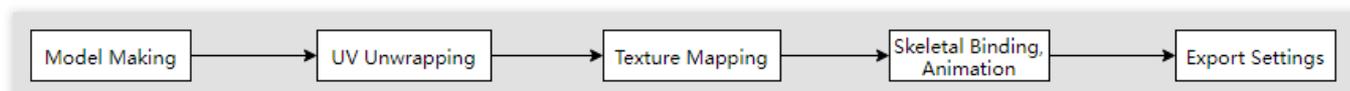
Filter standard LUT image [download link](#).

3D Production Material Specification

Last updated : 2024-03-22 18:45:44

Production Process

The basic linear process is as follows:



Model Making

Production software: Maya, c4d, blender, zbrush, as long as the final result can export fbx or glb files.

The model size needs to correspond to a specific head model size, and the size and position of the head model cannot be modified.

The triangle face count of daily 3D props should be controlled at around 8000 faces, with a limit count of 20,000 faces.

The completed model should center the pivot (the center point of the world coordinate system), clear history, and freeze transformation.

Naming convention: Use English characters for file names, models, and textures.

Low-poly topology should be reasonable, standard, and uniform.

The model can be split into multiple models for production, and the final output can be a single file.

When creating the model, mainly create the part facing the camera, because the final online prop will display the front and 45° side effects at most. Therefore, the invisible model at the back of the head can be directly deleted to reduce the face count and optimize performance.

UV Unwrapping

Unfold the UV and flatten it as much as possible.

Minimize seams and place them in less noticeable locations. Make full use of the texture space.

Production of pictures

Requirements

The maximum size is 1024*1024, and to ensure the effect, both width and height dimensions should be multiples of 4.

The memory size needs to be controlled within 1M, and the final pictures used need to be compressed (using TinyPNG compression).

Set the depth to 8-bit and the format to PNG.

PBR material

The textures needed are basecolor, normal, occlusionRoughnessMetallic.

Emissive is not necessary, but can be used when needed. When not needed, set the Emissive color to black.

Unlit material(unlit)

A single baked picture is enough, prioritize using Arnold and SP baking, prioritize effect.

Skeletal Binding, Animation

No skeleton (static model) can skip this step.

Physical skeleton binding.

Dynamic joint can be added to achieve physical jitter.

The maximum number of skeletons is 50.

The vertex skeleton influence number should be less than or equal to 4 (the maximum number of skeletons that can affect each model point during skinning).

The skeleton structure must have only one hierarchy, and the name of the highest-level skeleton should be named: Root (special structures will be described when sending the package).

Use skeleton skinning, avoid using other objects.

For skeletons that require physical calculations, the root skeleton name can be named with numbers, ABC+numbers for easy physical configuration.

Skeleton animation production.

The duration should be controlled within 15 seconds, with a frame rate of 30 frames/second.

The output animation needs to bake the keyframes on the skeleton.

Export Settings

Tencent Effect only supports importing fbx and glb formats, and does not support importing obj.

Export fbx format (2014-2019 version).

3D MAX export, check **geometry: normal tangent and triangulation, animation: animation, deformed model: skinning non-blended deformation.**

MAYA export, check projects with skeletal animation.

Delete useless keyframes outside the animation timeline (for example, if it's 0-100 frames, there should be no animation frames before 0 and after 100).

Export glb.

Head model download

[Download link.](#)

Export PAG Specification

Last updated : 2024-03-22 18:45:44

Determine the PAG export method (whether to enter the animation stage)

PS Static Frame Export: No need for animation effect, you can directly export a PNG in PS.

PNG size: 720*1280.

Click to select the layer you want to export, then click Menu File > Export > Format: PNG..

(Compress the PNG as much as possible)

AE Direct Export: The effect needs to be animated in AE, and PAG can be directly exported in AE.

Video size: 720*1280.

PAG parameter setting in AE (only need to set it before the first export, set as follows)

After Effects > Preferences > PAG Config...

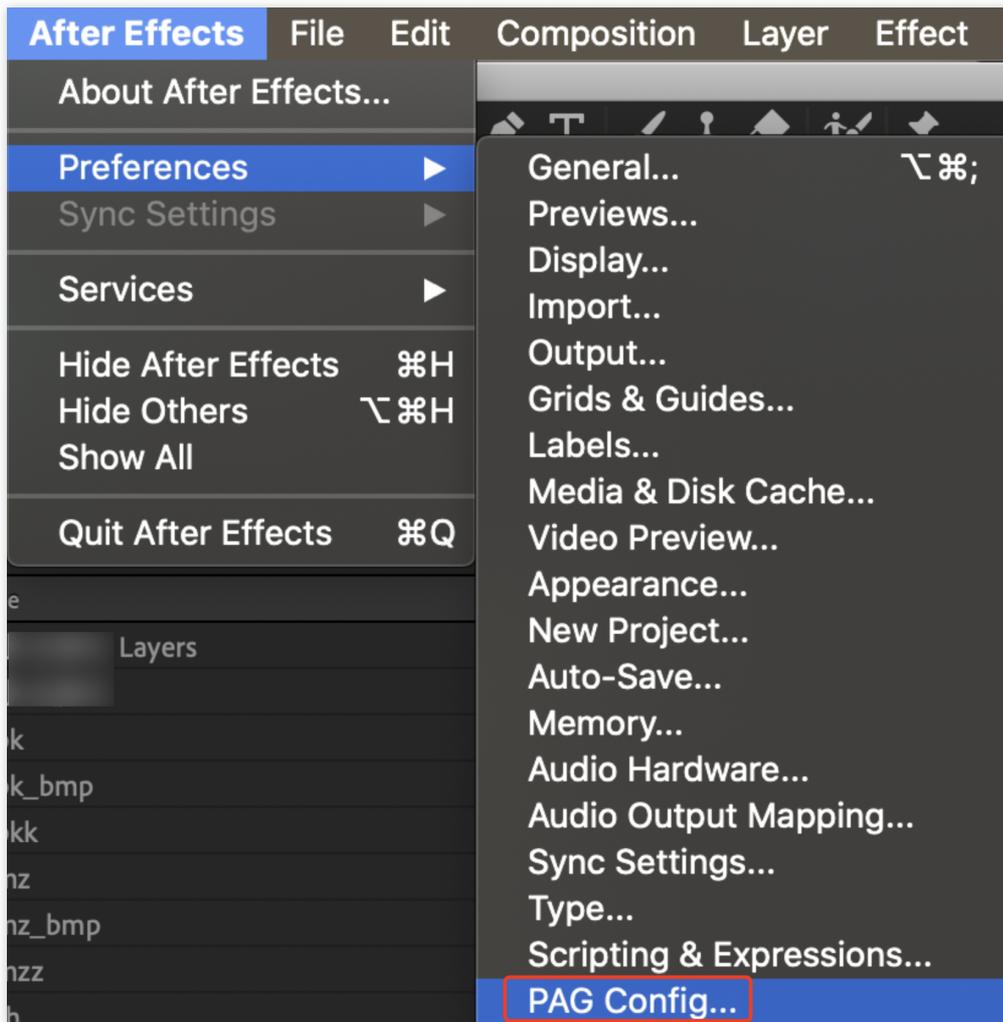


Image compression quality parameter is set to default 80, which can be adjusted according to the final effect quality and package size.

Sequence Frame Type: Video Sequence Frame.

The default parameter for sequence frame image quality is 80, and the upper limit for export size is 720, which can be adjusted according to the actual situation.

PAG Export Before

When the exported effects support PAG, you can name them according to the material abbreviation for easy identification of the materials.

When you need to export effects that PAG does not support, you need to create a new composition for the corresponding layer or sub-composition, and add the `_bmp` suffix when naming the new composition.

Note:

When adding the `"_bmp"` suffix, it should be added to the composition naming, not the layer naming.

Please make sure that the duration of the exported composition is consistent with the actual duration of the material.

Different Scenarios PAG Export

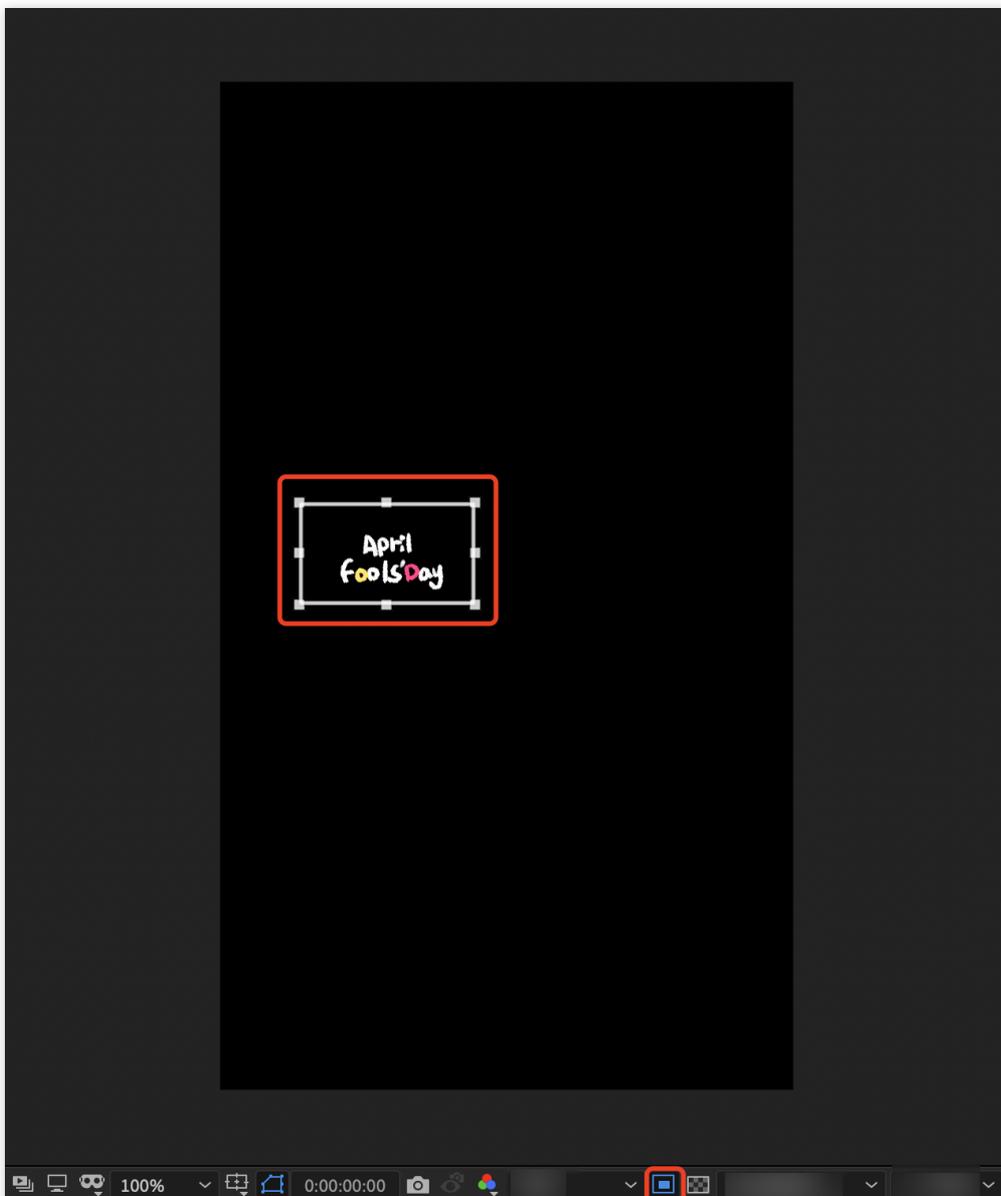
PAG export scene types: Full-screen material, facial tracking material, with or without overlay mode.

Full-screen material (fixed on the screen, not following user movement): Directly export according to screen size (720*1280).

File > Export > PAG File

Facial tracking part: Facial tracking stickers (such as: Blush, Head stickers, Facial tracking stickers, etc.). Use the region of interest tool.

Use the region of interest to draw an appropriate size bounding box.



Cut out appropriate size, synthesize > crop and synthesize to target area.

Obtained after cutting.



Repeat direct export steps: File > Export > PAG File.

If there is an overlay method, export the corresponding PAG for the composites under the same overlay method.

After PAG export, you can directly preview it with PAGViewer.

PAG Export Size, Frame Rate, Duration, Naming, Quantity, and Size Specification

Pag export size: The size of facial stickers depends on the sticker size; for panorama (foreground/background) dynamic stickers, it is recommended that the long side does not exceed 720px; for static stickers, also ensure that they are within 720px, and it is recommended to directly export a single png (within 720*1280) using Photoshop.

Pag frame rate: 24fps.

Pag duration: Basically around 5s, not exceeding 8s at the longest, unless in special cases (such as lyrics type), and pay attention to seamless looping.

Pag naming: It is recommended to use the english alphabet

Pag quantity: In a PAG package, it is best not to exceed 5 individual pags.

Pag package size: Control the total size of all individual pags within 5M.

Attachment

PAG Viewer [download link](#).

Material Export Specification

Last updated : 2024-03-22 18:45:44

Components

Follow facial material —— Follow face movement.

Foreground material/Keying material —— Fixed position, not following face movement.





Complete Effect

Follow-up Material

Foreground Material

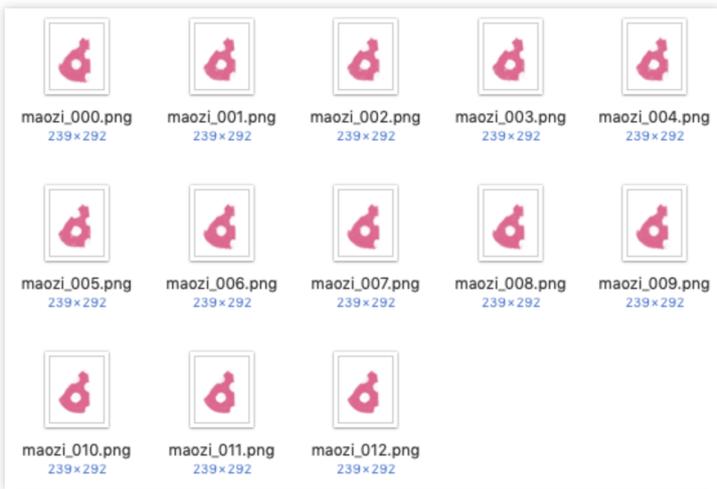
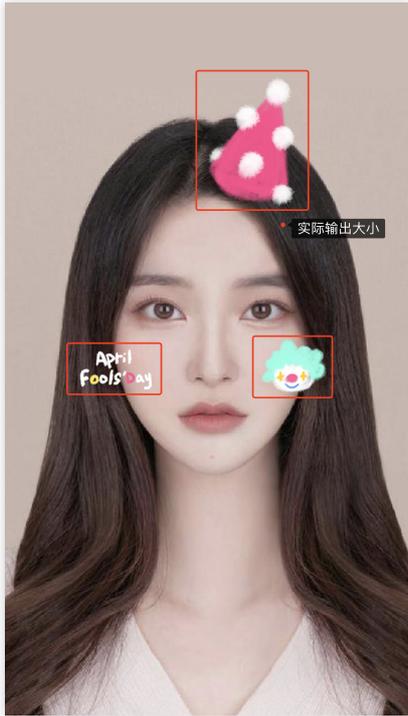
Follow Facial Material Export

Export various material parts separately, maintaining the file size as small as possible.

The animation frame rate is 24 frames/second (can be adjusted according to actual demand).

Sequence frame naming format: use english.

Package each group of sequence frames into a folder, with the name consistent with the sequence frame prefix.



Actual Output Size

Folder Naming

Sequence Frame Naming

Foreground Material/Cutout Background Material Export

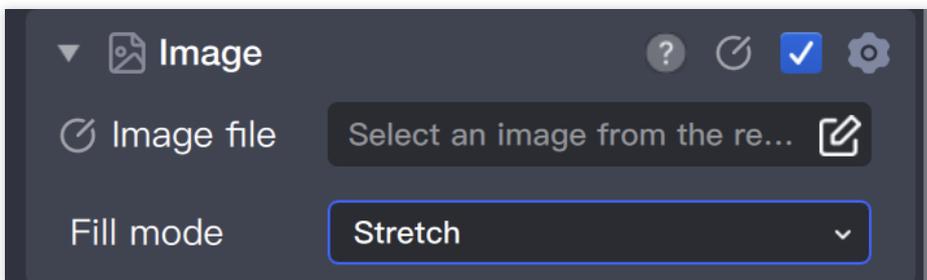
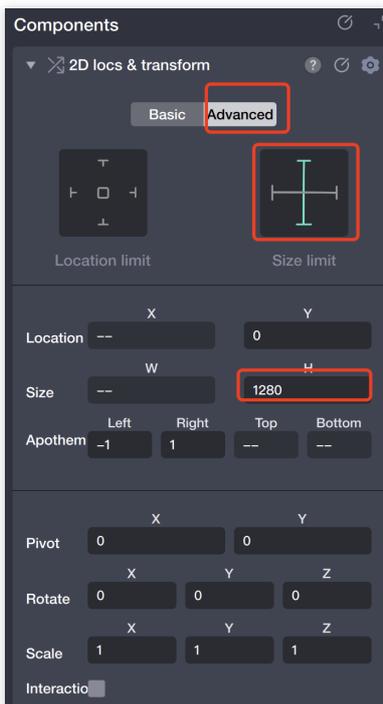
Not following the face, fixed position, located at the top layer of the screen.

Adapt to multiple platform ratio export methods:

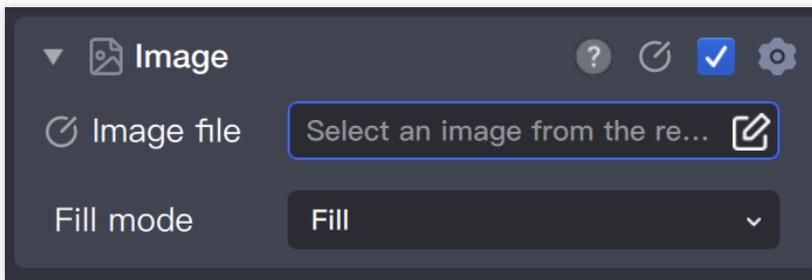
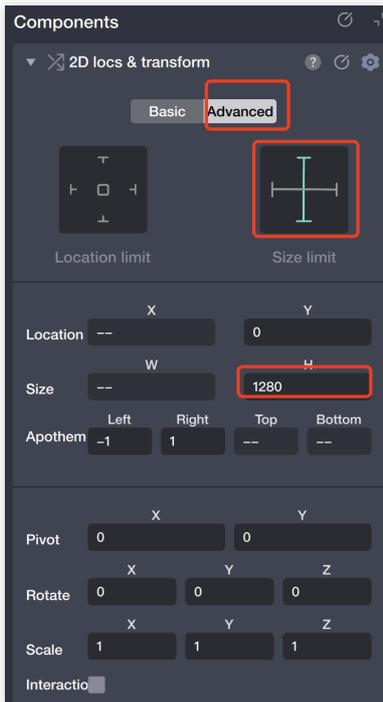
It is recommended that the foreground material export ratio is 720*1280. In order to ensure the display effect on multiple platforms, please have the creator perform a multi-ratio inspection of the preview effect, ensuring that all ratios have a complete element display and avoid cutting edges.

(Required check ratios: 9:16, 4:3, full, 1:1).

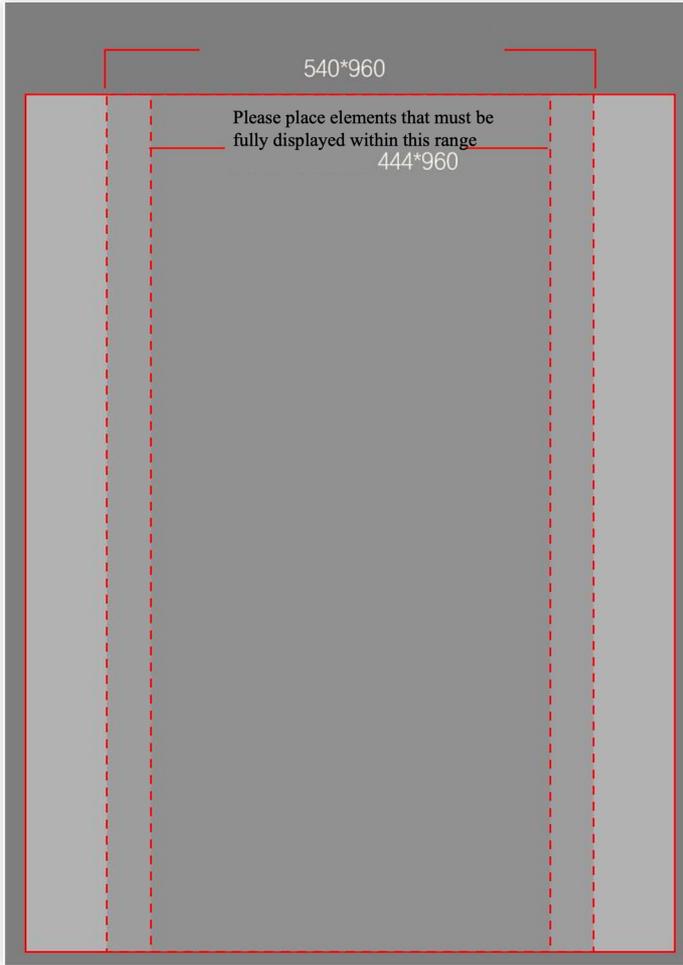
Applicable type: Do not want to be cropped, stretch material to adapt to multiple ratios.



Applicable types: By cropping to adapt multiple ratios.



The export ratio of foreground material is 720*960. Please design the material according to the standard shown in the picture below, and adjust the effect on Tencent Effect with multi-ratio preview.



TE Engineering Package

Best control around 10M, not exceed 15M.

Thumbnail Icon Production Standard

Last updated : 2024-03-22 18:45:44

Icon

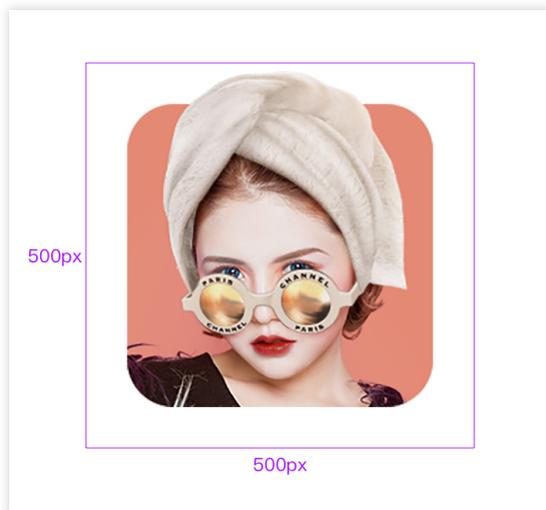
For display in the Prop Panel.

Please note that the model in the icon must hold copyright. At this stage, please click the link below to download the copyrighted model image for icon production.

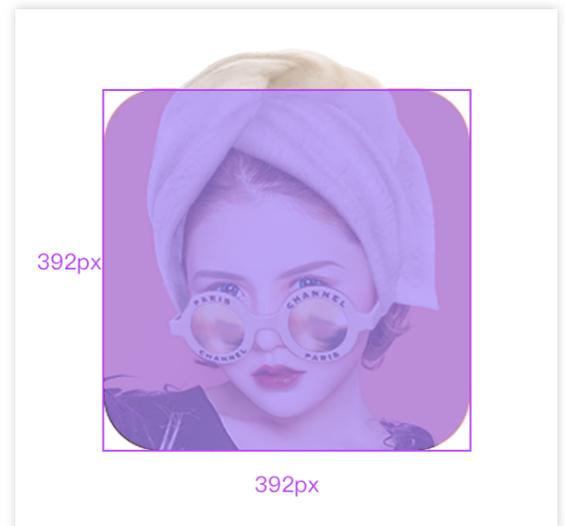
[Icon Model Image Material.](#)

Icon Export

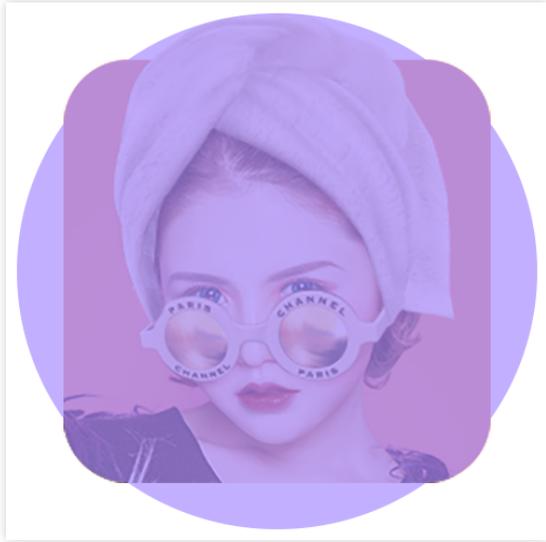
Basic Specification



Output: 500X500px



Main rounded rectangle part: 392X392px Rounded corner: 60px



Safe range: 480px Circular + 392px Rounded rectangle
Content must not exceed the Purple area



Need to check if important information is within the circular 392px area.

Thumbnail Composition Suggestion

Model photo priority selection: Full face half side, even lighting, light makeup, no filter.



Avoid selecting uneven lighting, overly heavy makeup, excessive filter, and side profile model images.

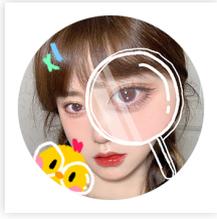


When the model picture has a messy background that affects the icon composition, you can cut out the character subject and place it on a suitable background color, and use appropriate makeup to emphasize the facial features.



The design of the icon should be consistent with the content of the prop effect image.





Model's face should try to be centered and occupy more than 50% of the proportion, **ensuring the character's face is upright and clear**, avoiding severe tilting of the head, and having pendant elements with strong readability.





Special Icon Precautions

Transparent icon

Transparent background icon.

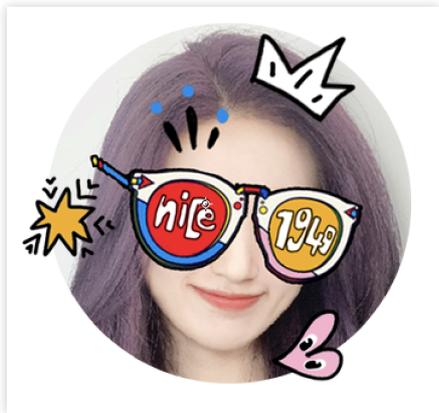


Selected state automatically adds semi-transparent black background.



Special-shaped icon

Special-shaped icon.



Special-shaped icon selected, default cut off .exposed part.



Tutorial

Prop Making Tutorial

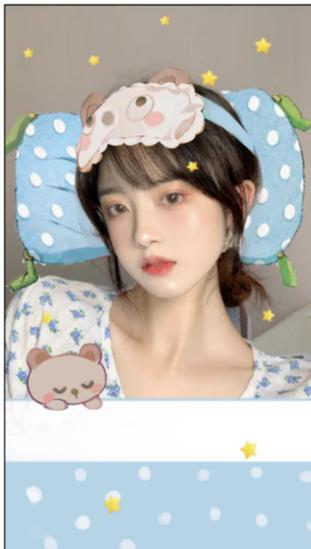
Creative Process

Last updated : 2024-03-22 18:45:44

Step1 Creative Preparation

Determine gameplay creativity, clarify style and elements.

Conception of creative proposal, with reference to:



Effect presentation:

3D accessories + 2D stickers around + makeup effect + foreground atmosphere stickers.

Game logic:

Eye mask pillow follows user's head, bedtime music atmosphere, animated bear pulling blanket.

Core elements:

Pillow, eye mask, sleepy bear.

Target users:

Girls who like taking selfies.

Publishing motivation

Good night before bed, creating a relaxed and lazy atmosphere.

Step2 Material Production

Please refer to the Material Specification in the Guideline Document for details.

[2D Makeup and Filter Specification](#)

[3D Production Material Specifications](#)

2D Material

| Content | Tool | Template |
|---------|------|----------|
|---------|------|----------|

| | | |
|---|----|------------------------------|
| Atmosphere | PS | - |
| Makeup (Face makeup, Eyebrow makeup, Eye makeup, Blush, Contouring, Lip makeup, etc.) | PS | psd template |
| Colored contact lenses | PS | psd template |
| Filter | PS | png template |
| PAG (Transition, Animated stickers, etc.) | AE | - |

3D Material

| Content | Tools |
|--------------------|---|
| Models | 3D MAX, Maya, C4D, blender, zbrush, etc., as long as the final output can be FBX or GLB format files. |
| Textures | - |
| 3D Model Animation | Maya, C4D, etc. |
| Environment HDR | PS, download on your own. |

Step3 Configuration & Preview

Import the material file into the Tencent Effect resource panel.

2D Section

In the Object Panel, add:

1. Filter ➔ Add filter resources in the Component Panel.
2. Makeup look (Specific makeup look specification and configuration process description: [2D Makeup and Filter Specification](#))
 - 2.1 Add the corresponding makeup look object in the Object Panel, and select the corresponding beauty makeup material in the Component Panel, and set the blending mode and opacity.
 - 2.2 Beauty.
 - 2.3 Facial beautification.
3. Animated stickers
 - 3.1 Foreground stickers ➔ Add corresponding resources in the Component Panel.
 - 3.2 Transition ➔ Add corresponding resources in the Component Panel.

3D Section

(Specific material specifications and configuration process description: [3D Production Material Specifications](#))

In the Object Panel, add:

1. 3D scene object group.
 - 1.1 3D human head.
 - 1.2 Drag the xxx.prefab file from the 3D resources to the sublevel of the 3D human head object.

Music

Add music in the Object Panel and add music resources in the Component Panel.

Add Process

Add process in the Process Panel, specific process configuration tutorial: [Process Panel Tutorial](#).

Step4 Effect Preview

Tencent Effect Preview Panel.

Step5 Final Acceptance

Icon Creation

Note:

The model in the icon must have copyright. At this stage, please click the link below to download the copyrighted model image for creating the icon. [Model image material](#).

Export specification for the icon: [Thumbnail Icon Production Standard](#)

Material Package Self-check

| Material Package Self-check List | | | |
|----------------------------------|---------------------|---------------------------------|---------------------------------|
| Self-check items | Format Requirements | Specification Size | Word Limit |
| Material Package | ZIP | 15m or less (10m is optimal) | / |
| Icon | PNG | Round, 342*342, 50-100k. | Preferably within 4 characters. |
| Music | MP3 | <30s, <1m | / |

| | | | |
|---------------------|-----|---------------------------------|---------------------|
| Special Effect Name | / | / | Within 4 characters |
| Makeup | PNG | Refer to export specifications. | /a |

Makeup & Filter Configuration Tutorial

Last updated : 2024-03-25 11:43:19

Makeup Configuration

Makeup Material Configuration Package Composition

The standard size of a single makeup material png is: 1536x2048.

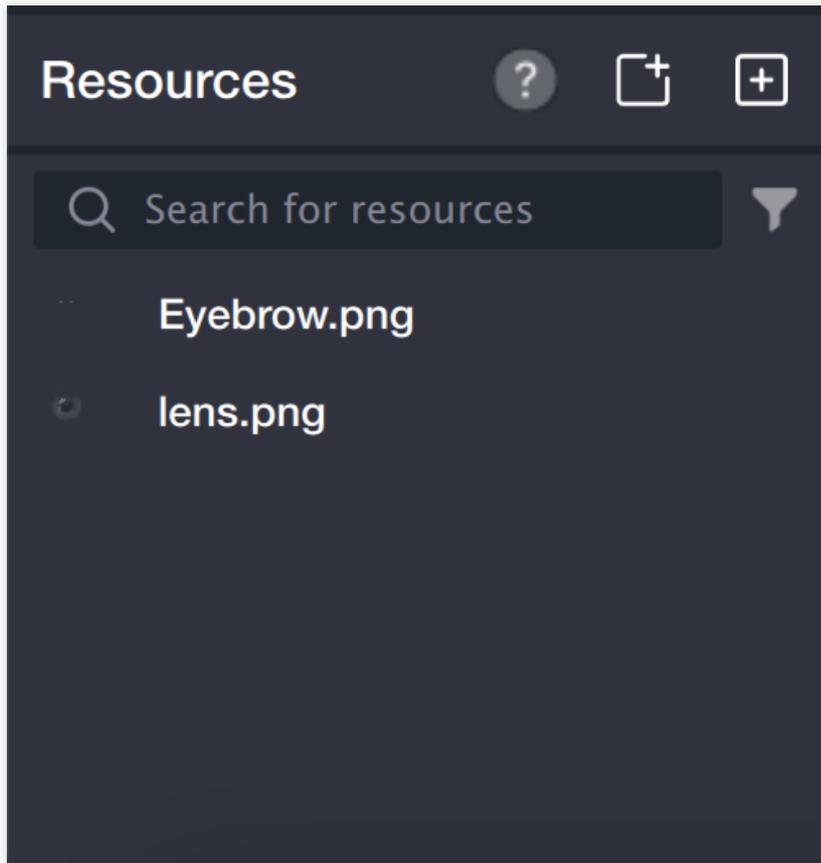
Makeup PSD template [download link](#).

Colored contact lenses PSD template [download link](#).



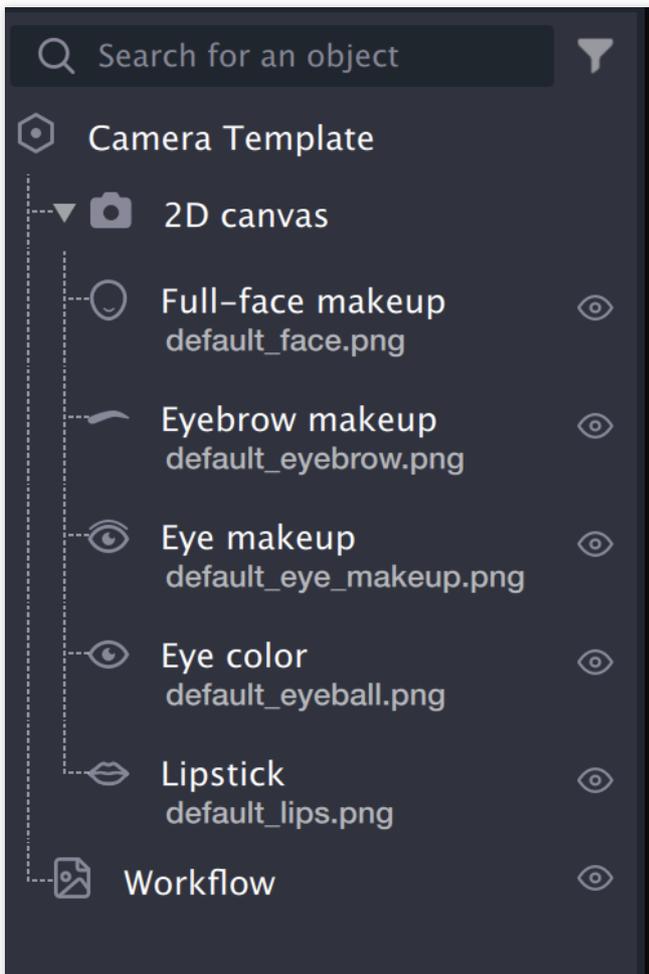
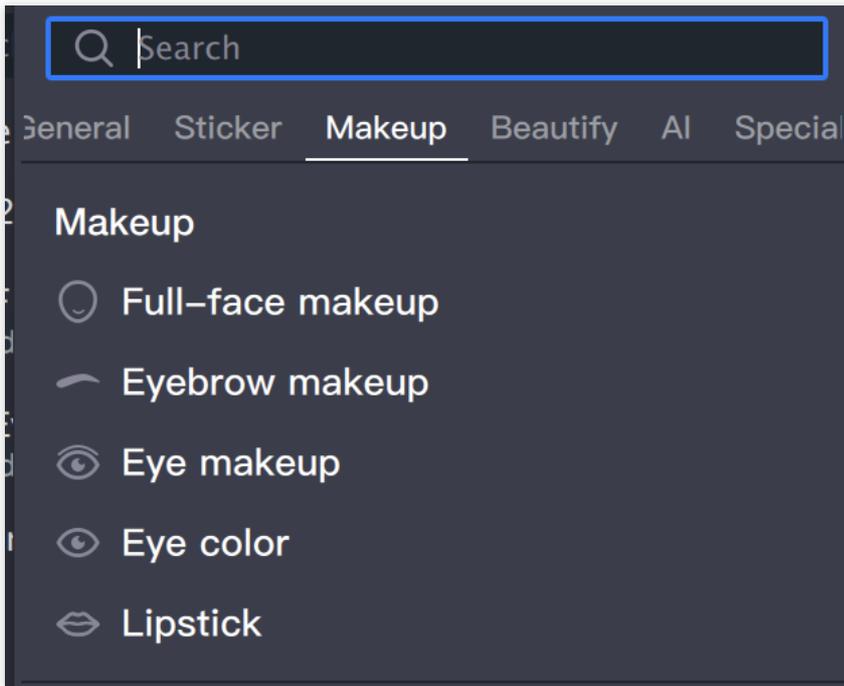
Makeup Material Import

Import compliant makeup materials into the bottom-left resource panel of Tencent Effect.



Makeup Material Configuration

In the Object Panel, select the makeup object corresponding to the facial feature position that needs to be configured. Pay attention to the layering relationship between makeups, such as Glitter Type materials should be configured on the material upper layer of normal blending materials.

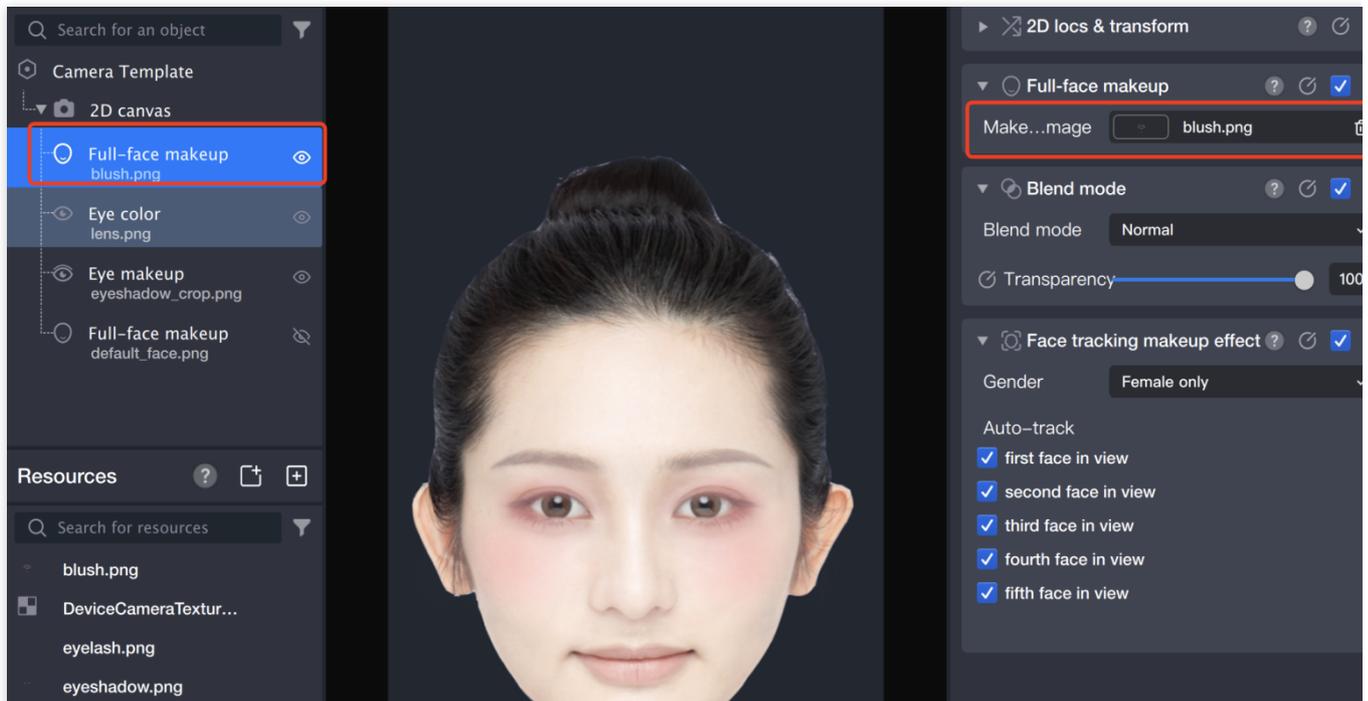


Makeup component panel, select the corresponding makeup material in the Resource panel.

Configure makeup material blending mode and opacity.

Note :

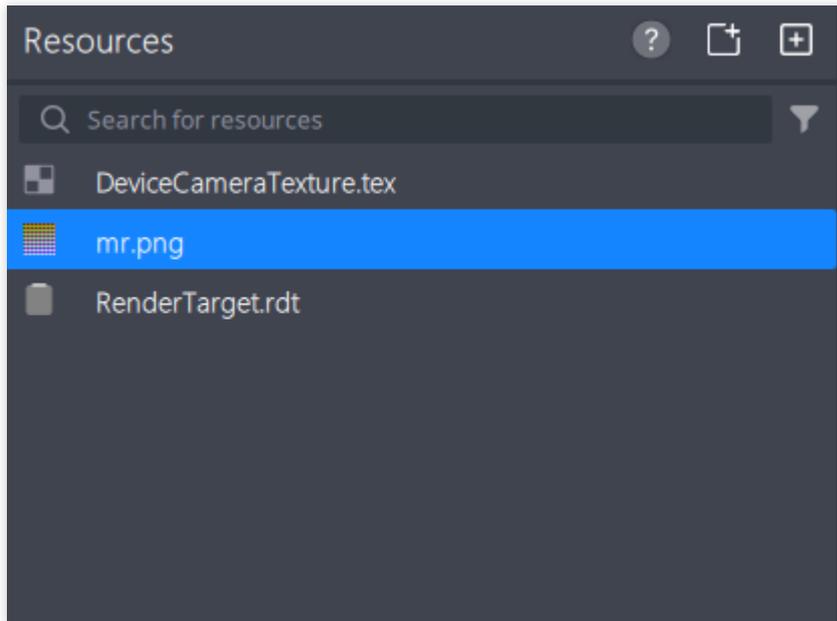
Makeup materials cannot be moved in Tencent Effect due to binding facial landmarks. To adjust the makeup position, you need to modify it in the PS source file and re-export.



Filter Configuration

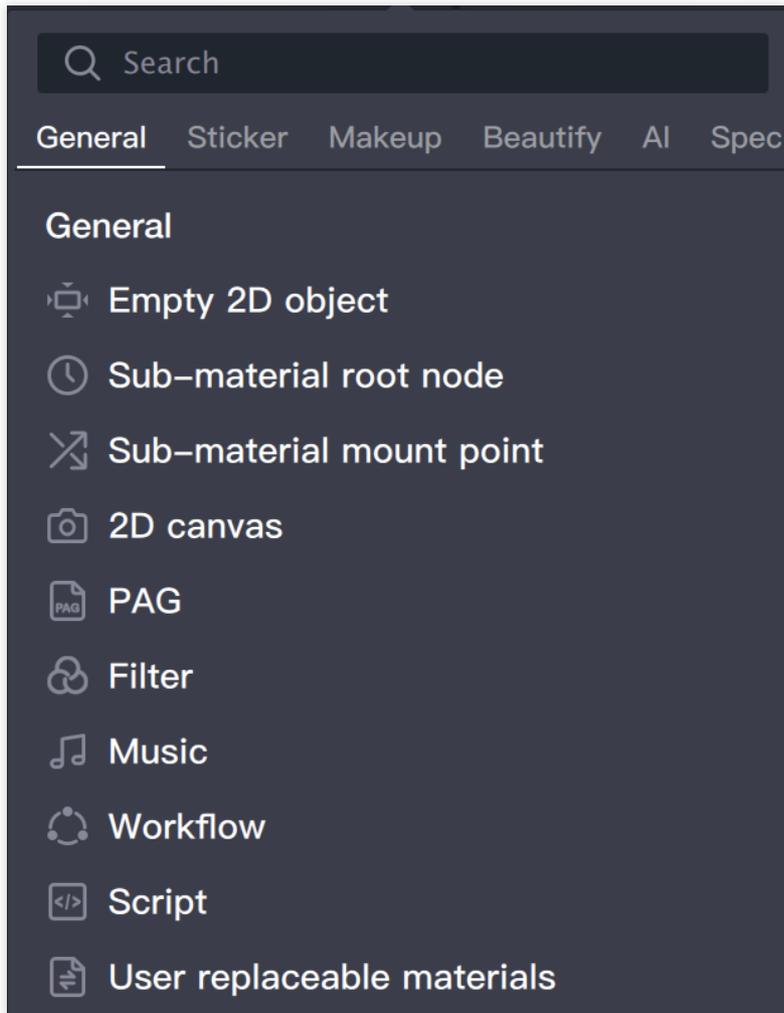
Filter Material Import

Import the color-graded LUT into the Resource Panel. Please note that LUT design should be done on a standard file. Filter standard LUT image [download link](#).

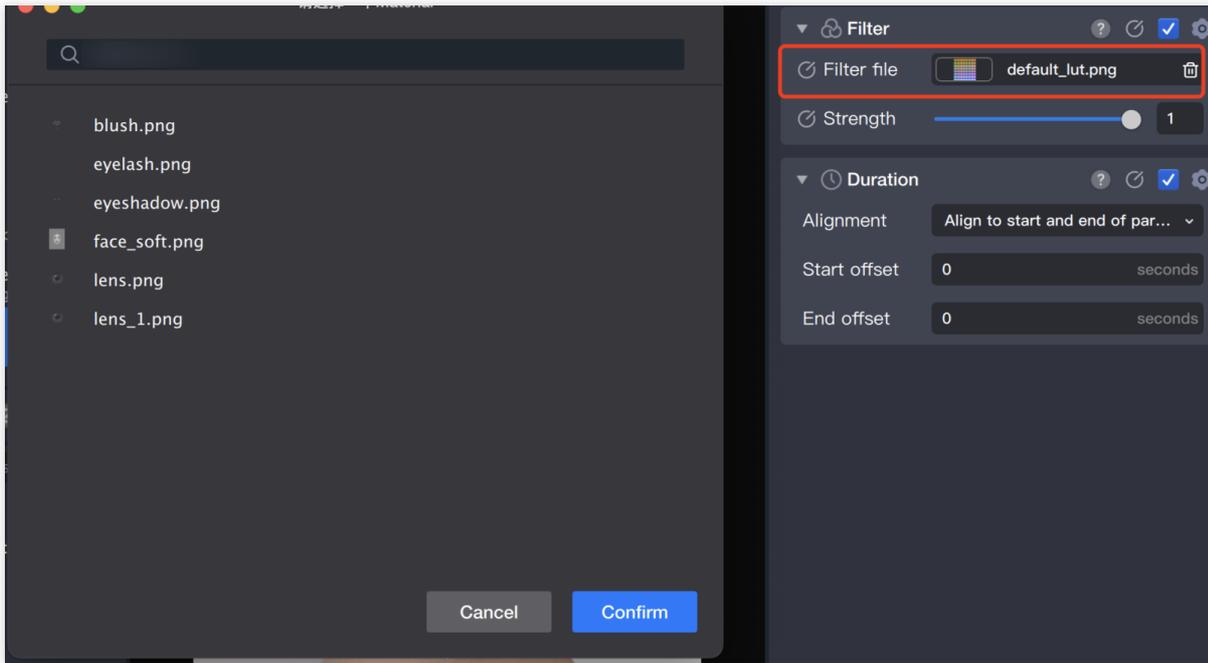


Filter Material Configuration

Select the filter object in the Object Panel.



Import LUT file in the right-side filter component panel, and adjust the corresponding opacity.



Filter Effect Real-time Preview

You can view the effect in real time in the preview panel



Export pag Tutorial

Last updated : 2024-03-22 18:45:44

Preparation Work: Download and install pag into AE.

Install PAGViewer: [How to Install PAGViewer](#).

Open AE, and if you see "File > Export > PAG File..." in the menu, it means the installation is successful.

Software Production

Creating dynamic sticker effect using After Effects software.

Dynamic sticker effect production specifications:

Production composition size: 720*1280.

Composition frame rate: 24fps.

Duration: Generally around 5s, no longer than 8s, unless in special cases (such as lyrics), pay attention to loop connection at the beginning and end.

Pag Export

After completing the production of the dynamic sticker effect in AE, export the corresponding separate pag package. First, split all the content that needs to be exported separately, and put them into their own new compositions and name them.

Split content:

Foreground: It does not follow the user's face and is placed at the top to cover the user's view. Common examples include frames, magazine cover layouts, etc.

Facial stickers: Follow the user's face or stick to the user's face. Common examples include blush, nose, head ears, beard, etc.

Cutout background: It does not follow the user's face and is placed at the bottom, covered by the user's view area, providing background content for the user.

Put all the layers or compositions with the same blending mode under the named composition into a new composition, and the duration of the new composition is the loop duration of the dynamic effect.

Select the large composition under all layers or compositions, right-click and choose "Pre-compose".

In general situations, it is suggested to name the new synthesized name as the material abbreviation, such as: hat-mz, and check "Move all attributes to the new synthesized image."

If the new synthesis contains effects that pag does not support, a "_bmp" suffix needs to be added to the new synthesis naming.

To obtain the new synthesis as shown in the following figure.

Ensure large synthesis duration is consistent with new synthesis duration, open synthesis, shortcut key: COM+K, can modify large synthesis duration.

Export the synthesis PAG, click File --- Export --- PAG File.

The Difference between Facial Stickers and Foreground / Background Export

The overall steps are the same as the export steps of the foreground PAG, the only difference is that the facial stickers need to be cut to size first, and then exported in the same way:

Click the "region of interest" tool, draw the area where the hat is located, and drag it to the pointer on the timeline, adjust the smallest area within the safe area, and be careful not to cut to the sticker.

Crop to the appropriate size, Combine > Crop and combine to the target area.

Derive the following size, and export.

If there are different stacking methods, put the layers or compositions under the same stacking mode into a new composition, and export step by step.

Other Considerations

To preview the PAG package, you need to install PAGViewer.

When adding the suffix "_bmp", it is for composite naming, not for layer naming.

Attachment

Example diagram's AE output project file [download link](#).

PAGViewer [download link](#).

Configuration Tutorial

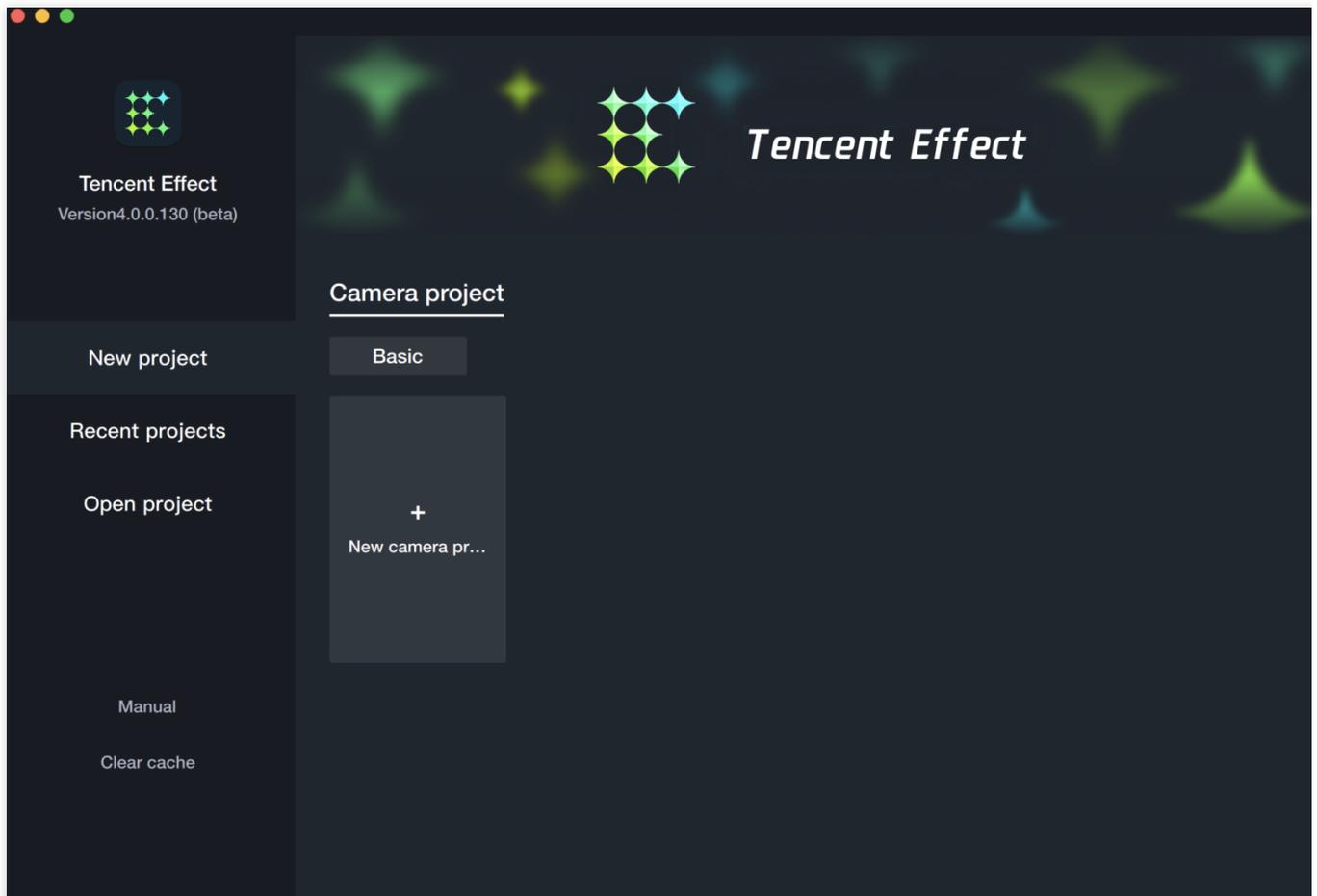
Last updated : 2024-03-25 11:43:19

Open Project

New project: Start your new creation.

Recent projects: Enter my project management.

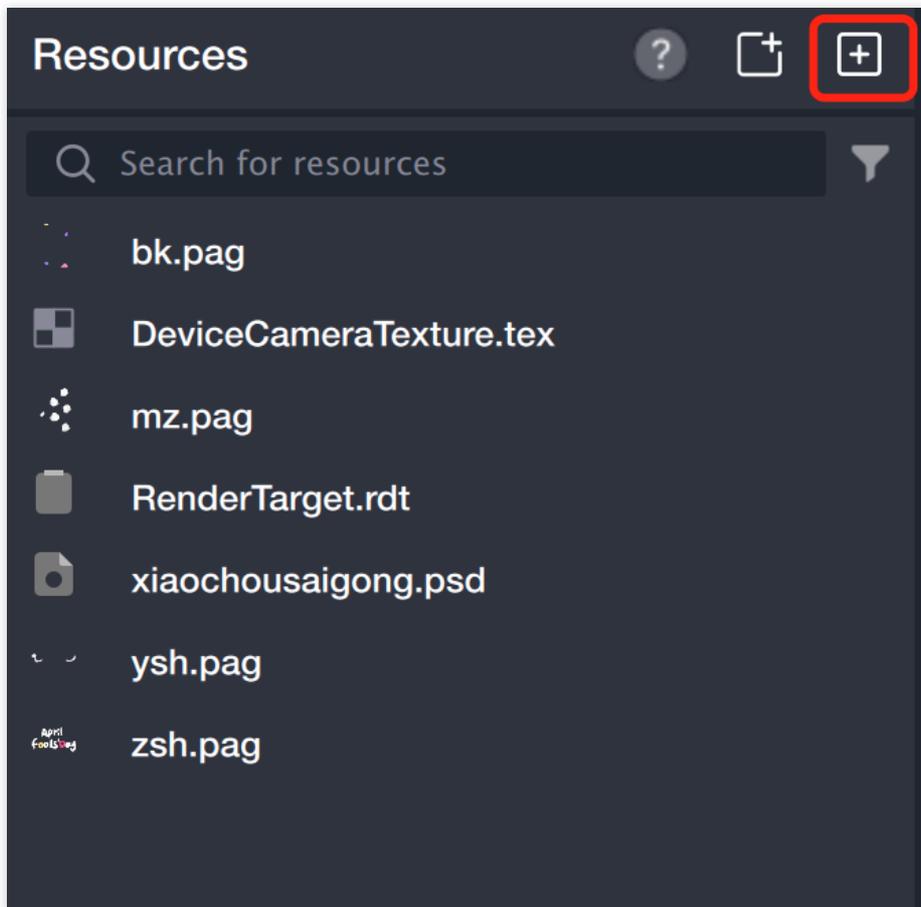
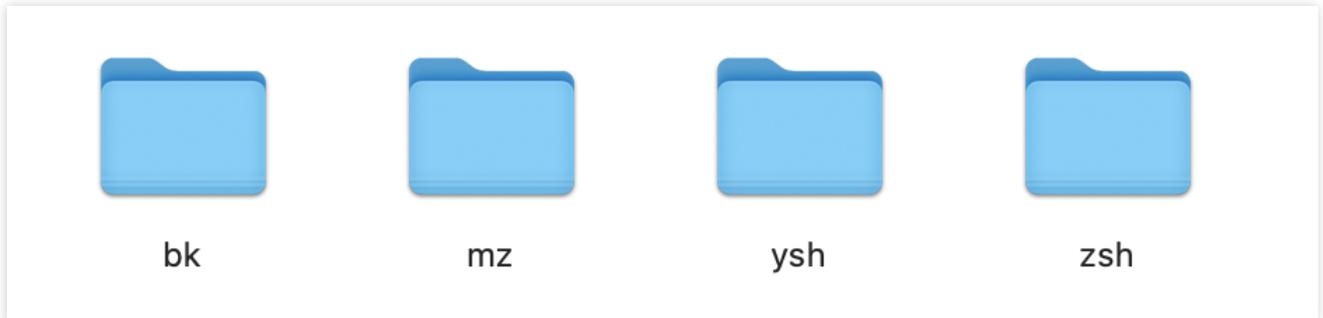
Open project: Open the locally saved engineering files.



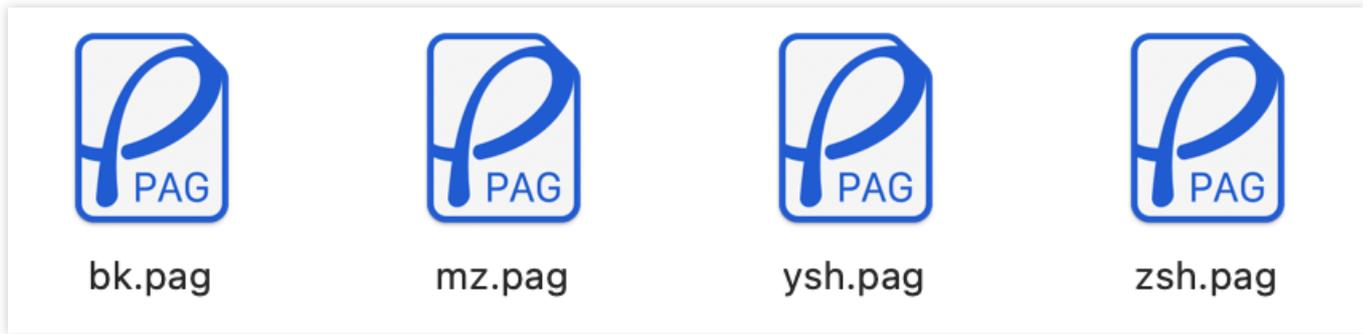
Material Import

Output according to specifications for material standby.

Sequence frame: Drag directly to the resource panel or click the add button to add, TE will automatically convert the sequence frame folder into pag. (The sequence frame folder is named according to the output specification, with no special symbols.)



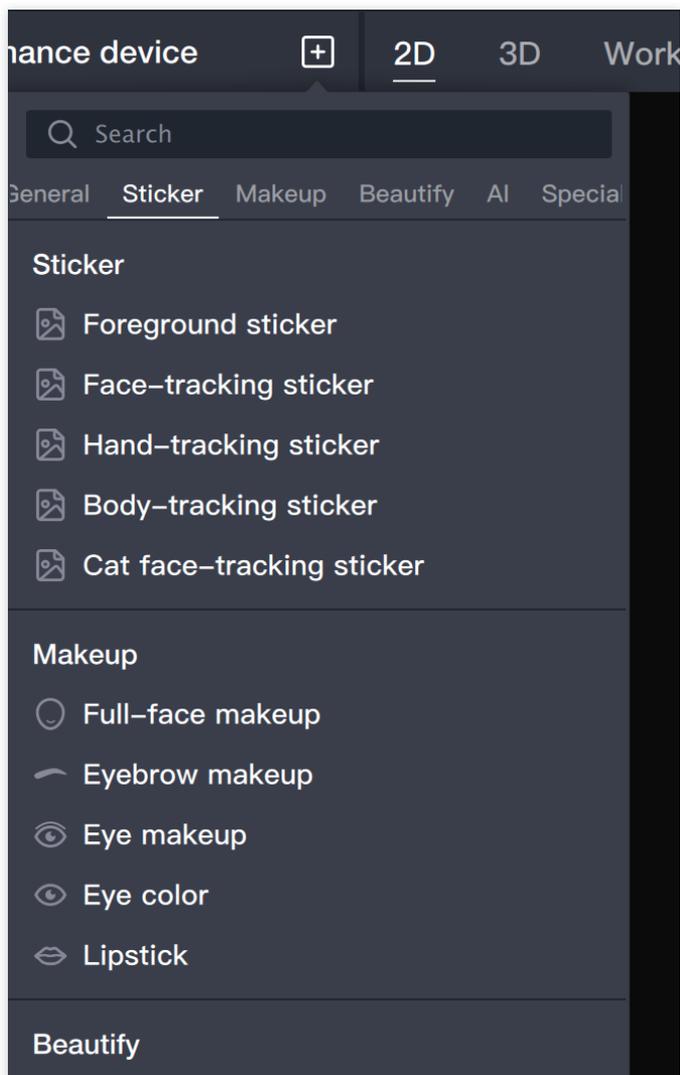
Pag: Direct dragging to the Resource Panel or click add button to add.



Add Object

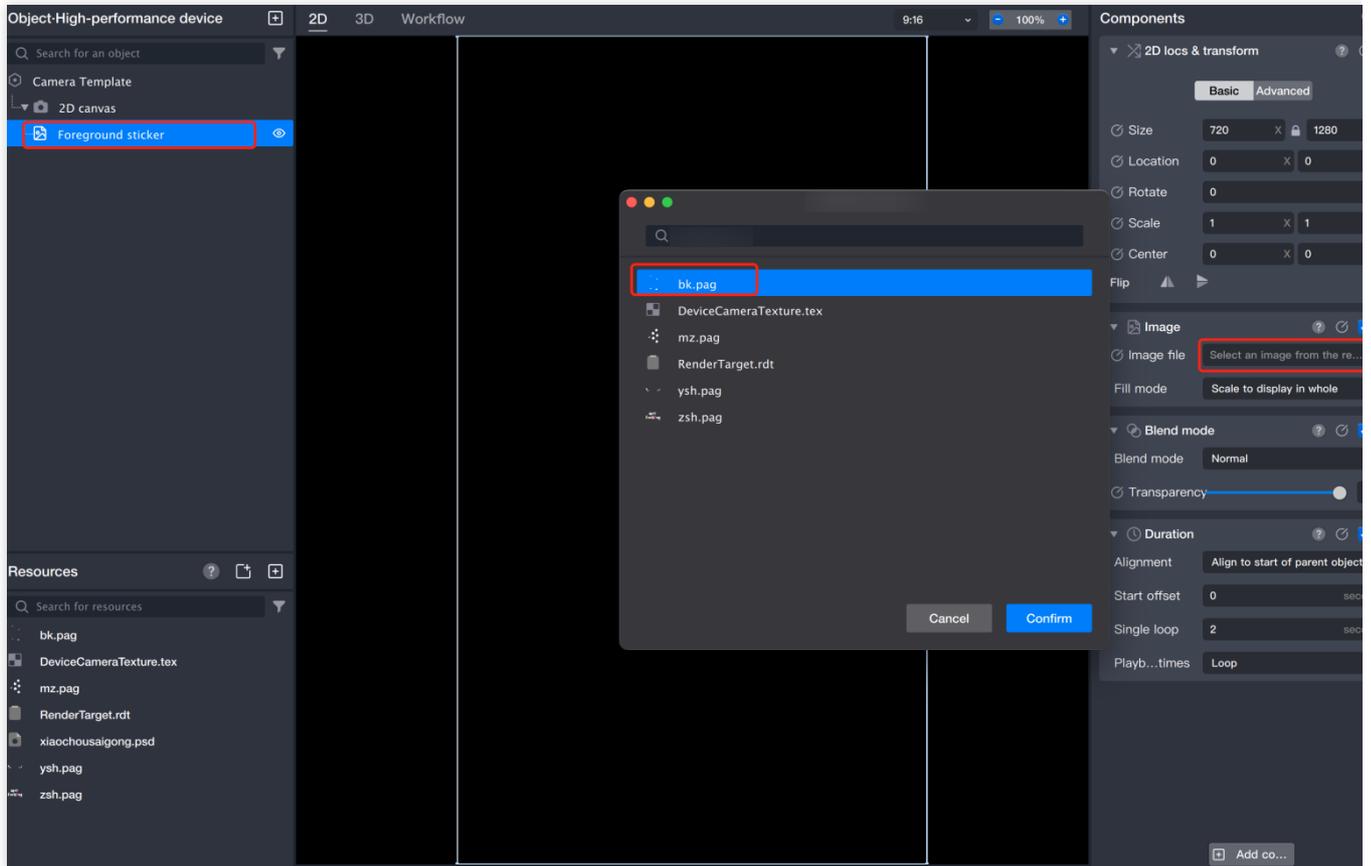
Face tracking sticker: Follows the movement of the face.

Foreground sticker: Fixed position, does not follow the movement of the face.

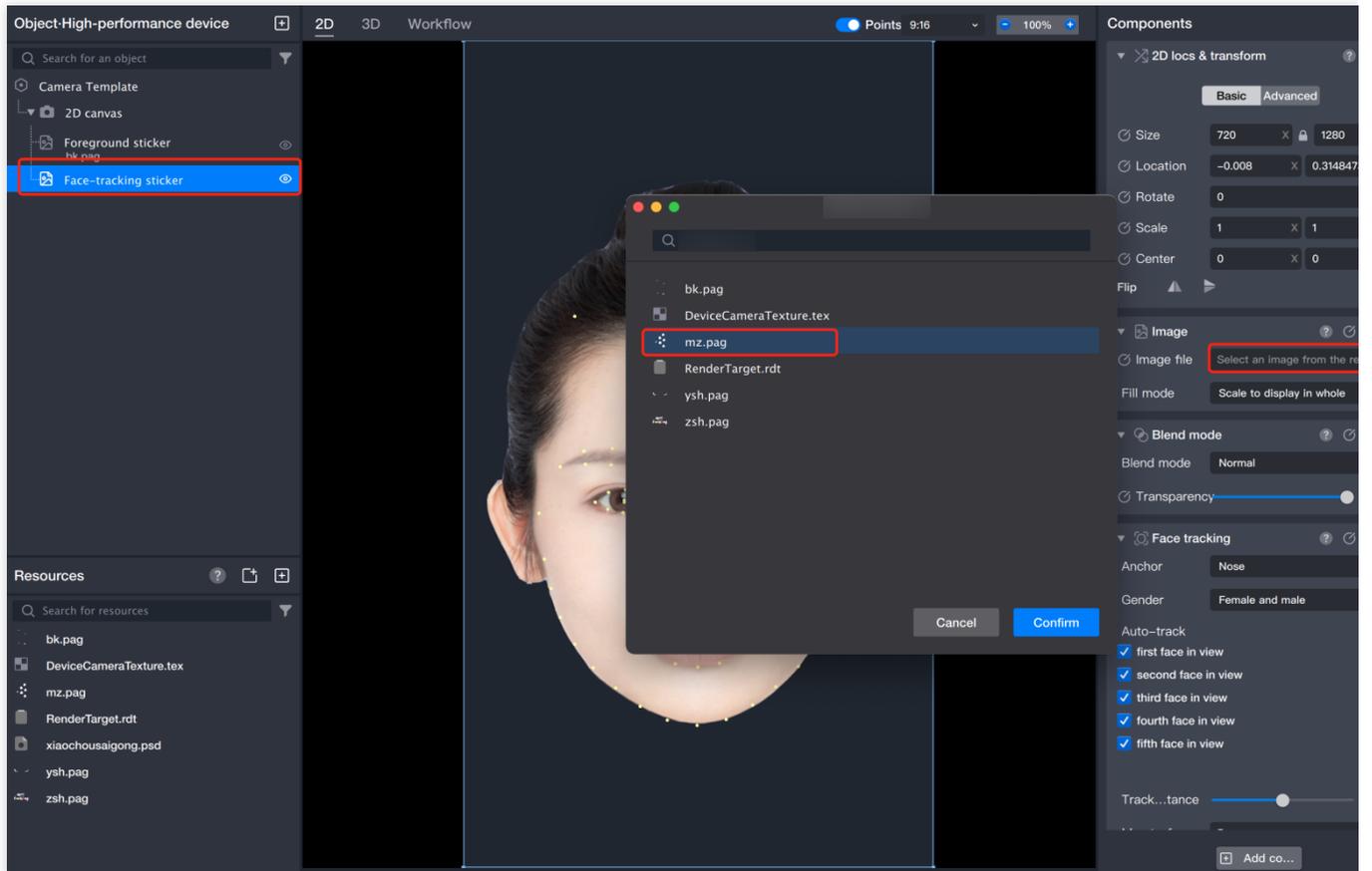


Material Configuration

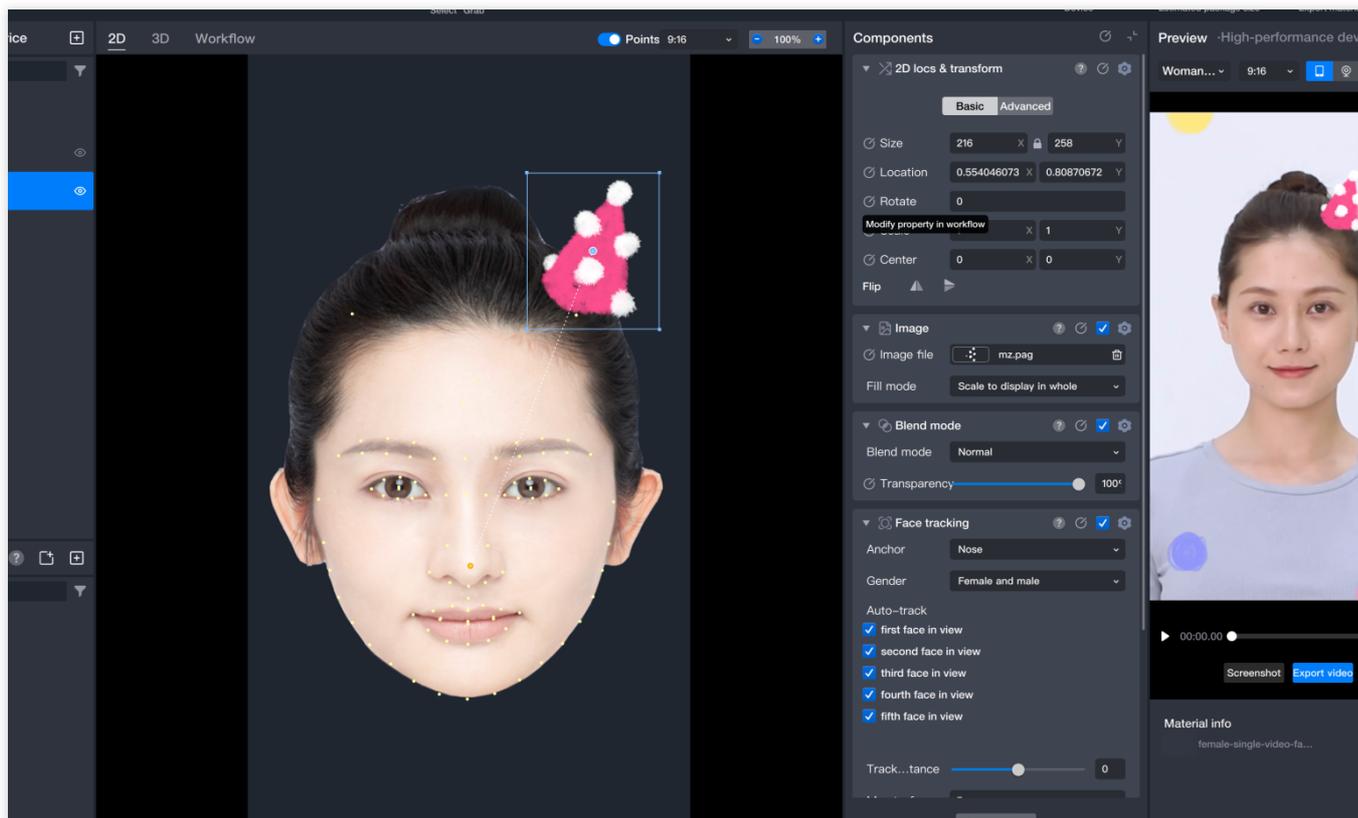
Foreground Sticker - Border



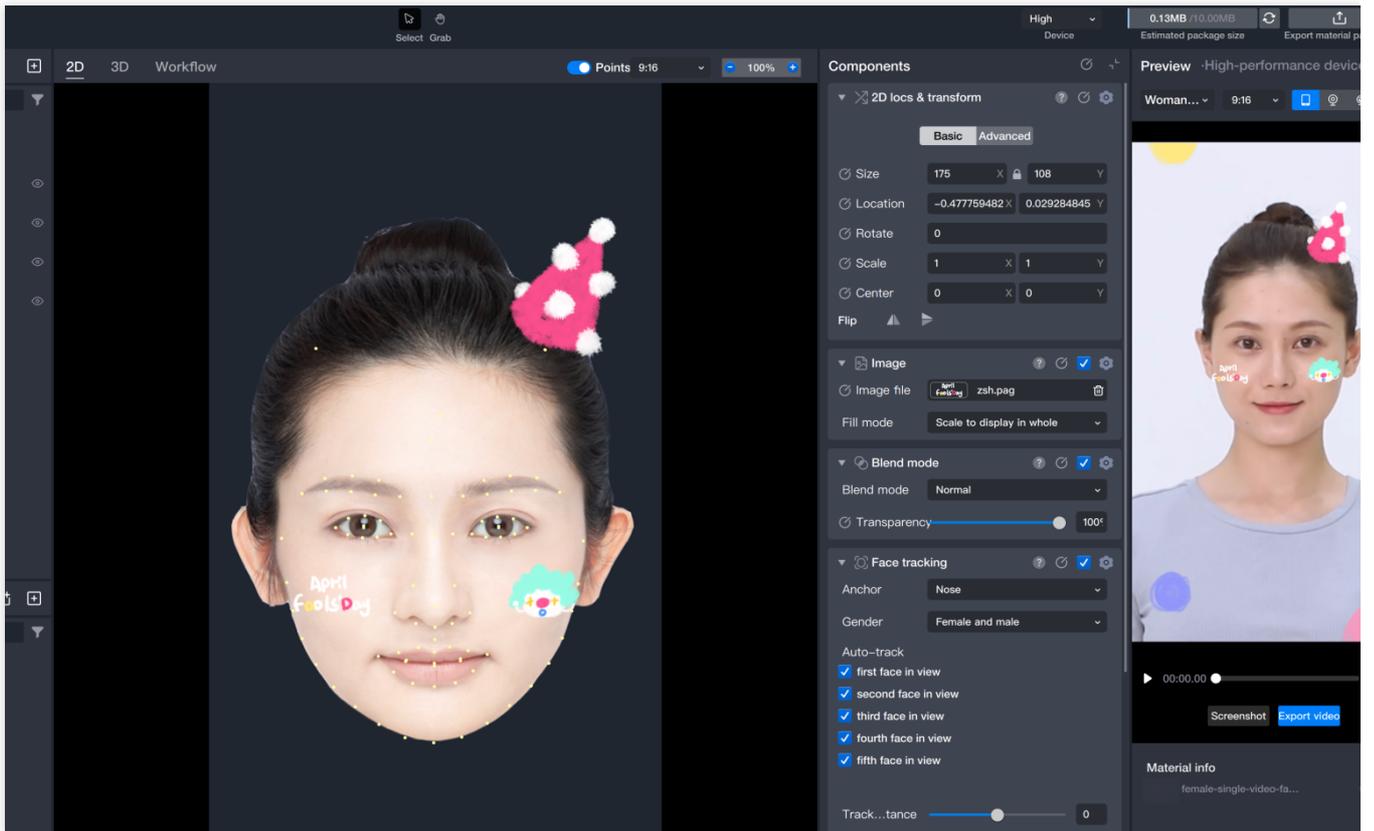
Face Tracking Sticker - Hat



You can adjust the size, position, and rotation angle by dragging.



The configuration of other face materials is the same as that of the hat.



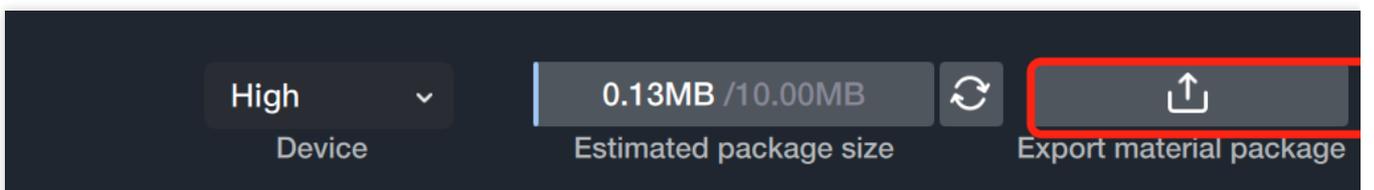
Check and Publish

Real-time Effect Preview

View real-time effects in the preview panel

Publish Project

Click on Export material package:



Process Panel Tutorial

Last updated : 2024-03-22 18:45:44

Introduction

Process control, that is, according to the set process, let events develop as we want. For example, when a nodding action occurs, a hat appears on the head.

In the process control of Tencent Effect, there are five major sections:

Trigger conditions

Logical operations

Trigger results

Data processing

Trigger result

Each section contains different triggers, which can be used in combination to achieve the desired playback effect.

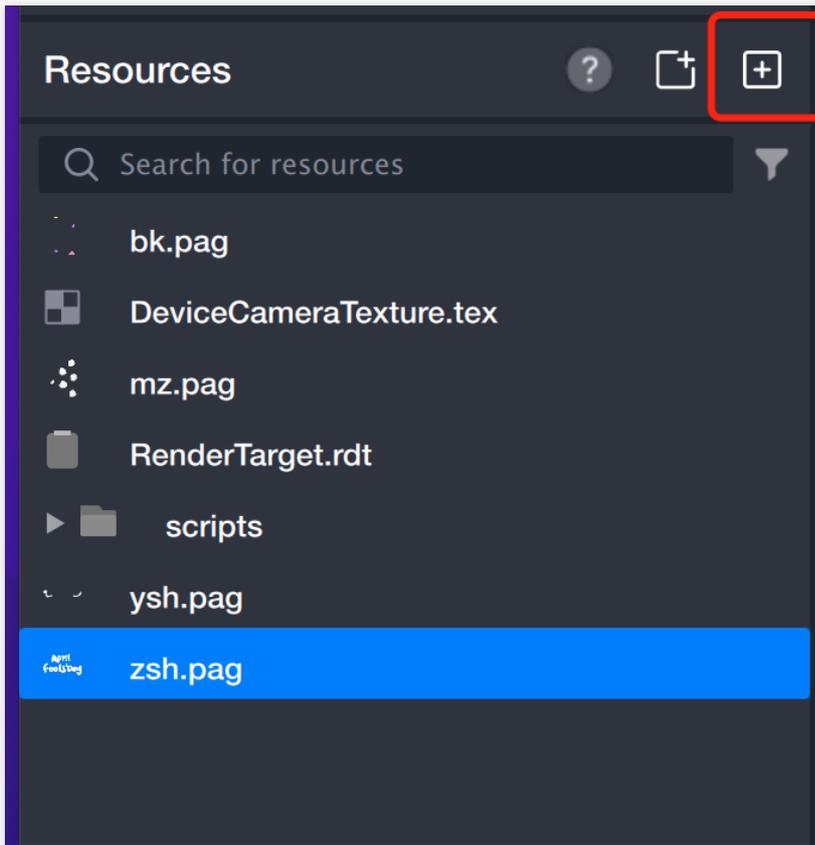
Basic Usage

1. Facial Expression Trigger

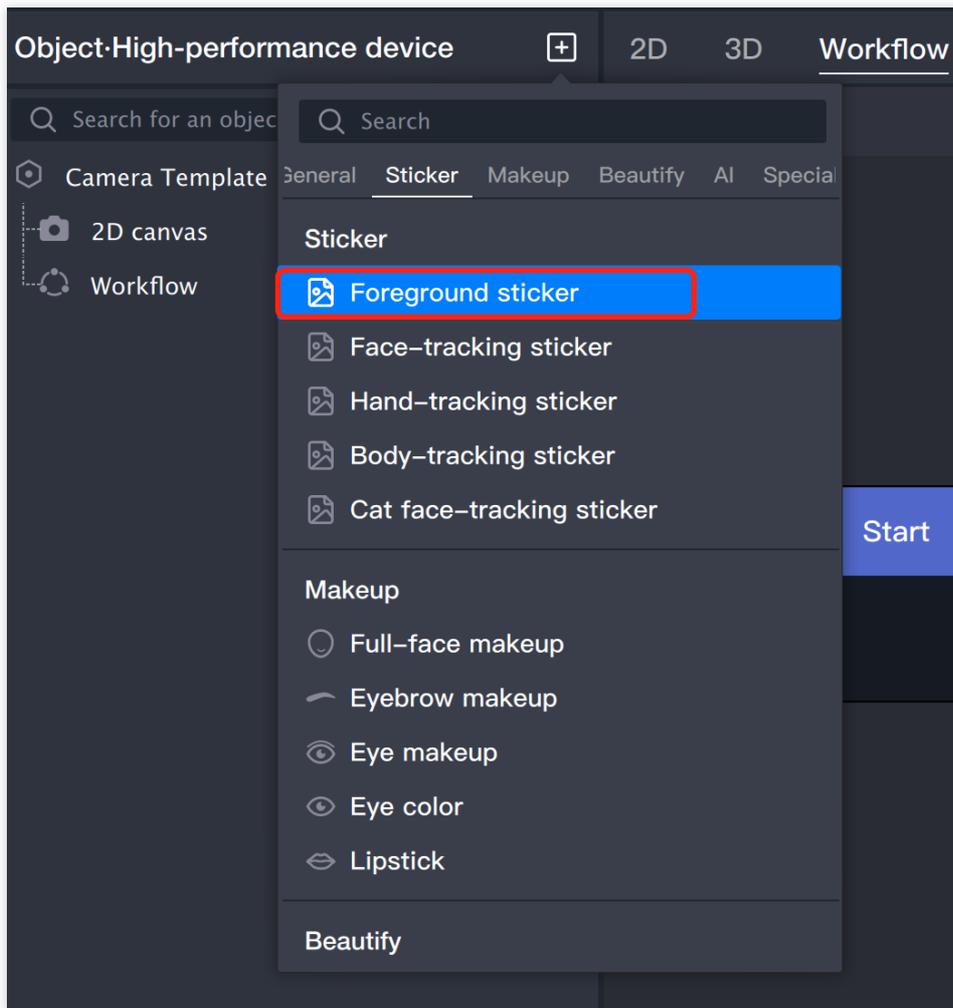
Facial expression trigger refers to triggering the next node when the specified expression is detected to appear/disappear.

Basic usage:

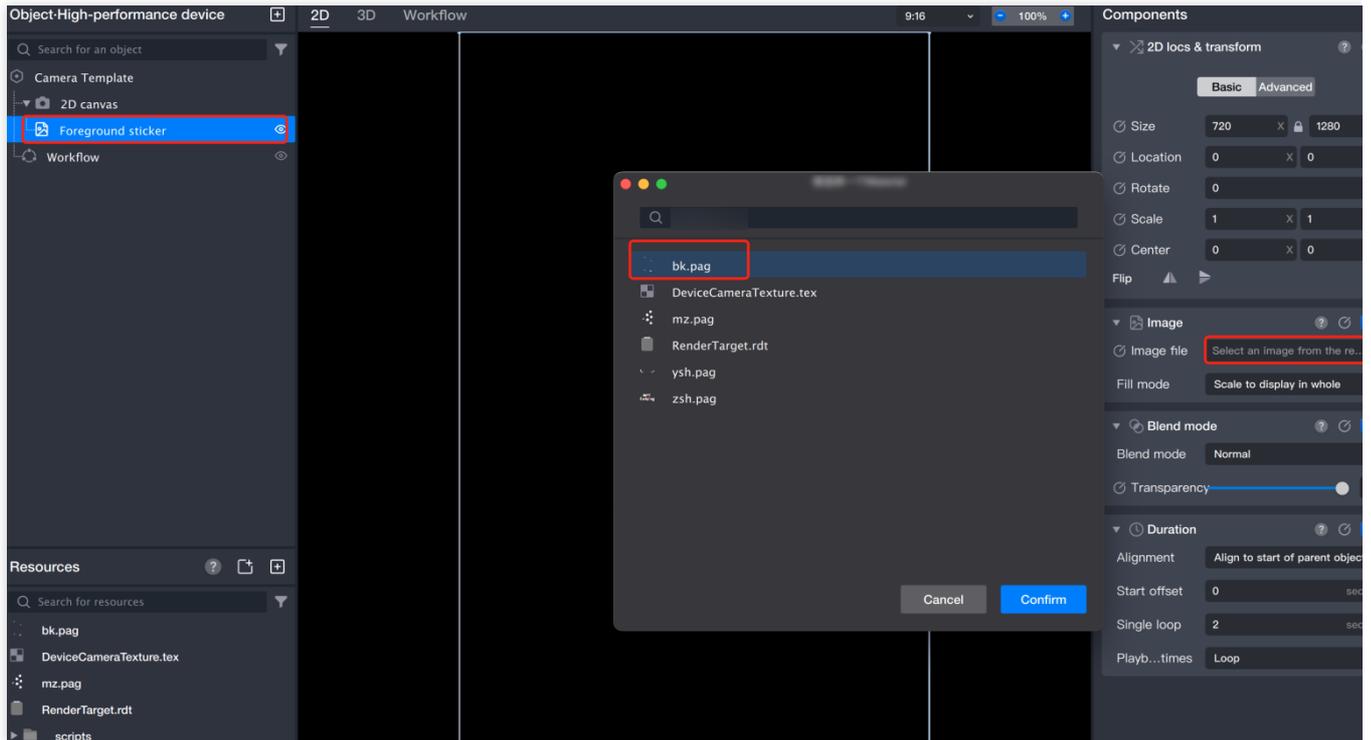
(1) Import resources.



(2) Add a foreground sticker in the Object Panel.

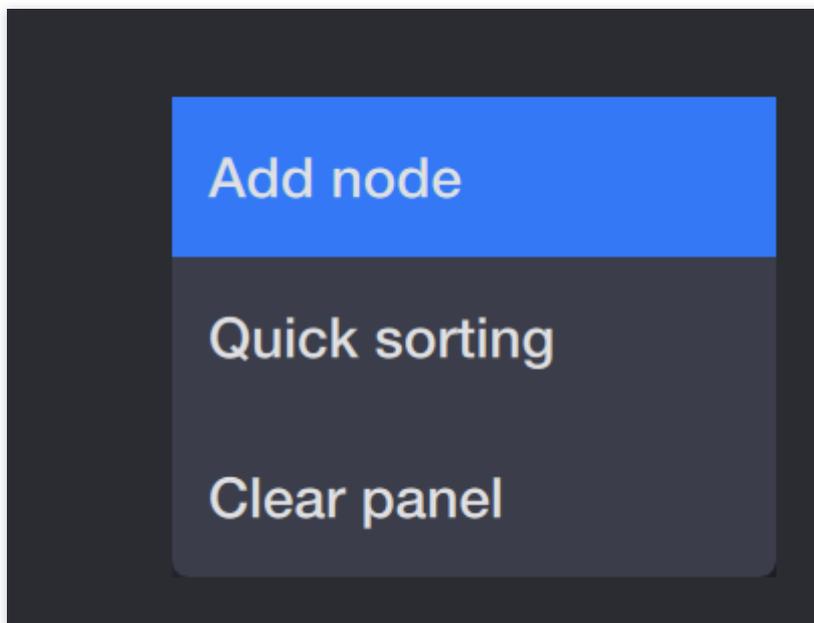


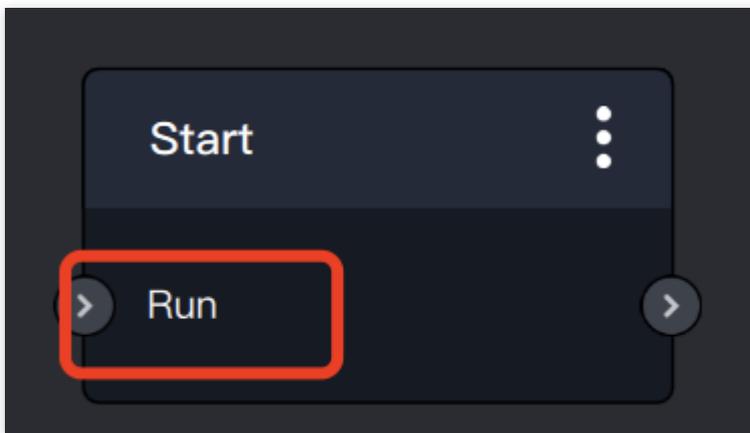
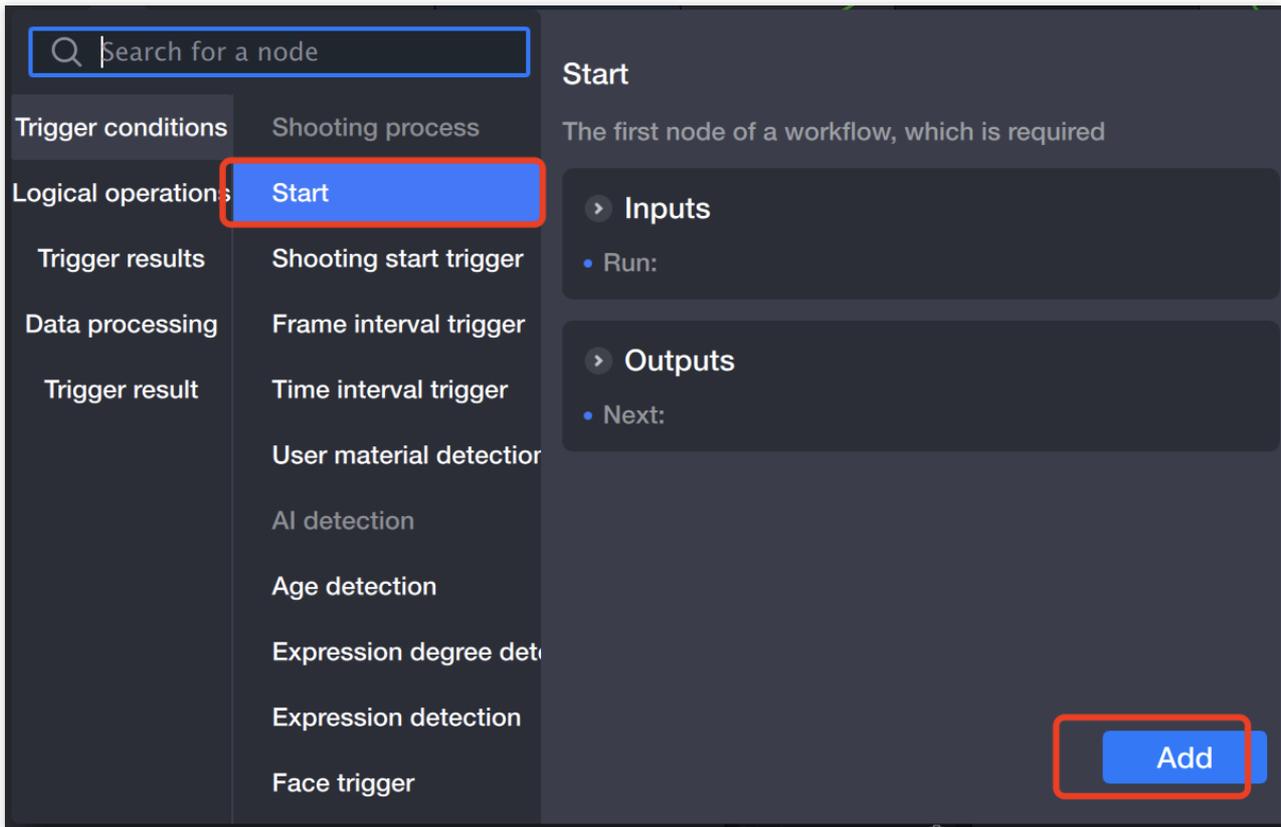
(3) Select an image file for the foreground sticker.



(4) Adjust the position of the image file.

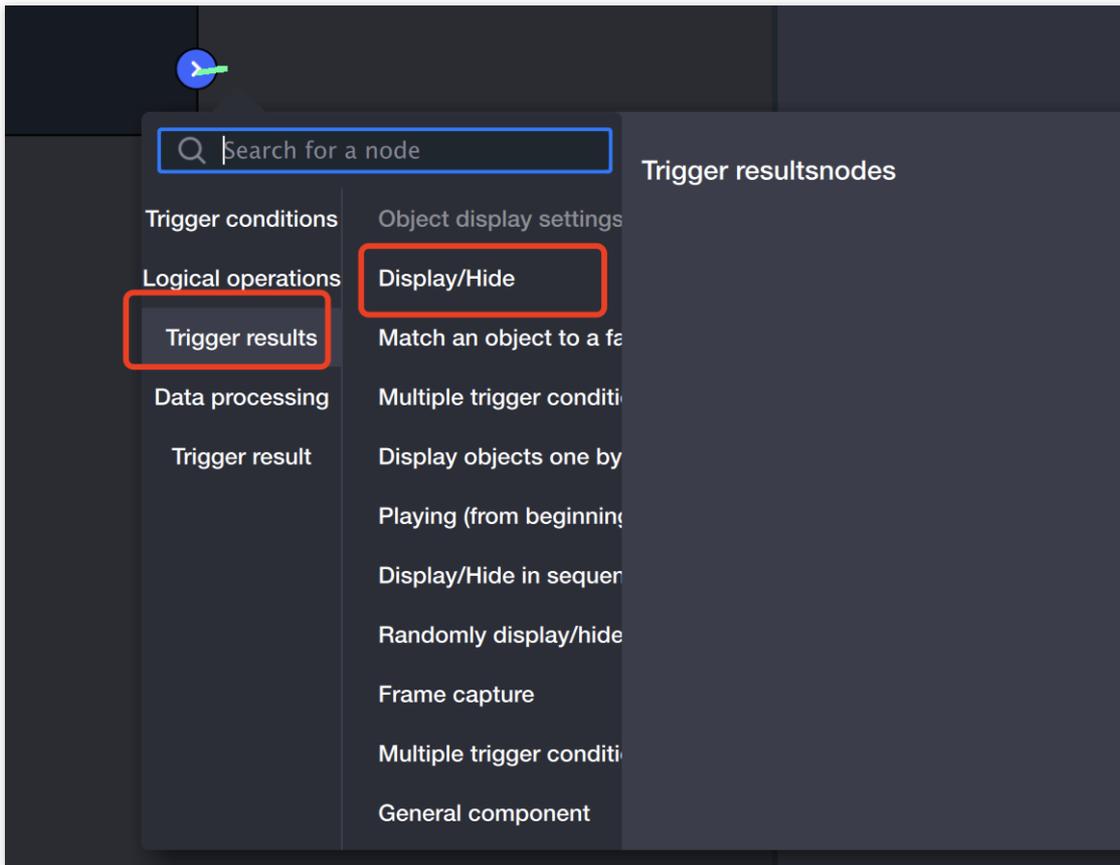
(5) Switch the Scene Panel to the Process Panel and add a Workflow,



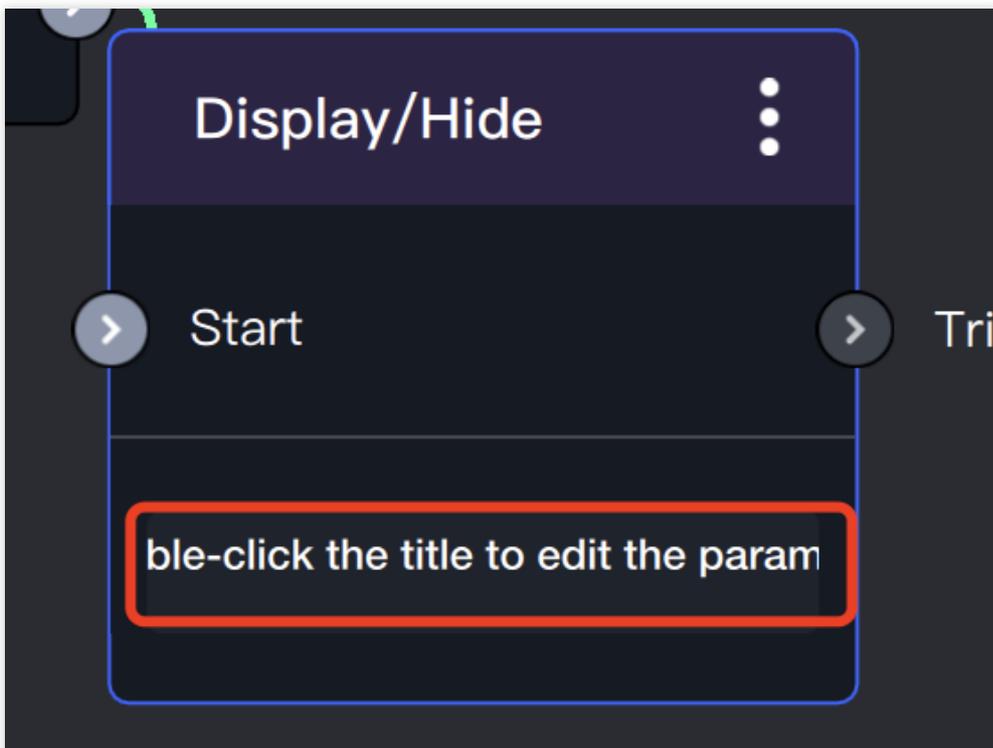


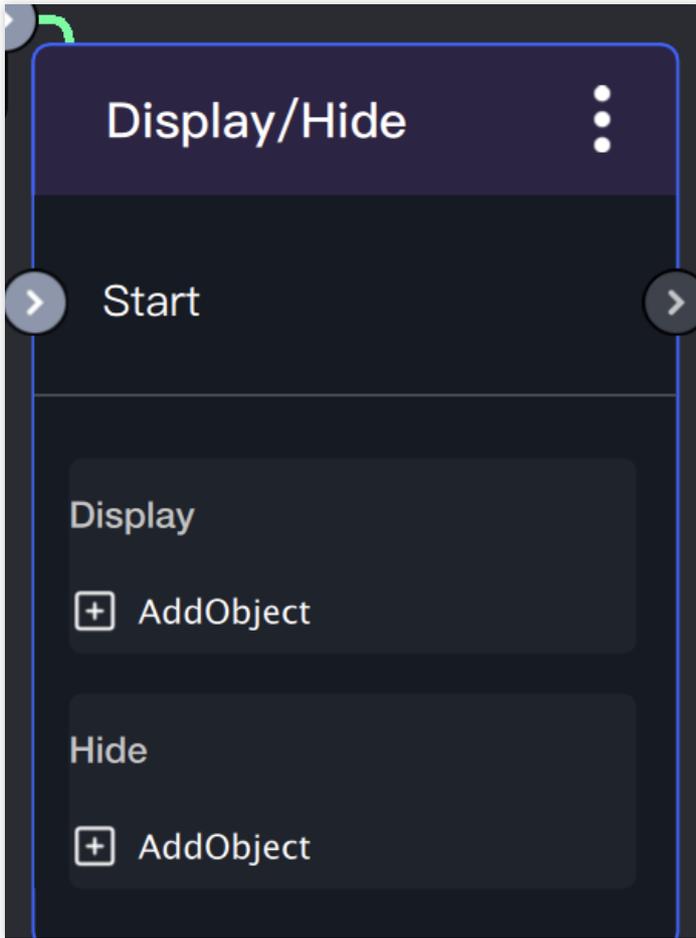
Must have the word run

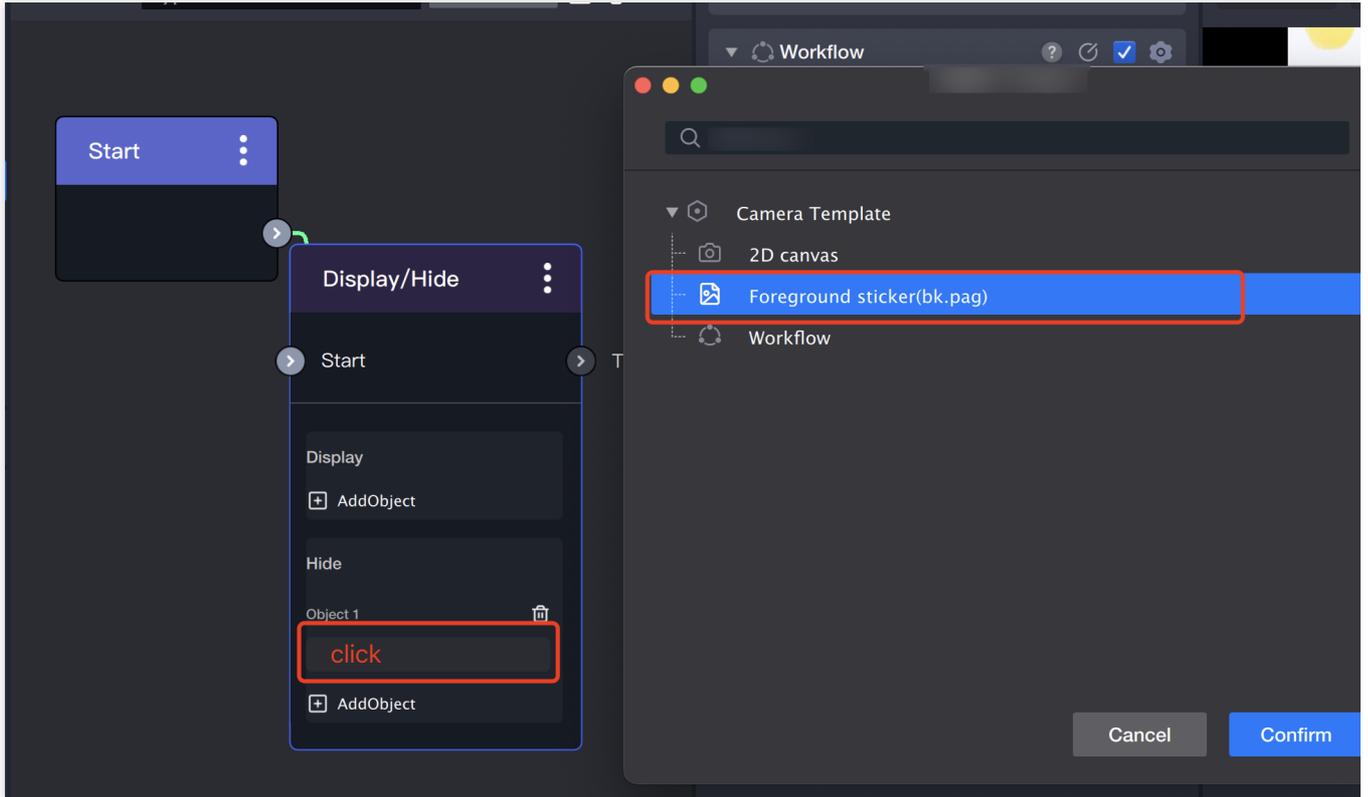
(6) Right-click on the Process Panel, select **Add node**, and add **Display/Hide**.



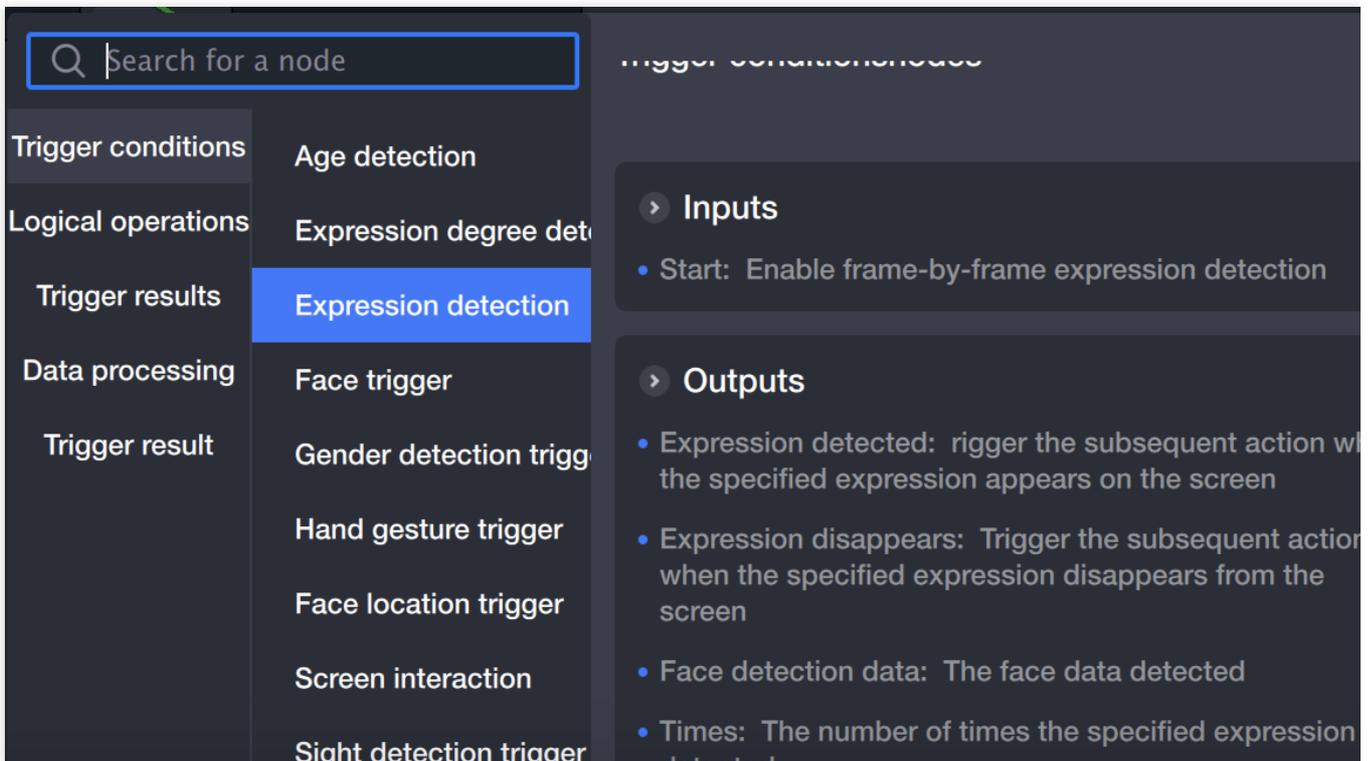
(7) Add an object to the **Display/Hide** added in (6).



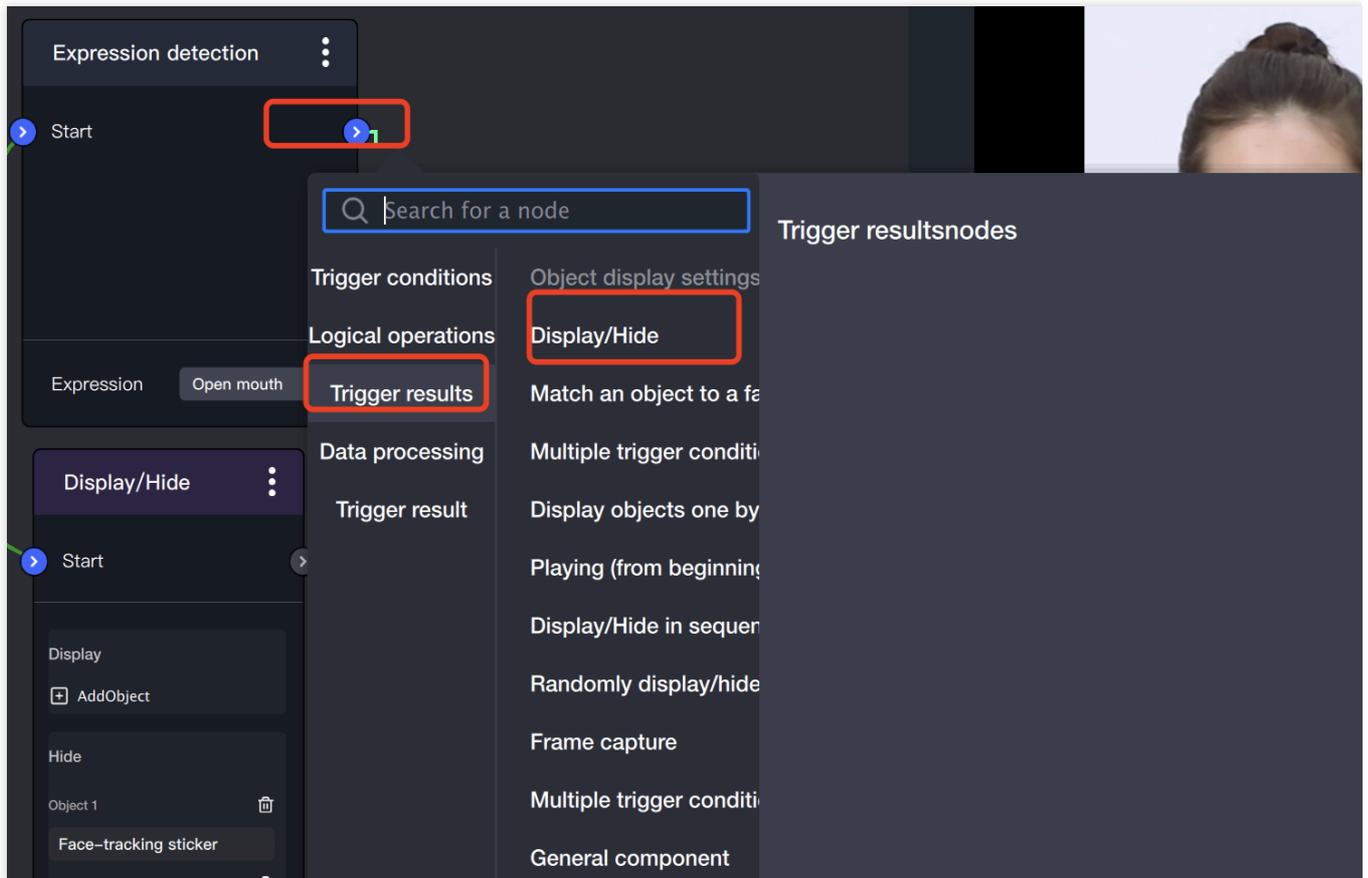




(8) Right-click on the Process Panel, select **Add node**, and add **Expression detection**.

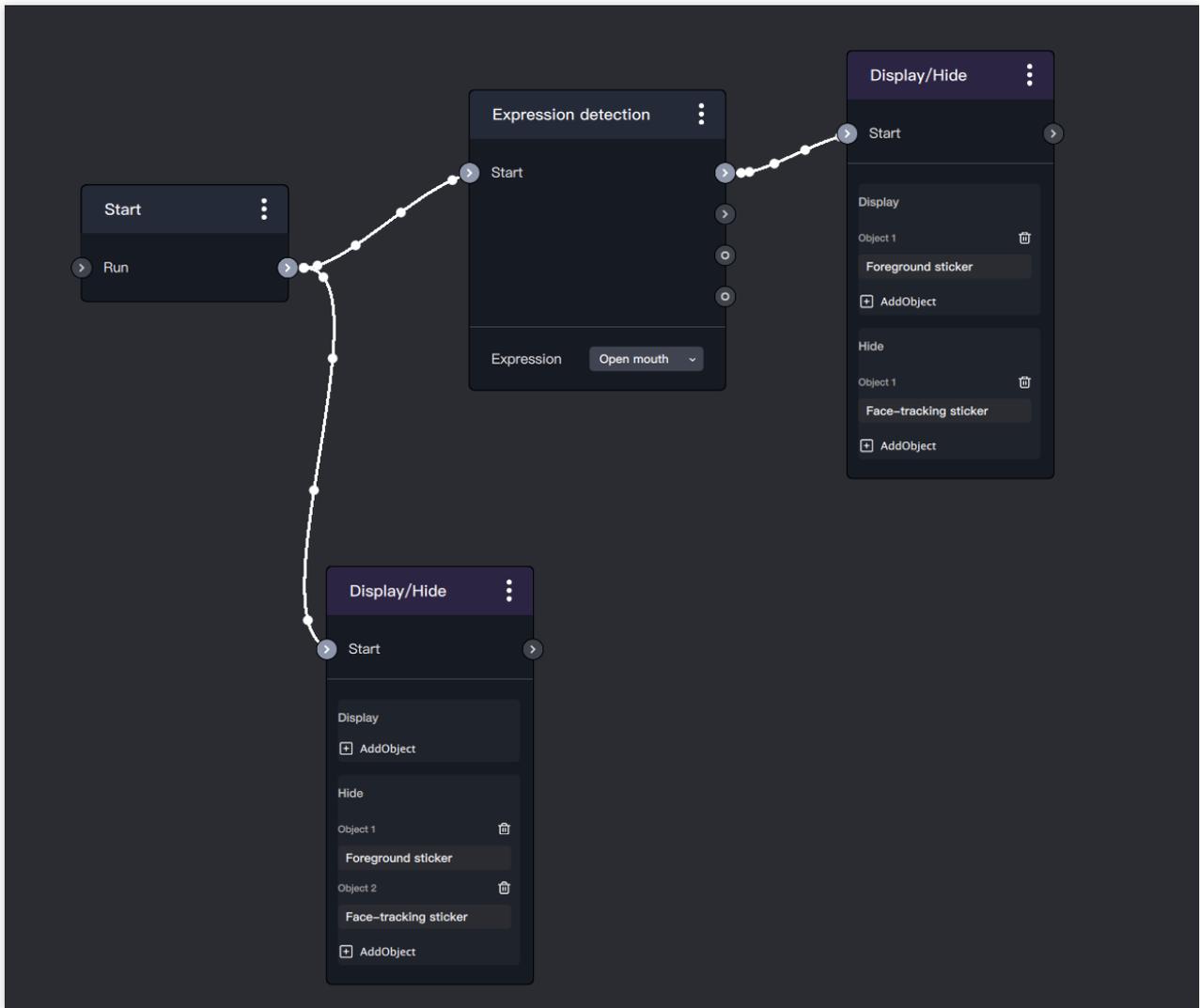


(9) Right-click on the Process Panel, select **Add node**, and add **Display/Hide**.

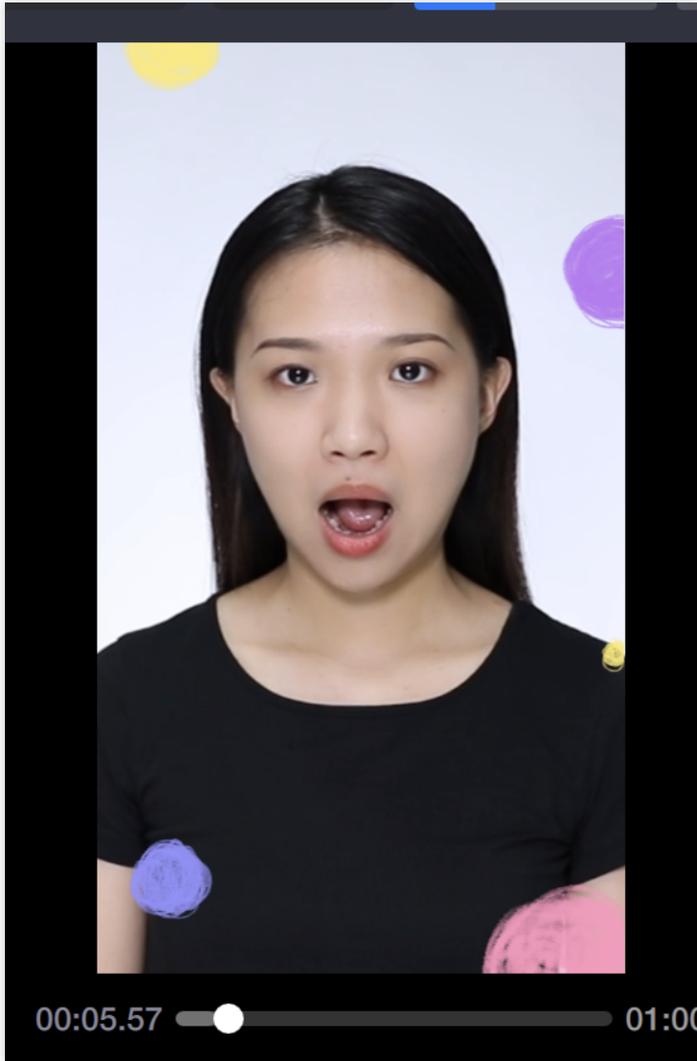


(10) Add an object to the **Display/Hide** added in (9).

(11) Connect nodes: At the beginning, the foreground sticker is not displayed. When the mouth-opening action occurs, the foreground sticker appears.



(12) Preview: Click the play button to preview the effect.

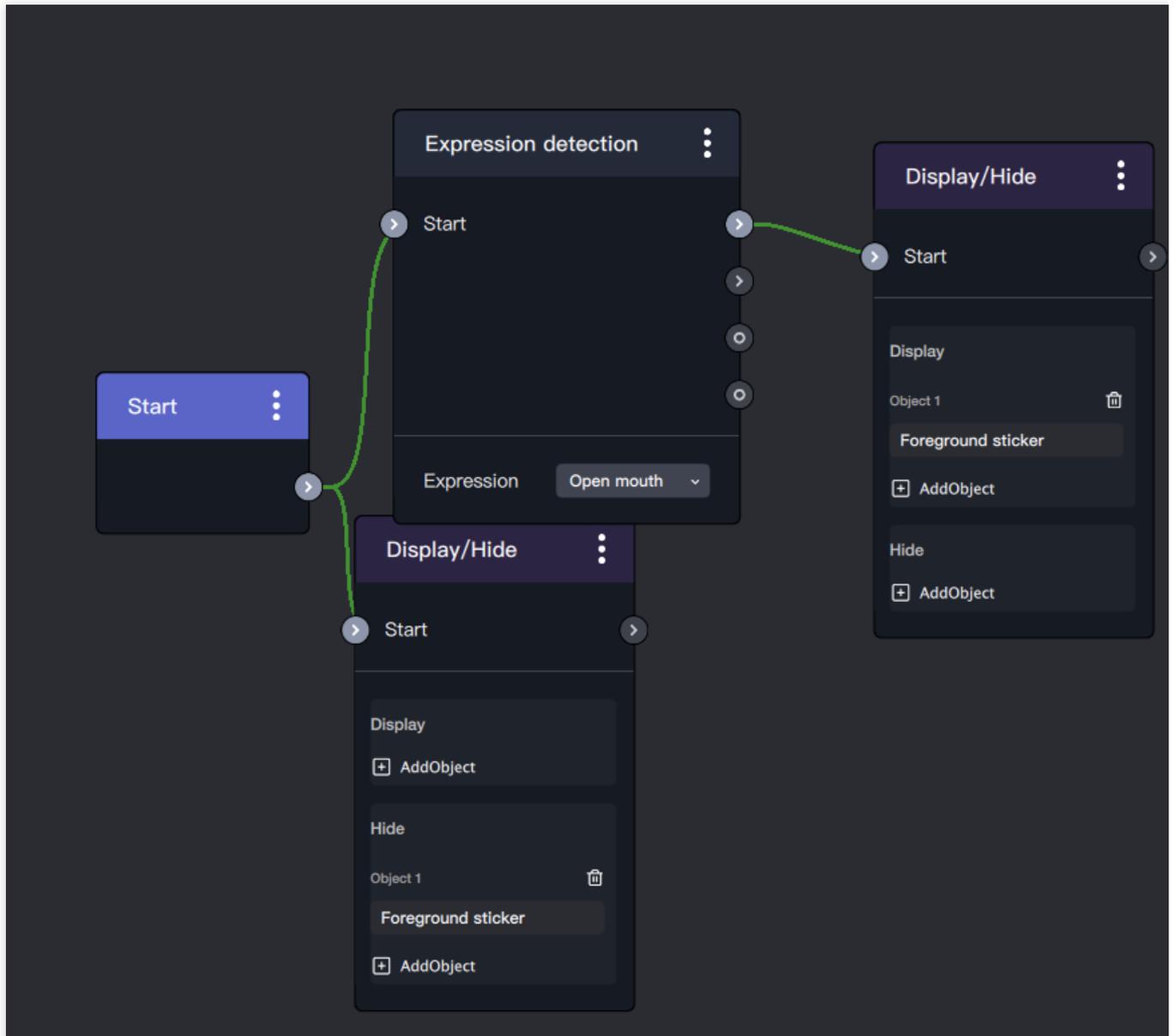


2. Trigger Carousel

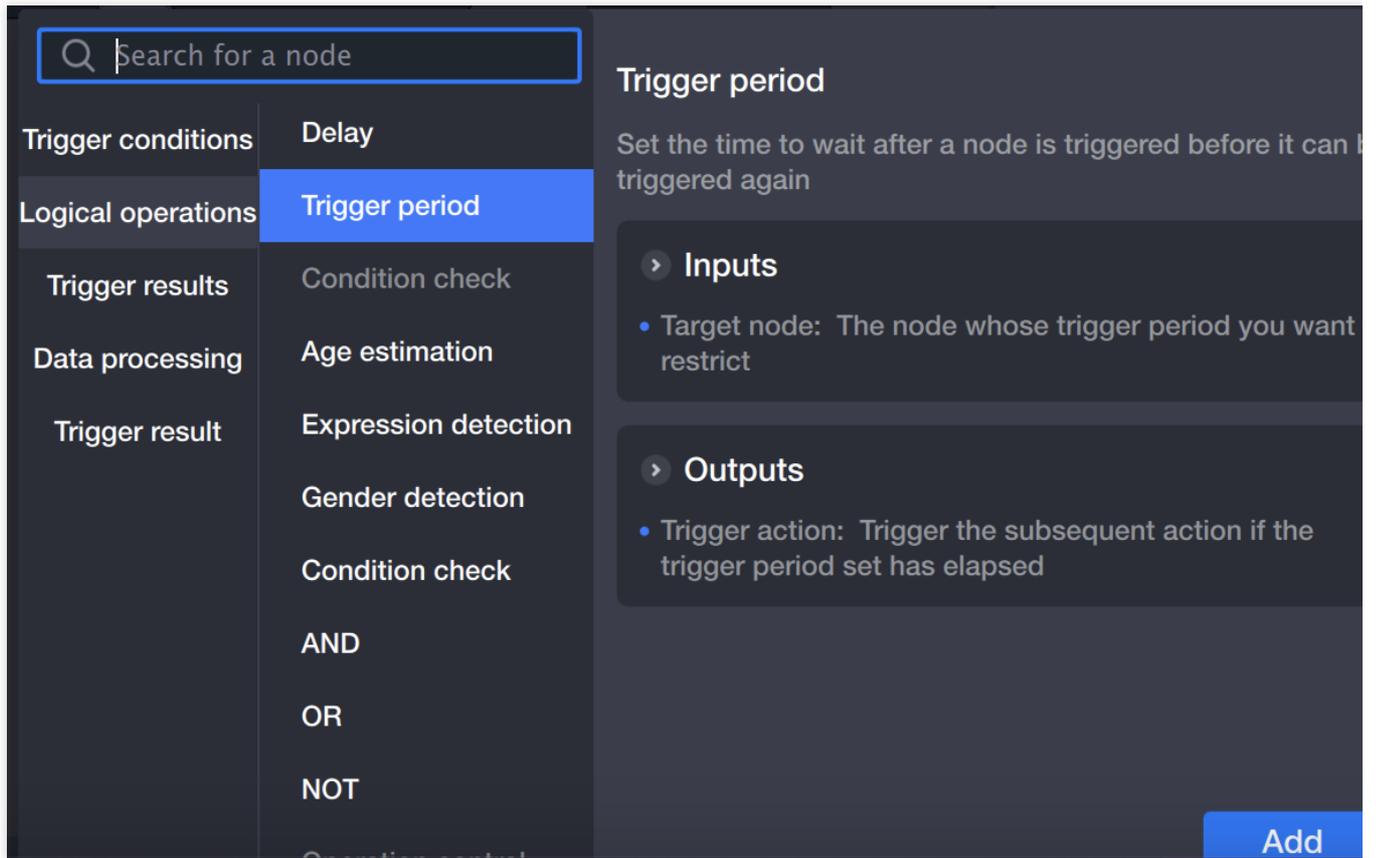
Trigger carousel is applied to expressions/actions and other triggers, which can be played in a loop, switching materials with each action.

Basic Usage

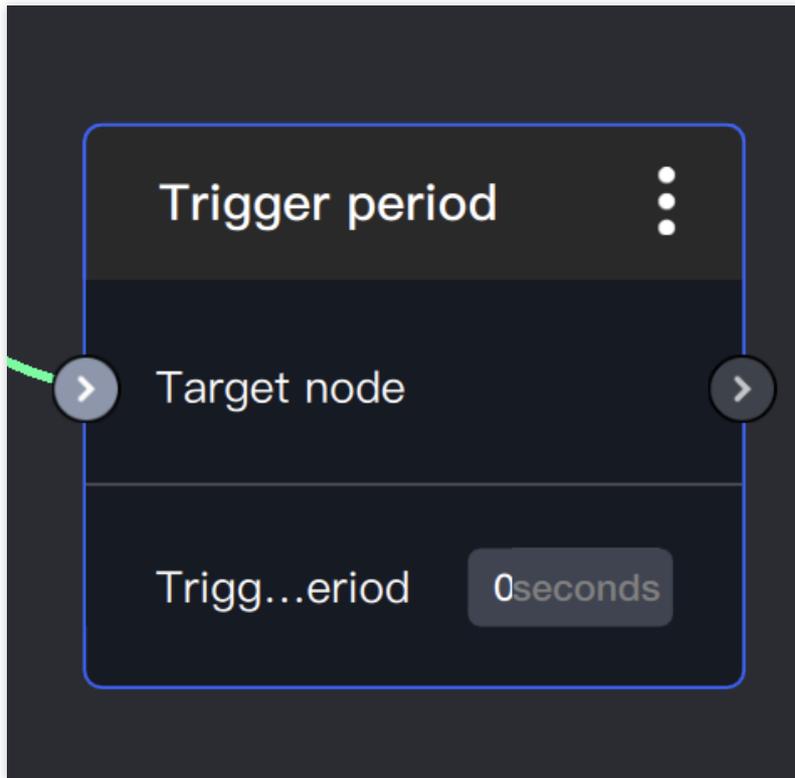
(1) Follow steps (1) to (11) of the facial expression trigger tutorial, create a project, import two image files, add a foreground sticker and a face tracking sticker, add two "**Display/Hide**" nodes and an "expression detection" node, and finally connect them as shown in the figure below:



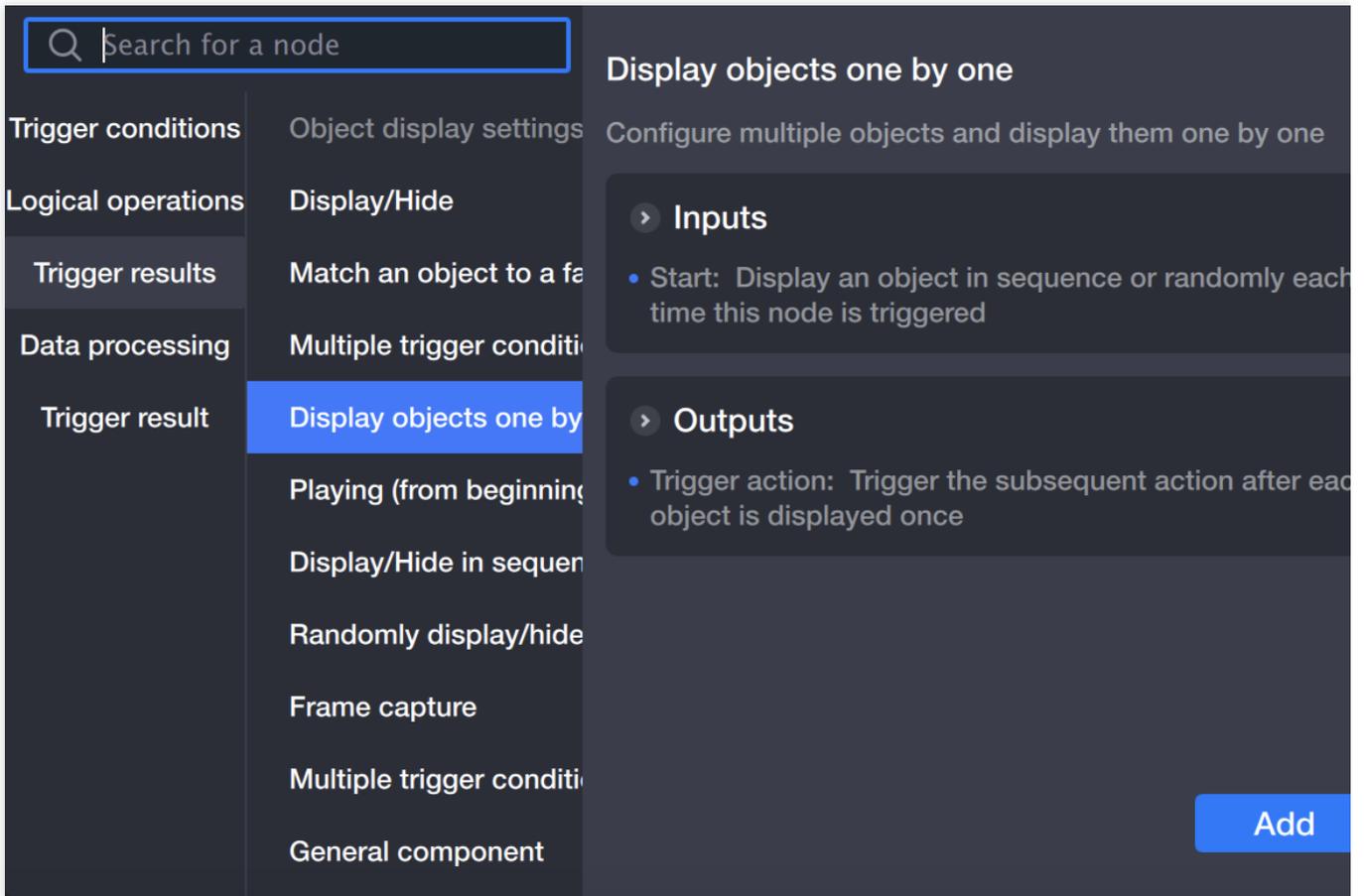
(2) Add a "Trigger period" node (The trigger cycle is to prevent the user from nodding for too long and causing a second trigger, so a trigger throttling is generally required here, and a time of 0.5-0.8s can be set).



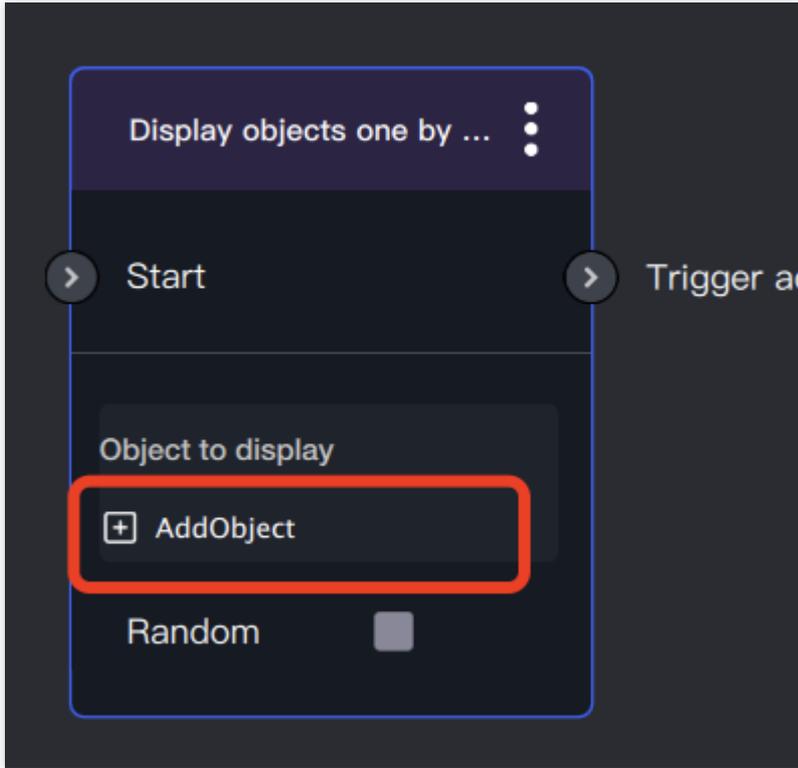
(3) Double-click to change the trigger time to once every 0.5 seconds.

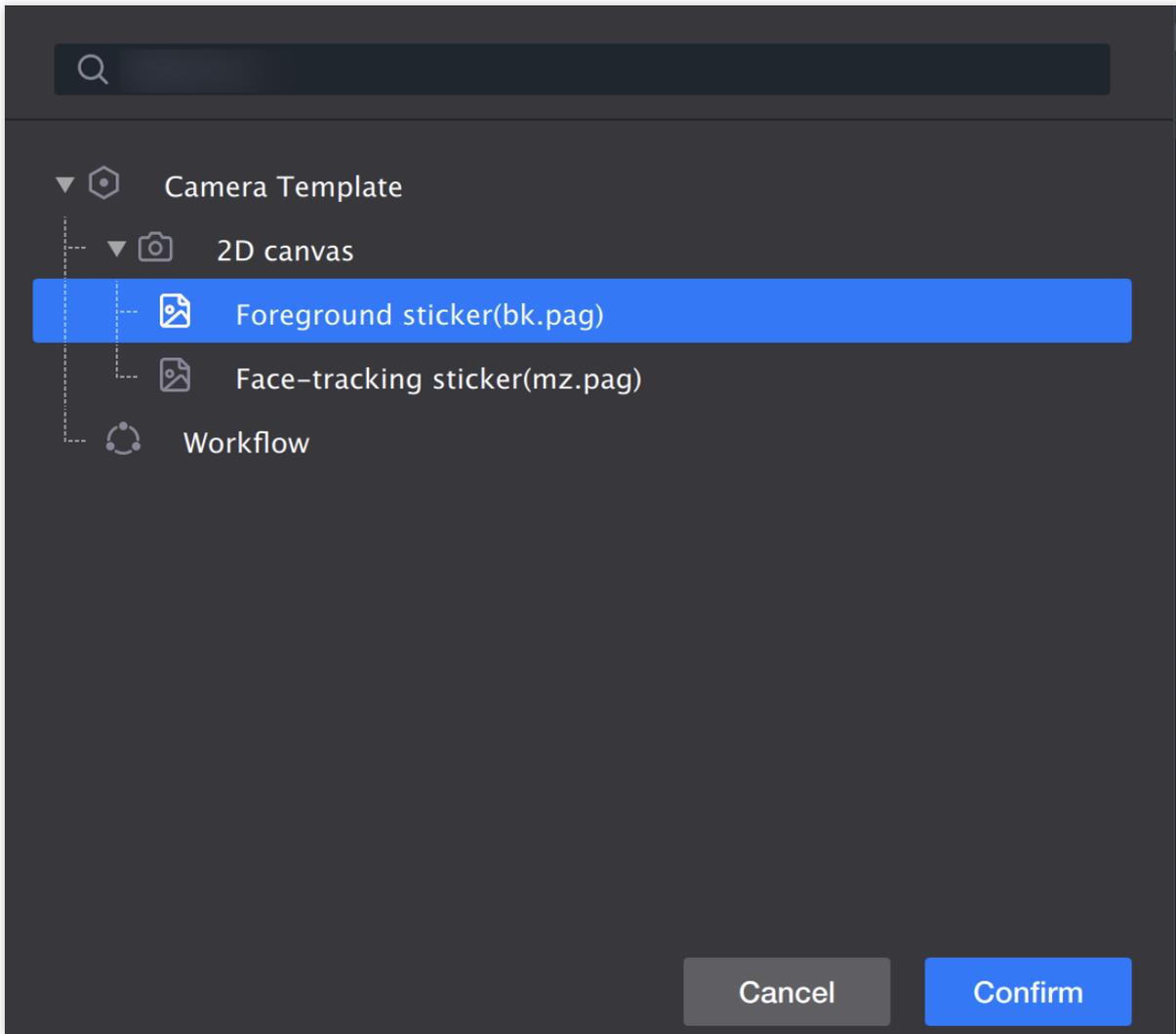


(4) Add a "Display objects one by one" node.

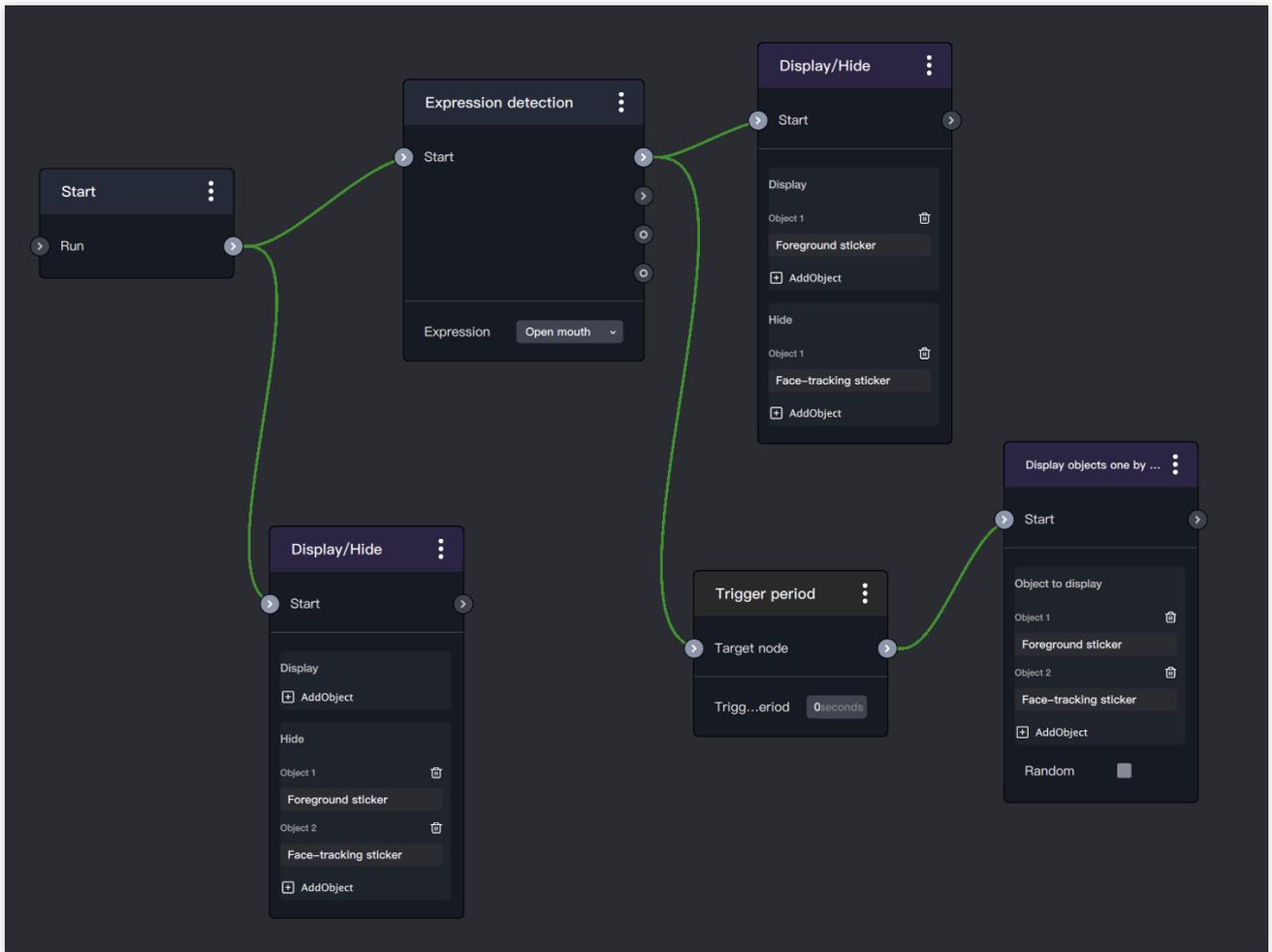


(5) Add carousel objects: Add the foreground sticker and face tracking sticker objects separately.





(6) Connect all nodes as shown in the figure below:



(7) Preview.



Production Frequently Asked Questions

Last updated : 2024-03-22 18:45:44

Frequently Asked Questions:

1. Q: Size limit of the submitted project package.

A: It is best to control it around 10M, and not exceed 15M.

2. Q: Does pag support radial blur?

A: Not supported for now, only Gaussian blur and motion blur are supported (6/8/2021)

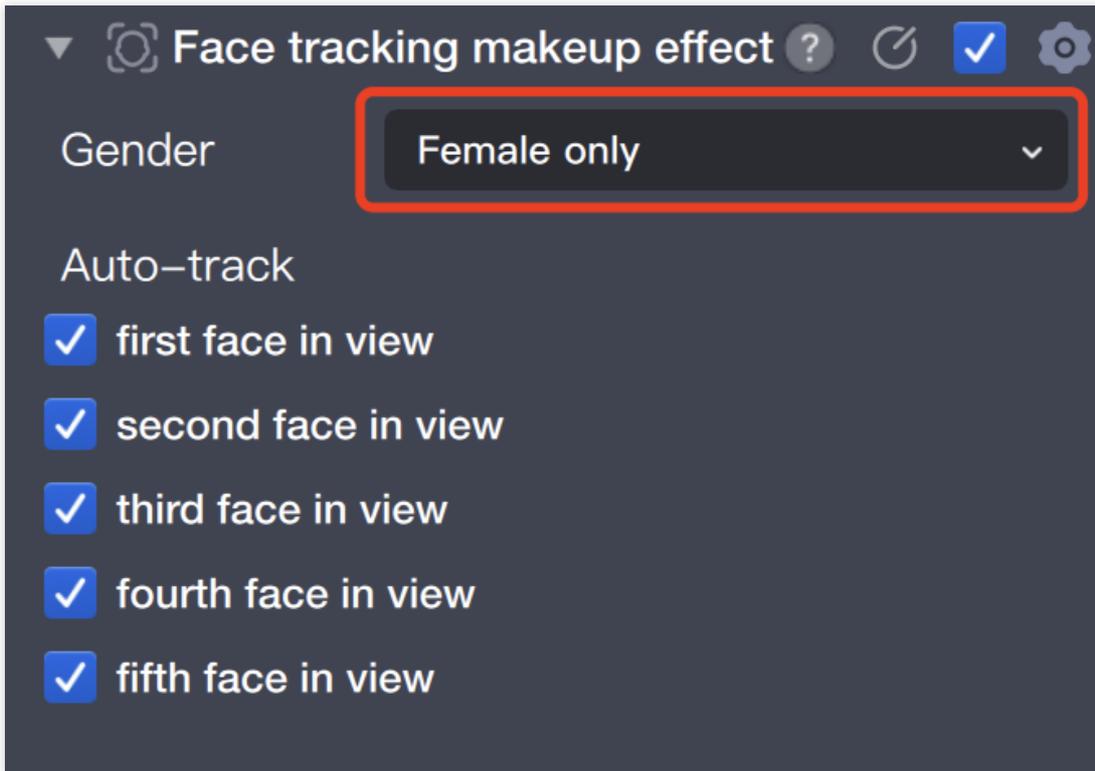
Tips:

1. Facial beautification parameters reference:

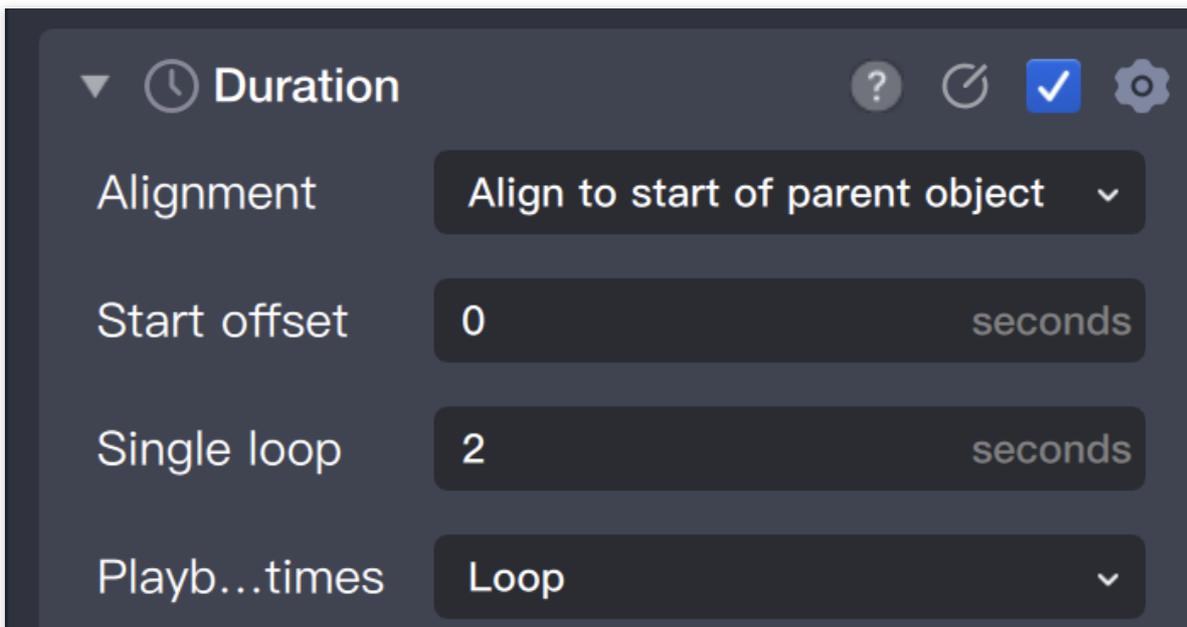


2. Non-makeup oriented special effects props are recommended for female makeup only.

In the face tracking component, select **Only effective for females**.



3. When adding music to special effects props,
For props with no need to record ambient sound, choose [BGM] (recommended).
For props that need to record ambient sound, choose [Effect].
And change the playback times in the duration component to infinite loop.



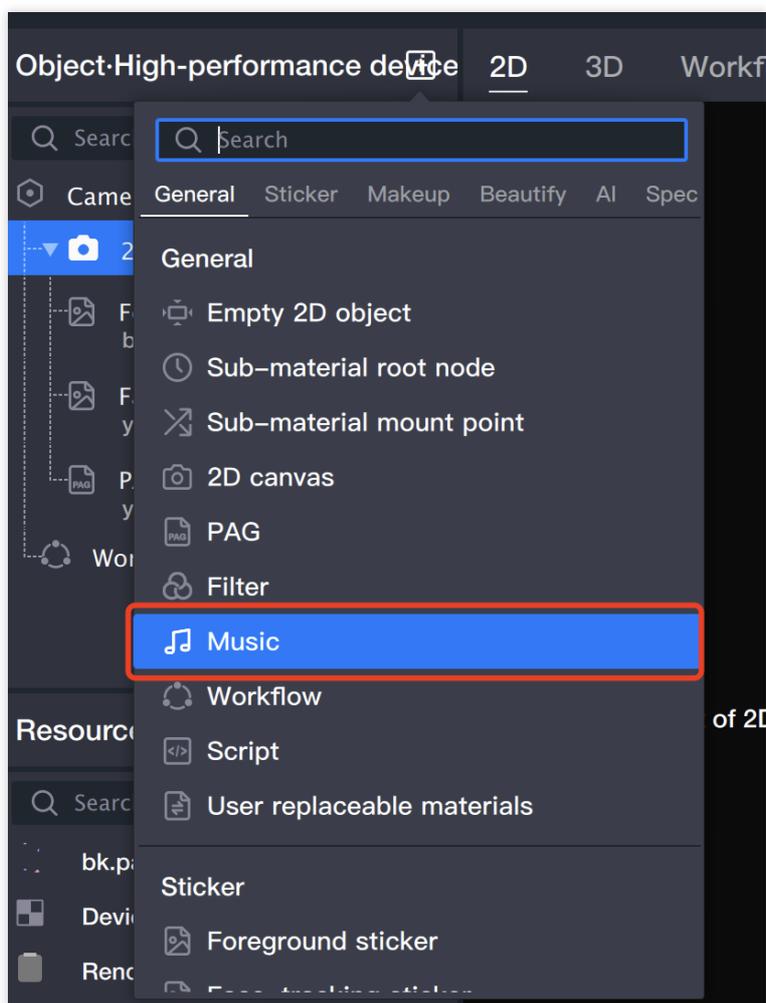
General Tutorial

Music Configuration

Last updated : 2024-03-22 18:45:44

Music Configuration

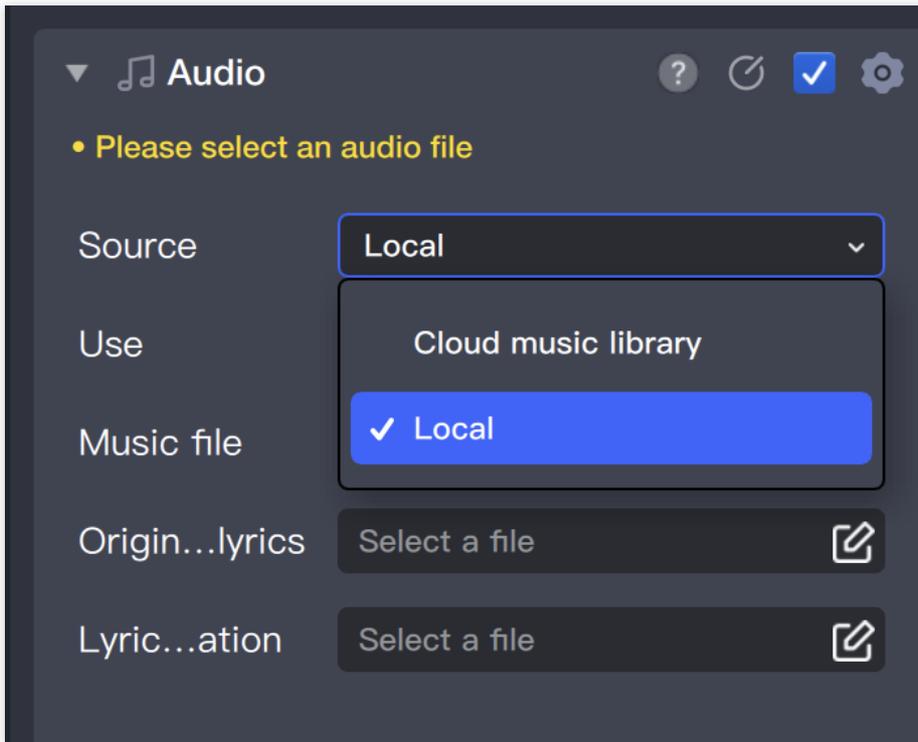
Add Music Object



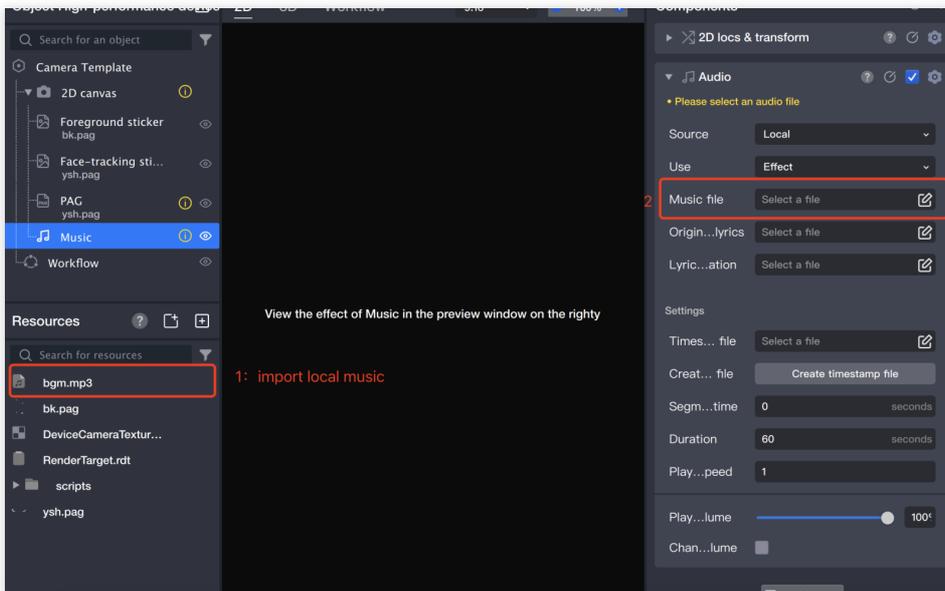
Select Music Source

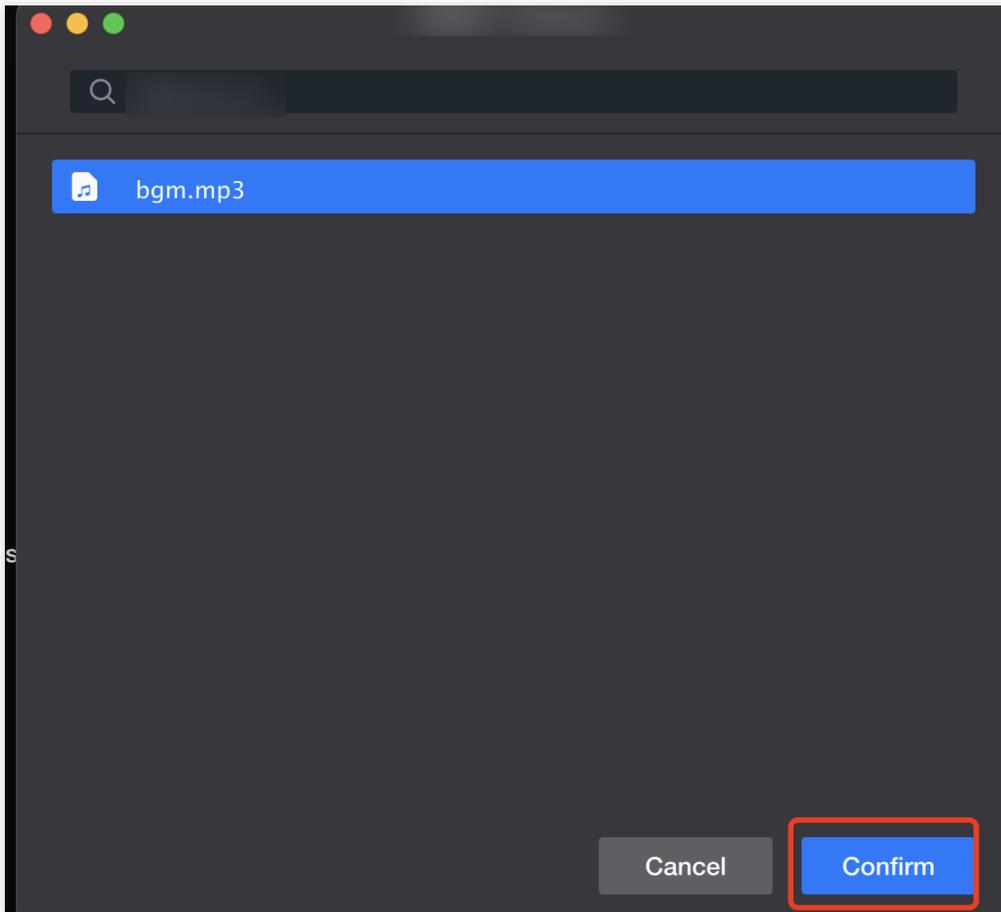
Choose music from the local.

If it is a self-adapted Remix audio (such as adding dialogue/sound effects, etc.), you can directly use local upload.

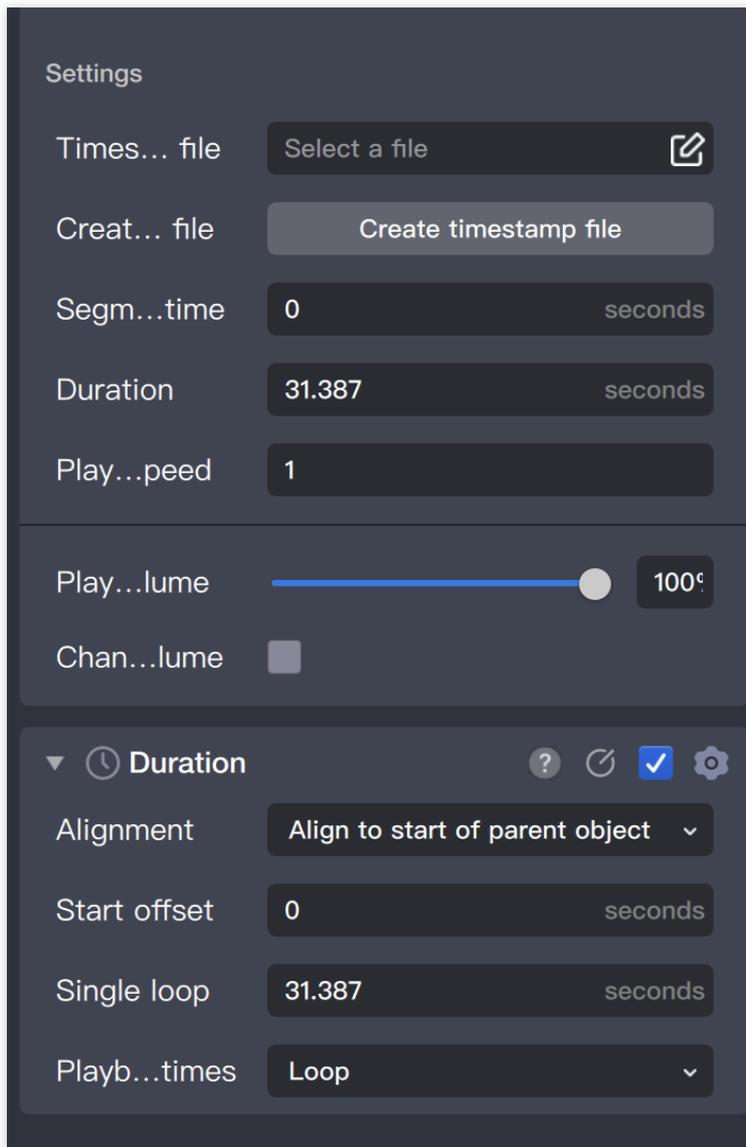


How to add local music.





Choose the appropriate starting point, duration & number of loops.



Timestamp file: Upload if available, otherwise no need to worry.

Segment start time: Music start time (accurate to 1 decimal place, default is 0, adjust as needed).

Duration: Music playback duration (default is 60 seconds or the maximum audio length **less than 60 seconds**).

Playback speed: Default normal speed 1, adjust as needed.

Playback volume: Default value 20% is equal to normal 100% volume, adjust as needed.

Change volume : Set fade in and out effects, adjust as needed.

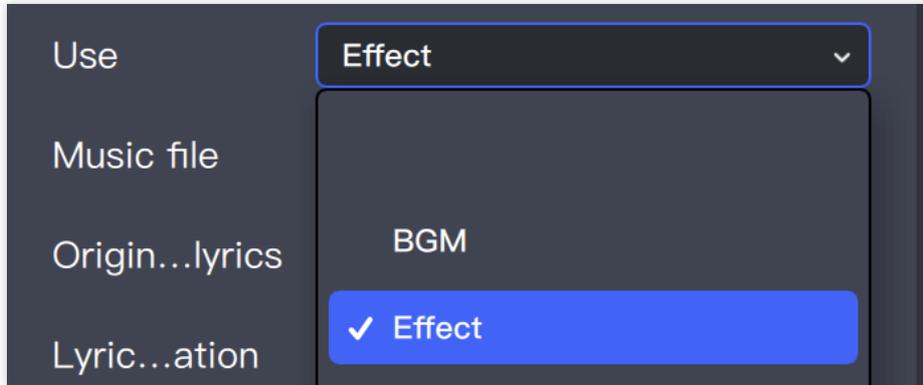
Playback times: Choose 1 time, multiple times, or infinite loop (if the selected music playback duration is 60 seconds+, choose 1 time; if less than 60 seconds, choose multiple loops).

Note:

Maximum shooting time is 60 seconds.

Selecting Music Usage

You can choose between BGM / Effect for two purposes.



Two Different Settings' Functions and Displays

Effect: Can record, poor bgm quality.

BGM: Cannot record, normal bgm quality.

Select Music Usage Based on Project

Shooting projects can choose the appropriate audio usage according to the designed prop type. The default choice is BGM. If the prop requires users to record their own audio, such as Olympic Cheering Station pendants, choose Effect.

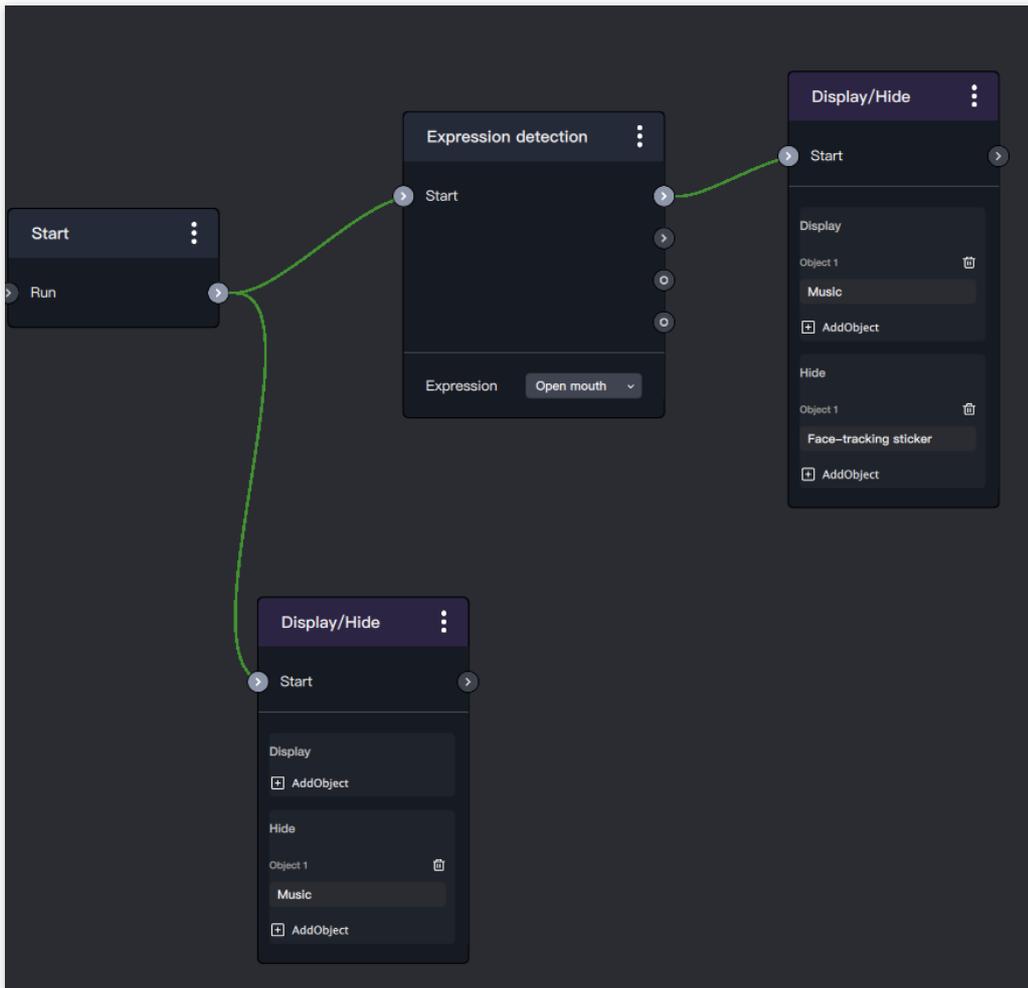
For **ordinary template projects**, choose BGM uniformly.

How to Control Music in the Process

Depending on the designed prop requirements, you can use the process panel's node to control the music's play/stop.

Use AI detection capability to control music playback.

Facial expression detection of mouth opening triggers music playback, with the following process settings:



Shortcut key

Last updated : 2024-03-22 18:45:44

3D Scene Panel

| Shortcut Name | Shortcut key |
|----------------------|----------------------------------|
| View Rotation | Right Mouse Button |
| View Movement | Middle Mouse Button + Press |
| View Zoom | Middle Mouse Button Scroll Wheel |
| View Switch to Home | Ctrl+1 |
| View Switch to Top | Ctrl+2 |
| View Switch to Front | Ctrl+3 |
| View Switch to Right | Ctrl+4 |

2D Scene Panel

| Shortcut Name | Shortcut key |
|--------------------|----------------------------------|
| Zoom | Middle Mouse Button Scroll Wheel |
| Sticker Move Up | Up / W |
| Sticker Move Down | Down / S |
| Sticker Move Left | Left / A |
| Sticker Move Right | Right / D |

Main Panel

| Shortcut Name | Shortcut key |
|---------------|--------------|
| Close | Ctrl+W |

| | |
|--------------|--------------|
| New Project | Ctrl+N |
| Open Project | Ctrl+O |
| Save Project | Ctrl+S |
| Undo | Ctrl+Z |
| Redo | Ctrl+Z+Shift |
| Copy | Ctrl+C |
| Cut | Ctrl+X |
| Paste | Ctrl+V |
| Delete | Del |

2D Function Manual

Following Ability

Last updated : 2024-03-25 11:43:19

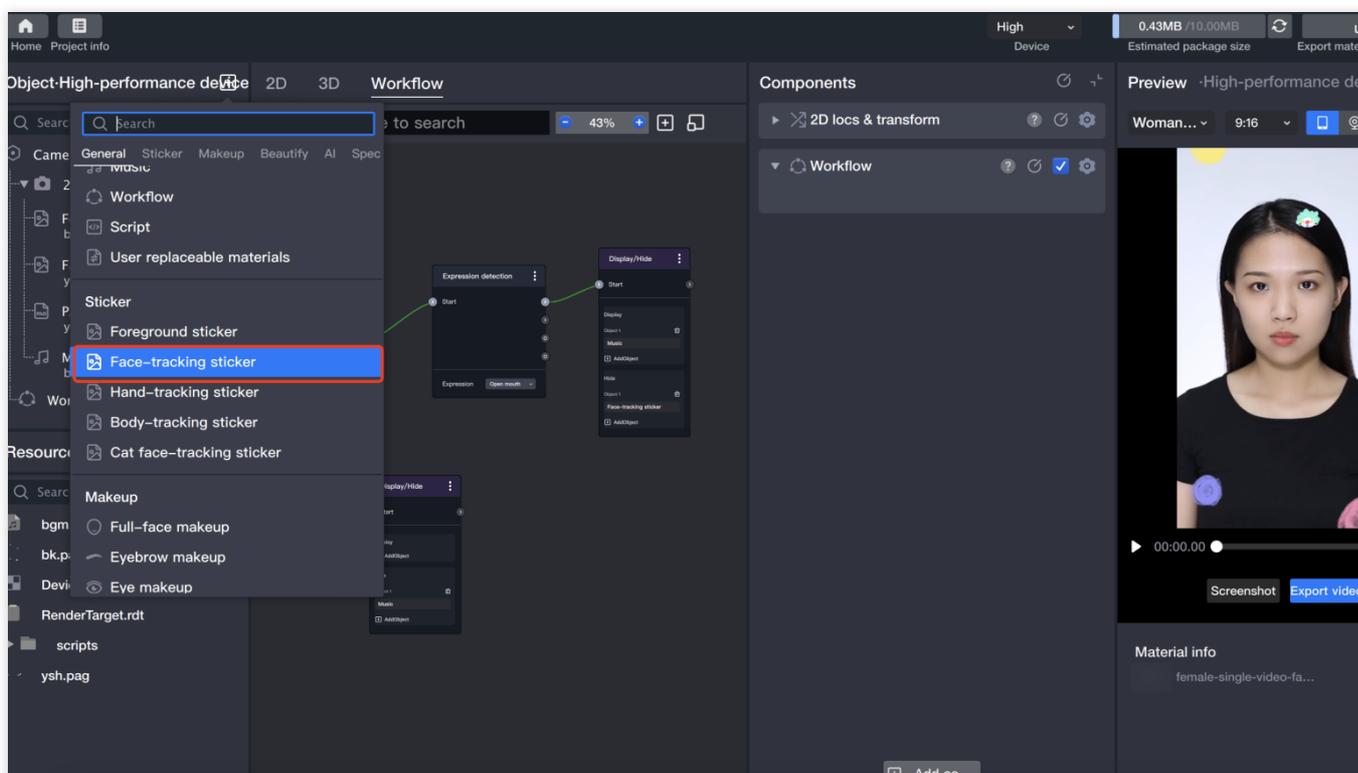
Introduction

In the Following Component, you can add 2D images, pag files, etc. to specific objects that appear on the screen. Currently, Tencent Effect supports face, gesture, body, and cat face tracking.

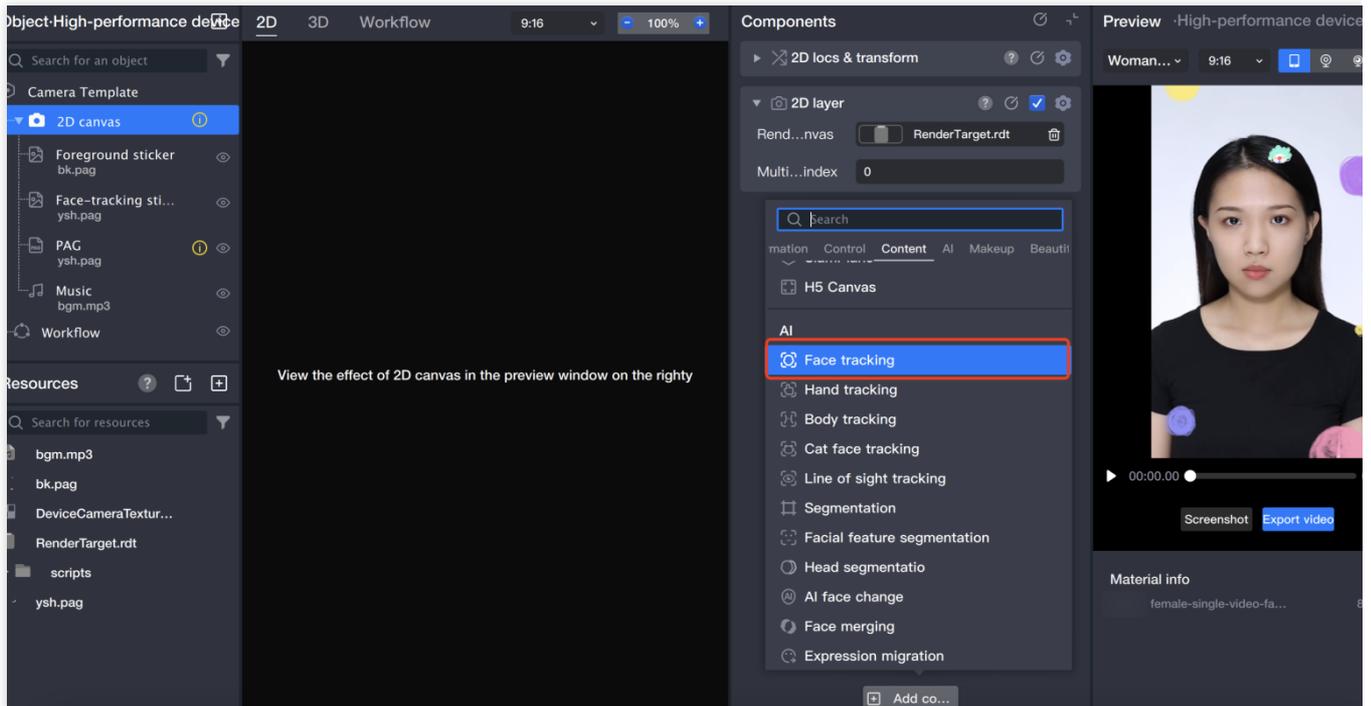
Basic Usage Method

1. Add Following Object

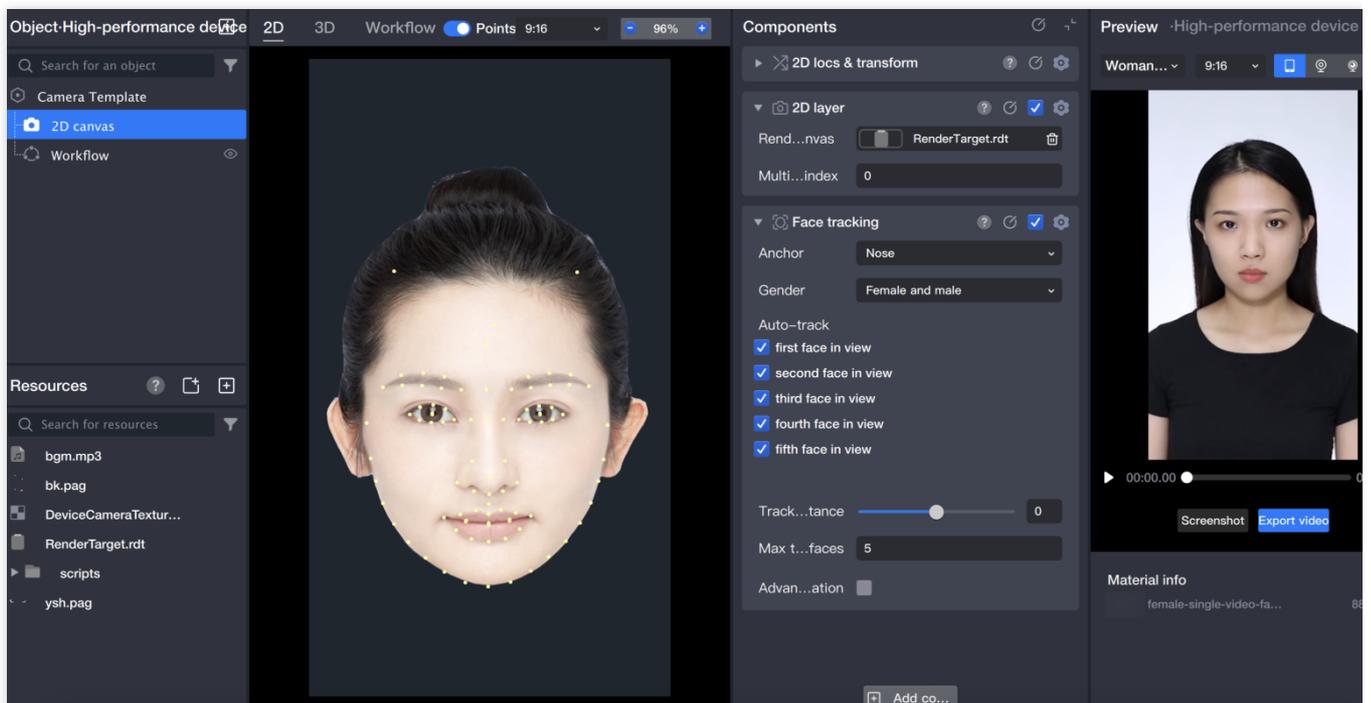
Add following object: Add following sticker in the object panel.



You can also directly add tracking components: Add tracking components in the component panel.

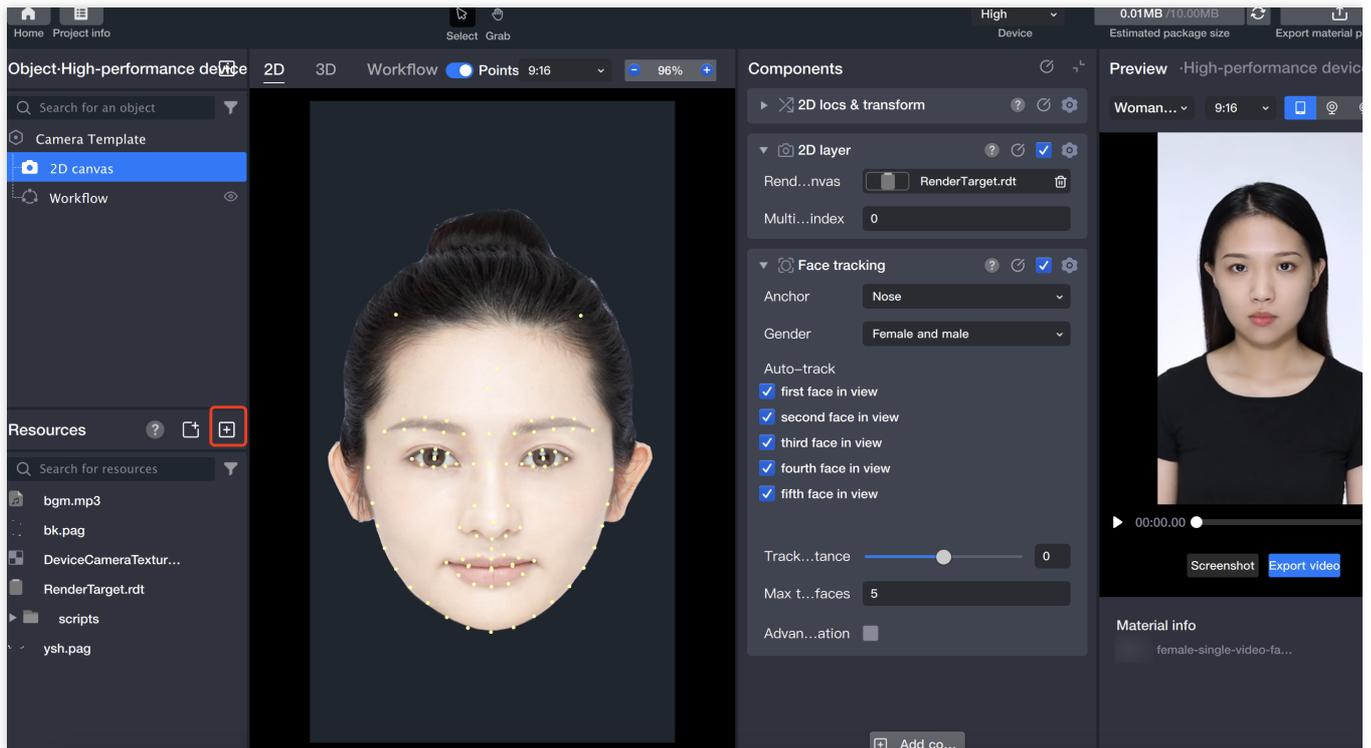


After adding any following component, the scene panel will provide a model point map accordingly.

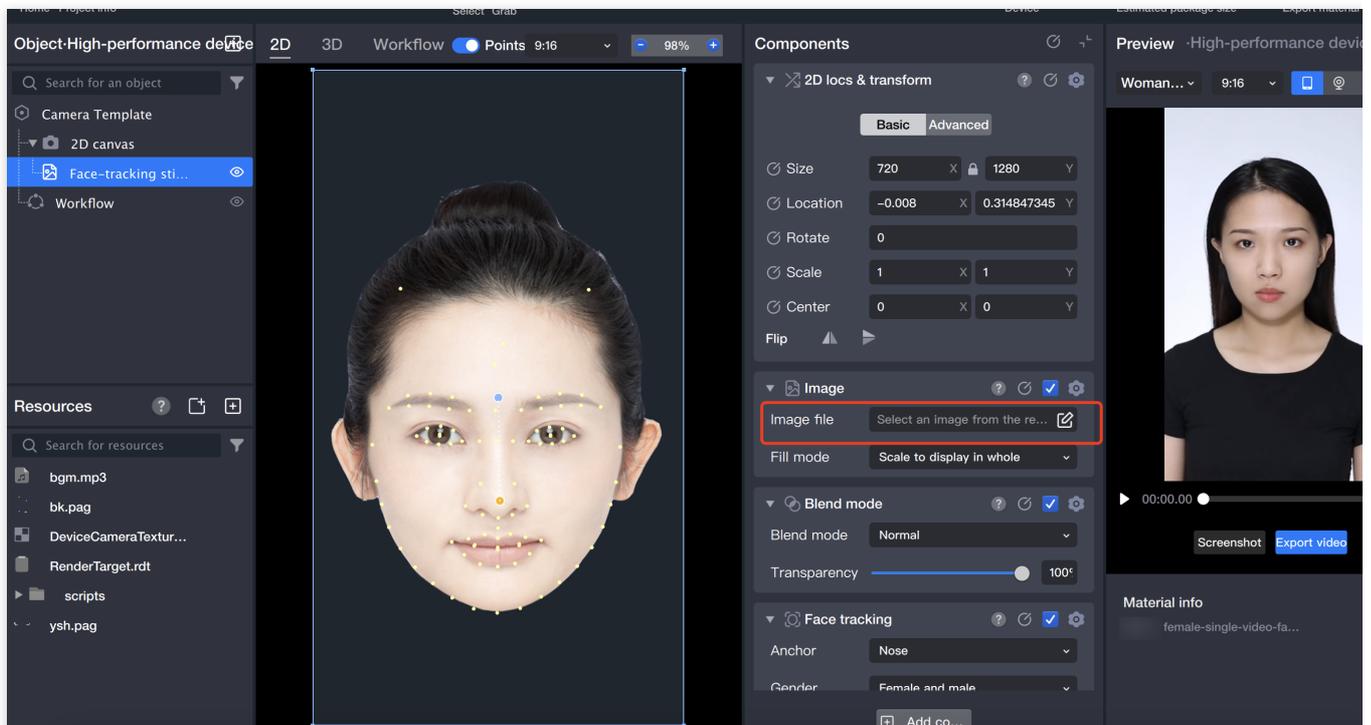


2. Import sticker file

Local import: Access computer local materials.



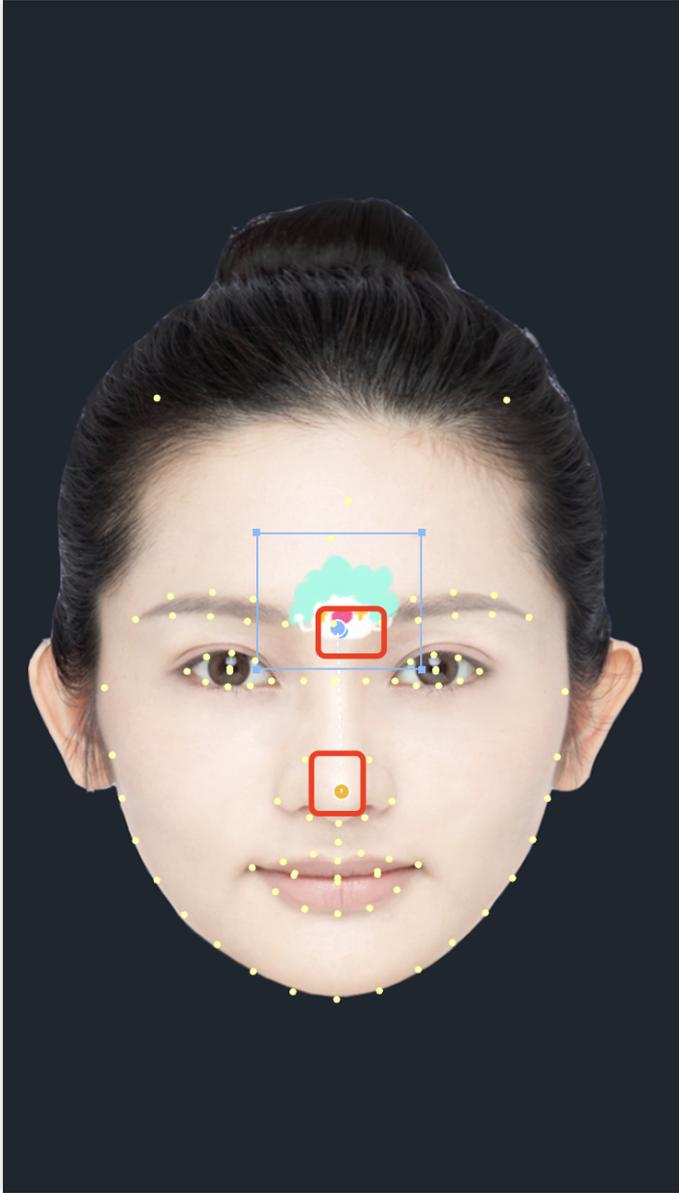
Select sticker file in the component panel.



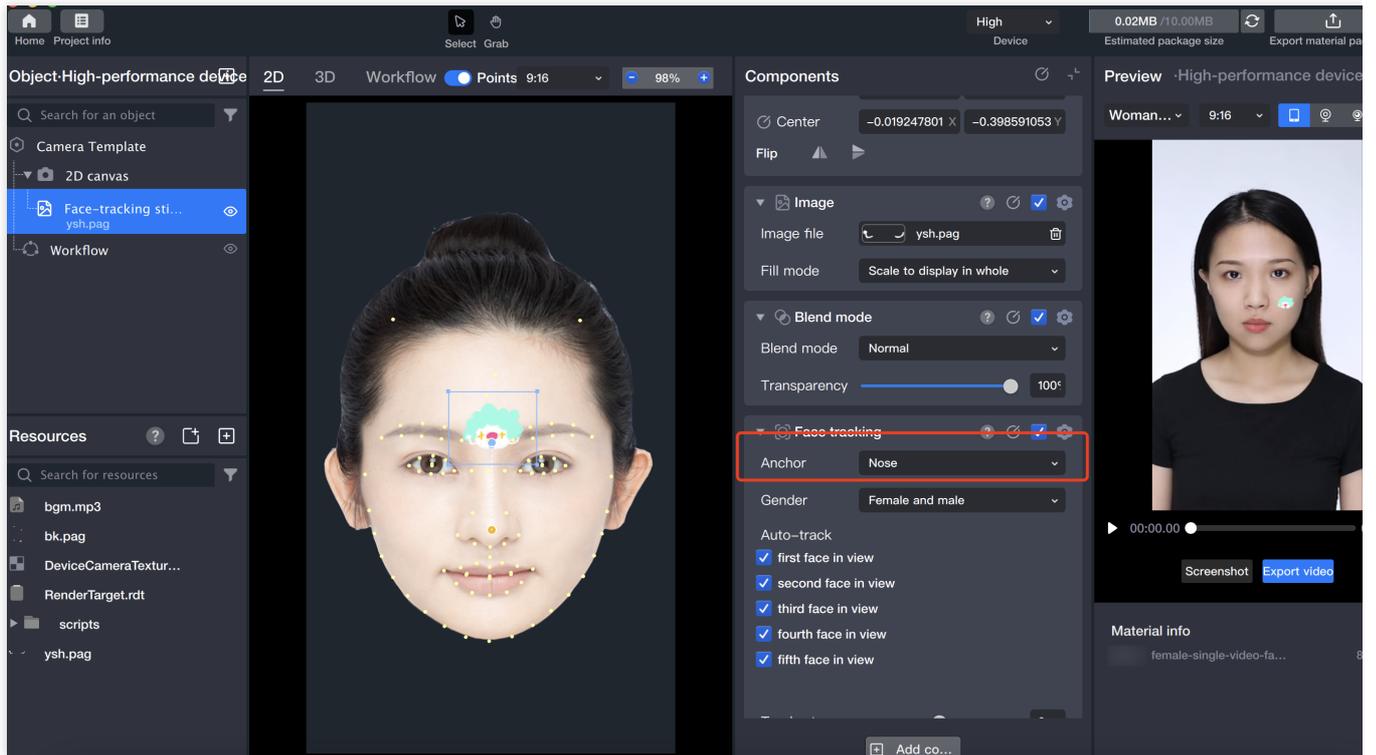
3. Material parameter adjustment

3.1 Binding points.

By dragging the binding points.



Adjust through the component panel.

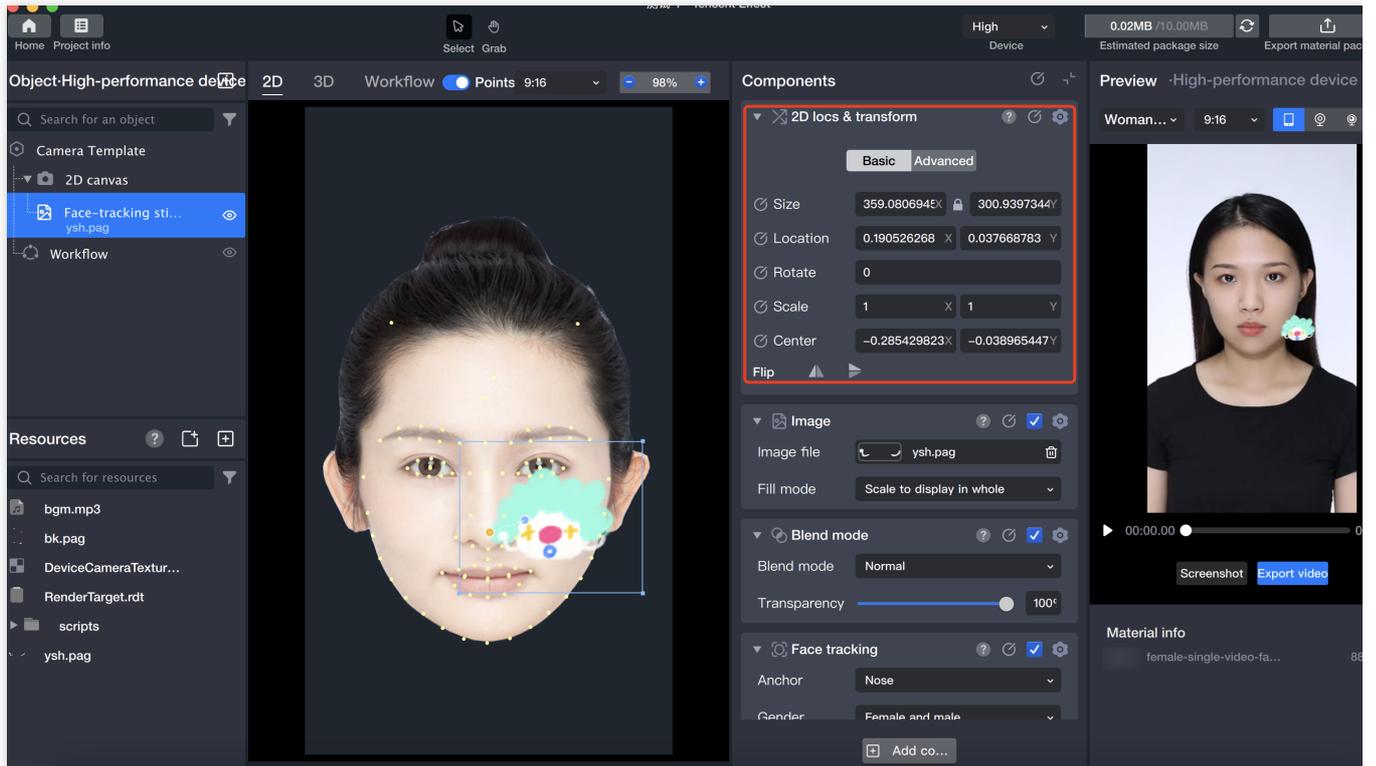


3.2 Change the sticker position, direction, and size.

Drag the sticker position in the scene panel.

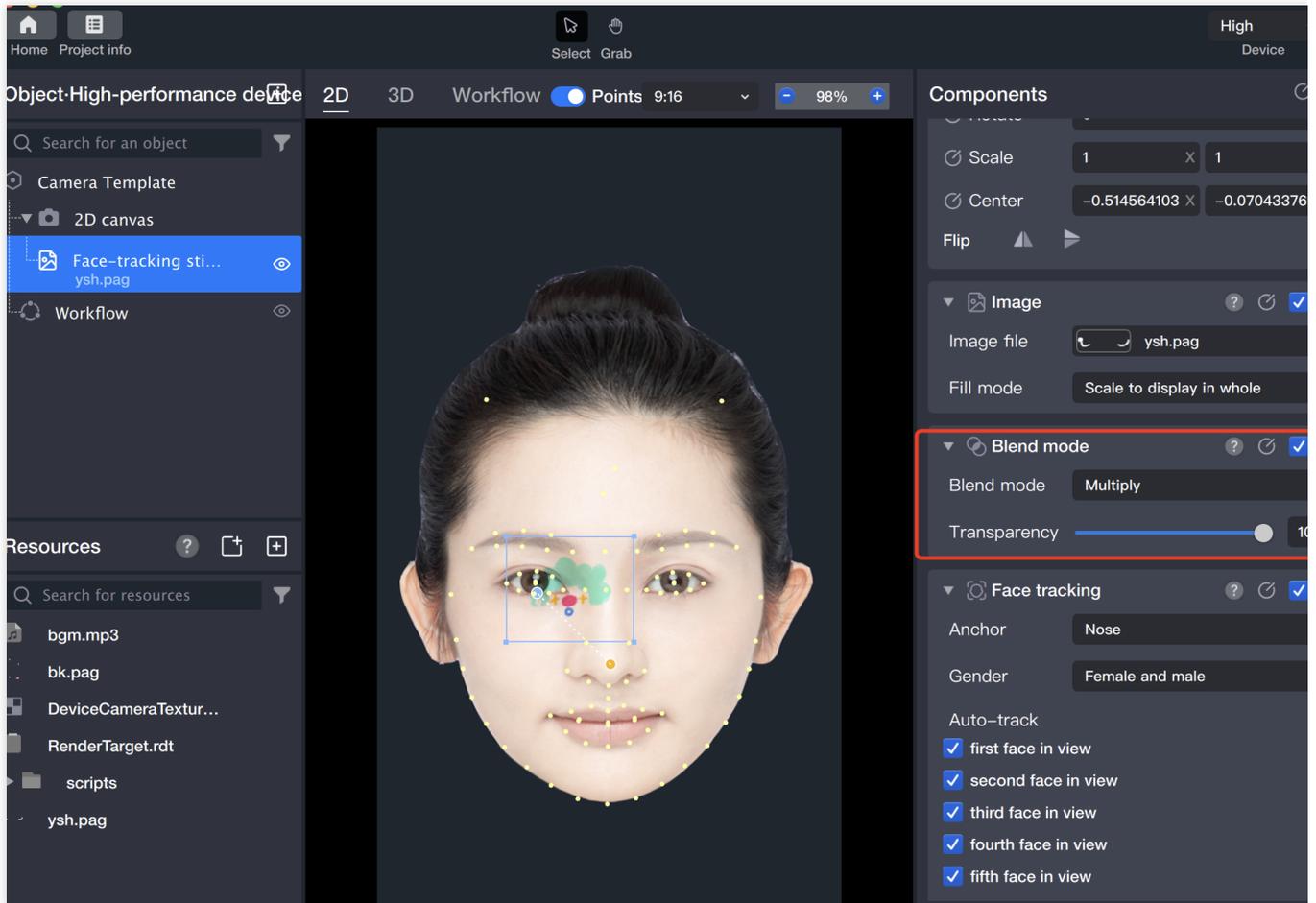
Change the position and transformation in the component panel.

You need to select this object or its parent object in the object panel.



3.3 Mode modification.

To help designers understand the image effect, refer to the multiply mode and normal mode in the designer's commonly used design software parameters according to the component sticker material parameters.



Here, only the face tracking gameplay is introduced, and other tracking gameplays are similar.

Gesture Following

Last updated : 2024-03-22 18:45:44

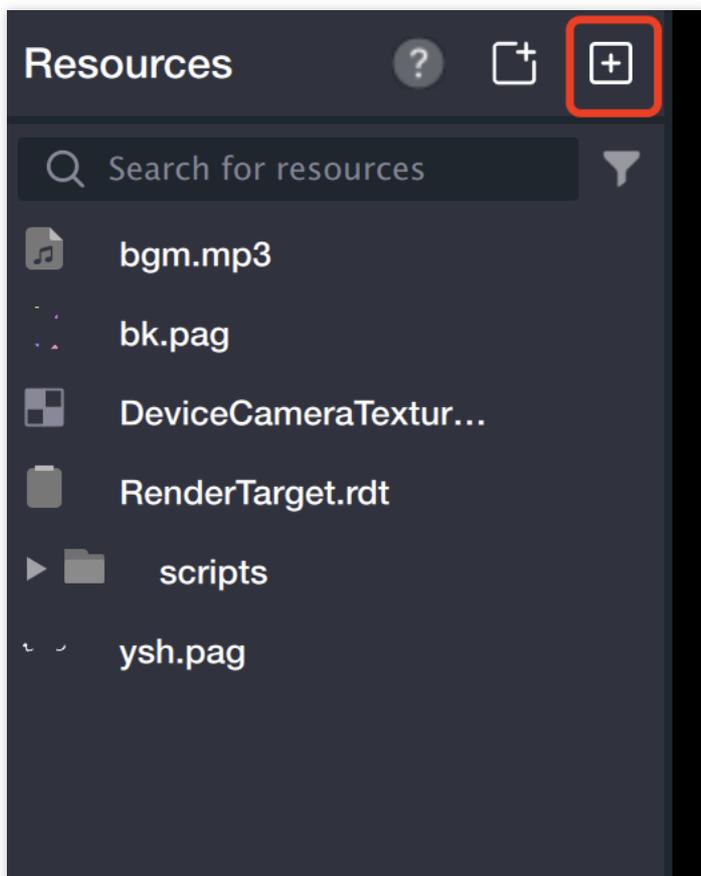
Concept Introduction

Gesture-following stickers, as the name suggests, are stickers that follow the hand in real-time during shooting. Currently, Tencent Effect supports adding 2D sticker files and PAG files to the hand.

Basic Usage Method

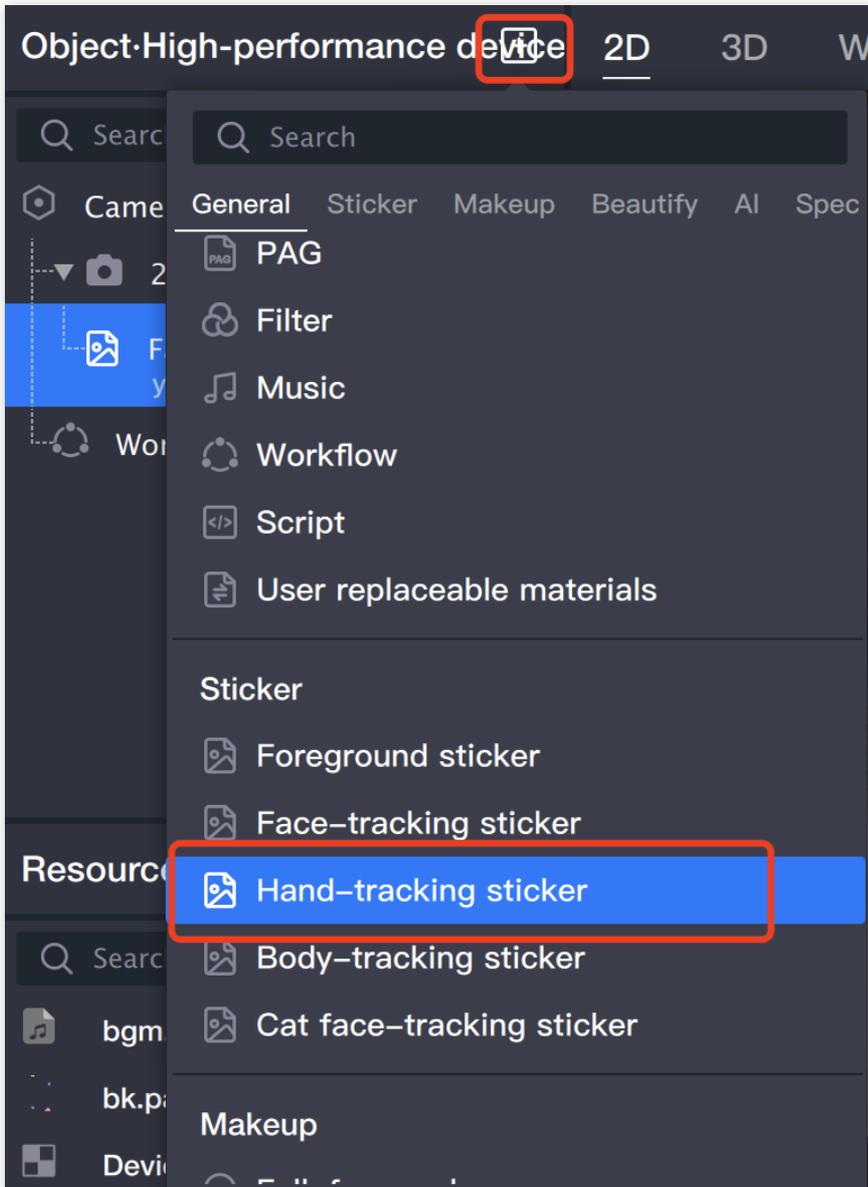
Step One: Import The Texture File.

Drag the texture file directly to the resource panel, or click the file input icon in the upper right corner of the resource panel, call up the computer's local folder, select and confirm to import.



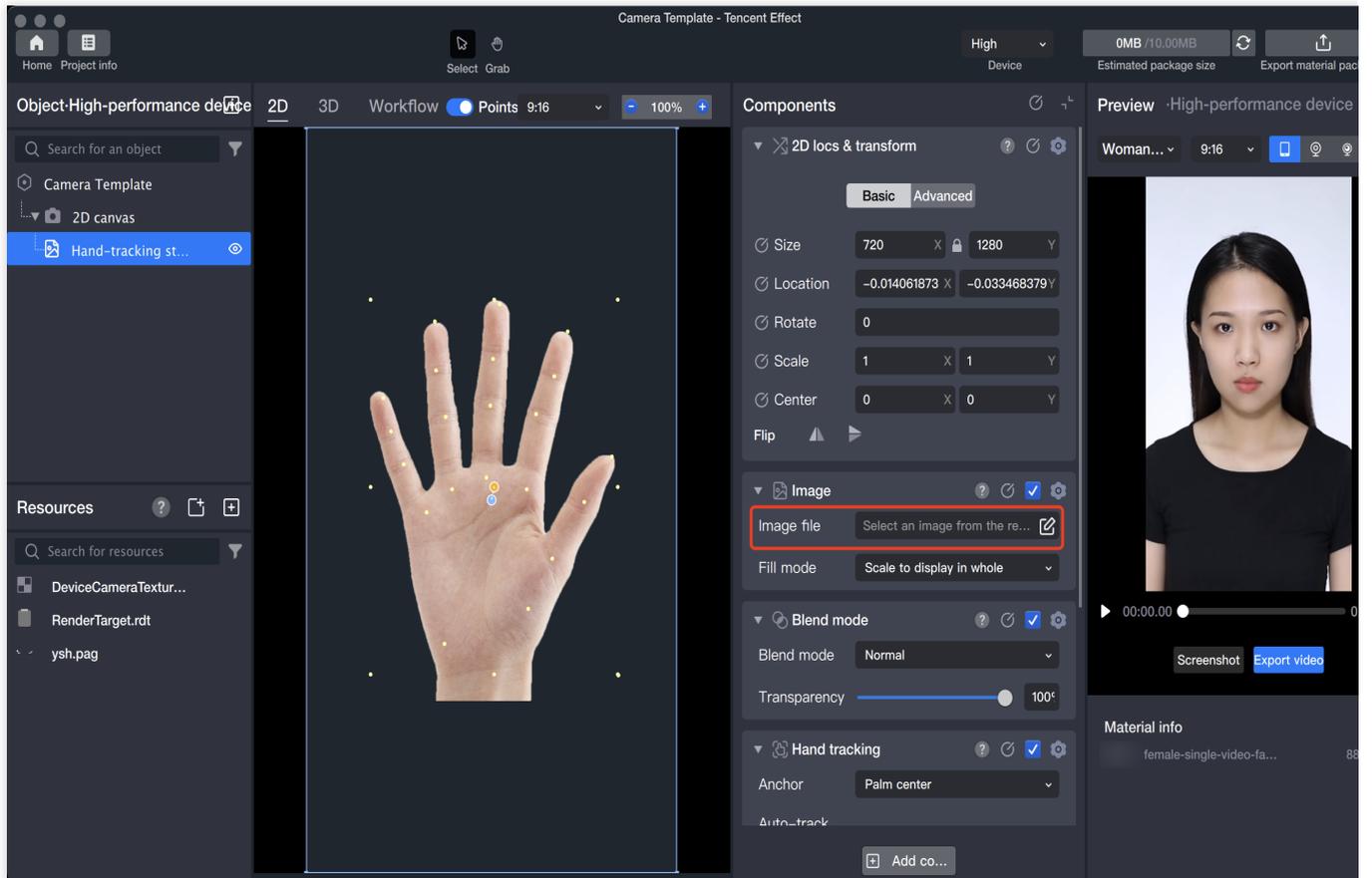
Step Two: Create Follow Object/Component

【Object】 Panel > 【+】 Add > Gesture Follow Sticker

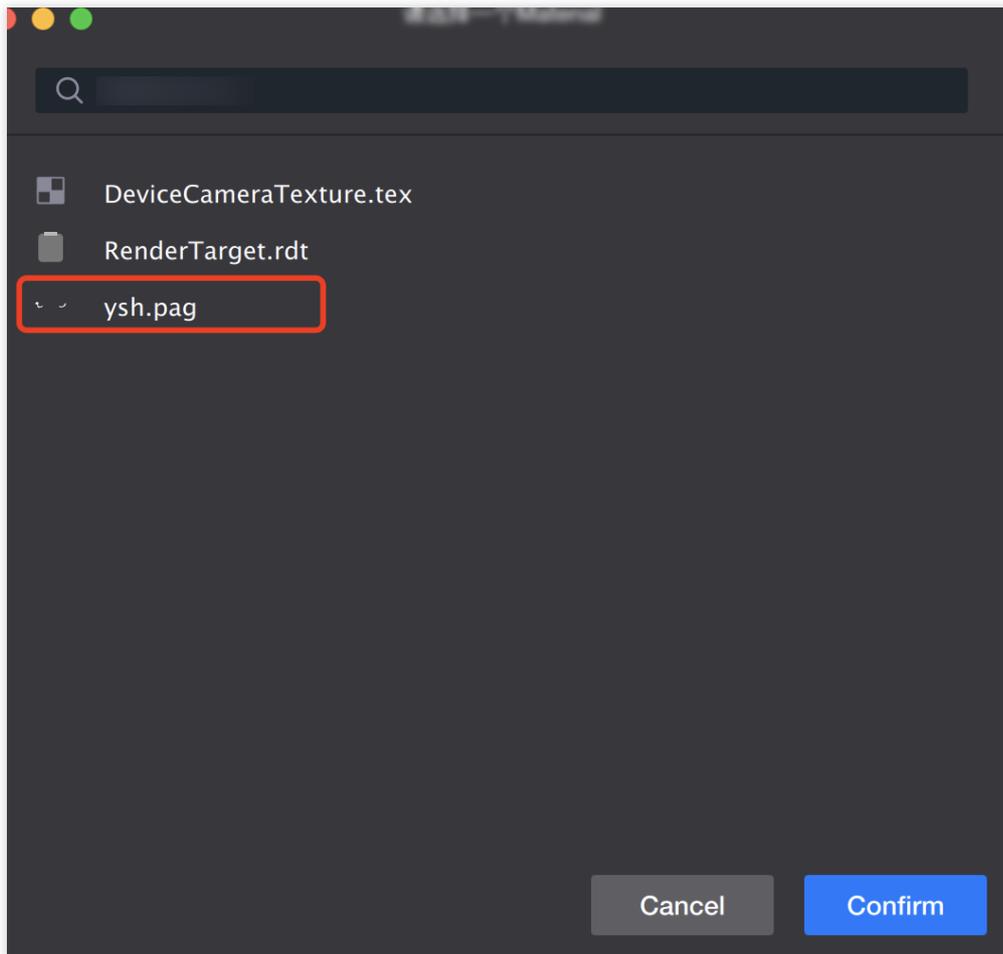


Step Three: Import Sticker File

Select the gesture follow object in the object panel, find the **Sticker File** in the component panel, and click its file input box.

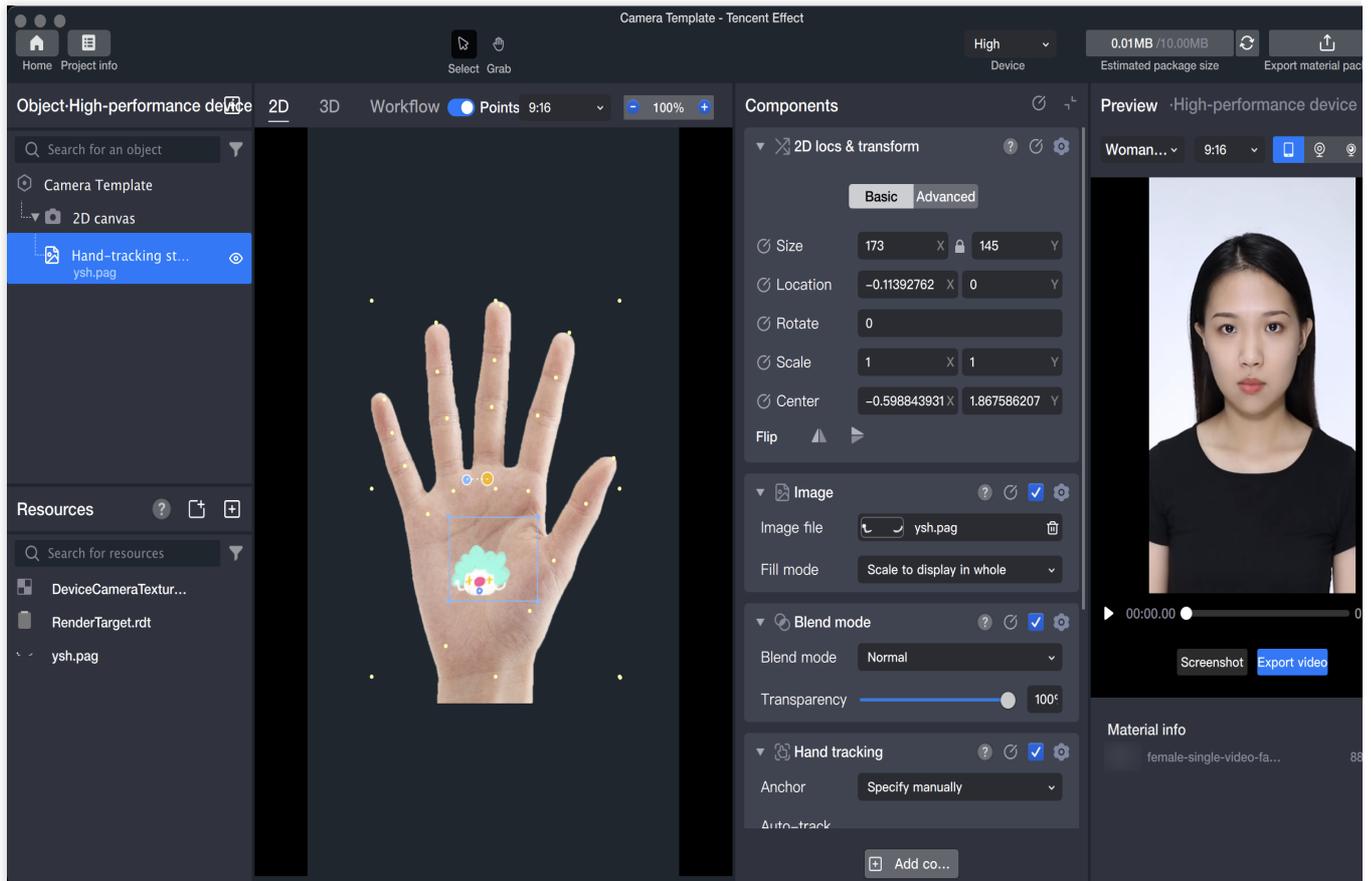


The resource panel will open immediately, select the file and confirm, the file will be added to the hand.



Step Four: Adjust Material

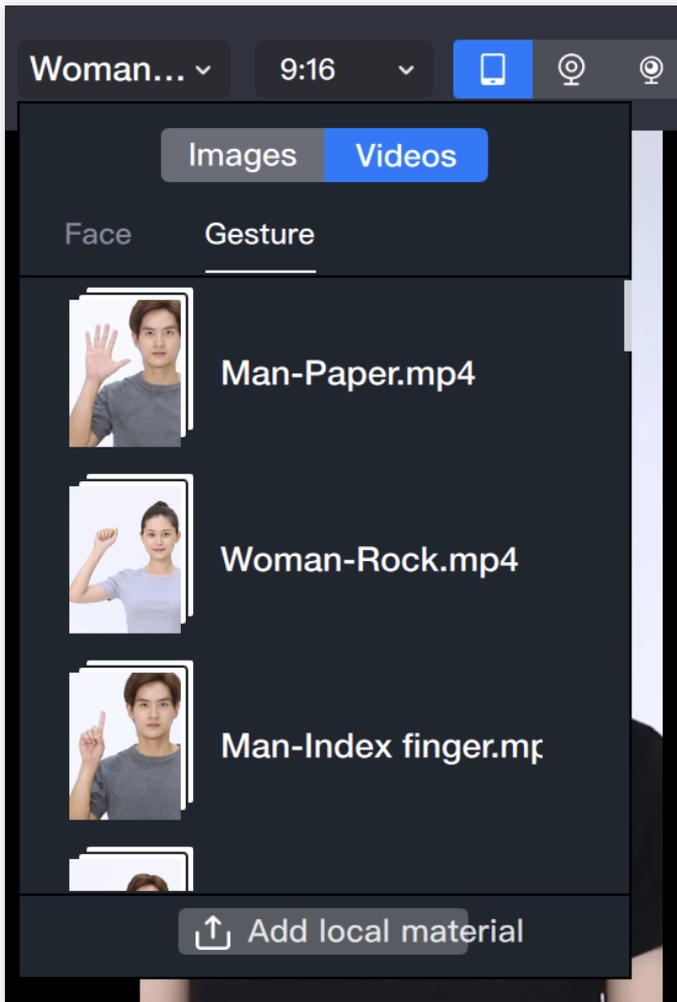
Gesture follow sticker supports binding two points by default, and binds two points by default. The binding points can be merged into one or split into two by dragging. The binding points represent the points bound when the shooting object moves. The points can be adjusted by dragging the yellow selected points on the panel, or by adjusting the component panel.

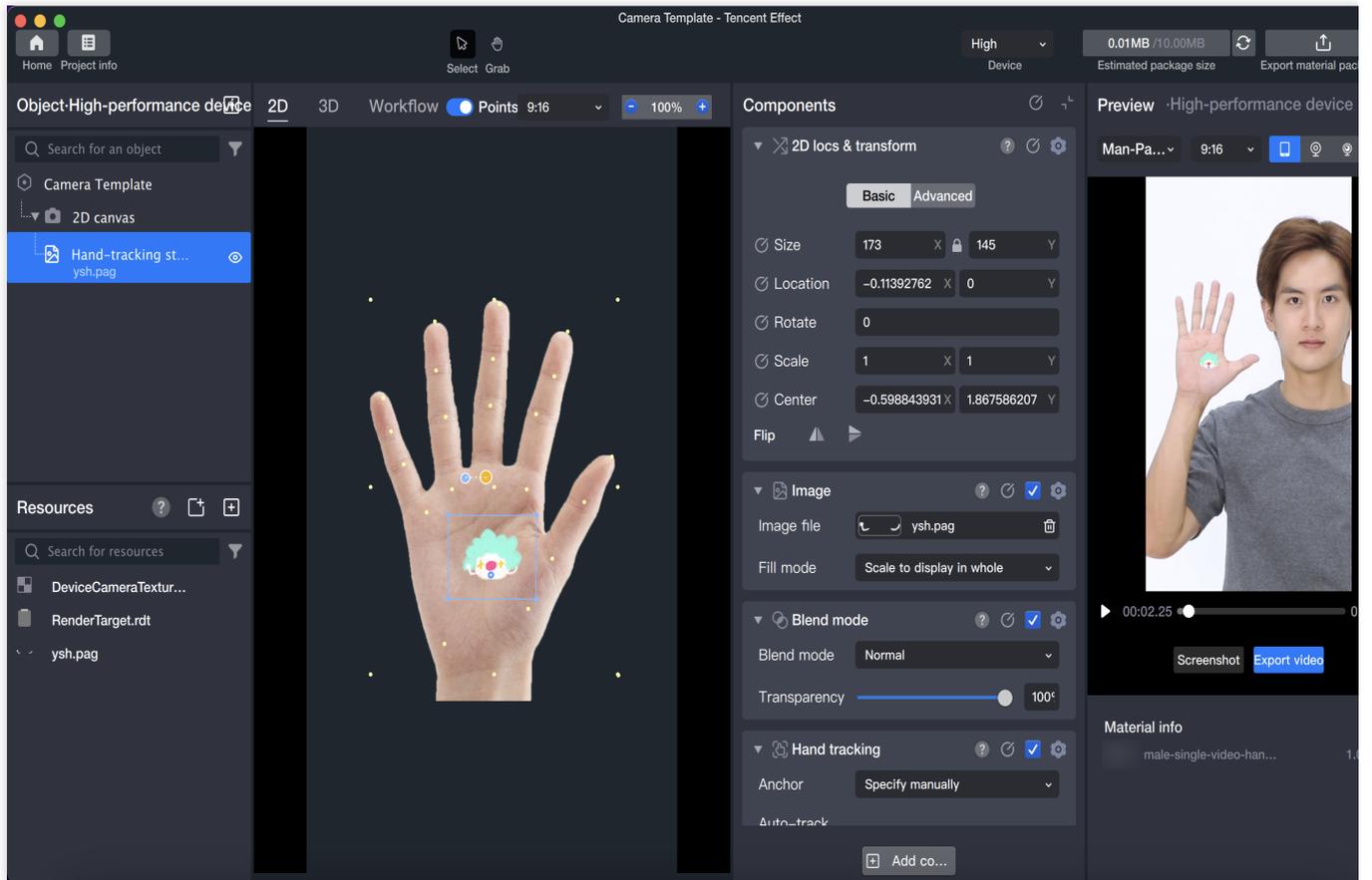


The sticker position can be adjusted through the **2D locs and Transformation** in the component panel, or by dragging in the scene panel to change the position, direction, and size. It should be noted that you need to select this object or its parent object in the object panel.

Step Five: Preview

To see the filter effect more intuitively, you need to change the preview image to a model with gesture action. Find the preview panel in the upper right corner, click the drop-down box, select Gesture, and choose an appropriate hand action.





After the settings are completed, you can start the preview.

Body Following

Last updated : 2024-03-22 18:45:44

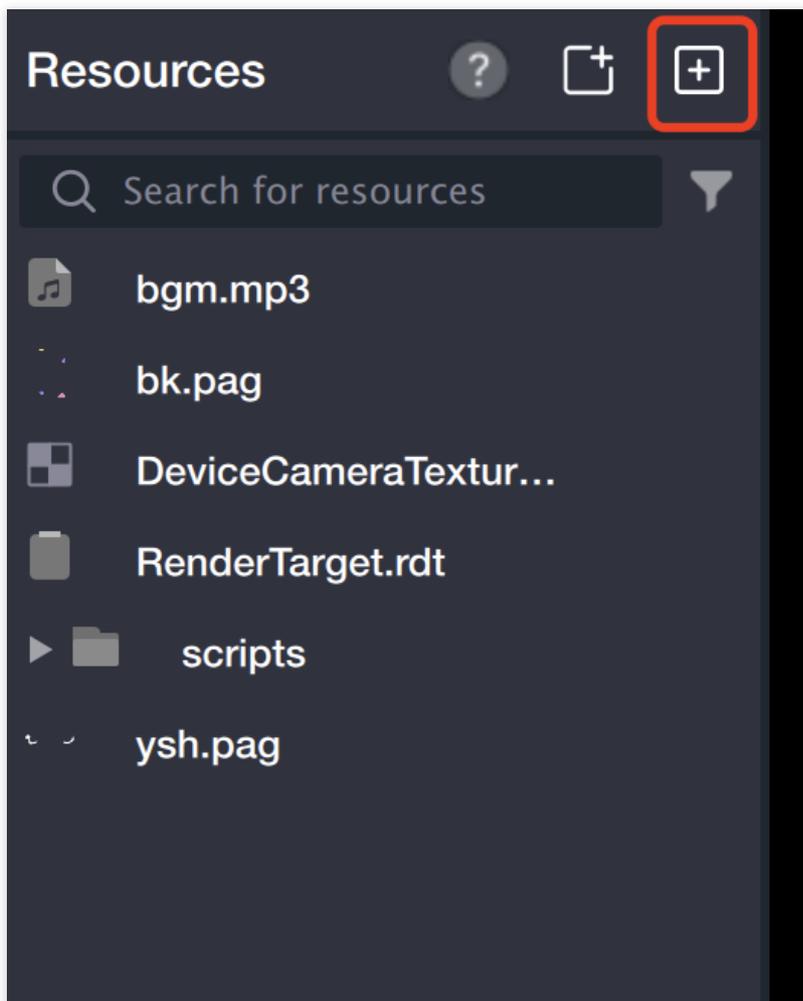
Concept Introduction

Body-following stickers are stickers that move with the body's movements during filming.

Basic Usage Method

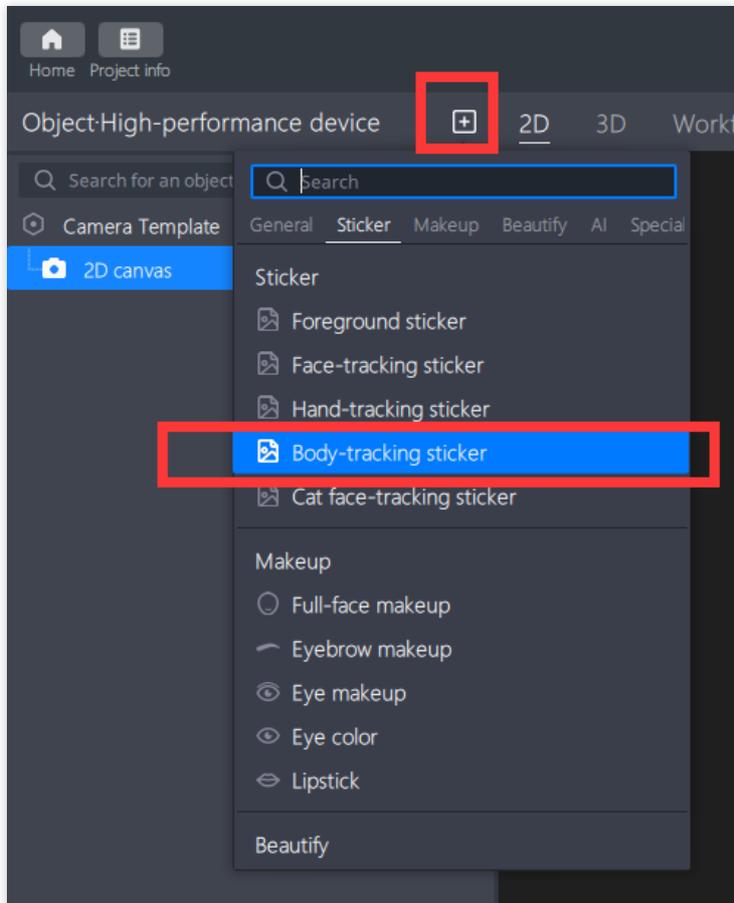
Step One: Import Texture File

Drag the texture file directly to the Resource Panel, or click the File Input Icon in the upper right corner of the Resource Panel, access the computer's local folder, and confirm the selection to import.



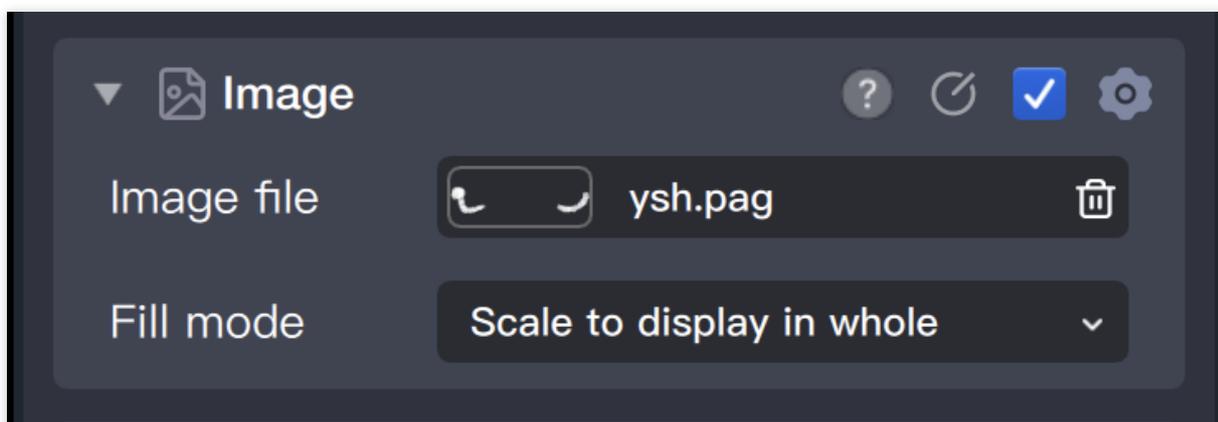
Step Two: Create Following Object

[Object] Panel > [+] Add > Body-following Stickers

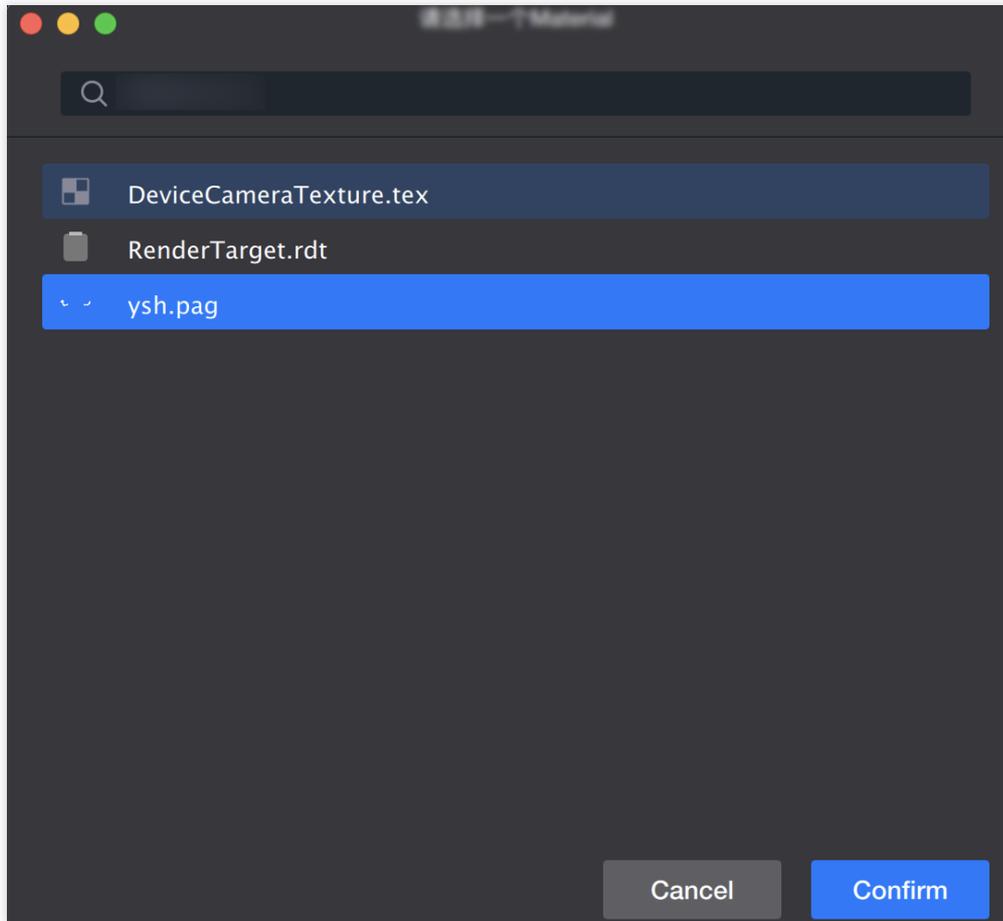


Step Three: Import Sticker File

Select the body following object in the left object panel, and find the [Sticker File] in the component panel on the right. Click on its file input box.

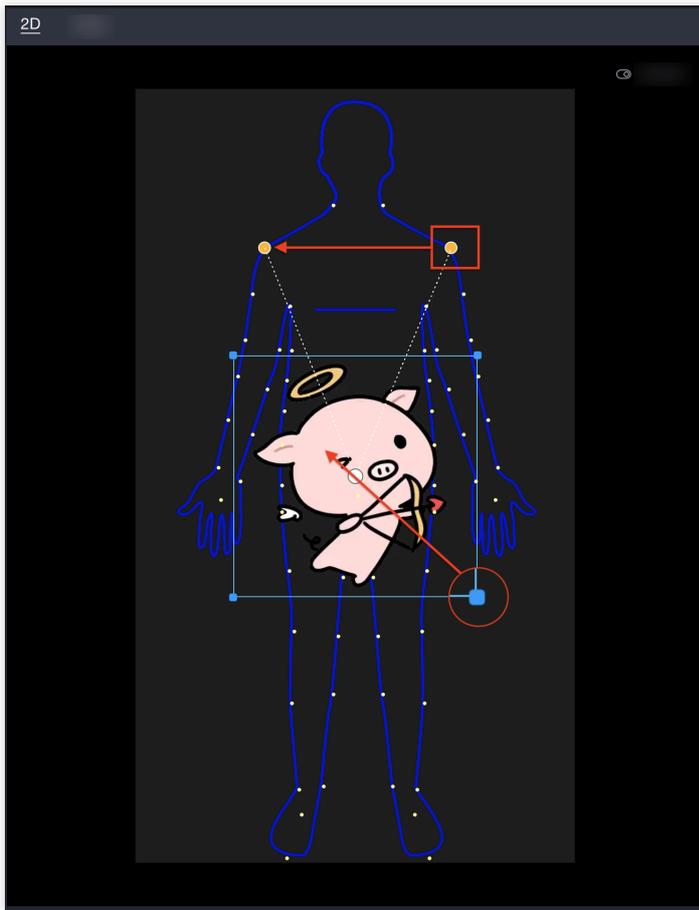


The resource panel will open immediately. Select the file and confirm, and the file will be added to the body.

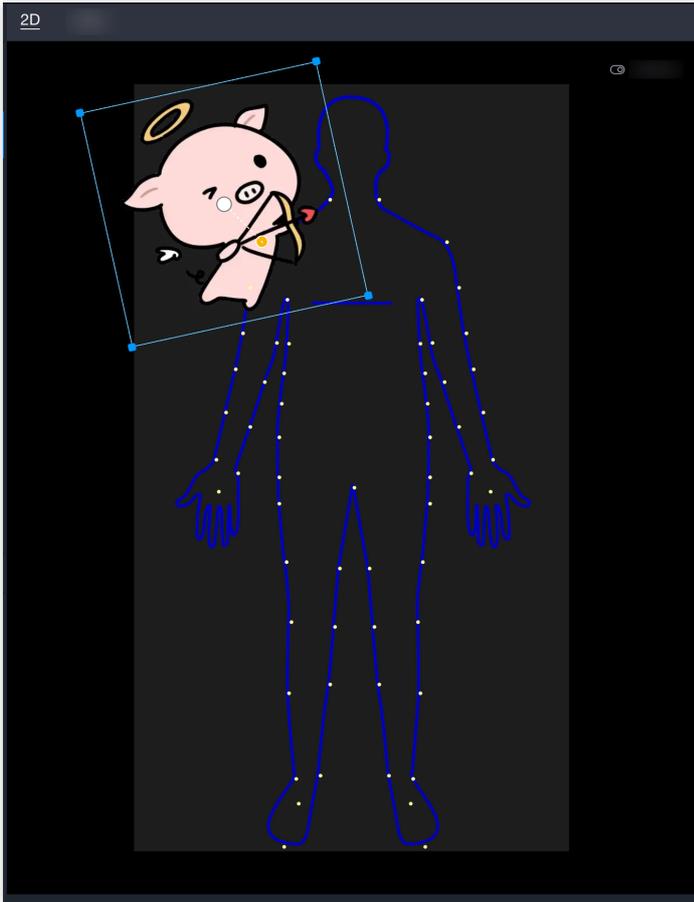


Step Four: Adjust Material

The body following sticker supports binding two points. By default, it binds two points. You can merge the binding points into one or split them into two by dragging the binding points. The bound points represent the points of the shooting object when it moves. The points can be adjusted by dragging the yellow selected point in the panel or by adjusting the component panel.



The sticker position can be adjusted through the [Position and Transformation] in the component panel, or by dragging in the scene panel to change the position, direction, and size. Please note that you need to select this object or its parent object in the object panel.



Cat Face Following

Last updated : 2024-03-25 11:43:19

Concept Introduction

To meet the needs of more gameplay, Tencent Effect can add stickers that recognize and follow cat faces.

Component Application

In the cat face tracking sticker, it is possible to implement a creepy gameplay by adding the cat owner's facial features to the cat face, or to add Disney eyes to the cat.

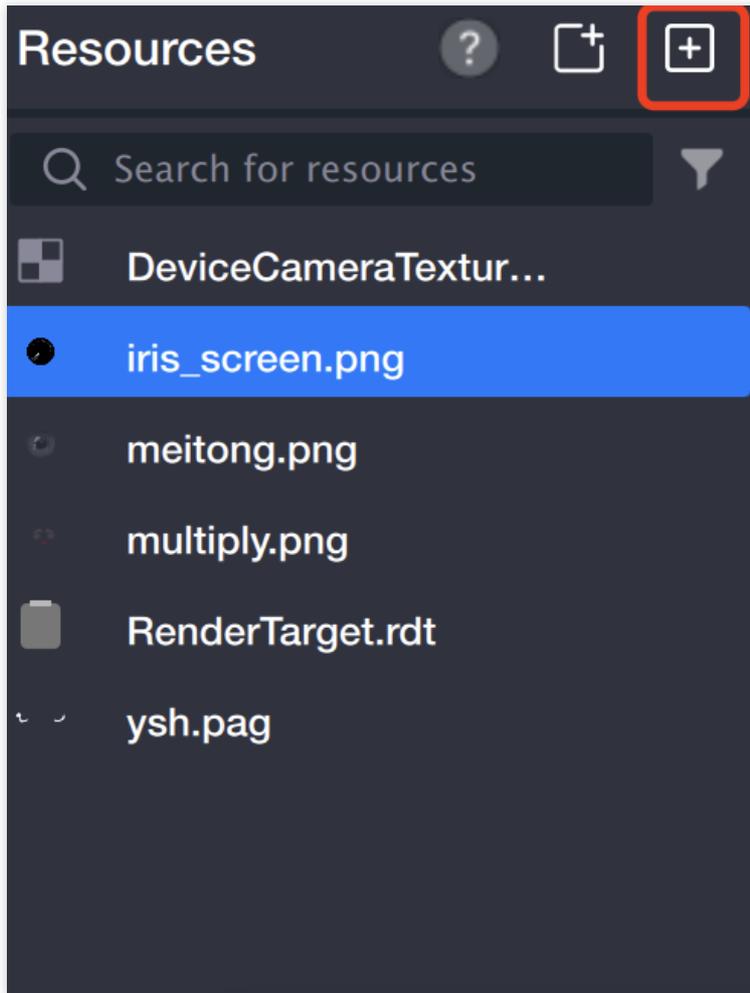




Basic Usage Method

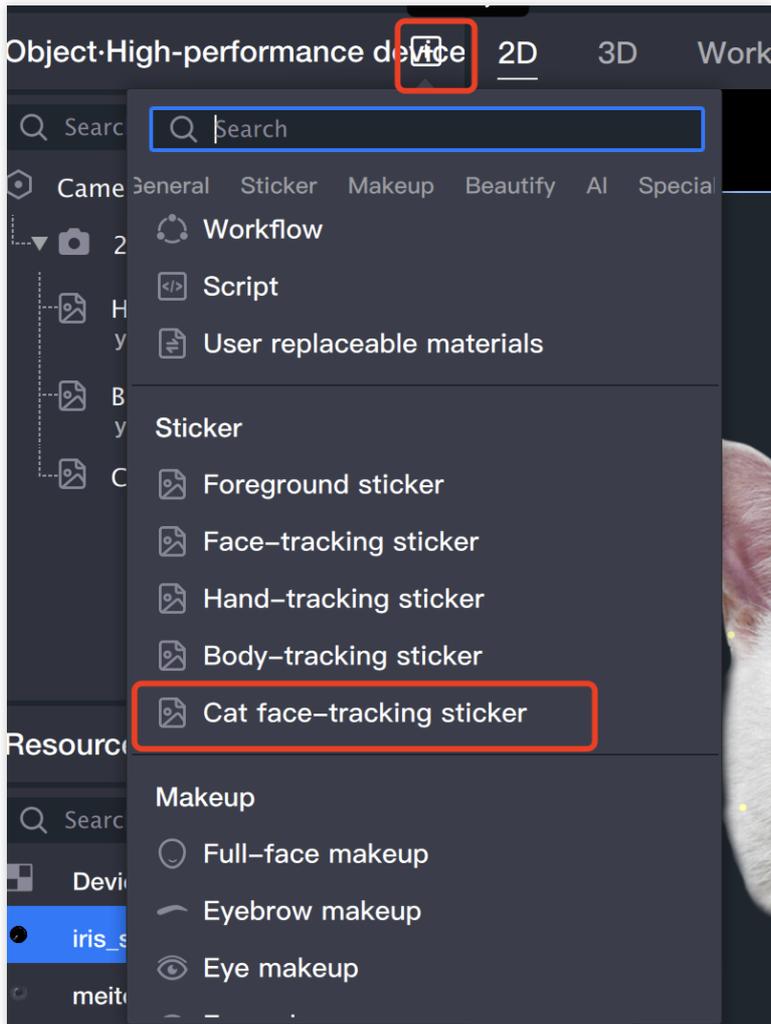
Step One: Import the sticker file

Drag the sticker file directly to the resource panel, or click the file input icon in the upper right corner of the resource panel, call up the local computer folder, and confirm after selecting.



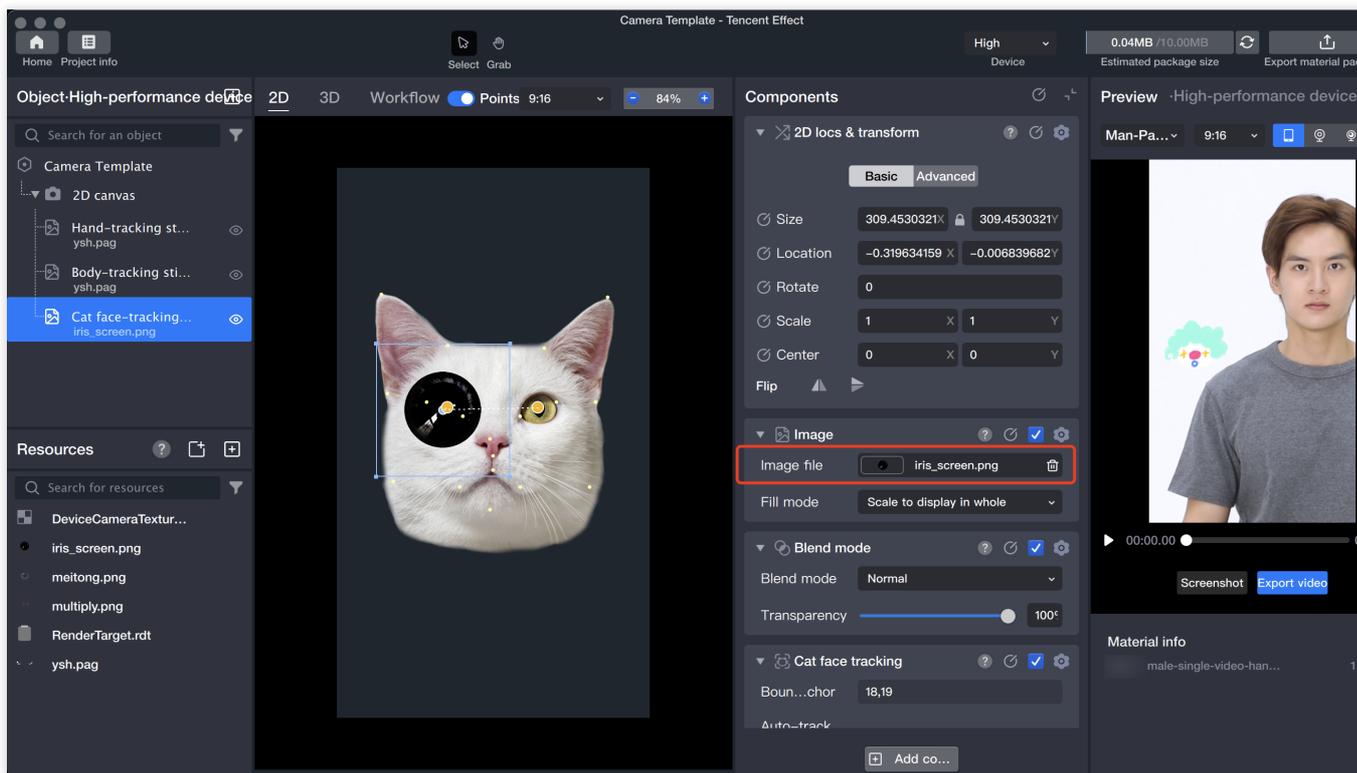
Step Two: Create Follow Object

Panel > Add > Cat Face Follow Sticker



Step Three: Import Sticker File

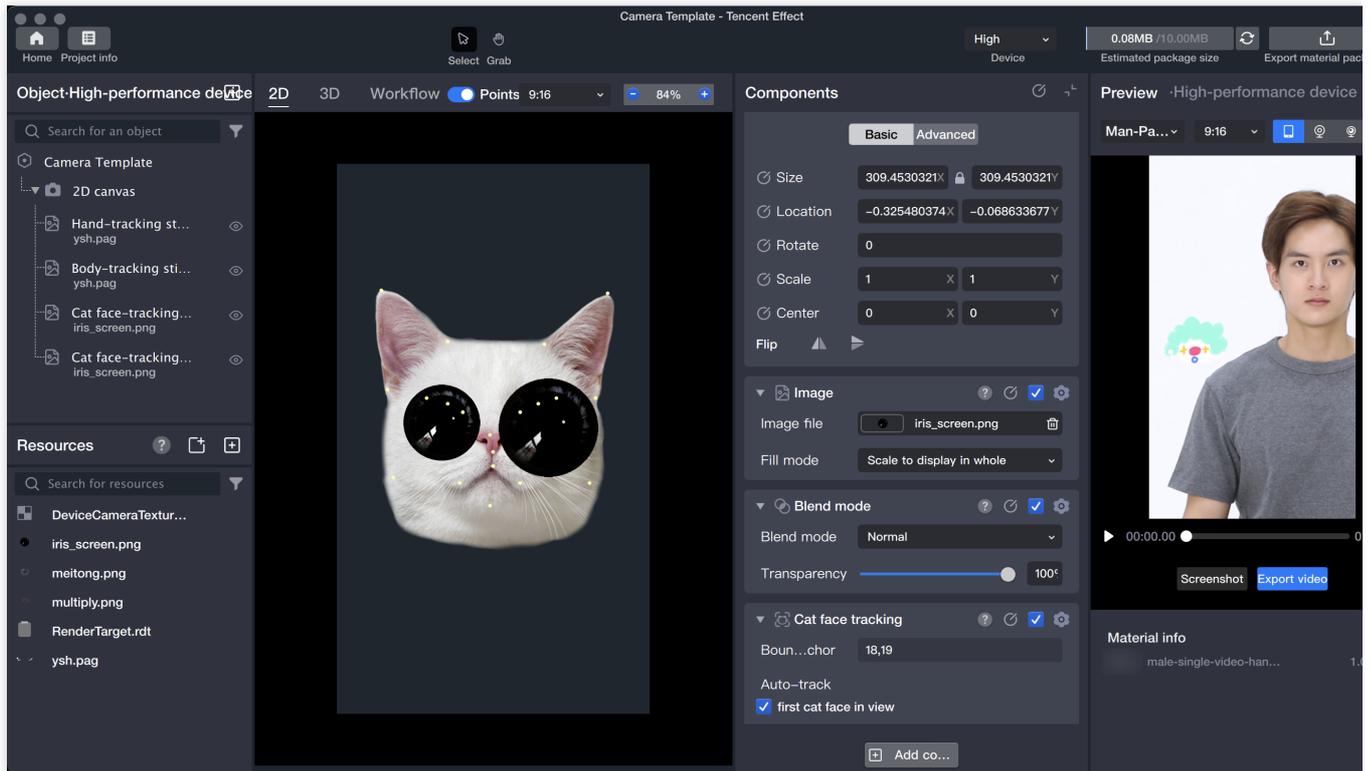
Select the body follow object in the left object panel, find the Sticker File in the component panel on the right, and click its file input box.



The resource panel will open, select the file and confirm, the file will be added to the cat face.

Step Four: Adjust Material

The cat face follow sticker supports binding two points by default, and binds two points by default. You can merge the binding points into one or split them into two by dragging the binding points. The bound points represent the points that the shooting object moves to when moving. The points can be adjusted by dragging the yellow selected point in the panel or by adjusting the component panel.



The sticker position can be adjusted through the Position and Transformation in the component panel, or by dragging in the scene panel to change the position, direction, and size. It should be noted that you need to select this object or the parent object in the object panel.

GAN Gameplay

Last updated : 2024-03-25 11:43:19

Introduction

GAN gameplay, that is, creating different presentation effects for the entire screen, such as the comic face effect.





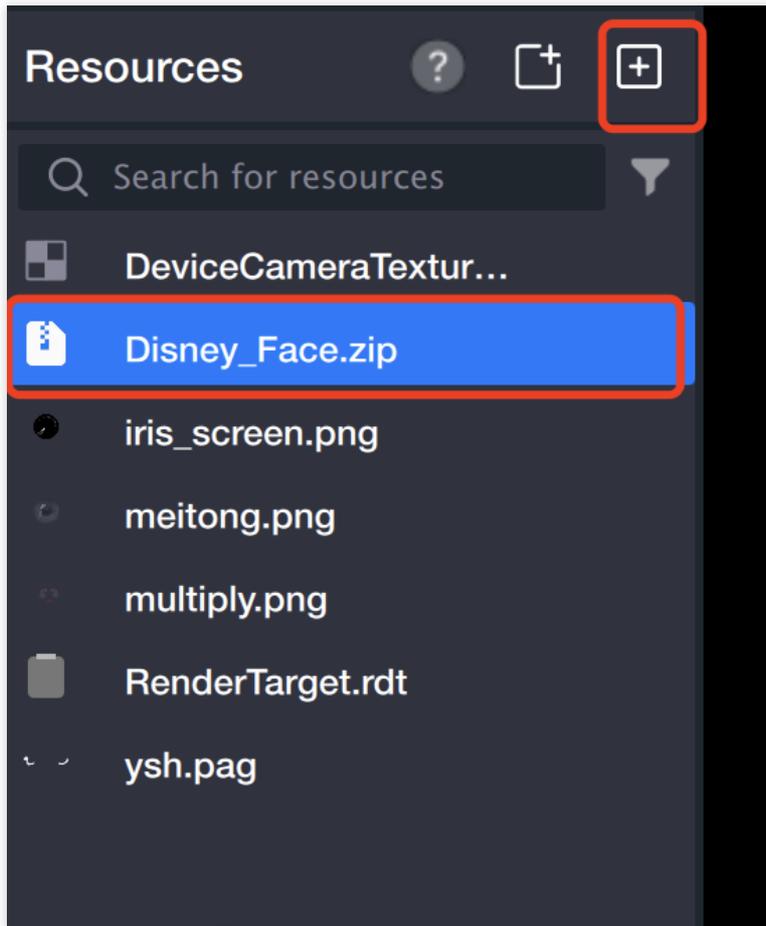
Original Effect

Add GAN

Basic Usage

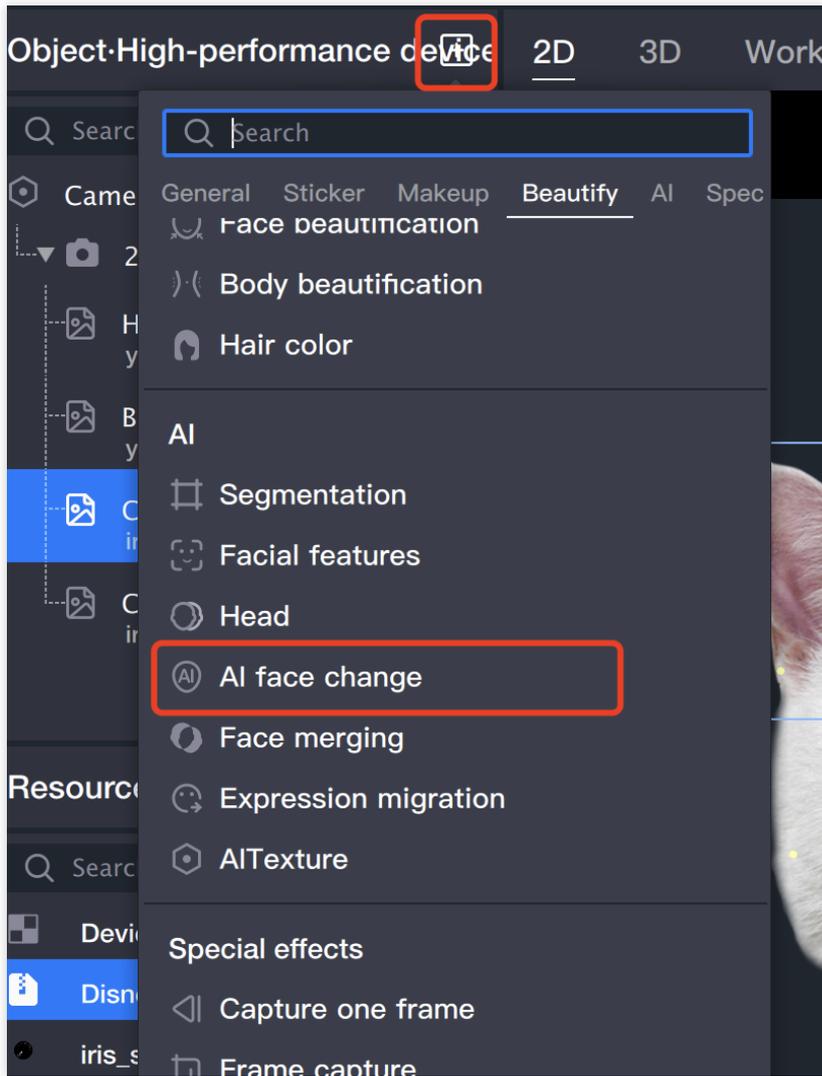
1. Import Materials

Import local material.

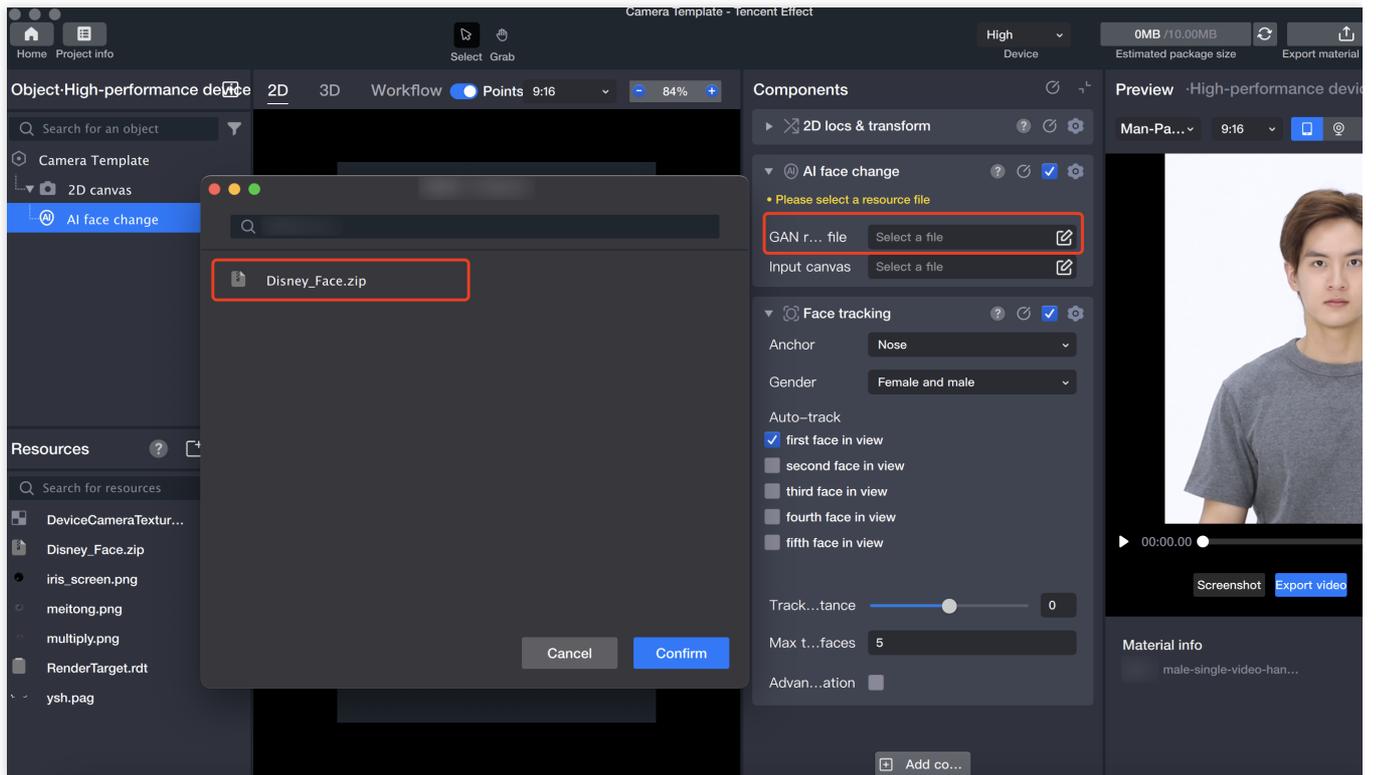


2. Create GA Object

Add **GAN** in the Object Panel.



3. Select GAN Resource File



4. Preview

Computer preview.



Background removal

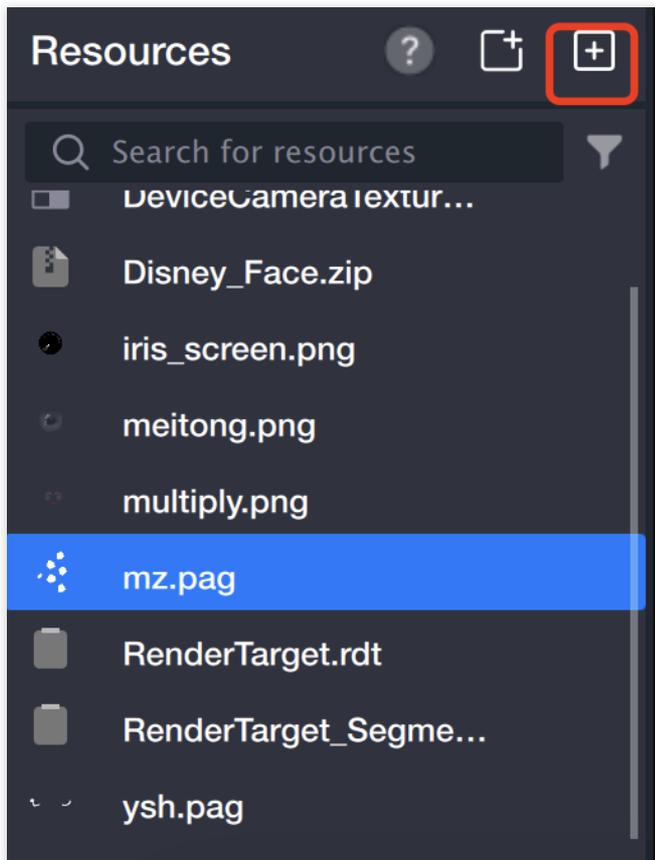
Last updated : 2024-03-25 11:43:19

Introduction

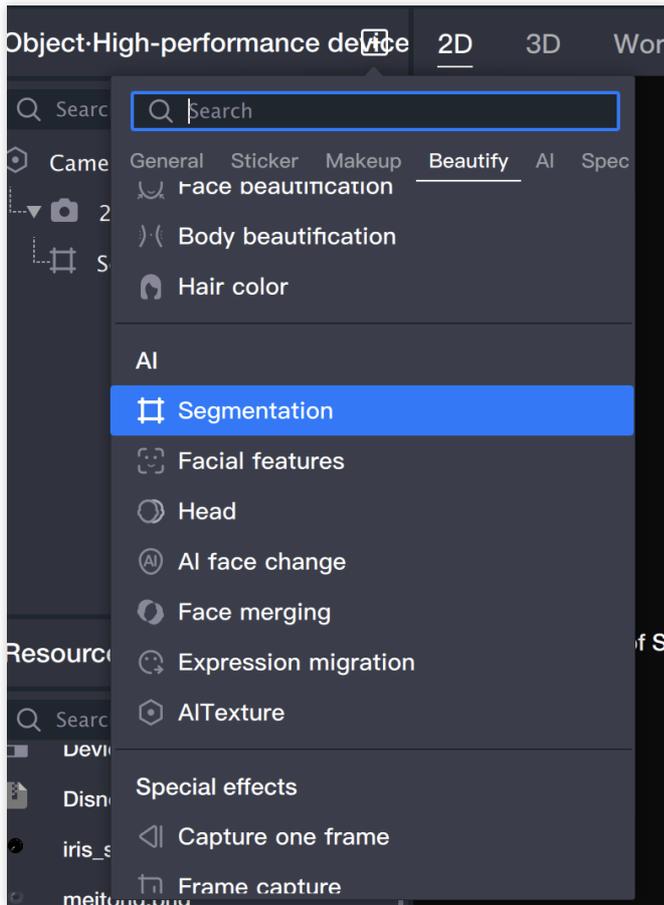
Background removal, that is, separating the main character and the background in images or videos to obtain images with clear boundaries of the main character. For example, portrait matting in PhotoShop is a simple application of matting. Tencent Effect integrates AI algorithms to perform real-time matting on video streams.

Basic Usage

1. Import materials

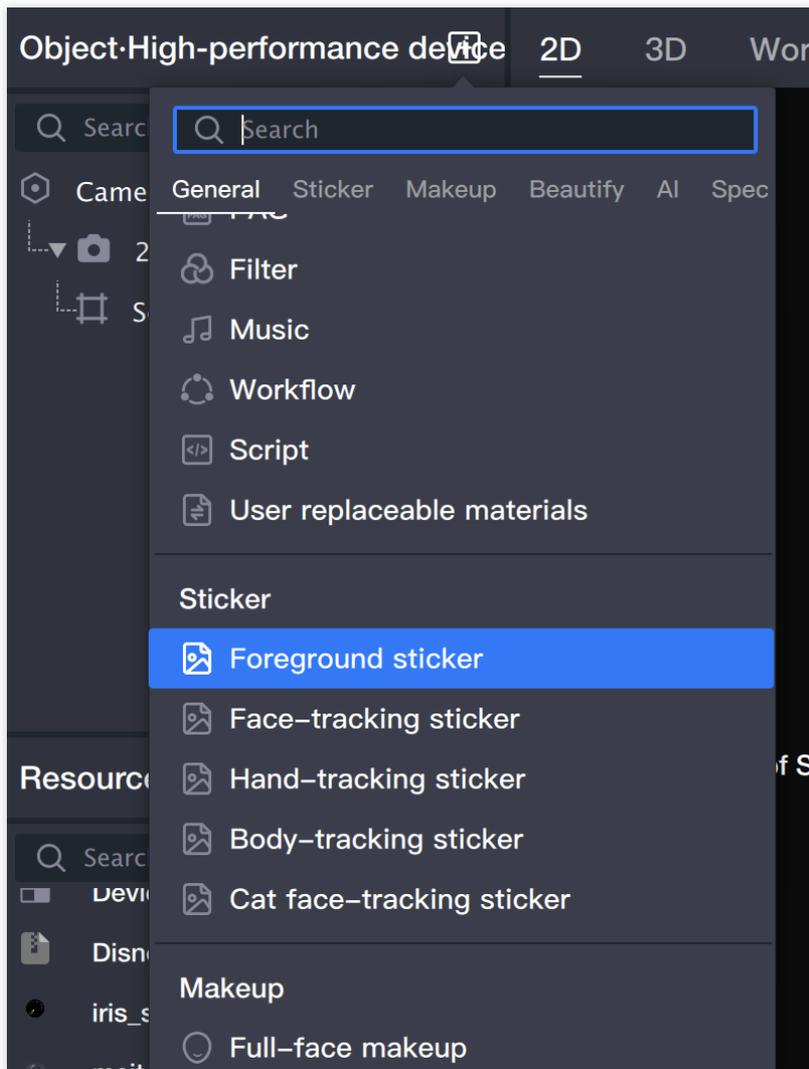


2. Create segmentation object



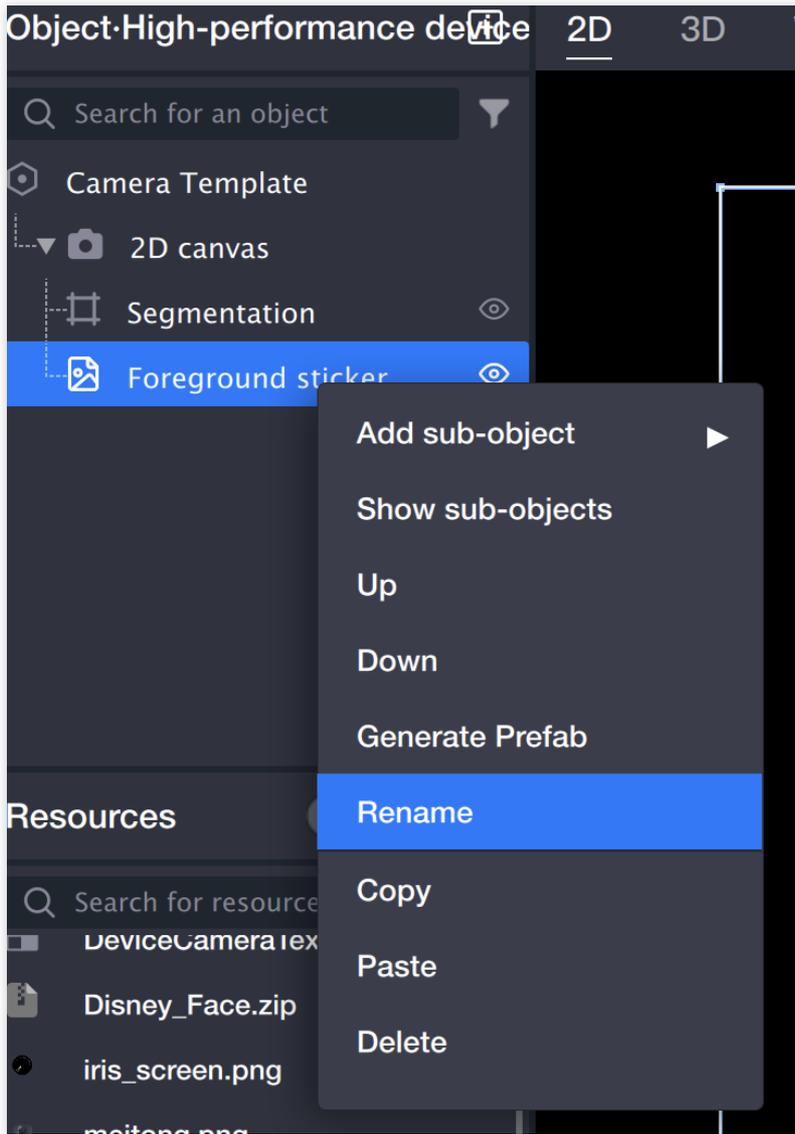
3. Add background

3.1 Add foreground sticker (the foreground sticker added here is the background).

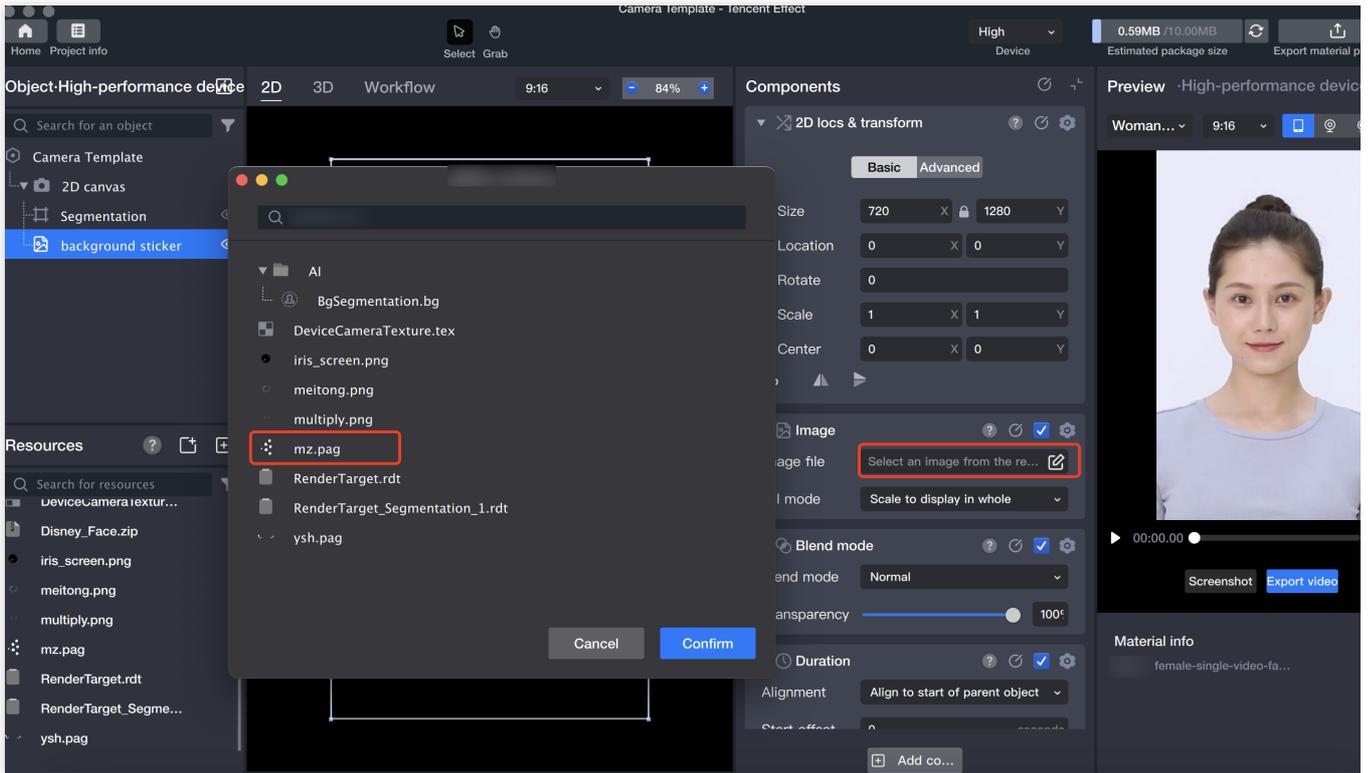


3.2 Rename the foreground sticker to "background sticker": right-click on the **Foreground sticker**, and click Rename.

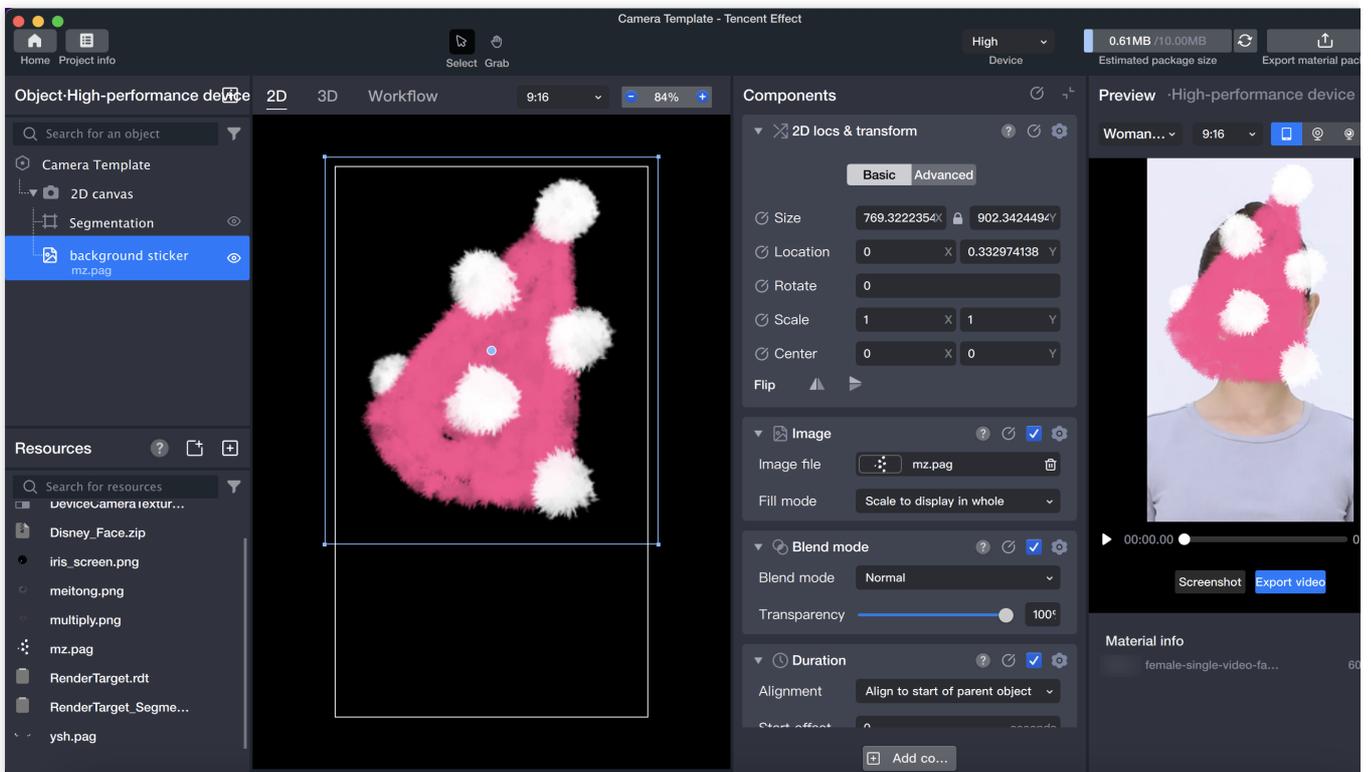
(This sticker is the background, making it easy to distinguish from the foreground stickers added later.)



3.3 Select sticker file: When the background sticker is selected, click on the image file, and choose the sticker file in the pop-up window.

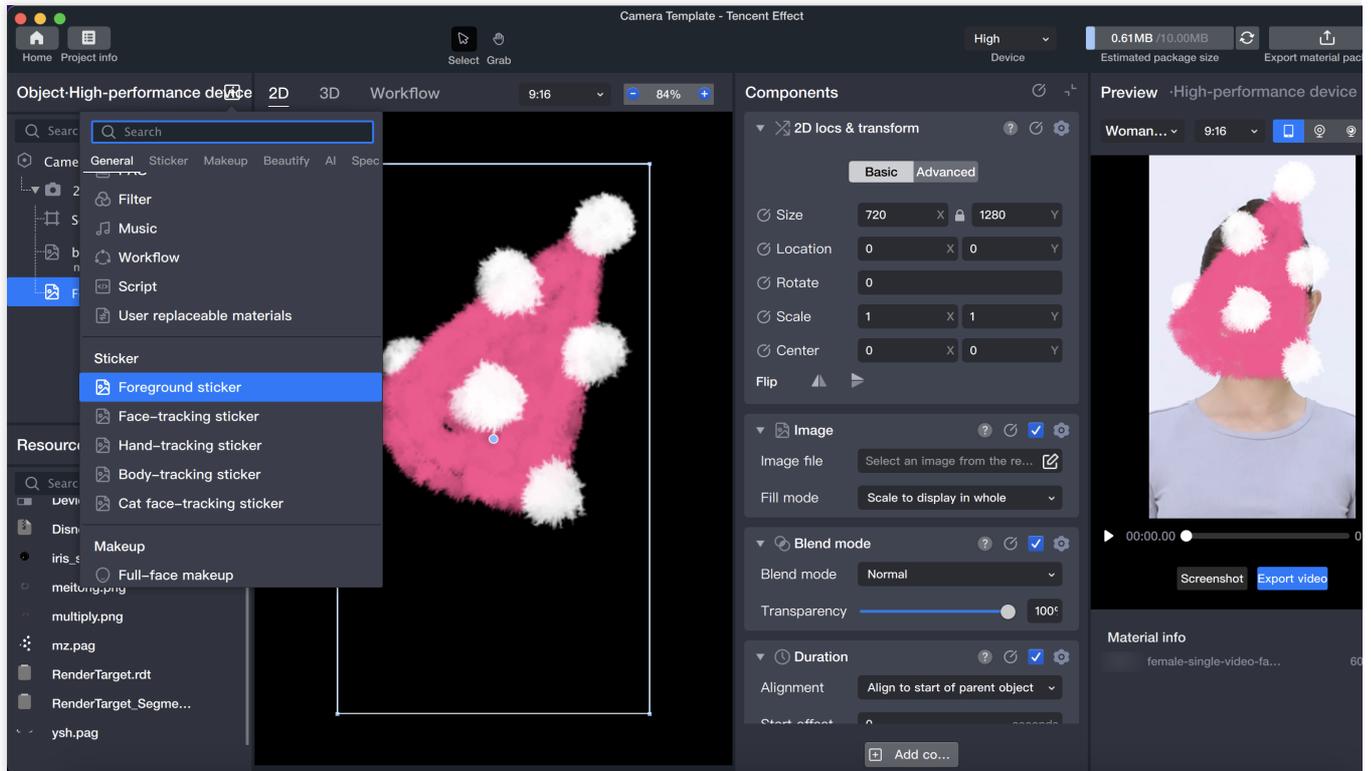


3.4 Adjust the background position and size.



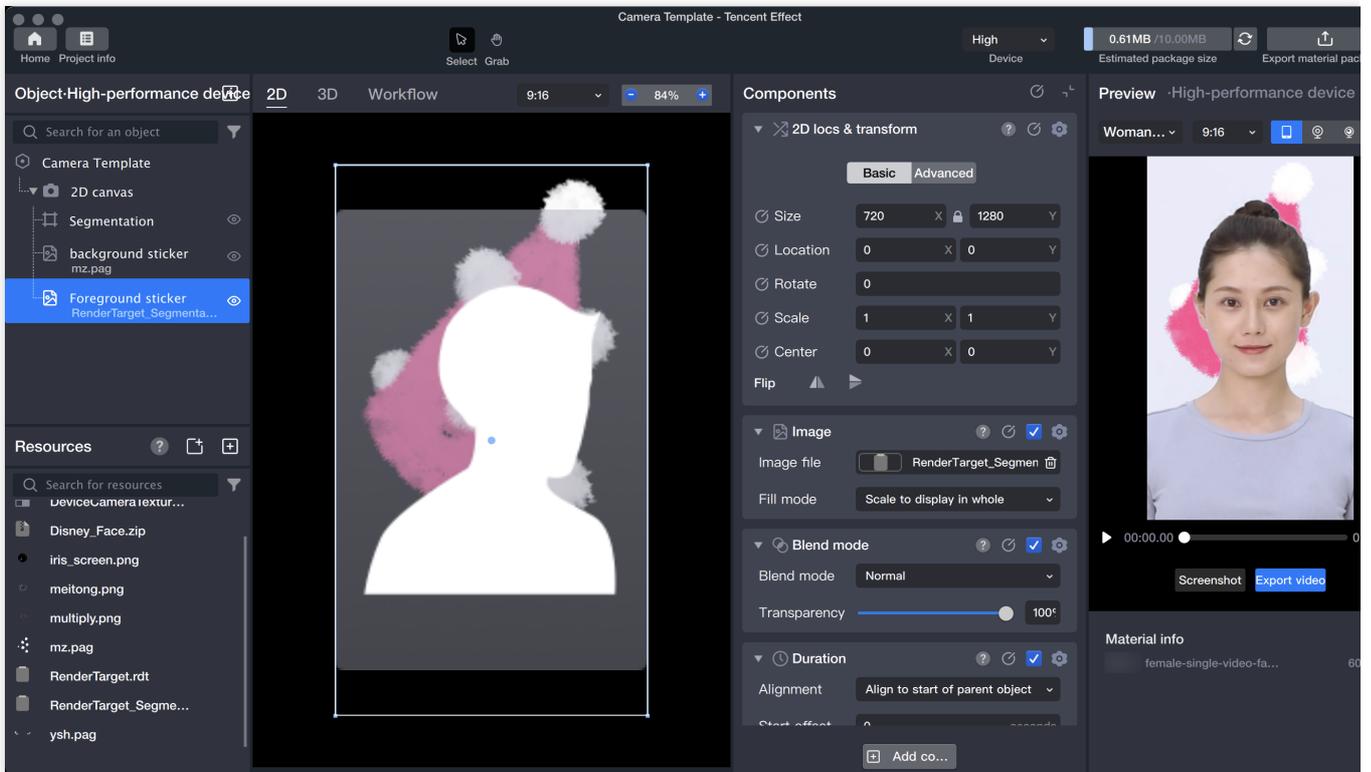
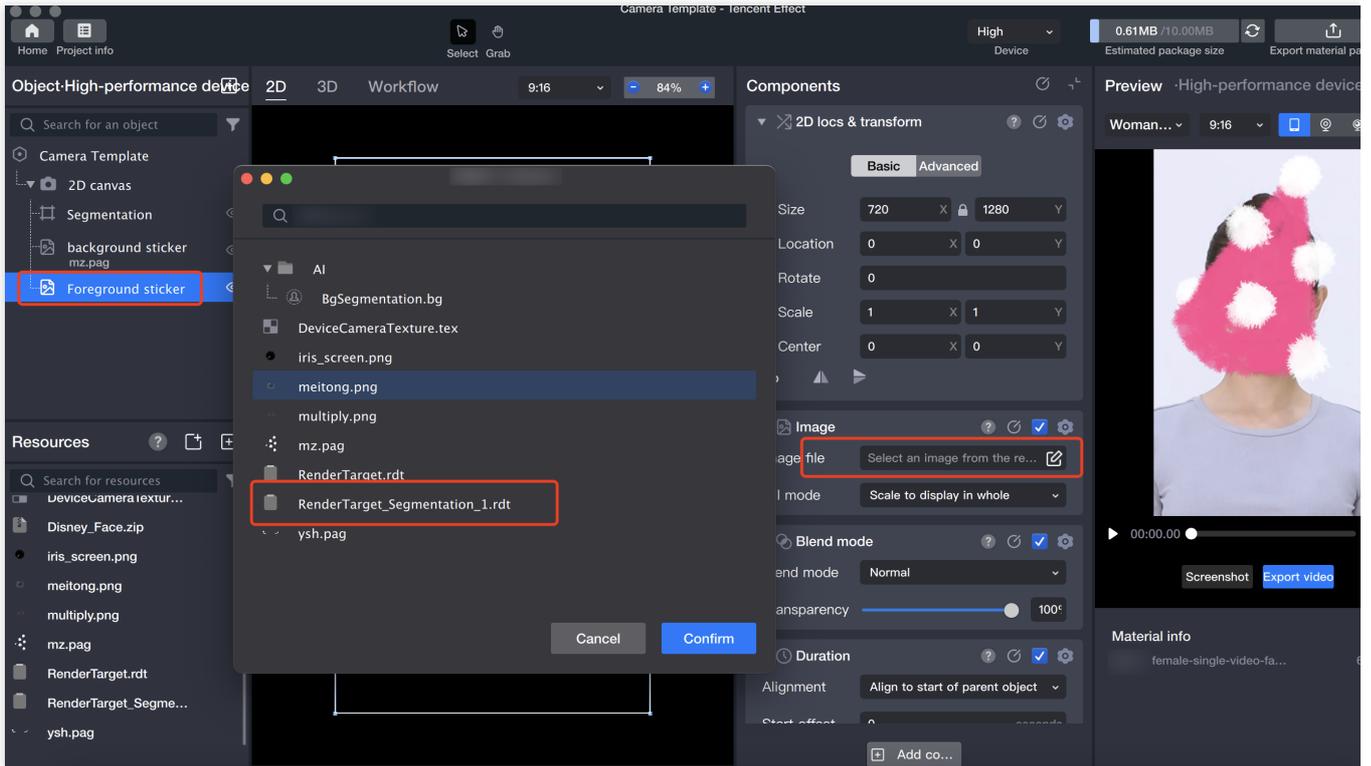
4. Add foreground

4.1 Add foreground sticker object.



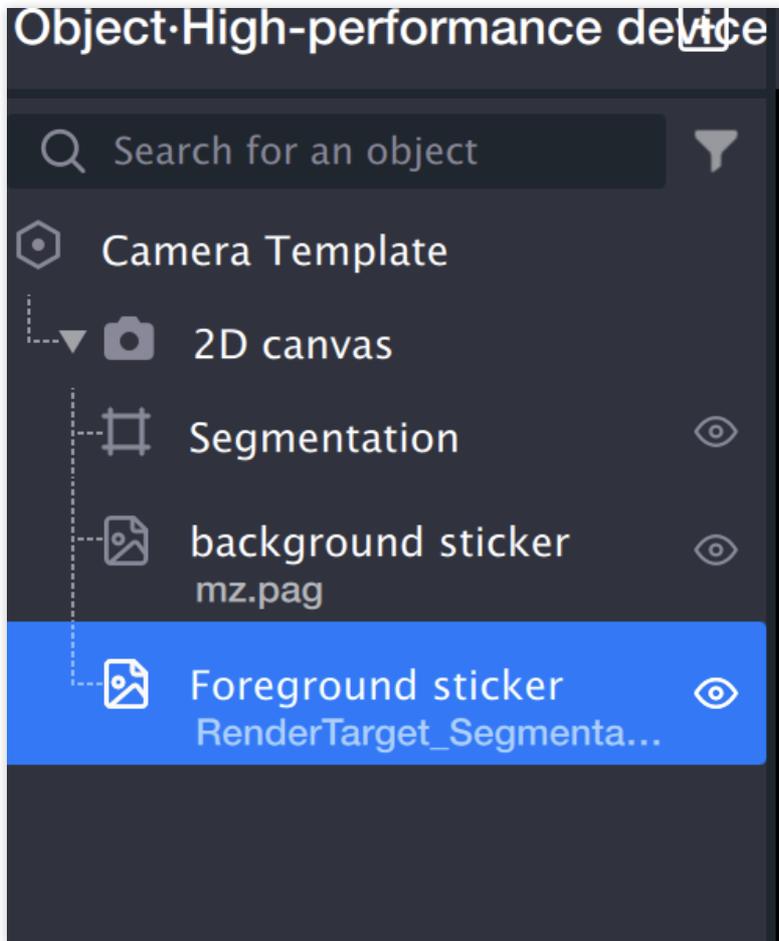
4.2 Select sticker file: Select the foreground sticker, click on the image file, and choose RenderTarget_Segmentation_1.rdt file.

(The RenderTarget_Segmentation_1.rdt file is generated when creating a segmentation object, which displays the separated portrait of the foreground.)



5. Adjust layer order

The order of the layers determines the rendering order. Adjust the layer order from top to bottom, in the order of segmentation capability, background sticker, and foreground sticker.



6. Preview



Hair Dyeing

Last updated : 2024-03-22 18:45:44

Introduction

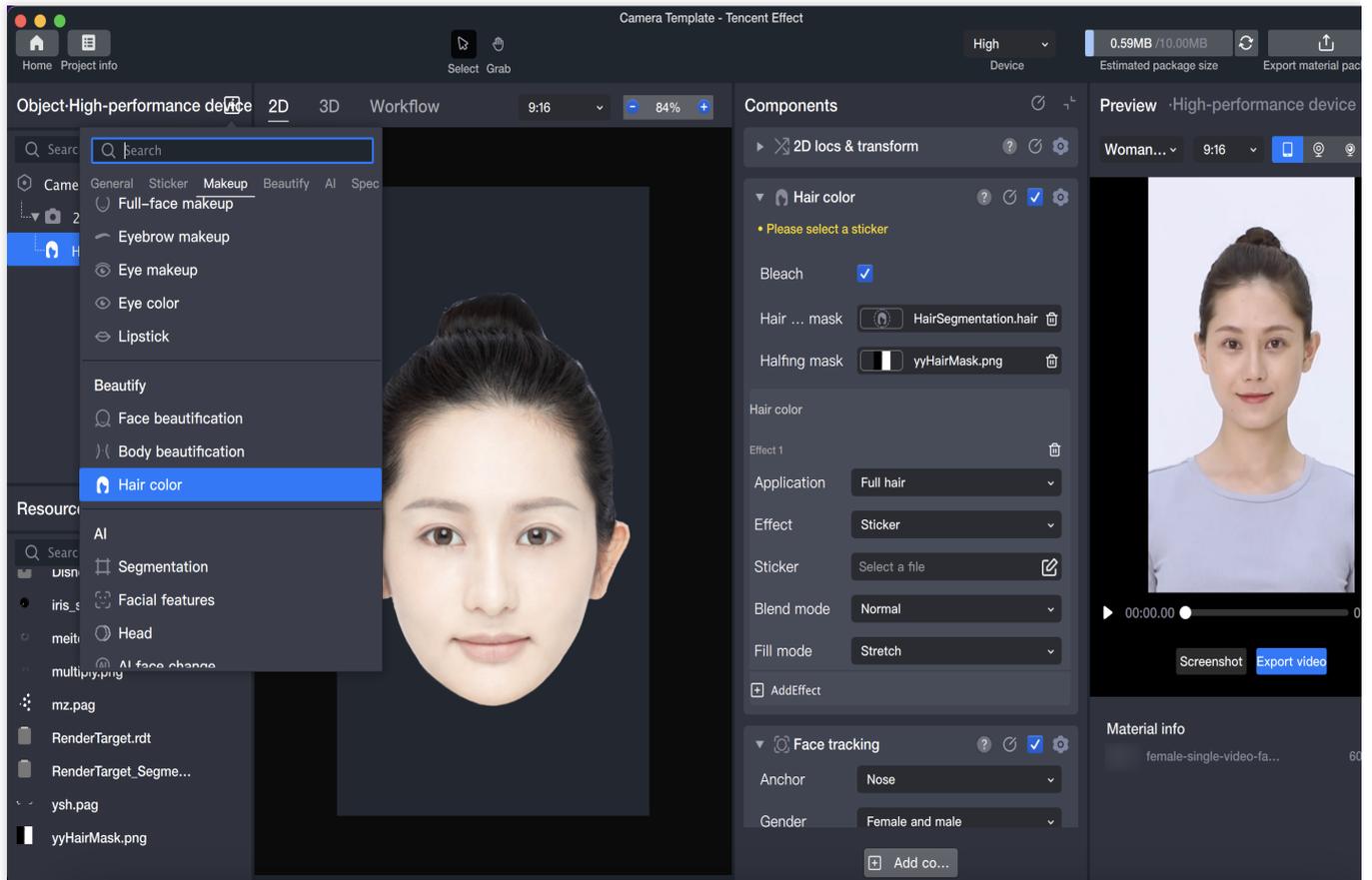
Hair dyeing, which separates the hair of the shooting object and dyes or adds special effects to specific hair areas. Through the segmentation function in hair dyeing, the hair can be dyed in different colors. Tencent Effect can also automatically add hair segmentation mask and yin-yang segmentation mask, which can quickly achieve the hair dyeing effect of the full head, left half of hair, or right half of hair.

Basic Usage

1. Create a hair dyeing object

1.1 Add hair dyeing in the object/component panel;

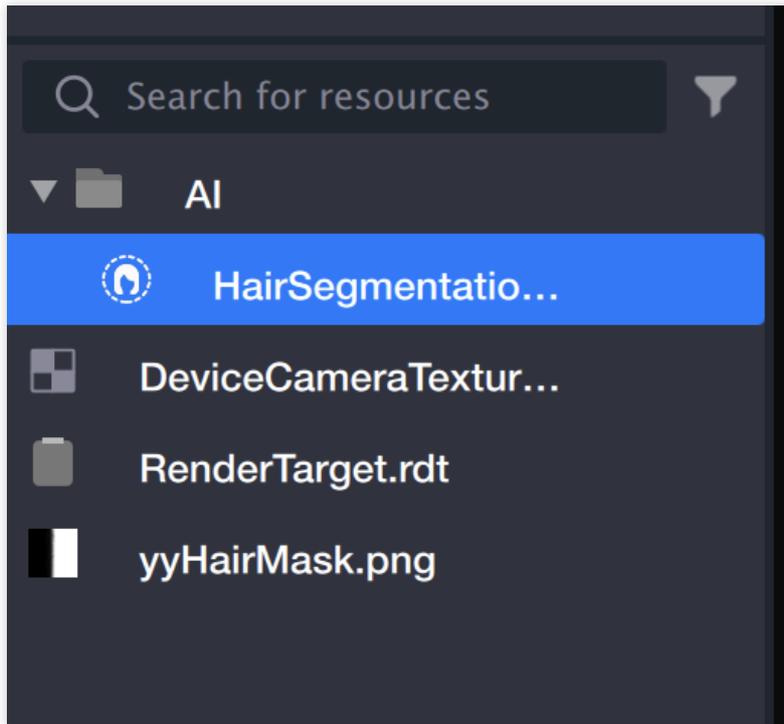
Adding hair dyeing is similar to adding human body segmentation ability. It does not add a layer, but adds an ability block. This ability can process the content input by the camera and output the result. We can use these output results for further processing.



1.2 After adding the hair dyeing ability, two files will be added to the **Resource** window.

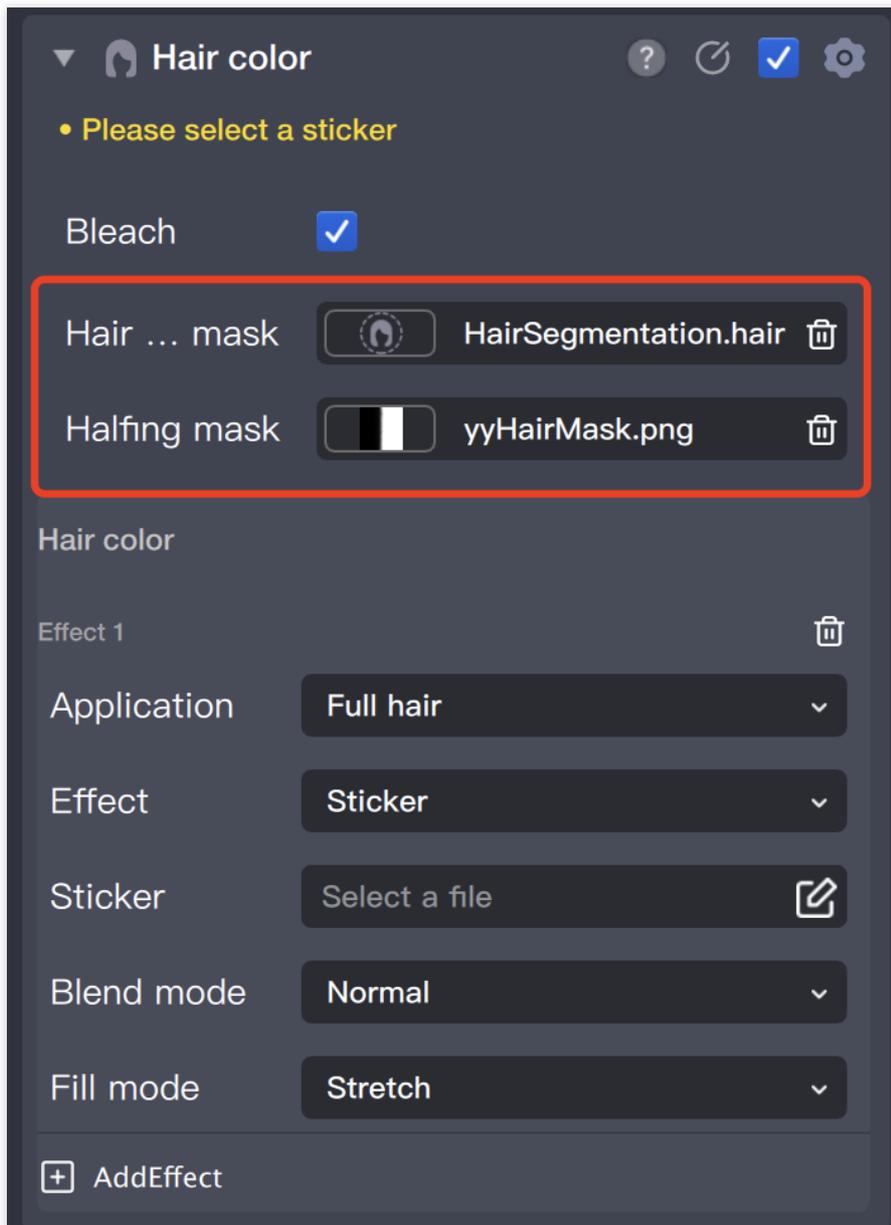
HairSegmentation.hair: After adding the hair dyeing component, a mask that recognizes the full head of hair will be added.

yyHairMask.png: Based on the recognition of the full head of hair, yyHairMask will divide the hair into left and right halves.



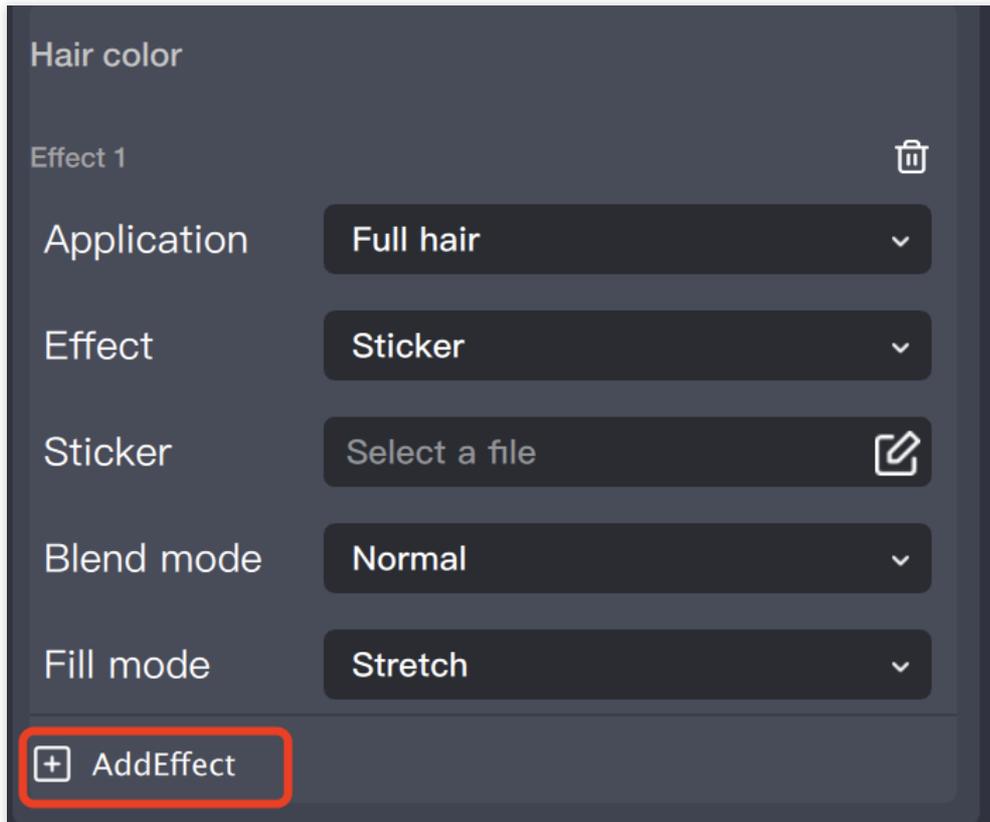
1.3 The files will be automatically filled in the corresponding file input box in the component panel.

If there are special requirements, you can add the mask file to the resource panel yourself and then import the file selection box.

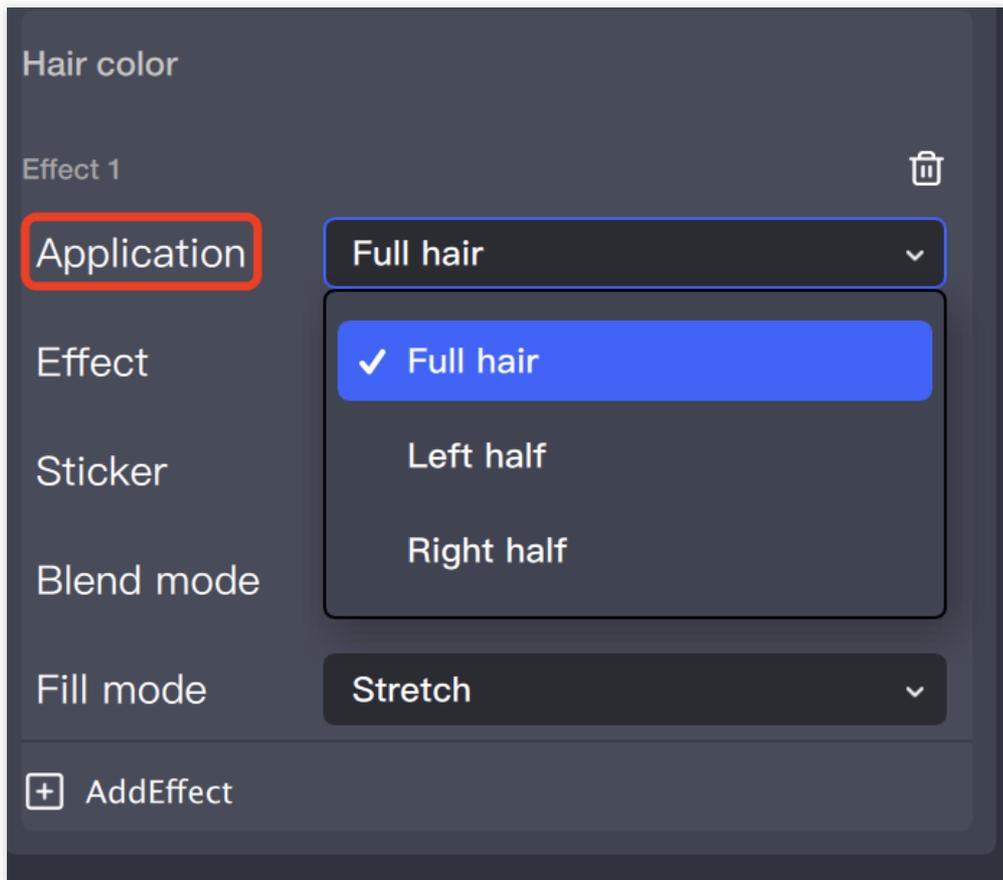


2. Configure hair dyeing parameters

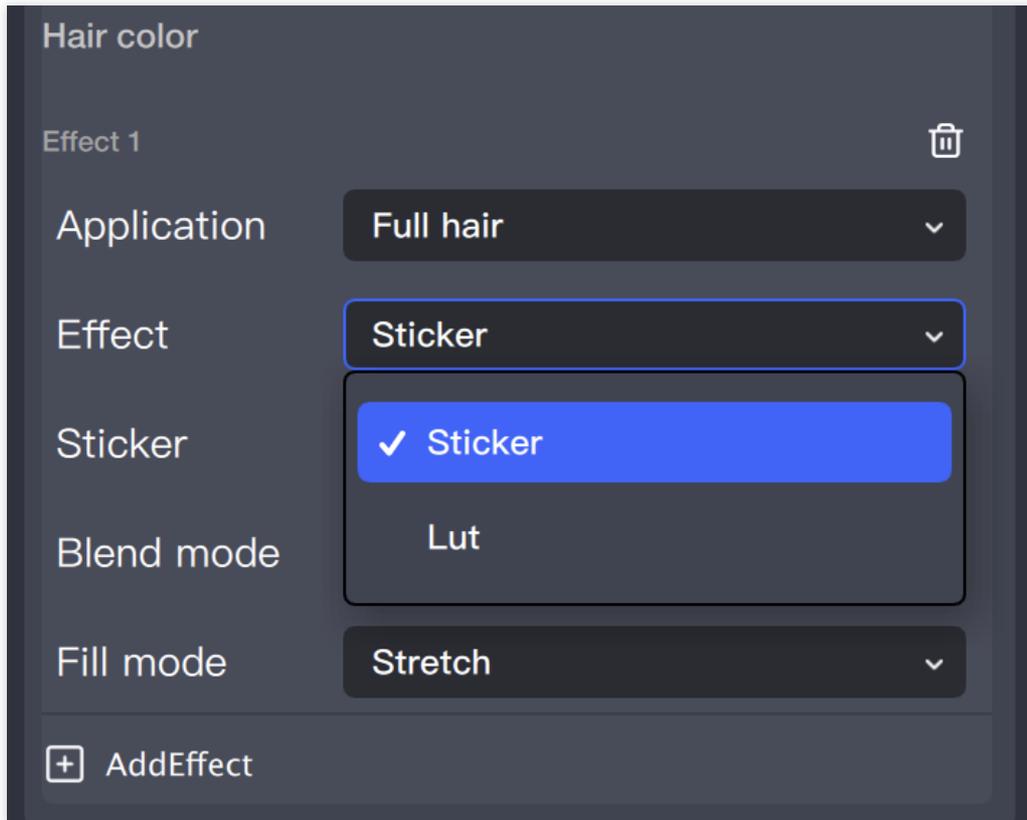
After adding the hair dyeing object, the component will enable a hair dyeing effect by default. Hair dyeing effects can be added and deleted repeatedly.



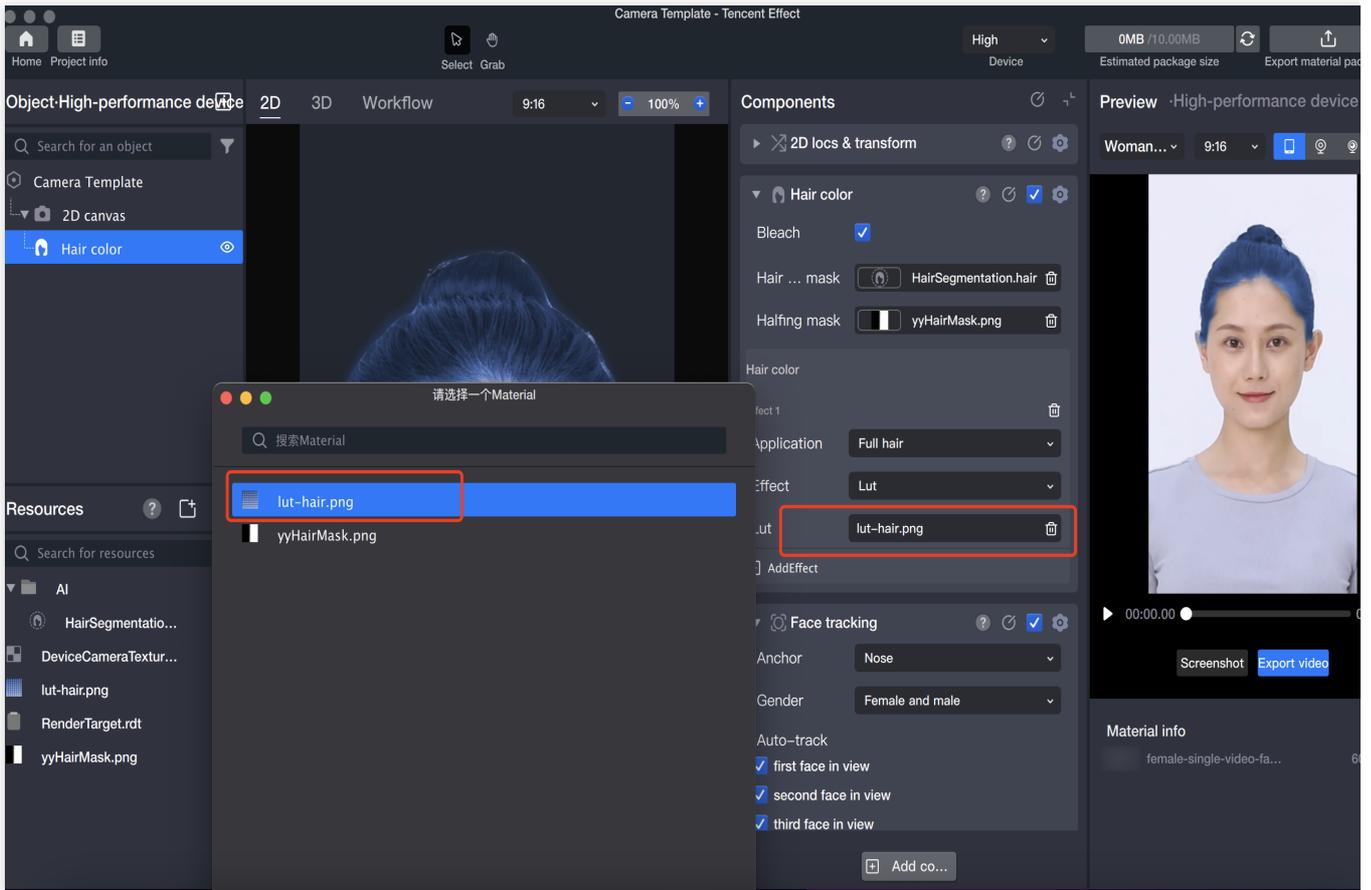
The hair dyeing area provides three options: full head, left half, and right half, to achieve regional hair dyeing.

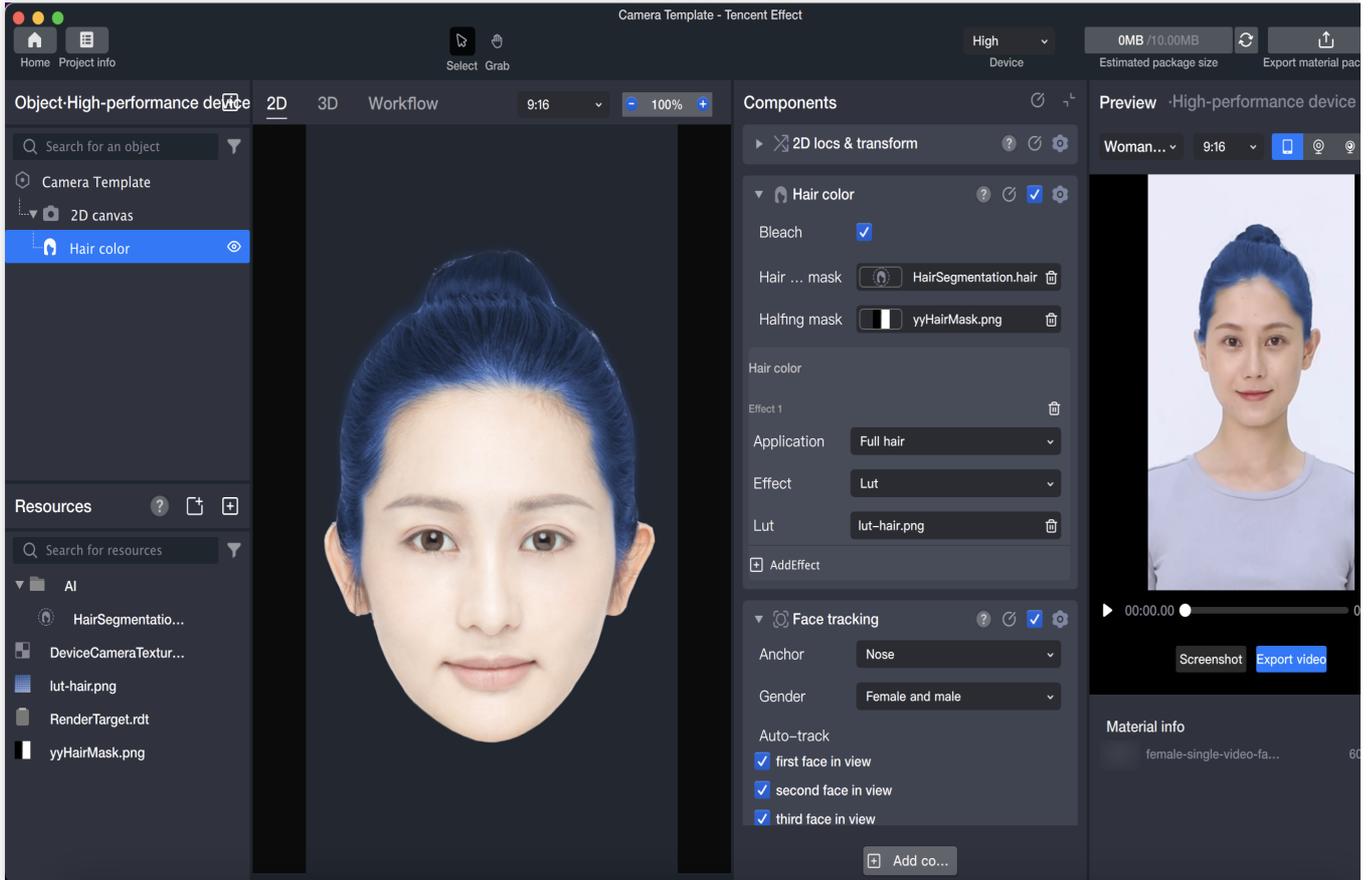


Hair dyeing effects are divided into stickers and Lut. After selecting one, the corresponding input box and corresponding parameters will appear. Sticker files include JPG, PNG, PAG, and other common texture materials.



Import a lut-hair file, and Click the lut box to configure the effect.





Selecting Facial Features

Last updated : 2024-03-22 18:45:44

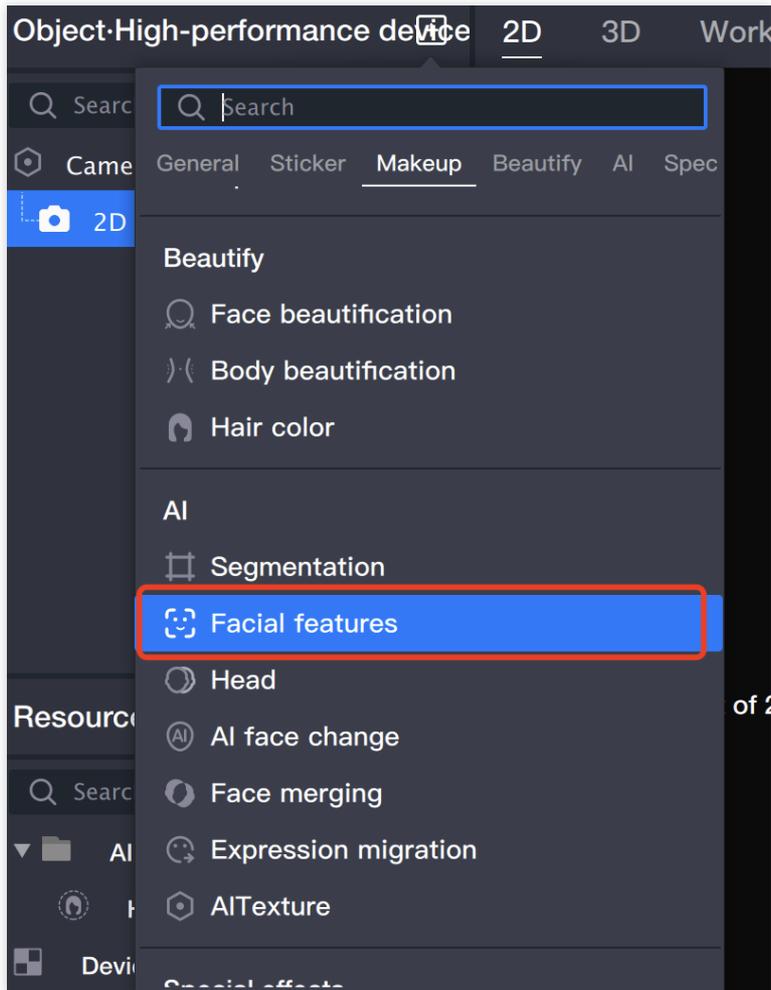
Introduction

Select facial features, that is, separate specific facial features from the face, and obtain images with clear boundaries of the selected facial features. You can add the selected facial features to any position on the canvas to achieve some interesting and weird effects, such as adding eyes to the middle of the forehead, or extending the palm to show the photographer's facial features.

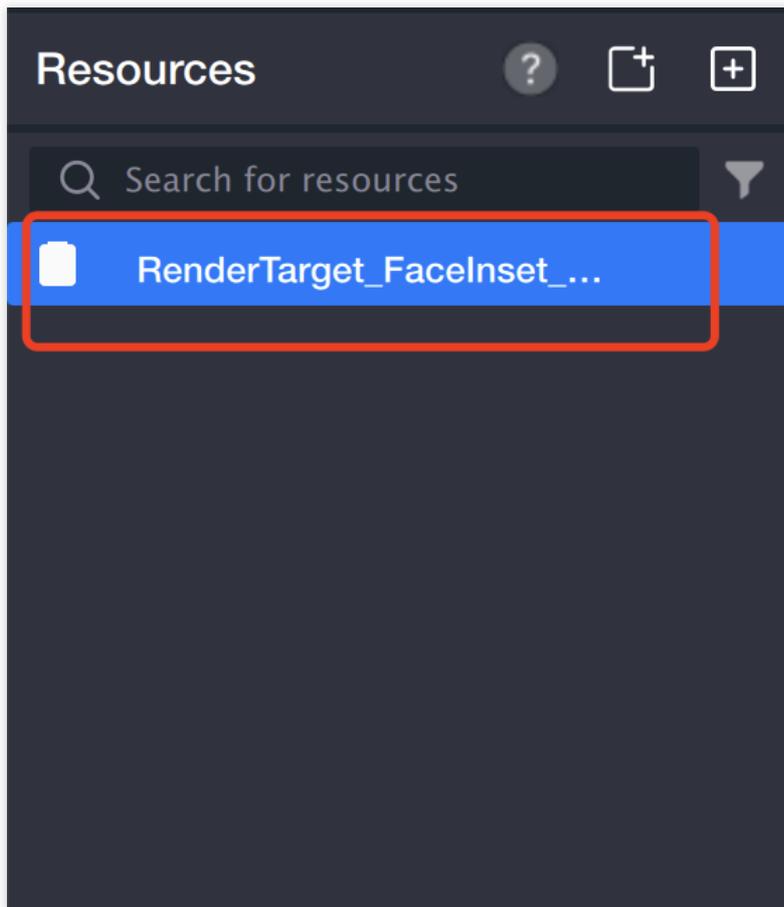
Basic Usage

1. Create a Cut out facial features object

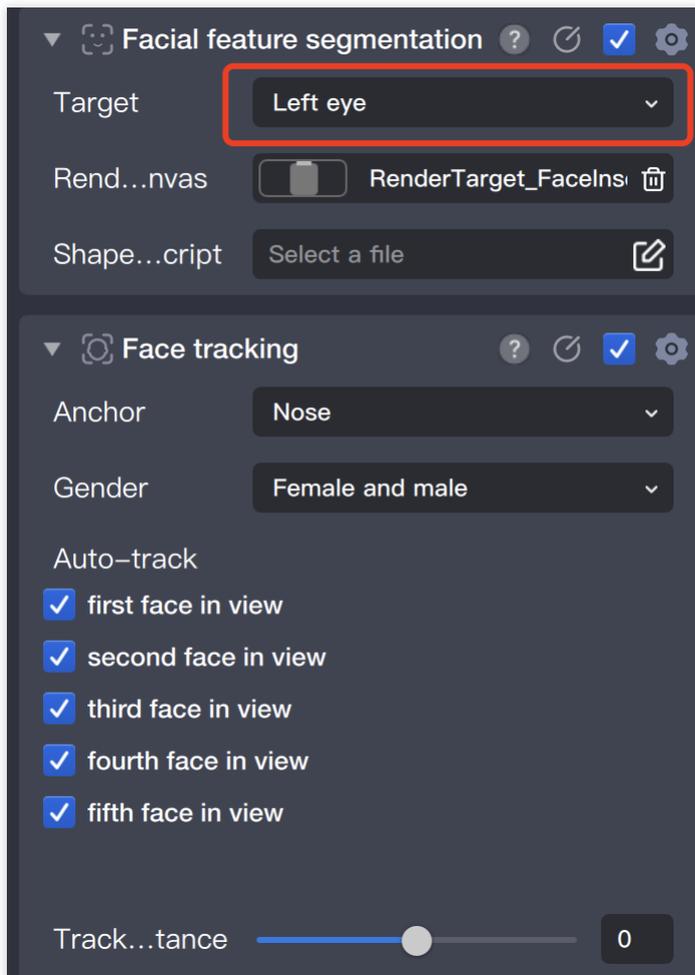
Add **Facial features** in the object panel.



After adding the ability to select facial features, a `RenderTarget_FaceInset1.rdt` file will appear in the resource panel. This file is the output result of the segmentation ability, that is, the cut-out facial features will be output to this file (which can be used as a sticker later).



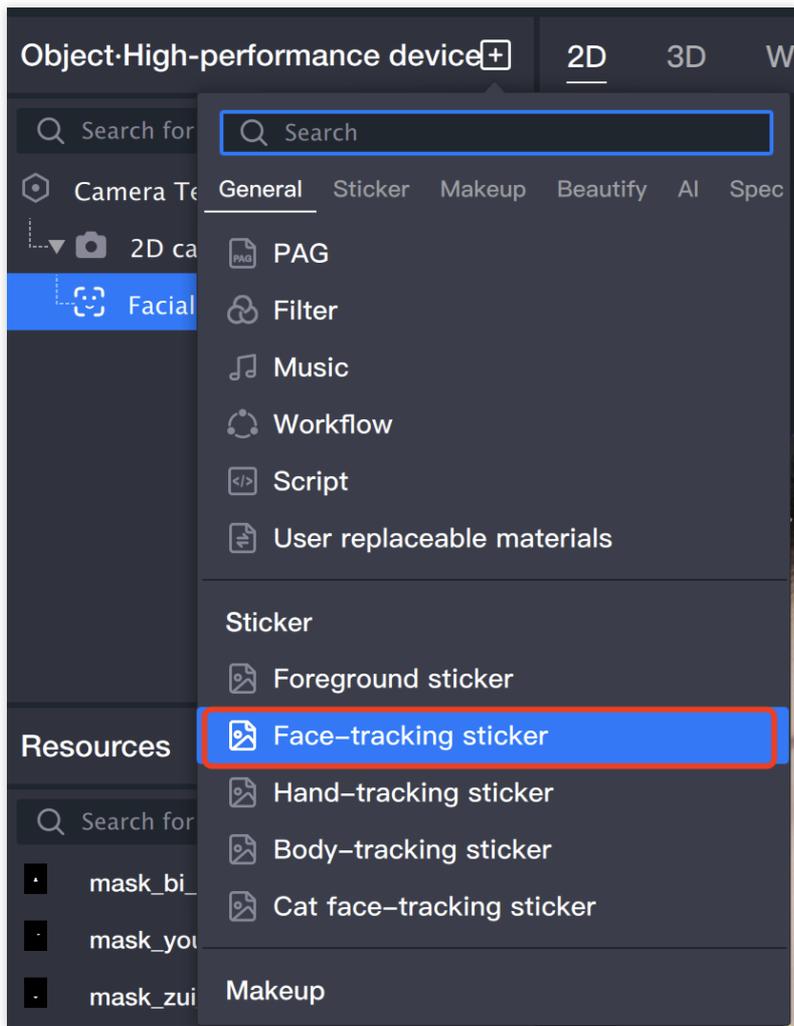
2. Select the area to be cut out



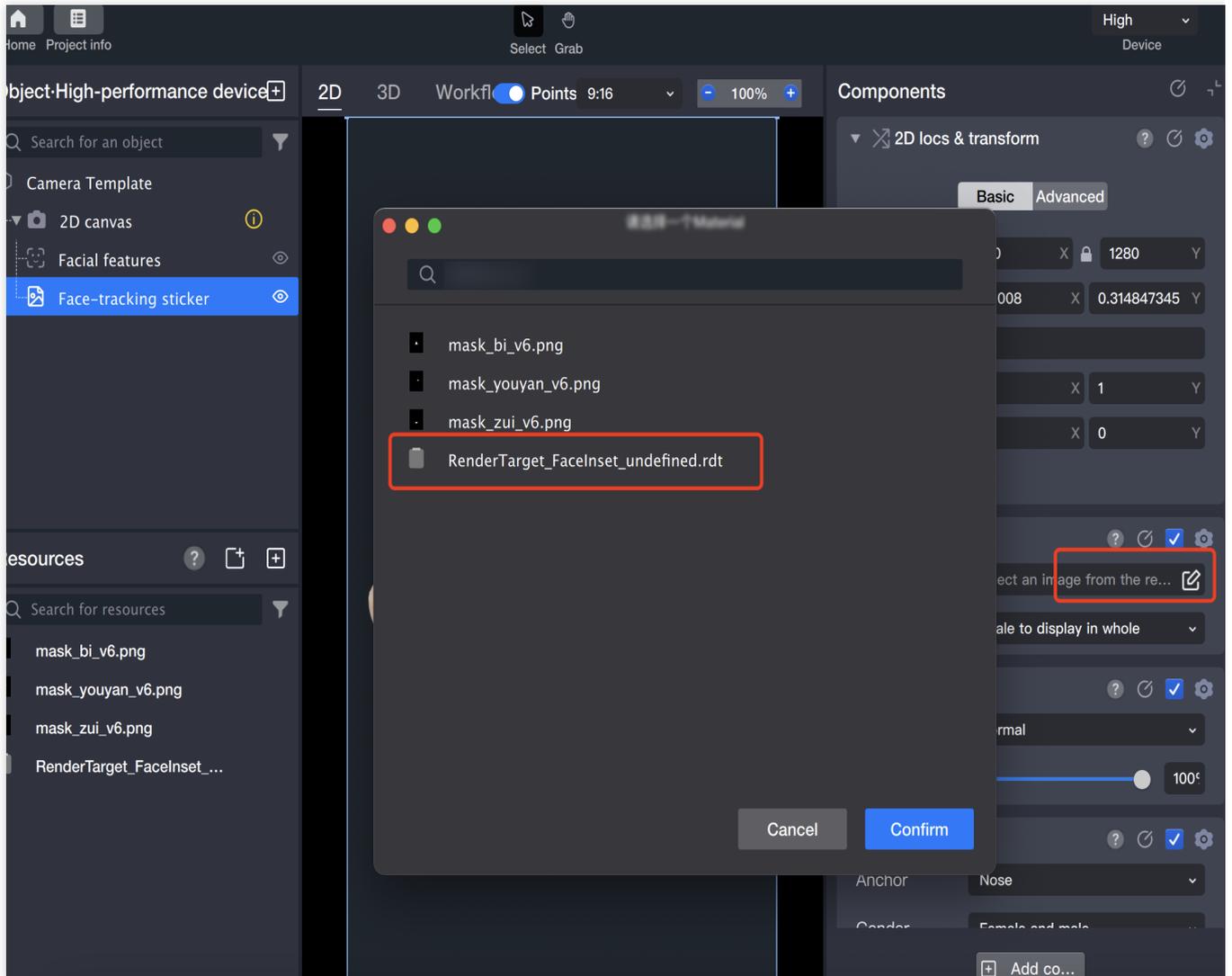
3. Add face-tracking stickers to the cut-out facial features.

3.1 Add face-tracking stickers in the object panel.

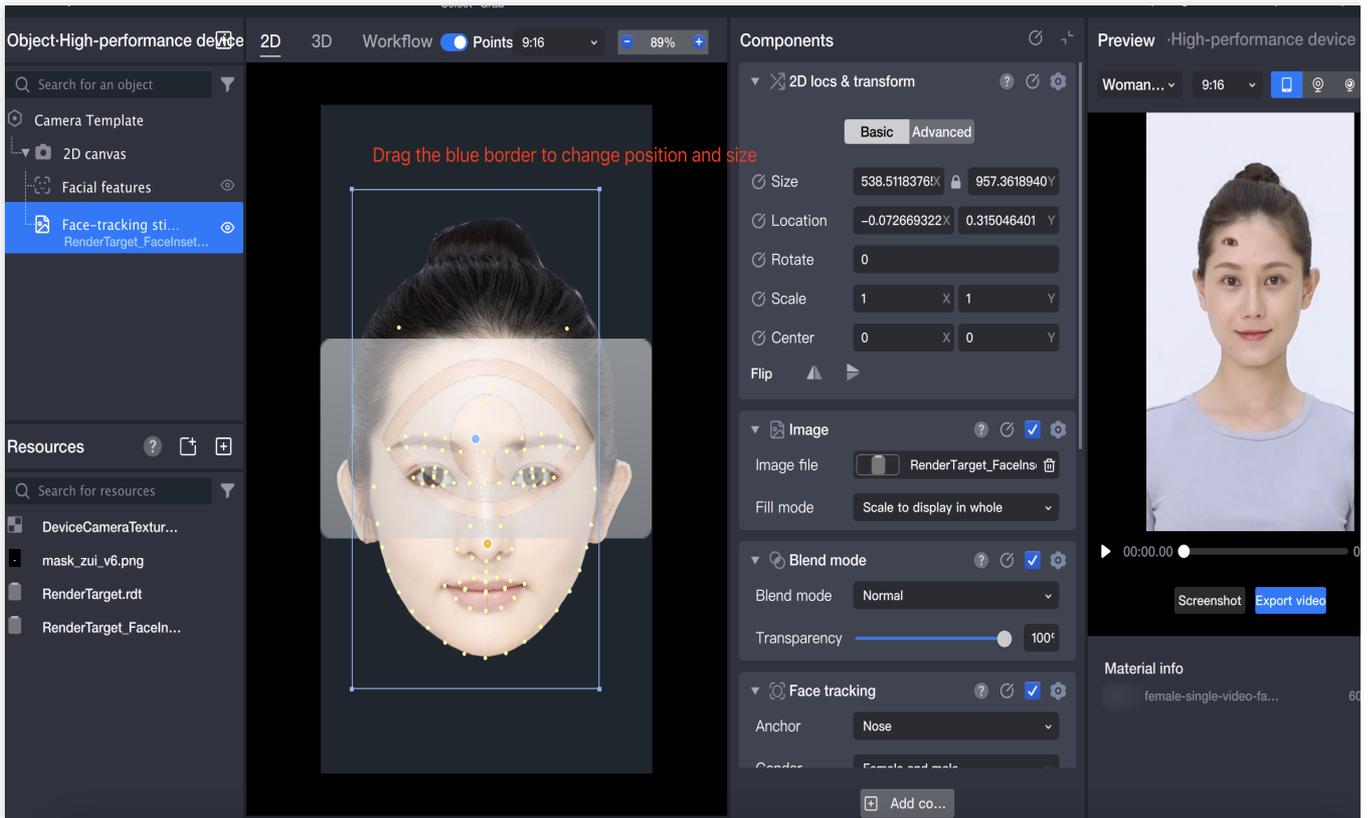
(You can also add foreground stickers/gesture-tracking stickers/body-tracking stickers/cat face-tracking stickers.)



3.2 Select the sticker file (the sticker selected at this time is the cut-out facial features).



3.3 Adjust the position and size as needed to complete the use of the Select facial features component.



Head Clipping

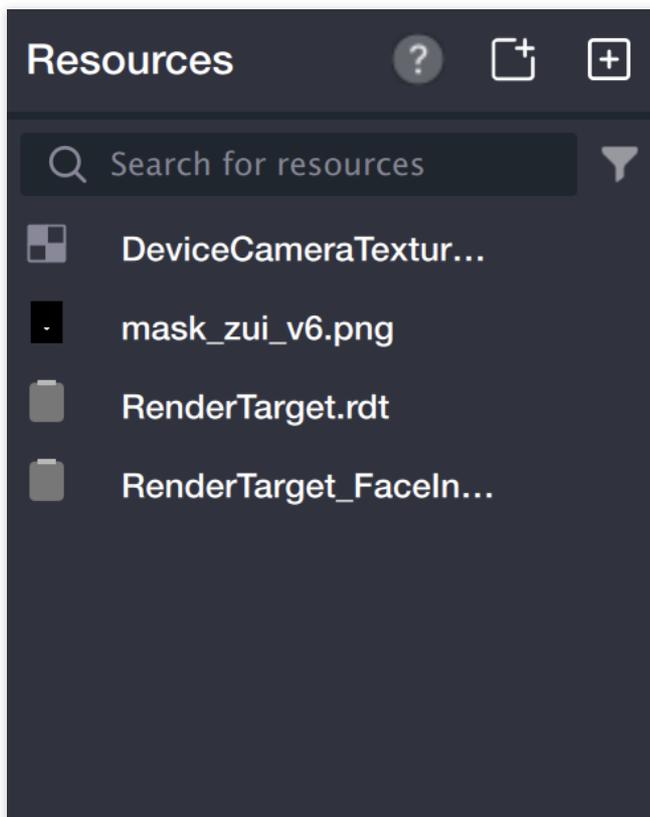
Last updated : 2024-03-25 11:43:19

Introduction

Head clipping is a type of segmentation ability, which separates the head part of an image or video from the rest of the scene, resulting in a clear head boundary image. In Tencent Effect, the head clipping ability can quickly identify the head position and rotation angle, achieving real-time and accurate segmentation results.

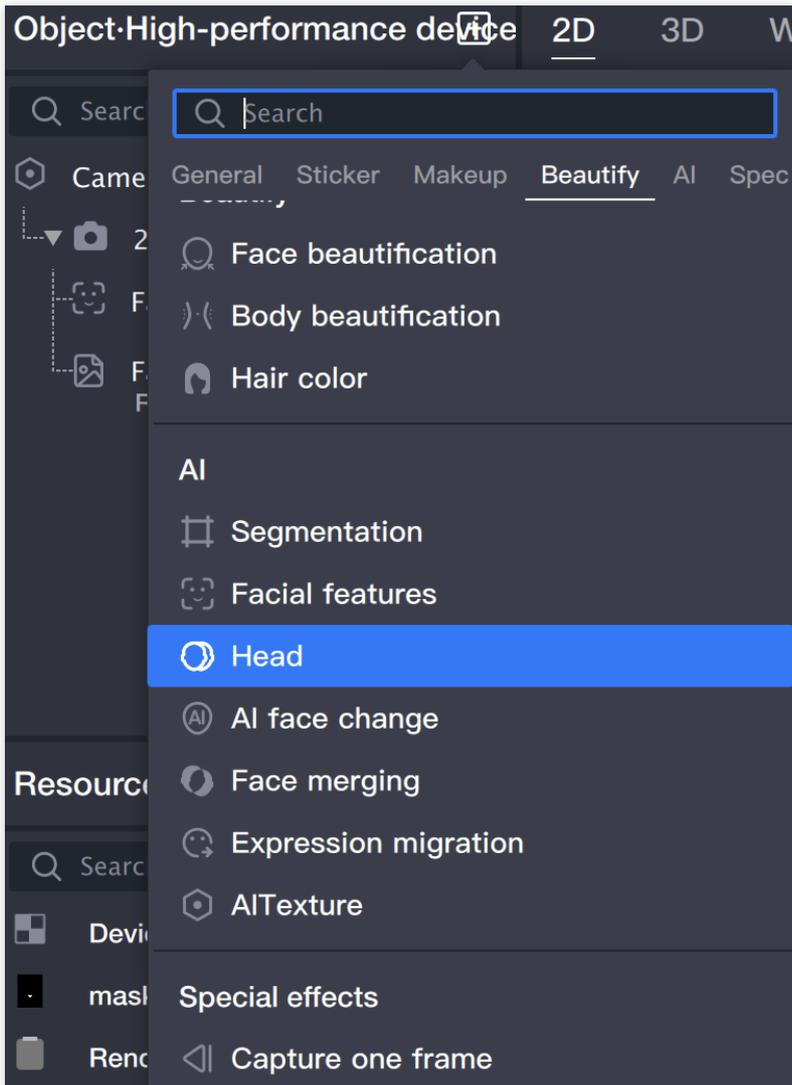
Basic Usage

1. Import materials

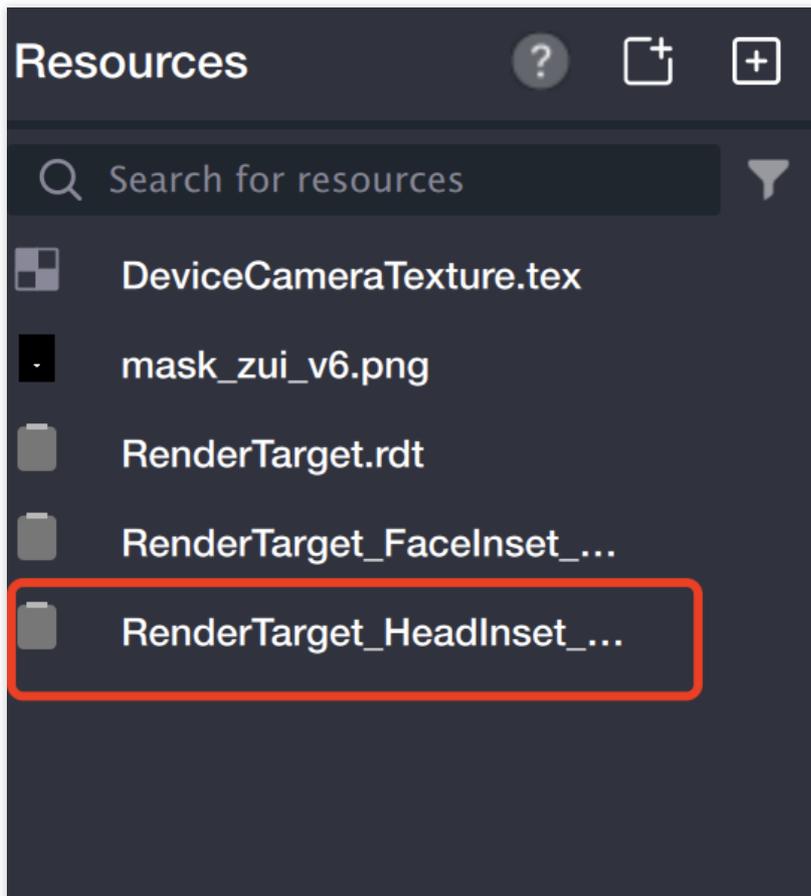


2. Create Head Clipping Object

2.1. Add **Head Clipping** in the Object Panel.

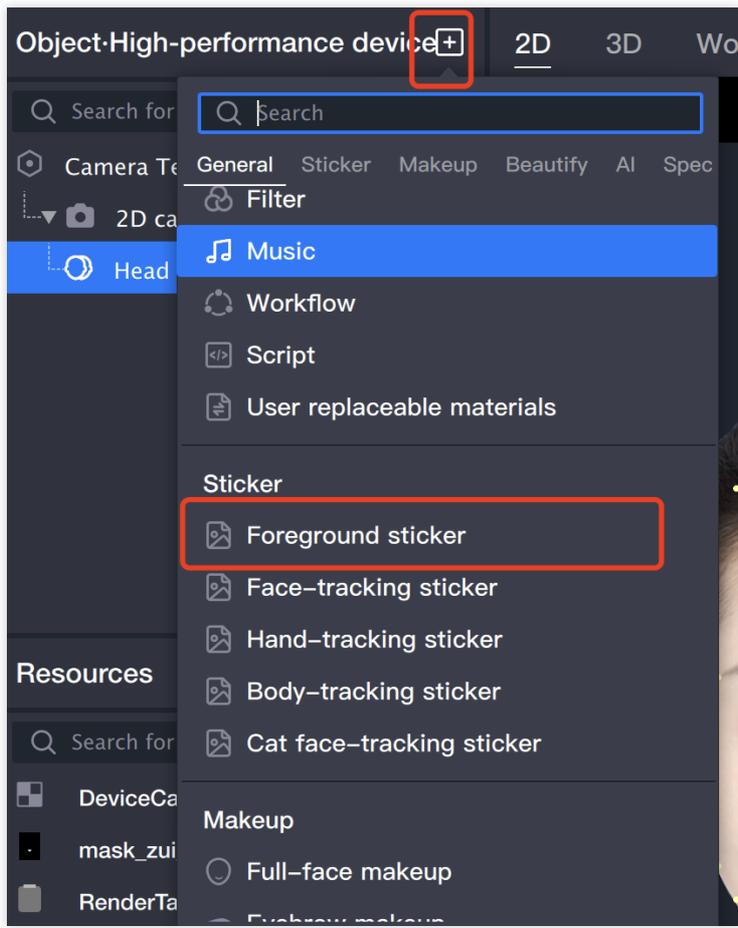


2.2 After adding the head clipping ability, a `RenderTarget_HeadInset_1.rdt` file will appear in the Resource Panel. This file is the output result of the head clipping ability, i.e., the clipped head image will be output to this file (which can be used as a sticker later).

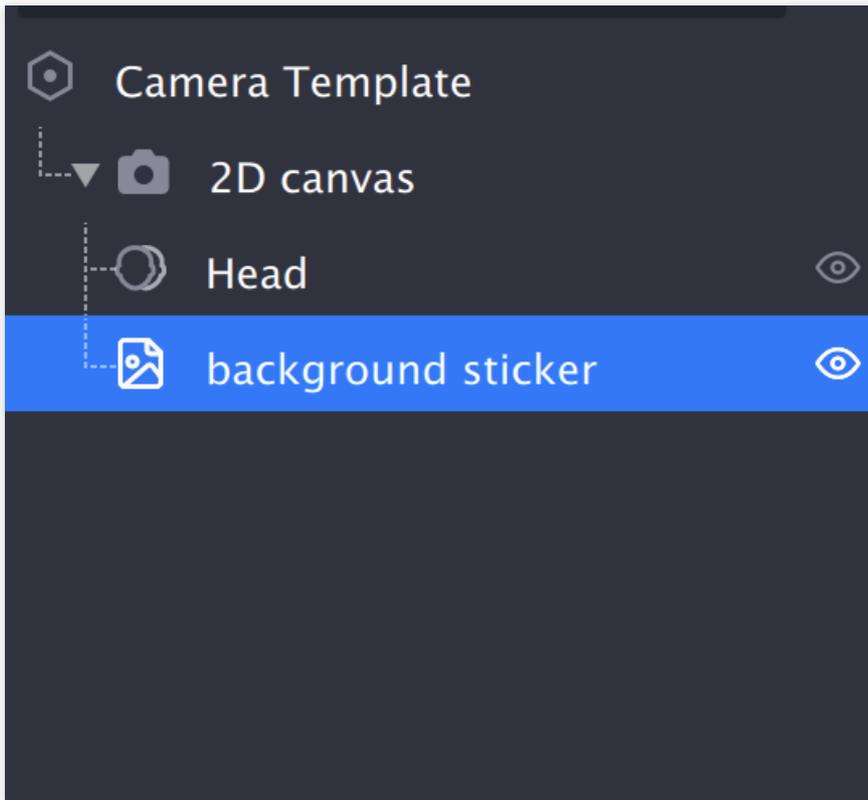


3. Add Background

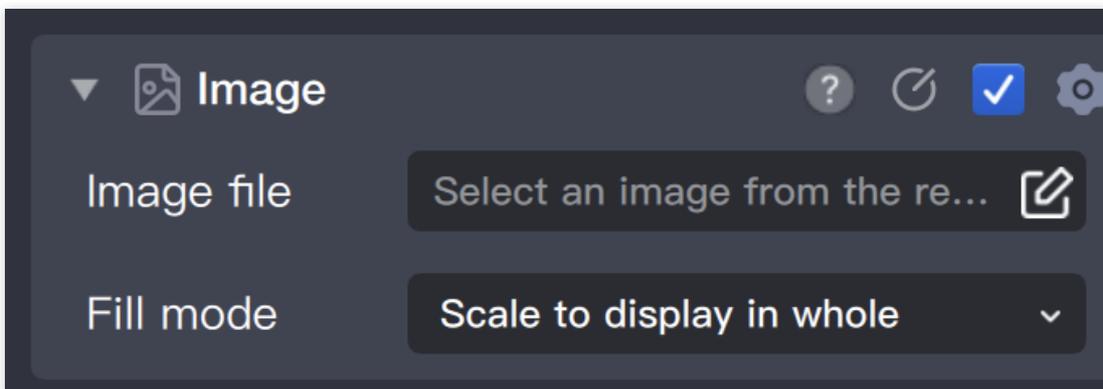
3.1. Add foreground sticker (the background you want to replace).

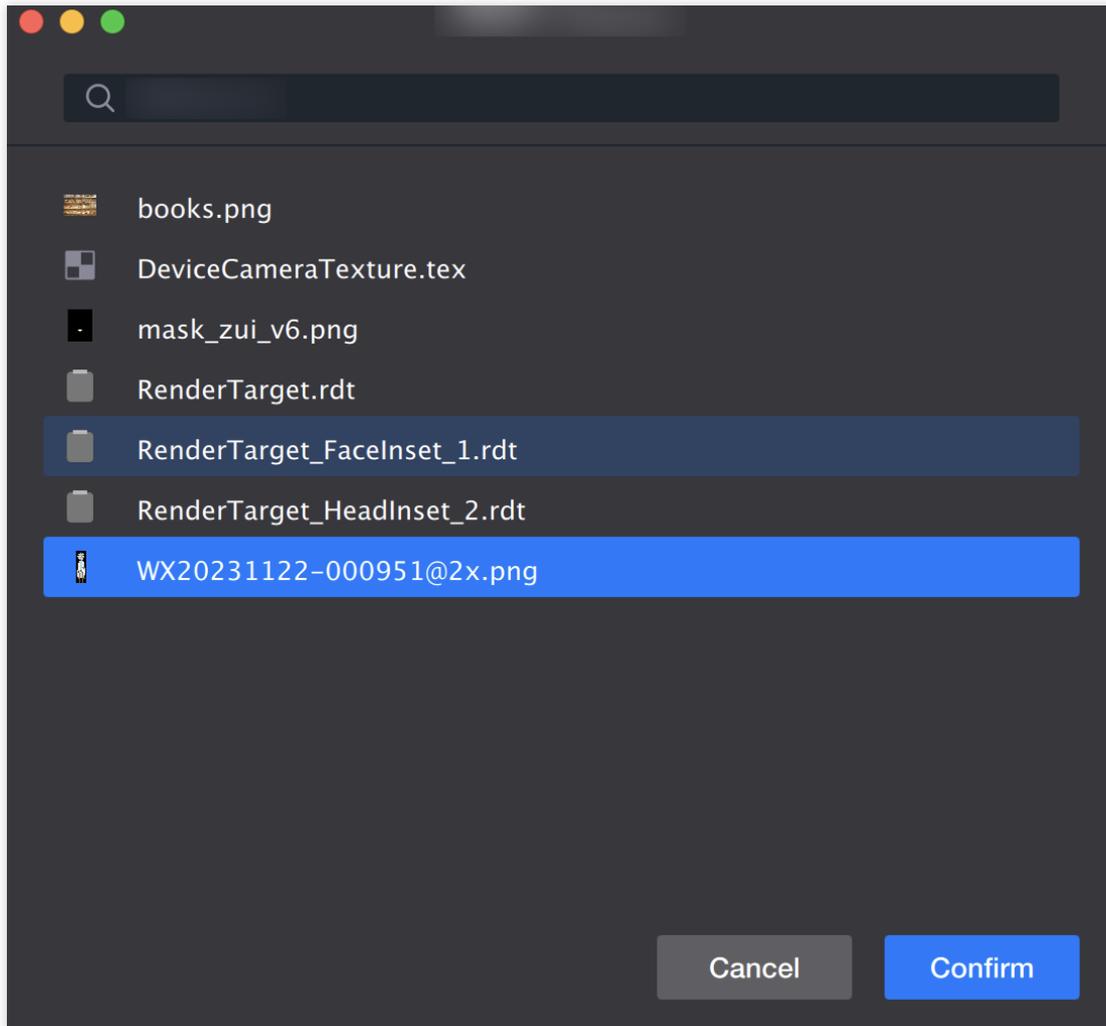


3.2. Rename the foreground sticker to "Background Image" (to avoid confusion with the foreground stickers added later).

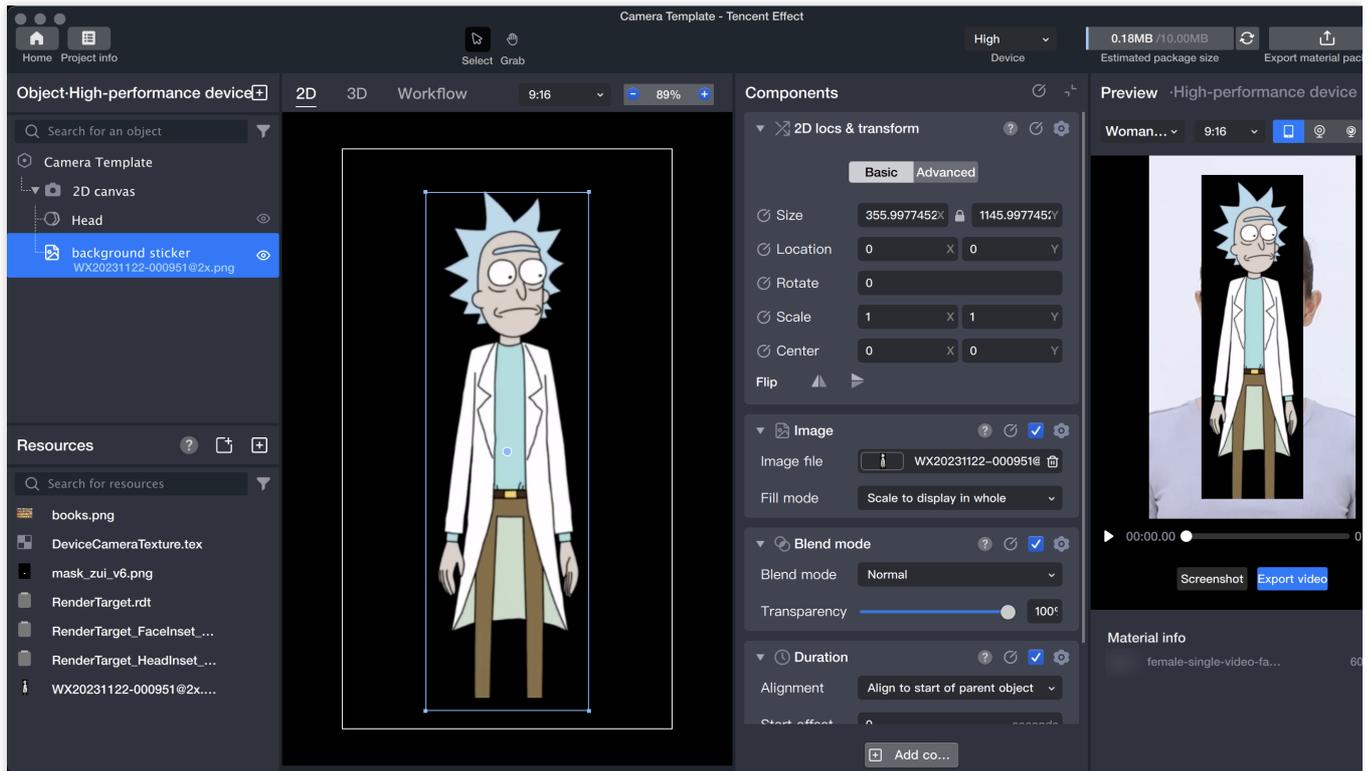


3.3 Select image file.



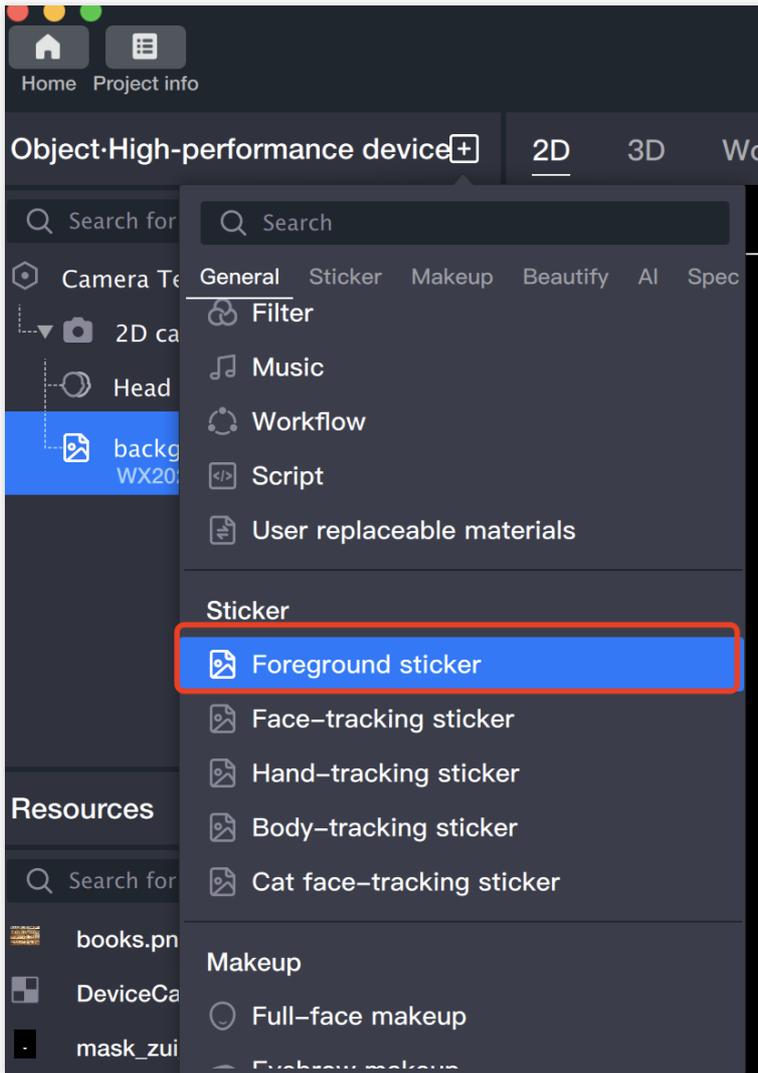


3.4 Adjust background position and size.

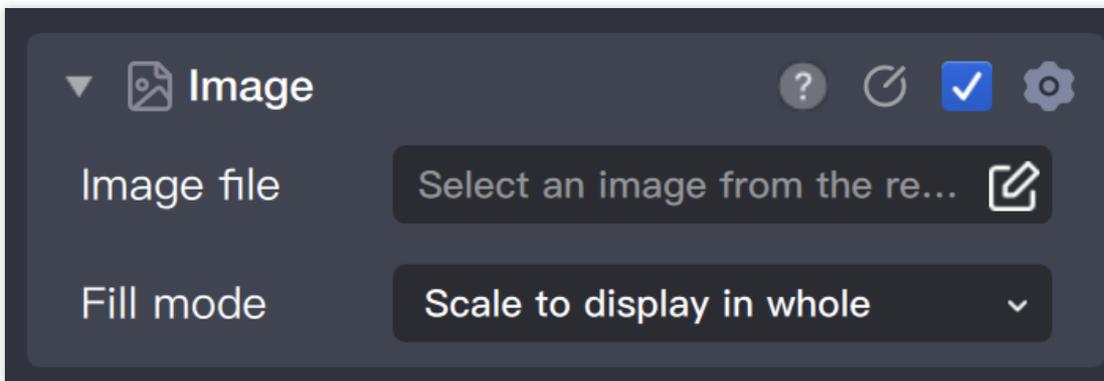


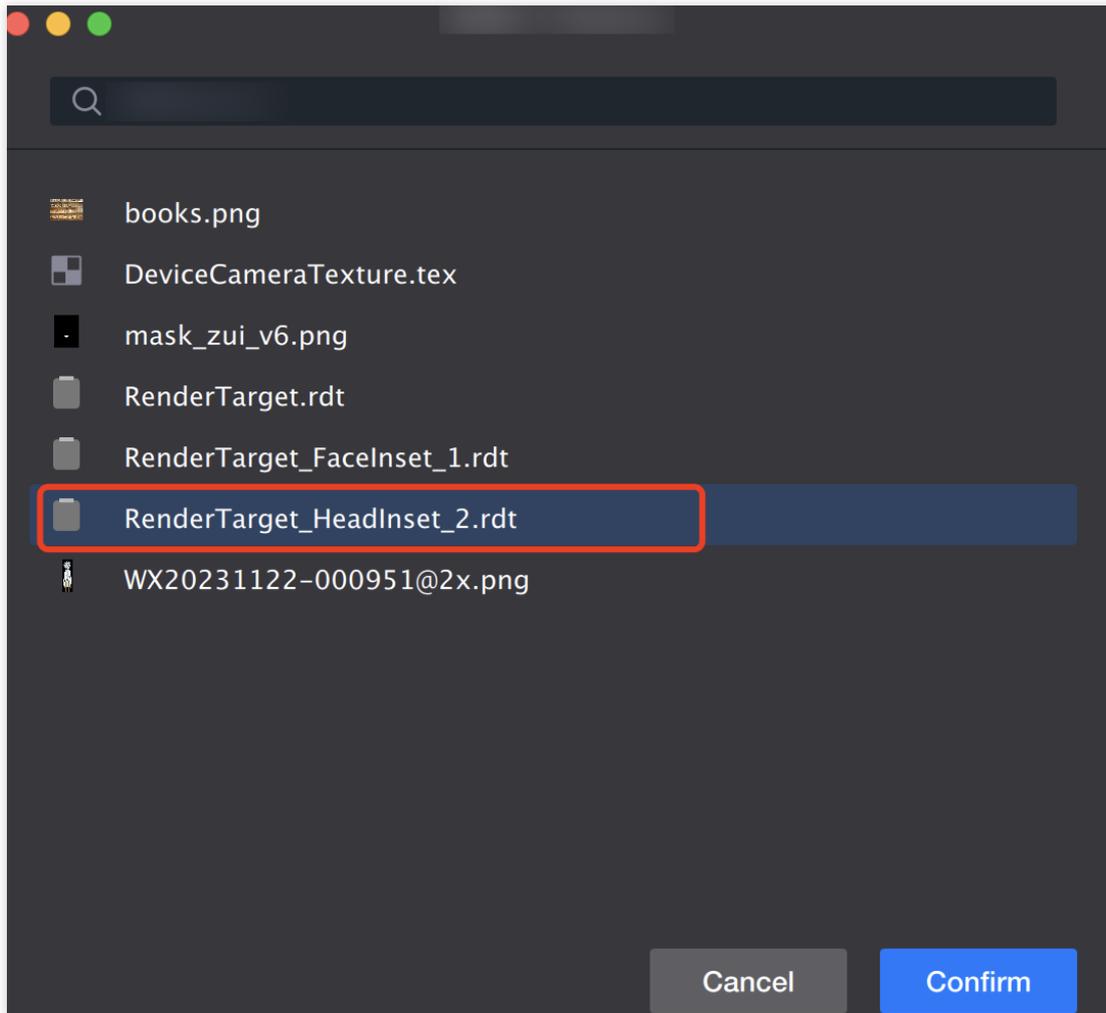
4. Add foreground sticker to the clipped head image.

4.1 Add **Foreground Sticker** in the Object Panel.

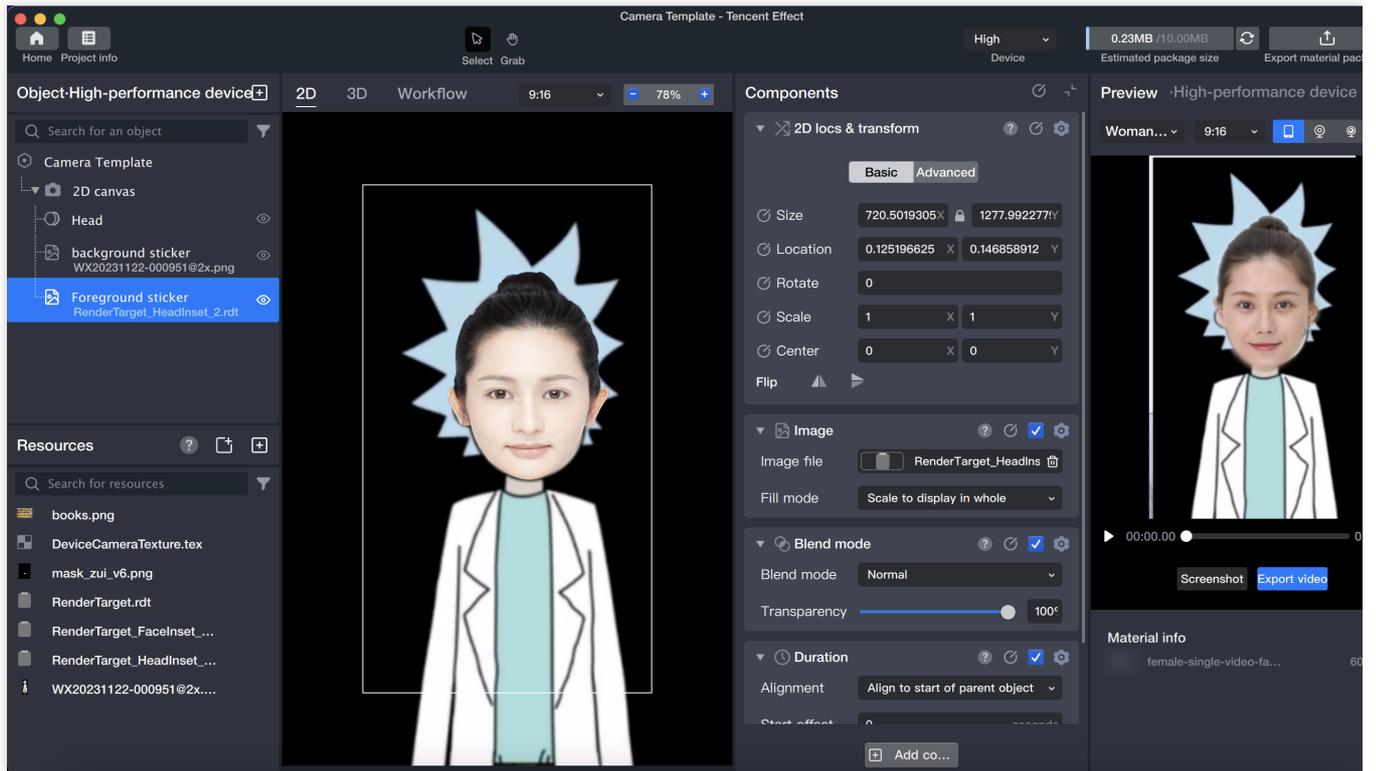


4.2 Select image file.



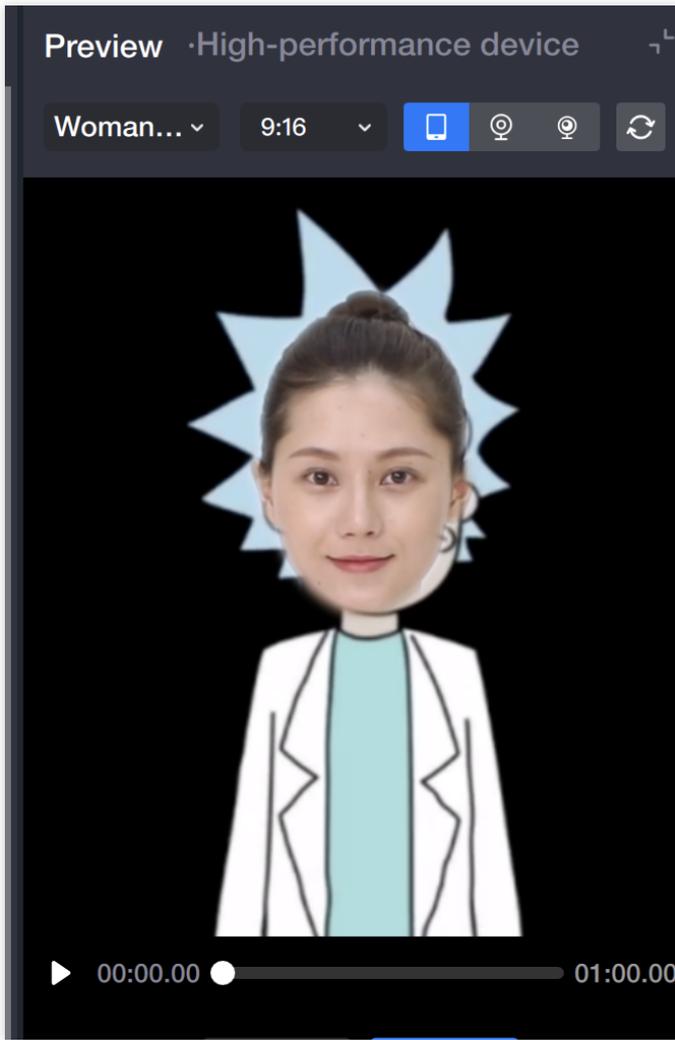


4.3 Adjust head image position.



5. Preview

Computer Preview: Click the play button.



Face Liquification

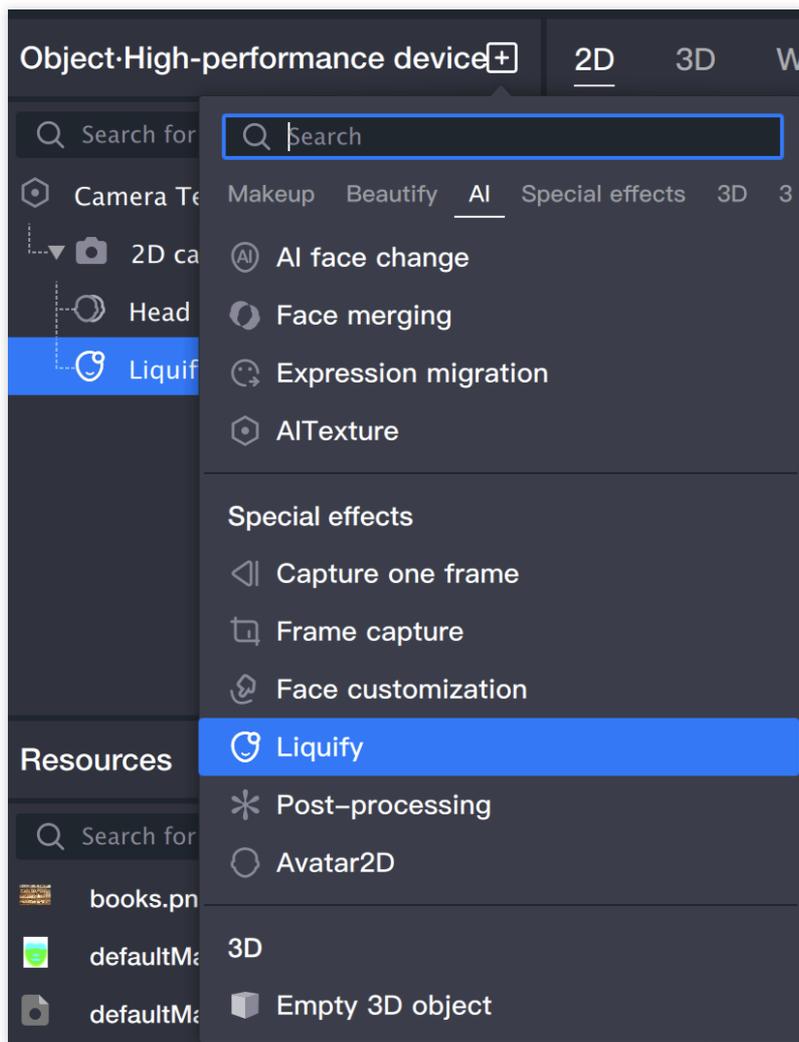
Last updated : 2024-03-25 11:43:19

Introduction

Face liquify is used in the form of a brush, which can be freely moved and repeatedly added, changing the shape of the image it is on. The brush parameters determine whether the area covered by the brush shrinks or expands. Face Liquify is an important component for creating prank filters for faces.

Basic Usage

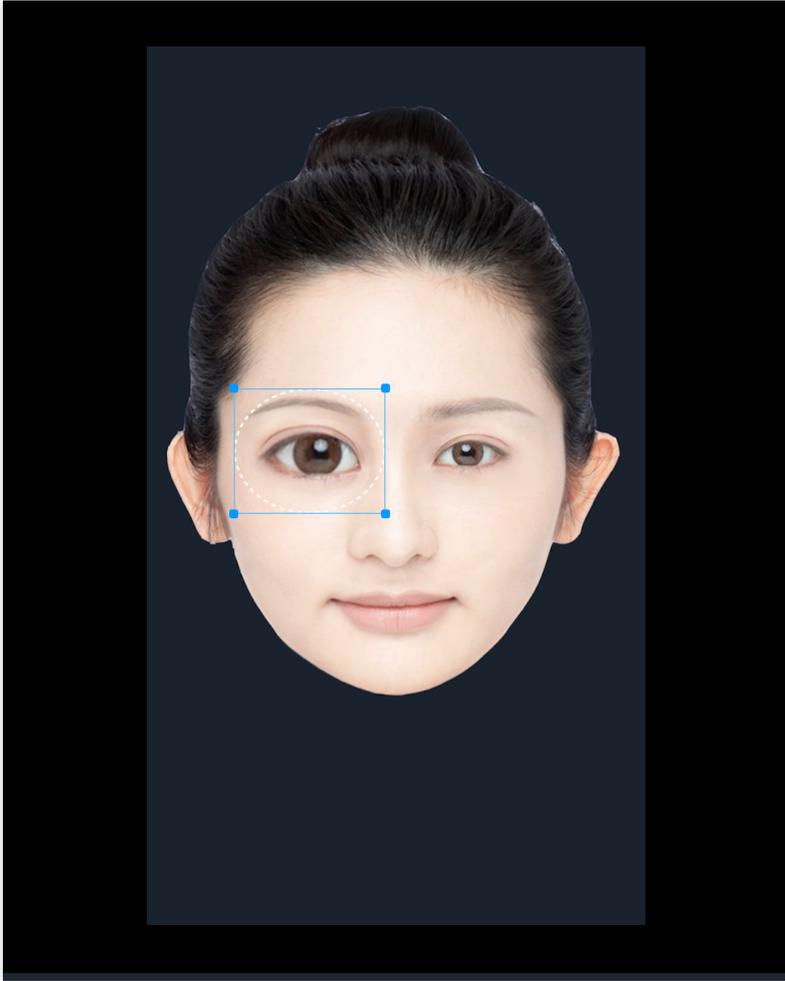
1. Add a Face Liquify object

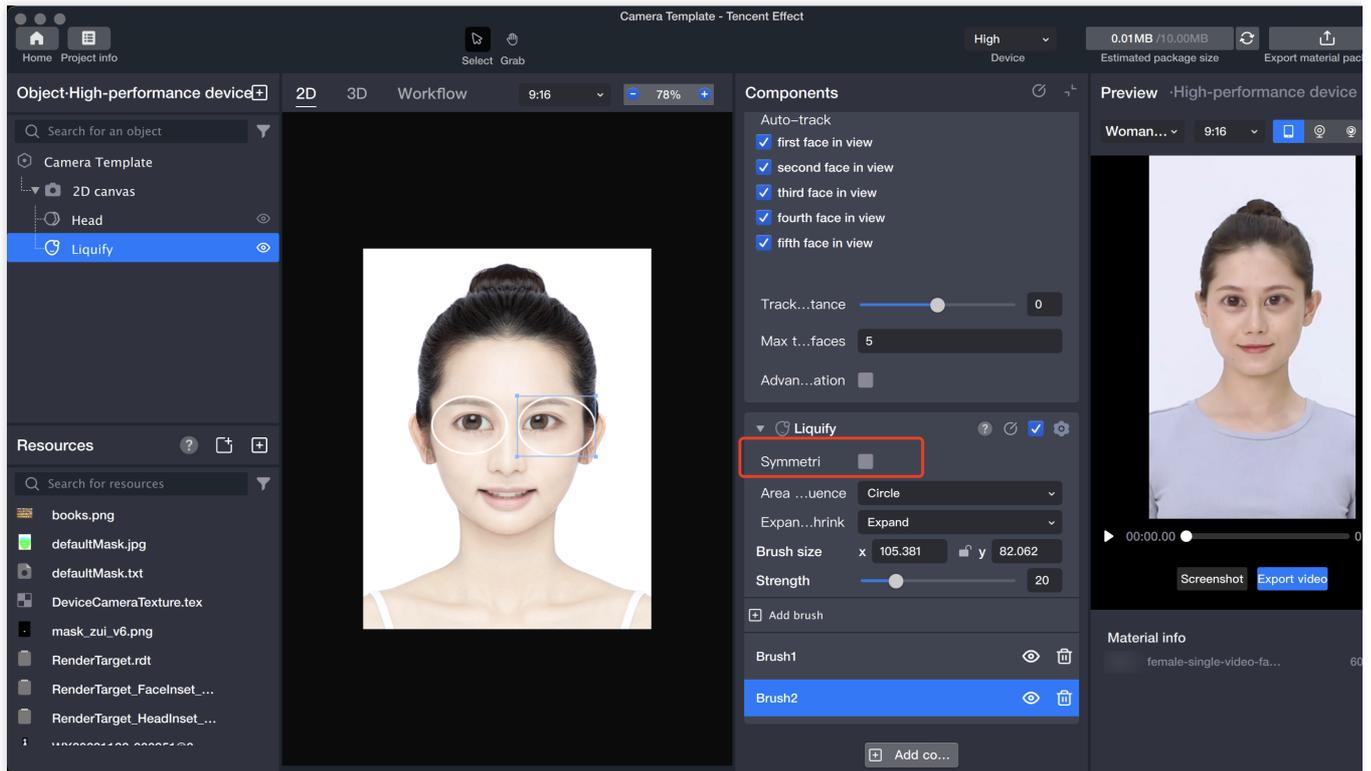


2. Adjust Parameters

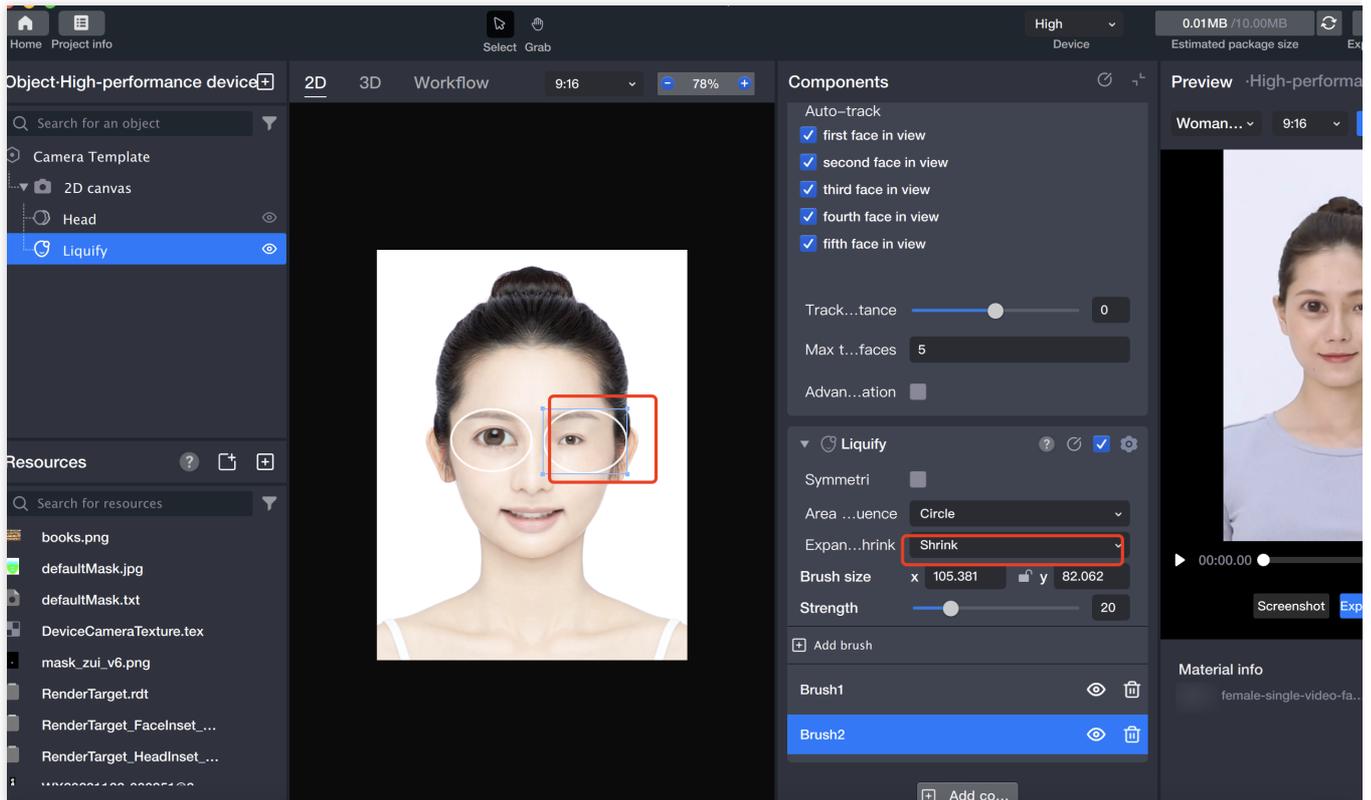
Brush Scaling: Supports direct scaling in the scene panel, hold and drag the edge of the brush, expand the brush outward, and shrink the brush inward; you can also adjust the Brush Size in the Face Liquify component, click the lock button in the middle, when the aspect ratio is locked, the brush scales according to the current ratio.

Left and Right Face Symmetry: When left and right face symmetry deformation is disabled, there is only one circular brush in the scene panel, and when you hold and drag the circle, local deformation occurs; when enabled, two circles appear in the scene panel, one solid and one dashed, and when you hold and drag the solid circle, the dashed circle changes symmetrically.



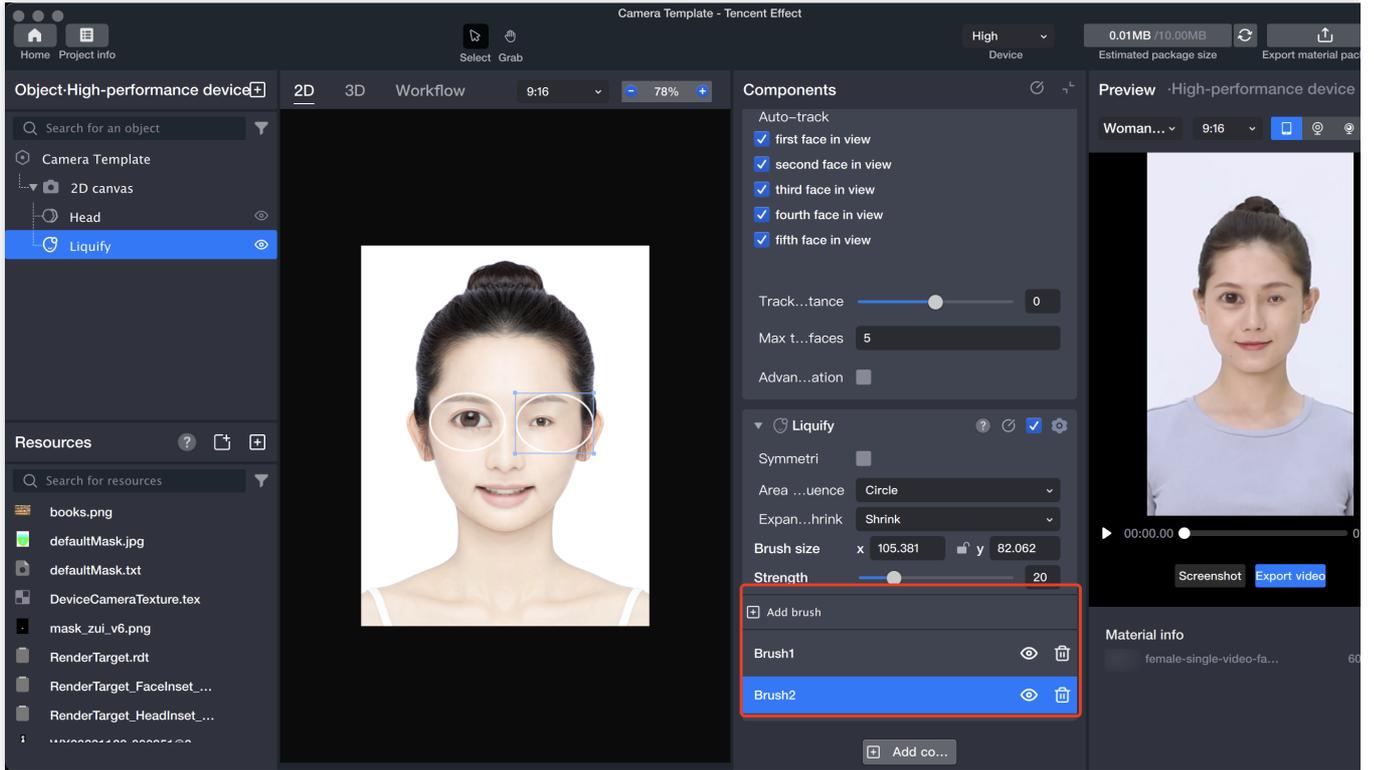


Expansion and Contraction: The parameter is used in conjunction with brush strength, when the brush is selected to expand, the local area expands as the degree approaches expansion, and the local area wrinkles as the degree approaches contraction;



Brush Strength: Brush strength determines the degree of expansion or contraction.

Add Brushes: The Face Liquify tool supports adding multiple brushes in a single component, with the brushes simultaneously deforming the face, and overlapping deformation effects in the intersecting areas between brushes.



Face Pinching

Last updated : 2024-03-25 11:43:19

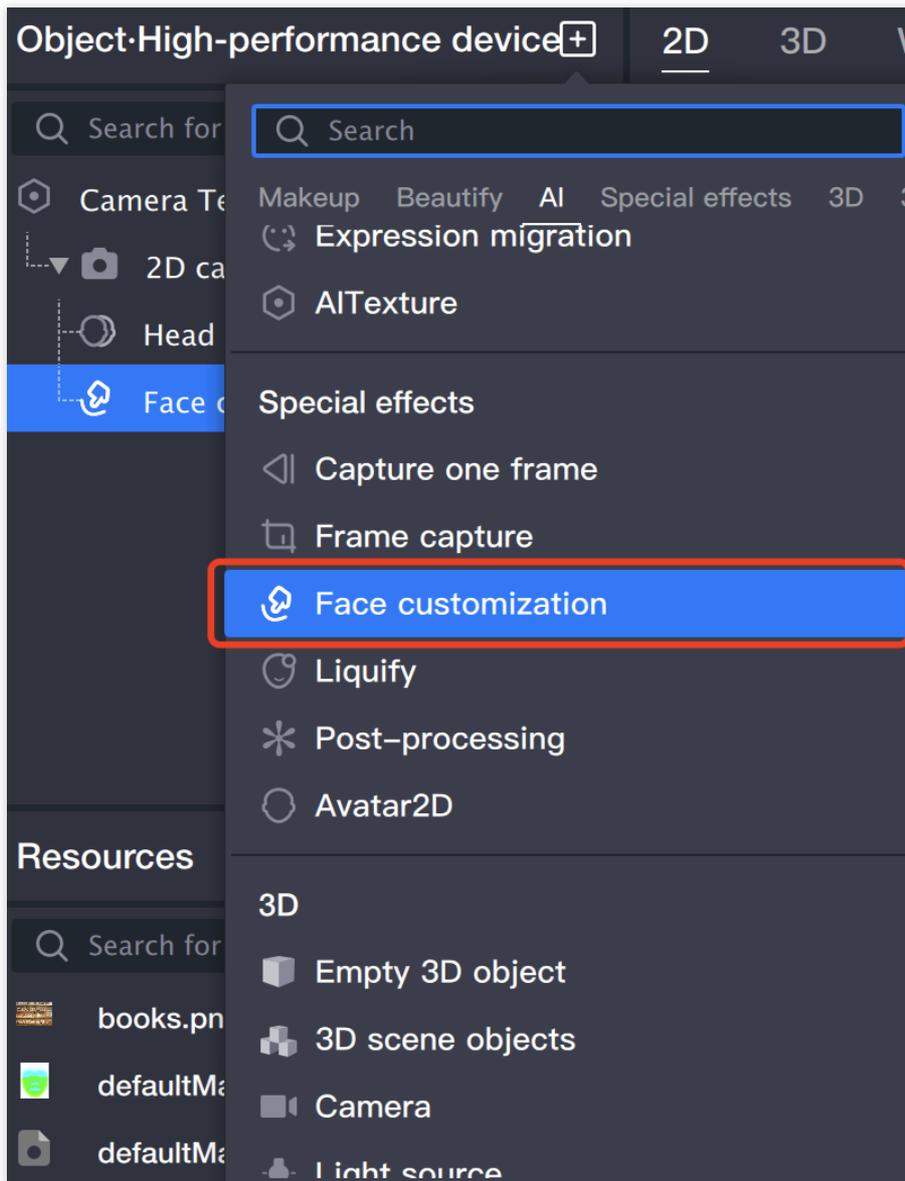
Introduction

Add a "Pinch Face" object, which allows you to adjust the whole face and facial features to achieve the desired effect. For example, adjusting the chin width, eye spacing, etc.

Basic Usage

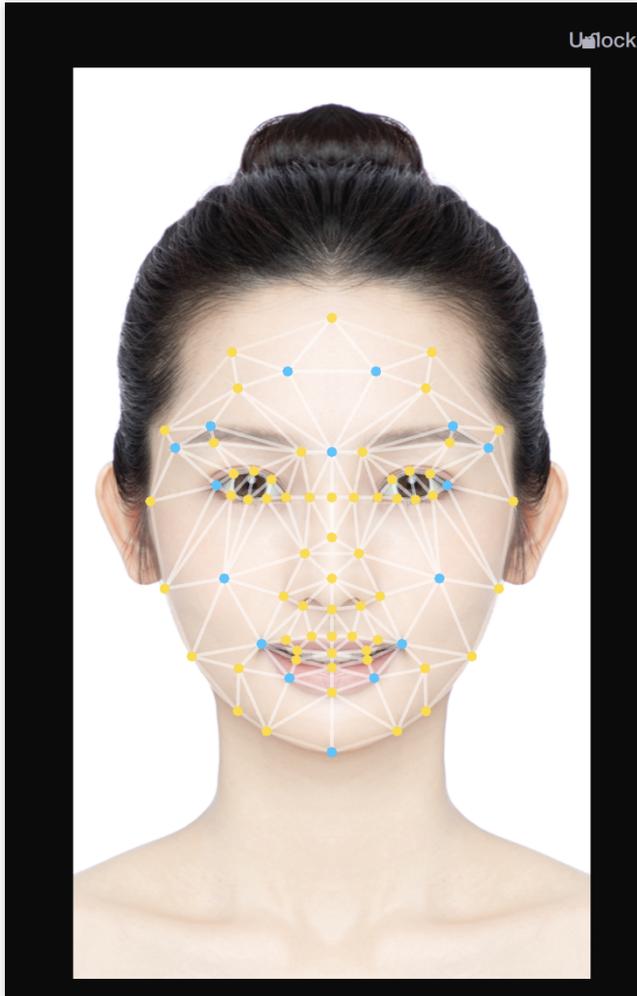
1. Add a " Face customization" object/component

Add a "Face customization" object in the Object Panel

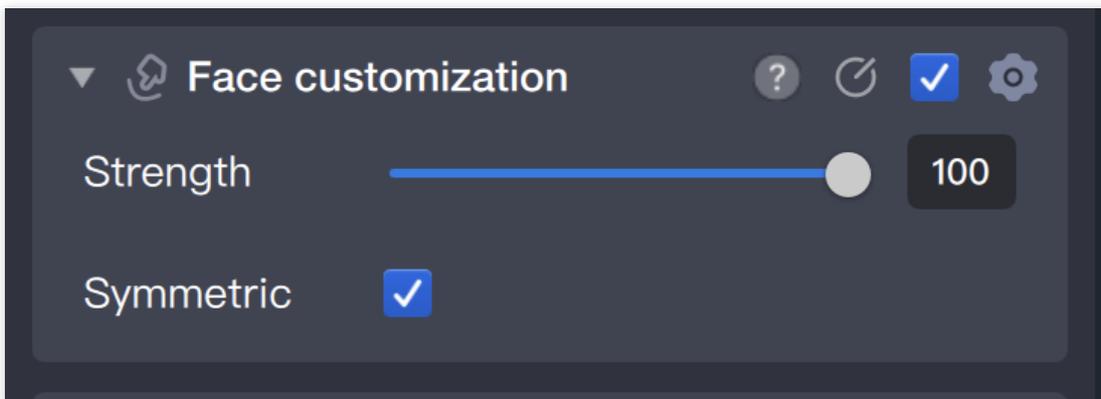


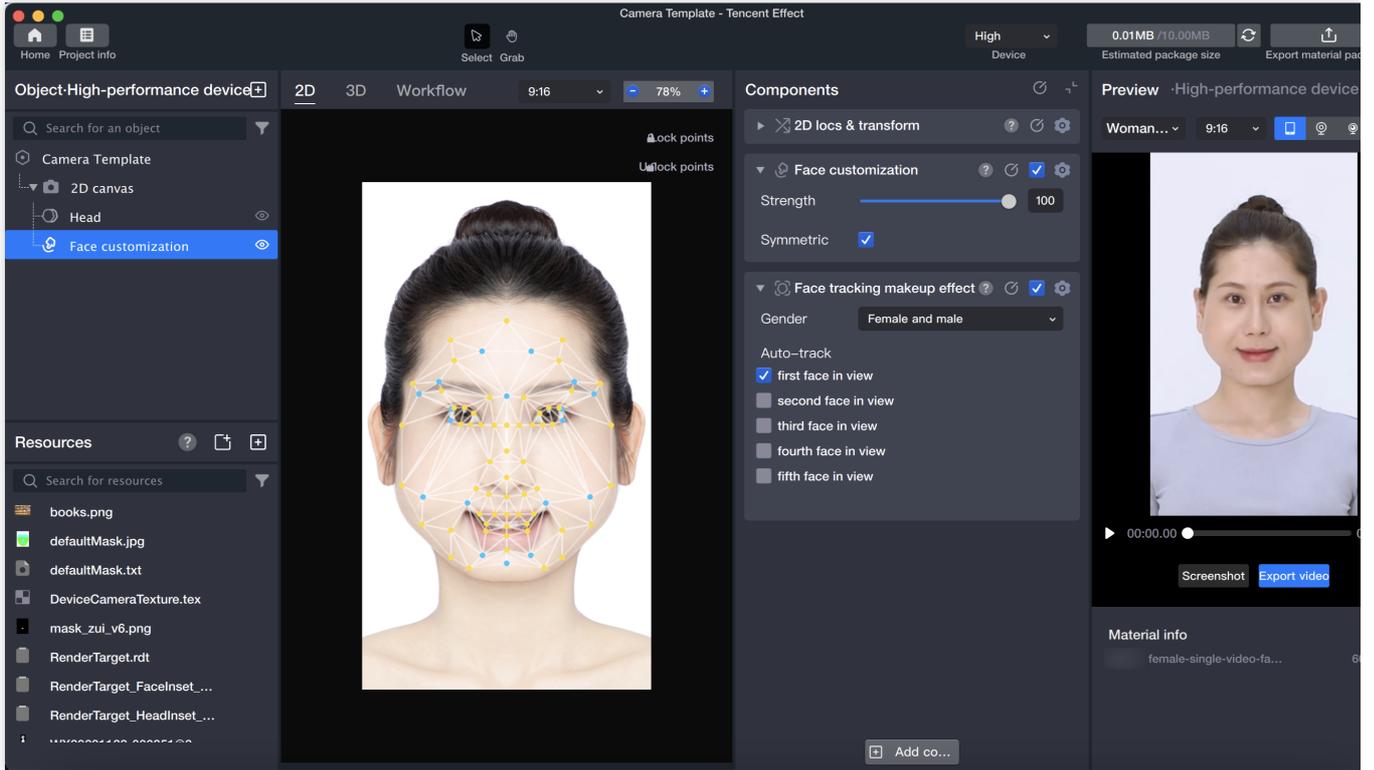
2. Adjust Parameters

You can directly drag the points in the Scene Panel with the mouse to modify the face.



You can also change the intensity and symmetry of the left and right faces through the Component Panel.



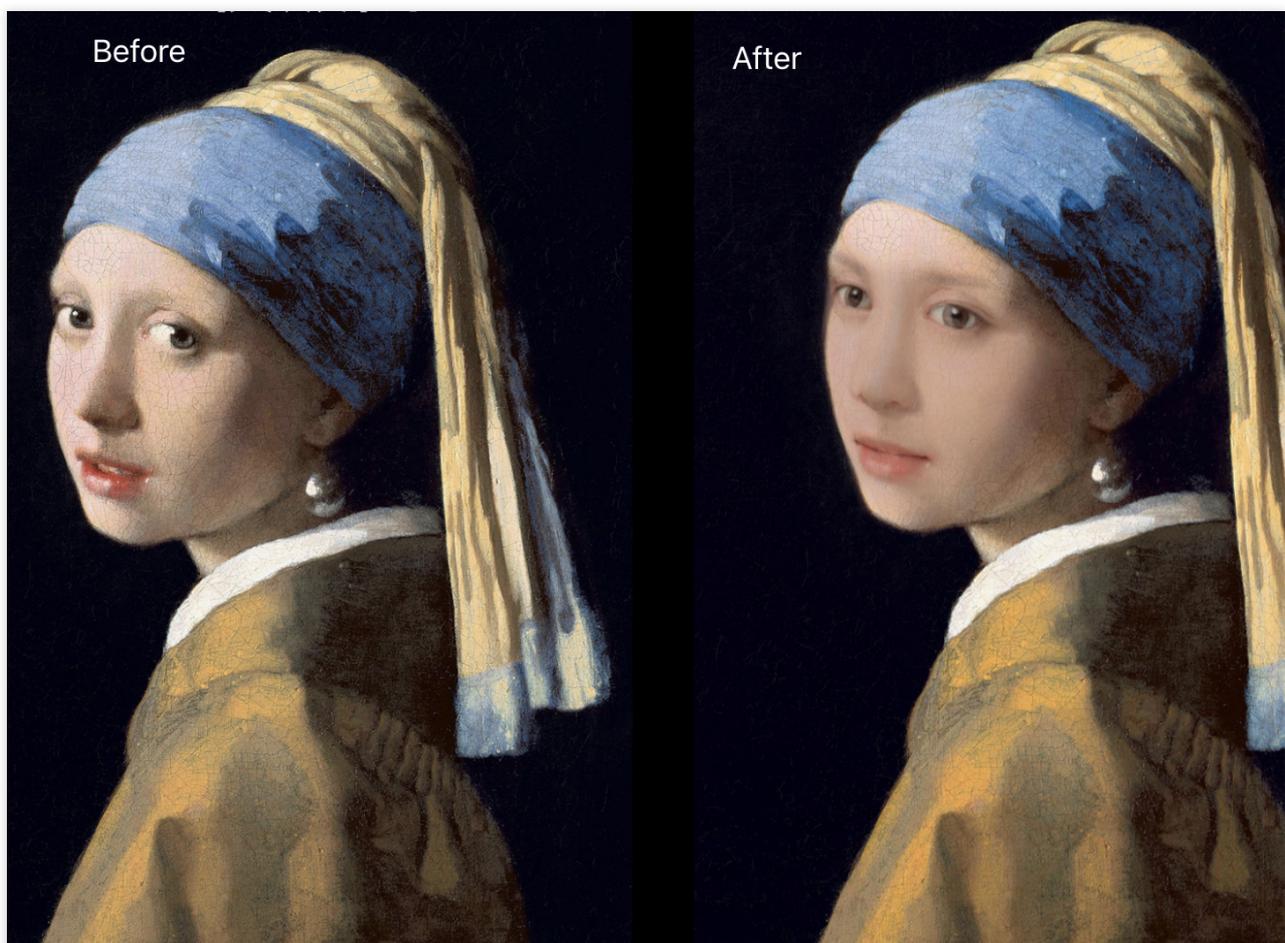


Face Fusion

Last updated : 2024-03-25 11:43:19

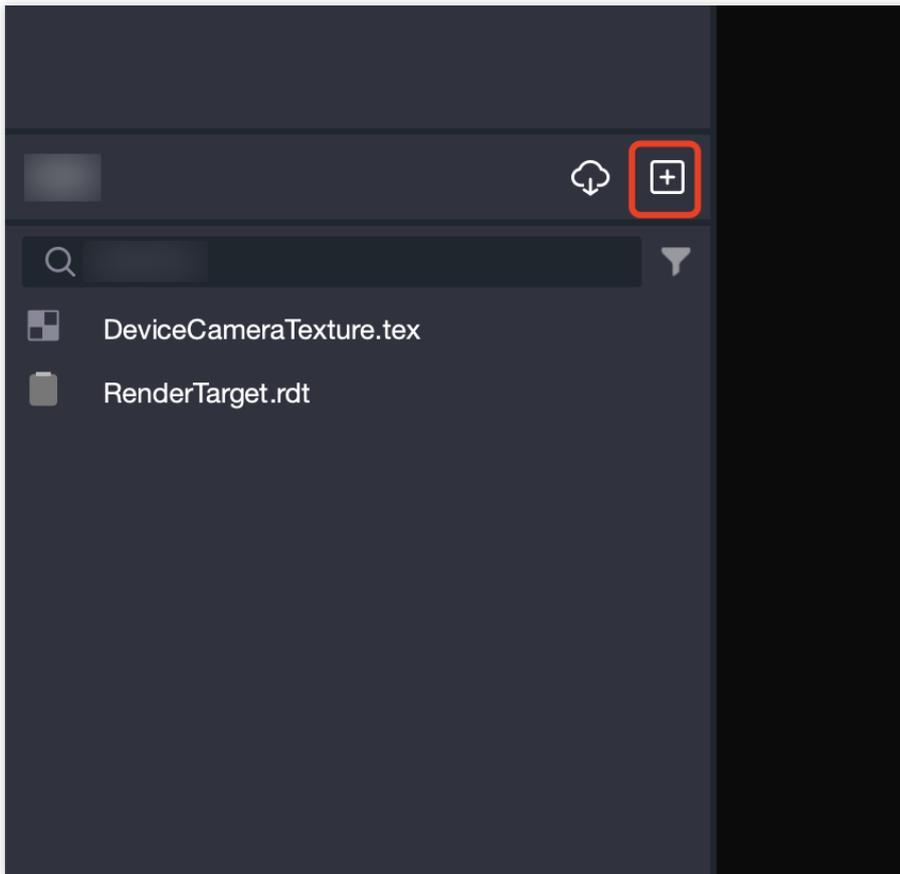
Introduction

Face merging is the process of blending a user-uploaded character photo with a specific object photo to create a combined image with shared features.

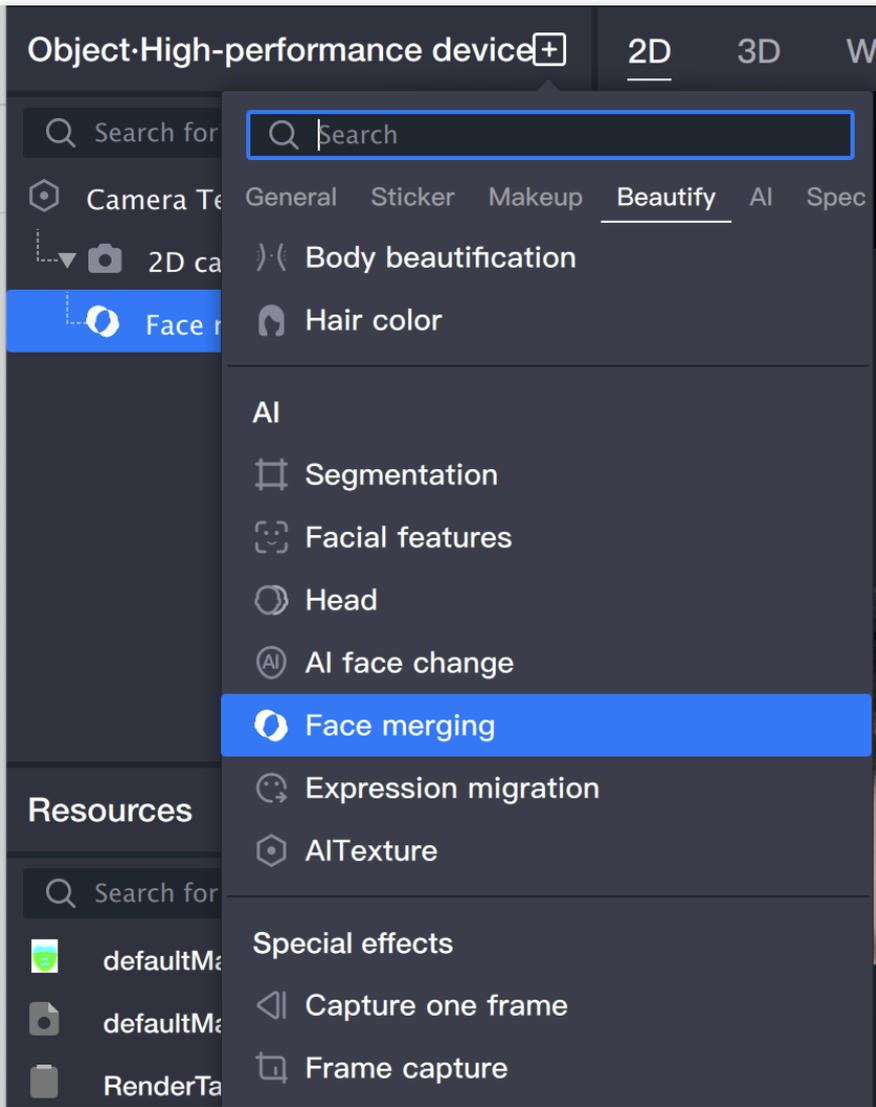


Basic Usage

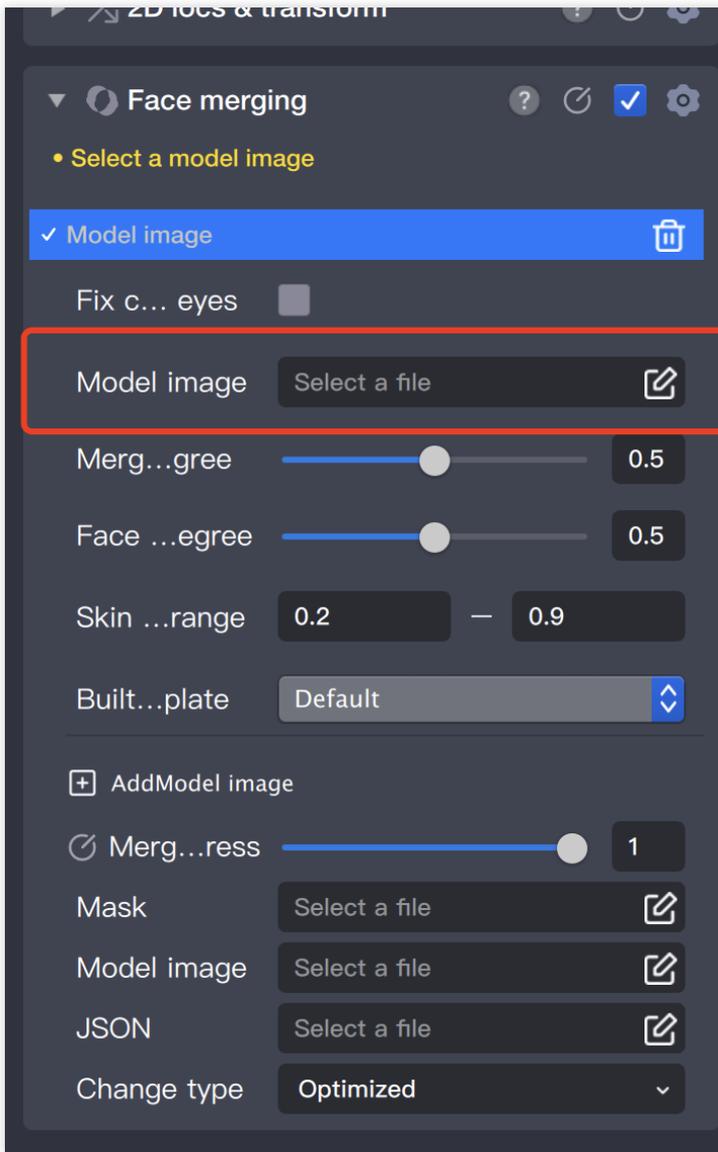
1. Import Material

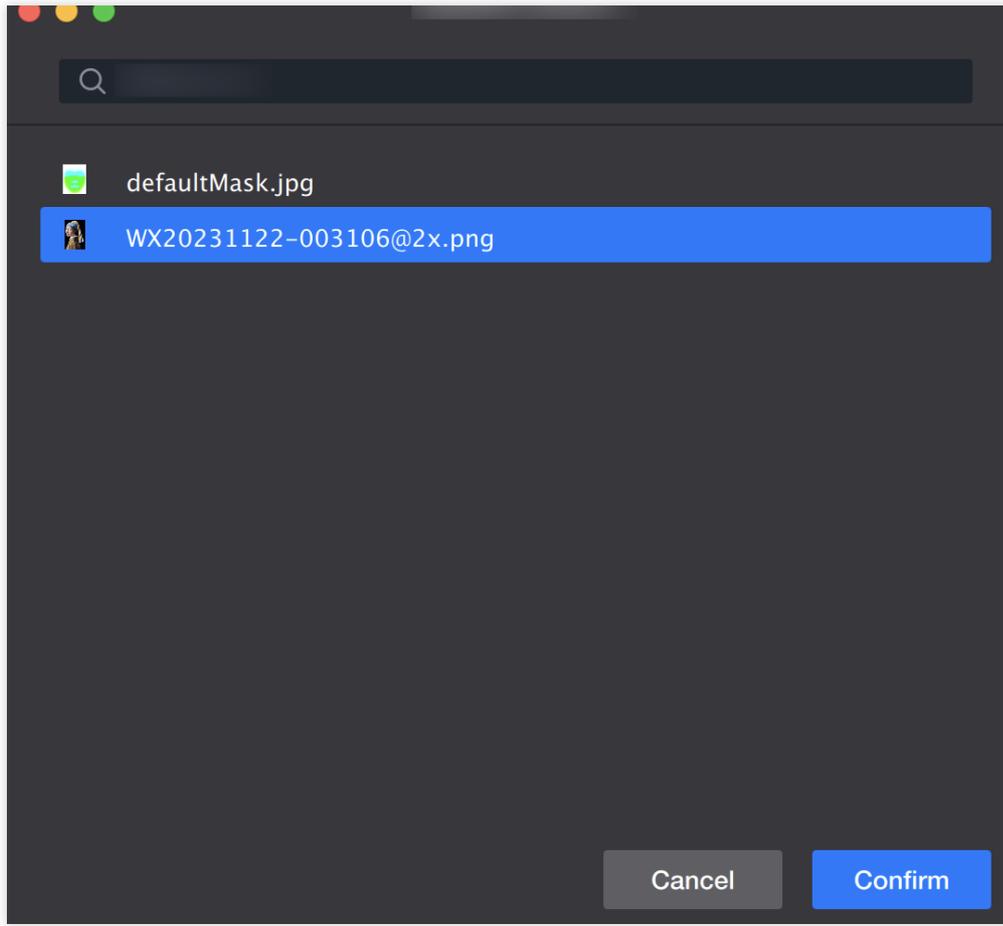


2. Add Face merging Object



3. Add Model Image

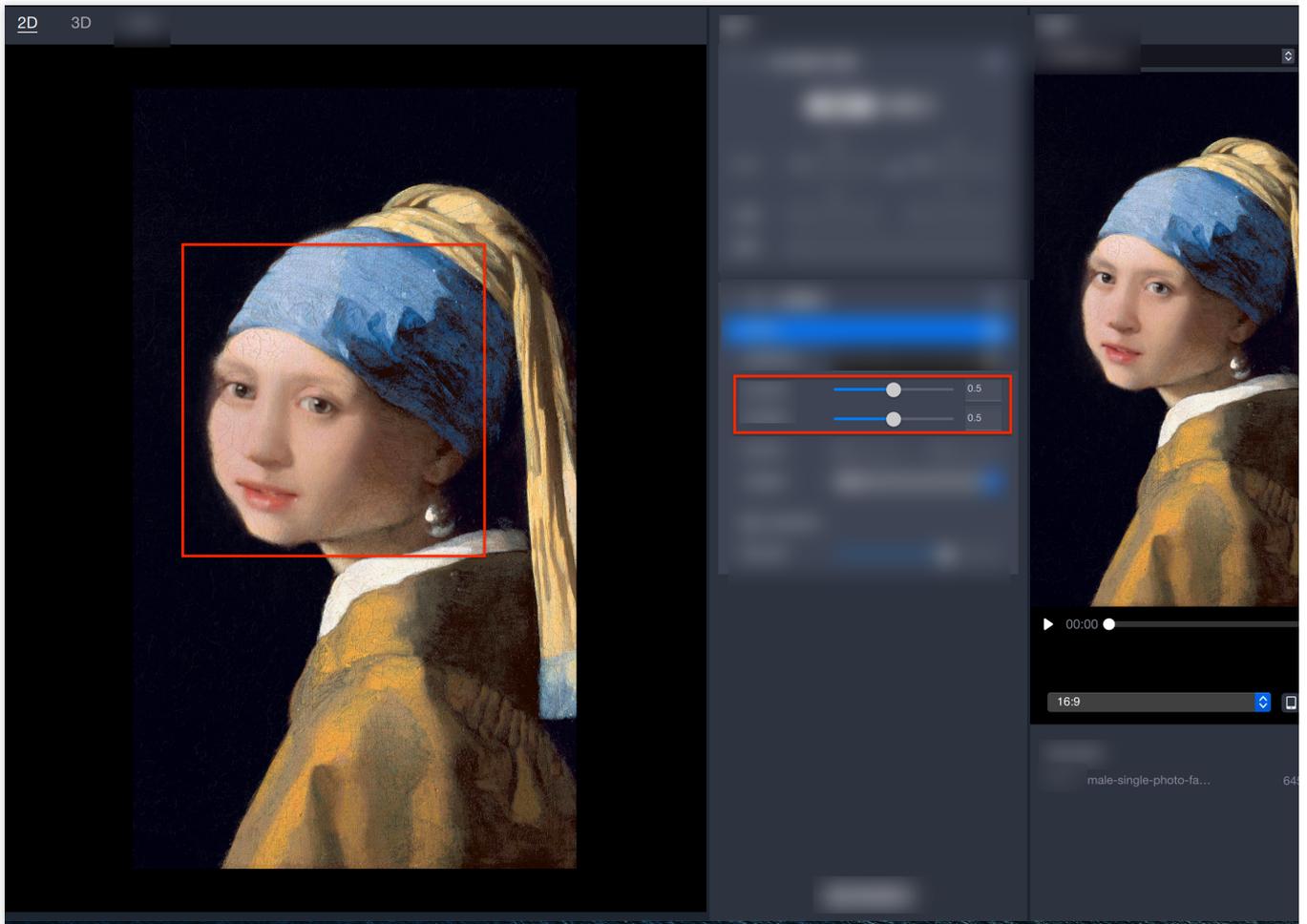




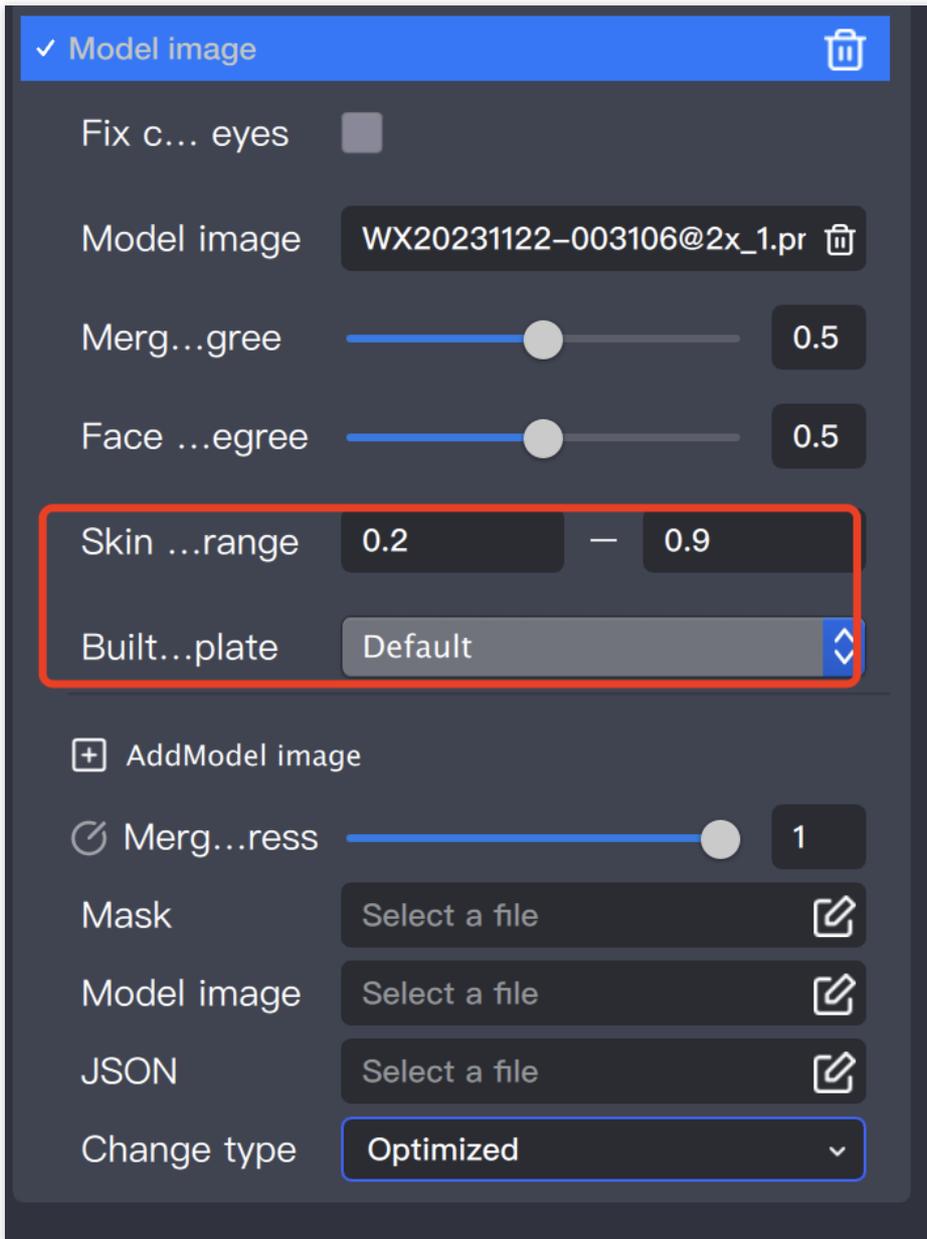
4. Adjust Fusion Parameters

Blending Level: The higher the blending level, the closer the facial features of the fused image will be to the model image's features.

Deformation Level: The higher the deformation level, the closer the face shape of the fused image will be to the model image's face shape.

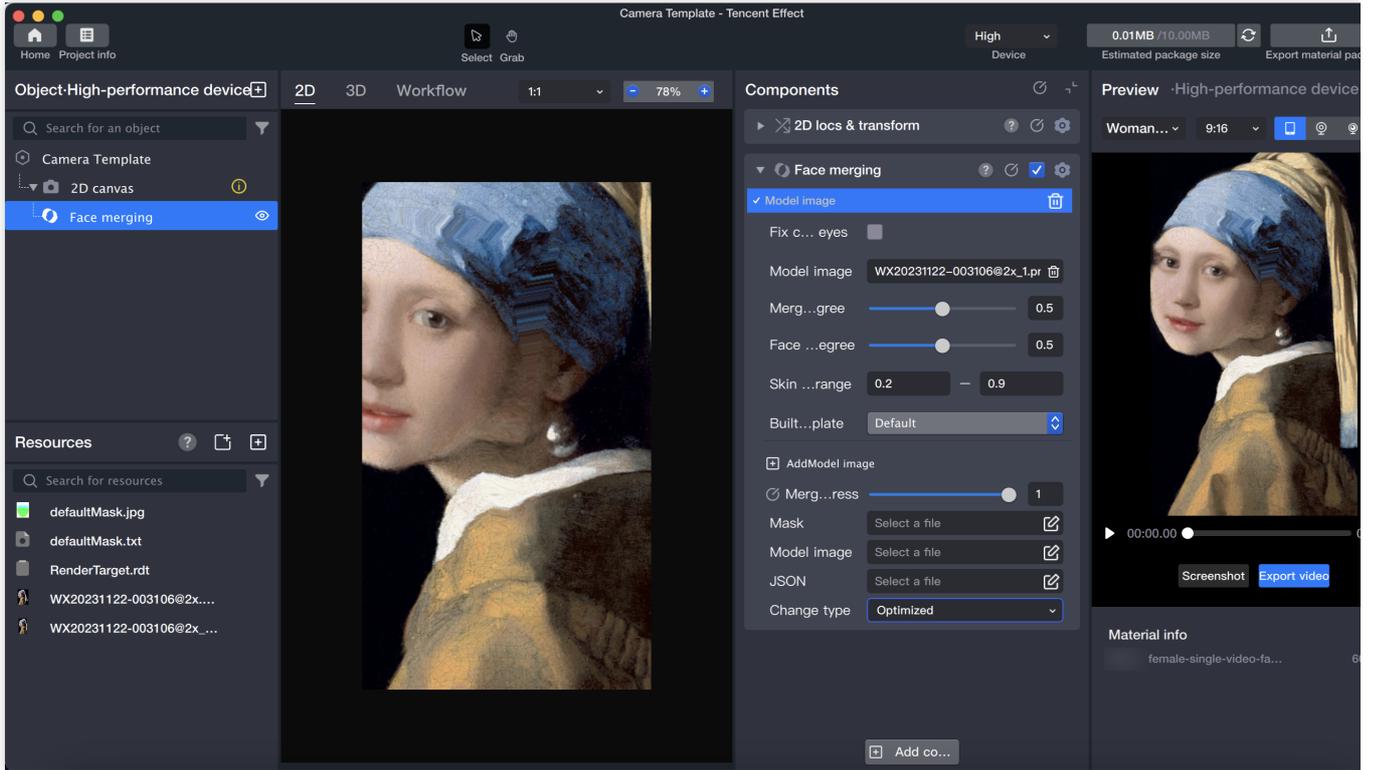


In the Fusion Masterpiece gameplay, we want the face shape and skin color and texture to be closer to the masterpiece, while retaining more of the photographer's facial features. In this case, we need to lower the blending level, increase the deformation level, and adjust the skin color range to 0.8-1.



5. Refresh

After refreshing, you can see the fusion effect.



Body Beautification

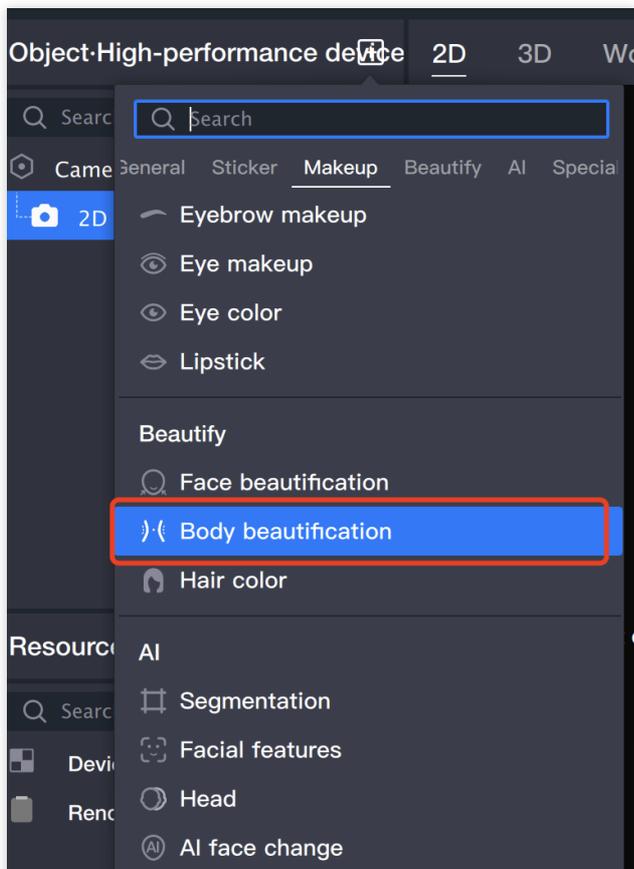
Last updated : 2024-03-25 11:43:19

Introduction

The Body Beautification Component can naturally enhance the body lines of the subject, making them more confident in their figure when engaging in full-body gameplay. The Body Beautification Object provides four parameters: long legs, slim body, slim shoulders, and slim waist. By adjusting these parameters, the intensity of the beautification can be modified.

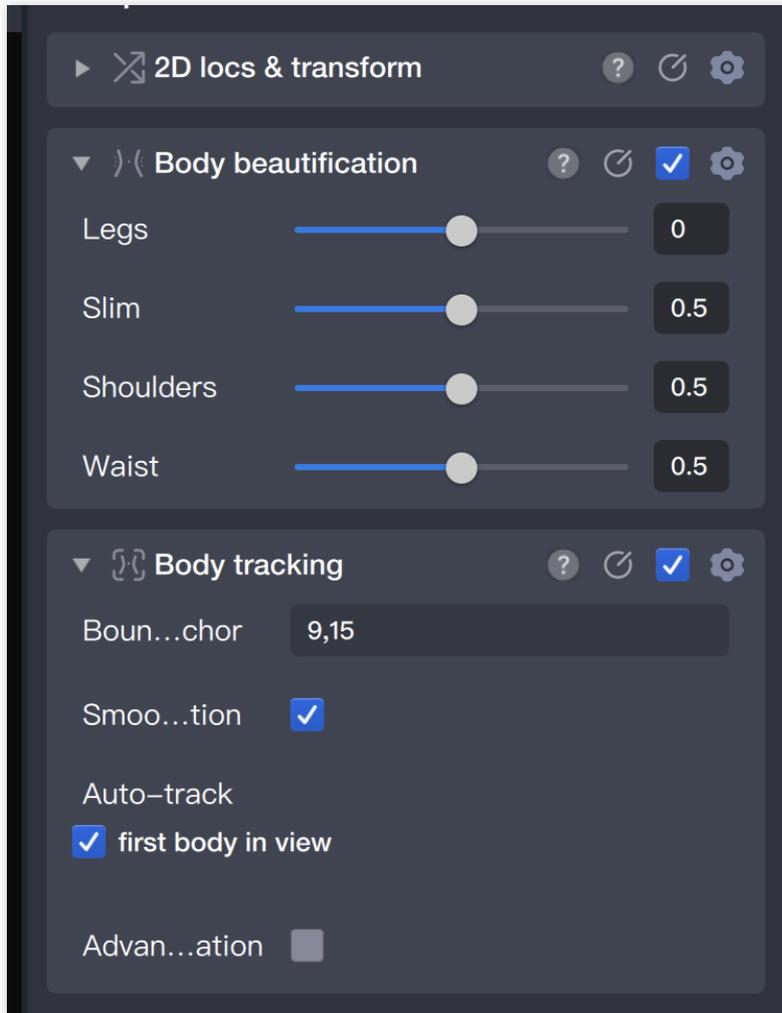
Basic Usage

1. Add a Body Beautification Object

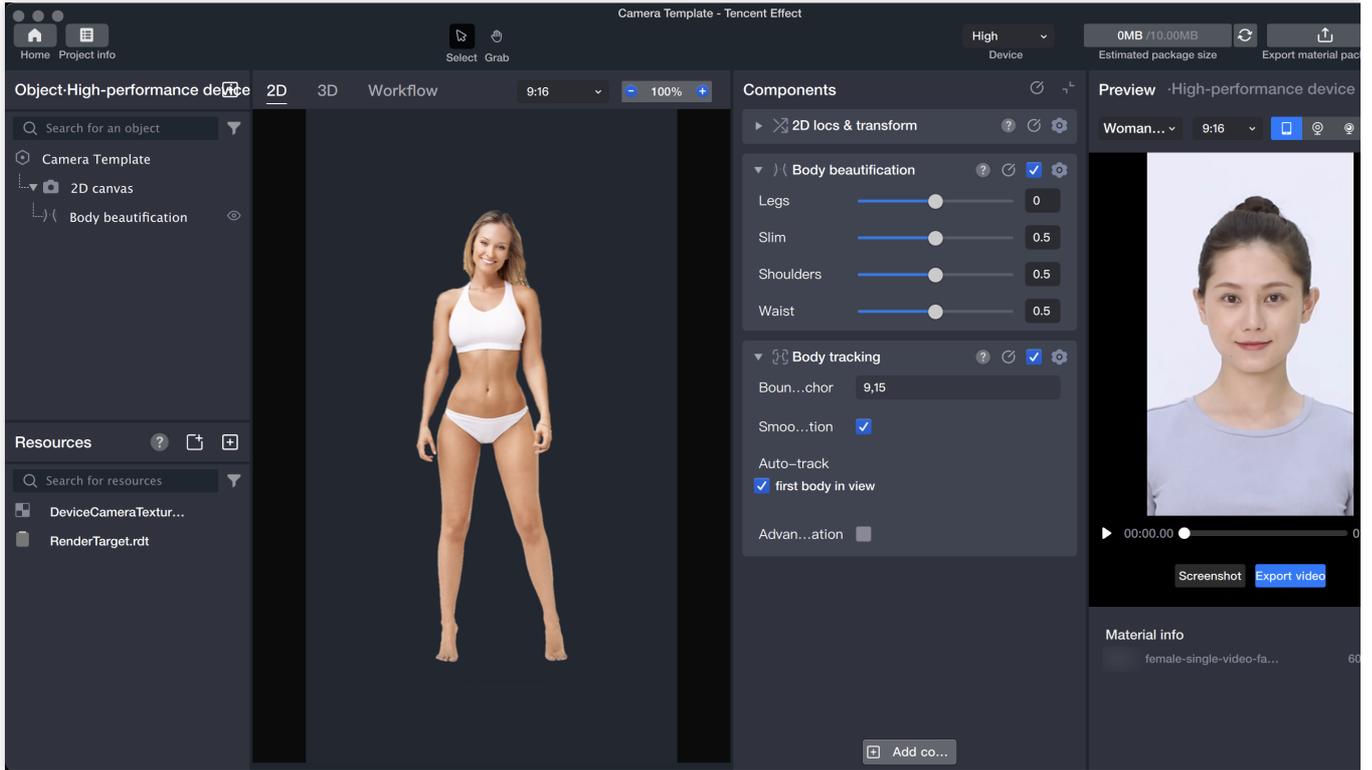


2. Adjust the Beautification Parameters

The Component Panel allows you to modify the parameters of the beautification.



The Scene Panel displays the model image, allowing you to preview the effects of the modifications in real-time.



Multi-Grid

Last updated : 2024-03-25 11:43:19

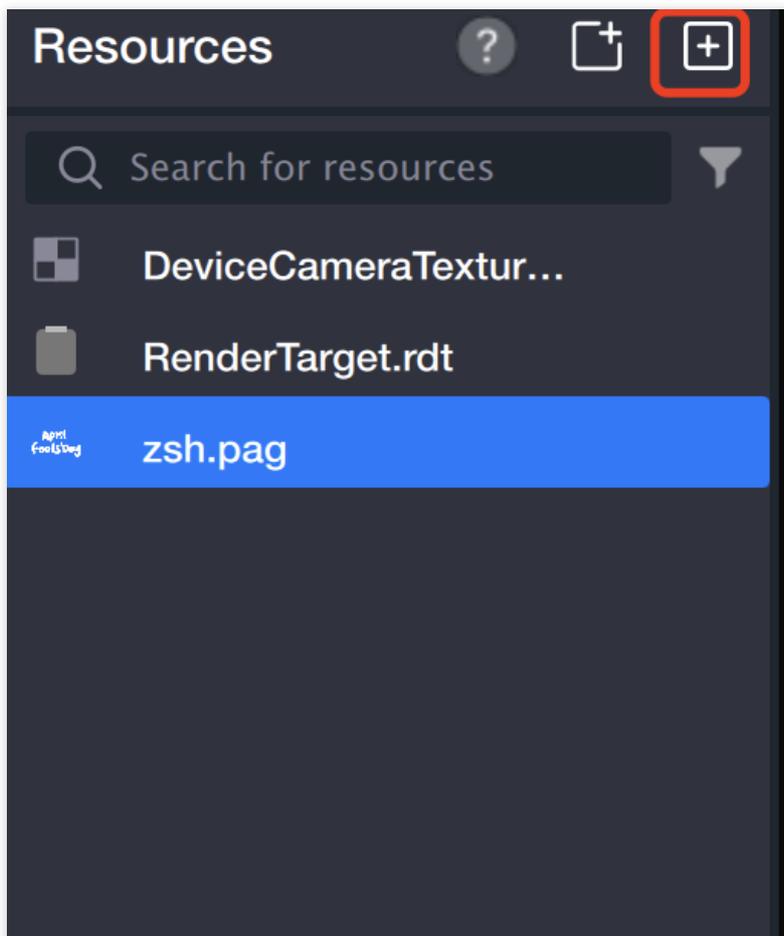
Introduction

Multi-frame, that is, multiple frames appearing on a screen and being shot simultaneously, is the basis for many gameplay in shooting templates.

Basic Usage

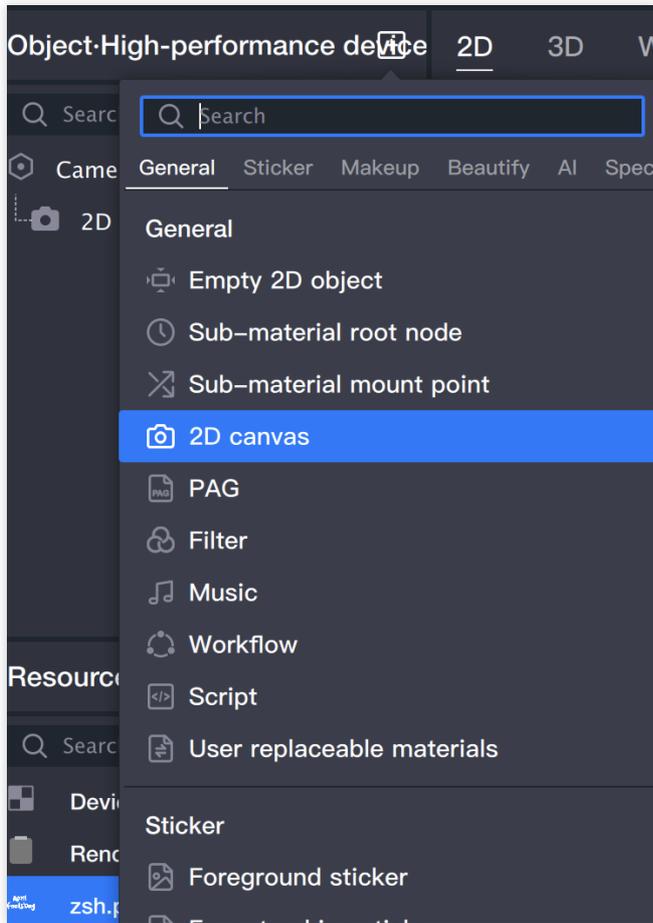
1. Import Material

Drag the file directly into the Resource panel.



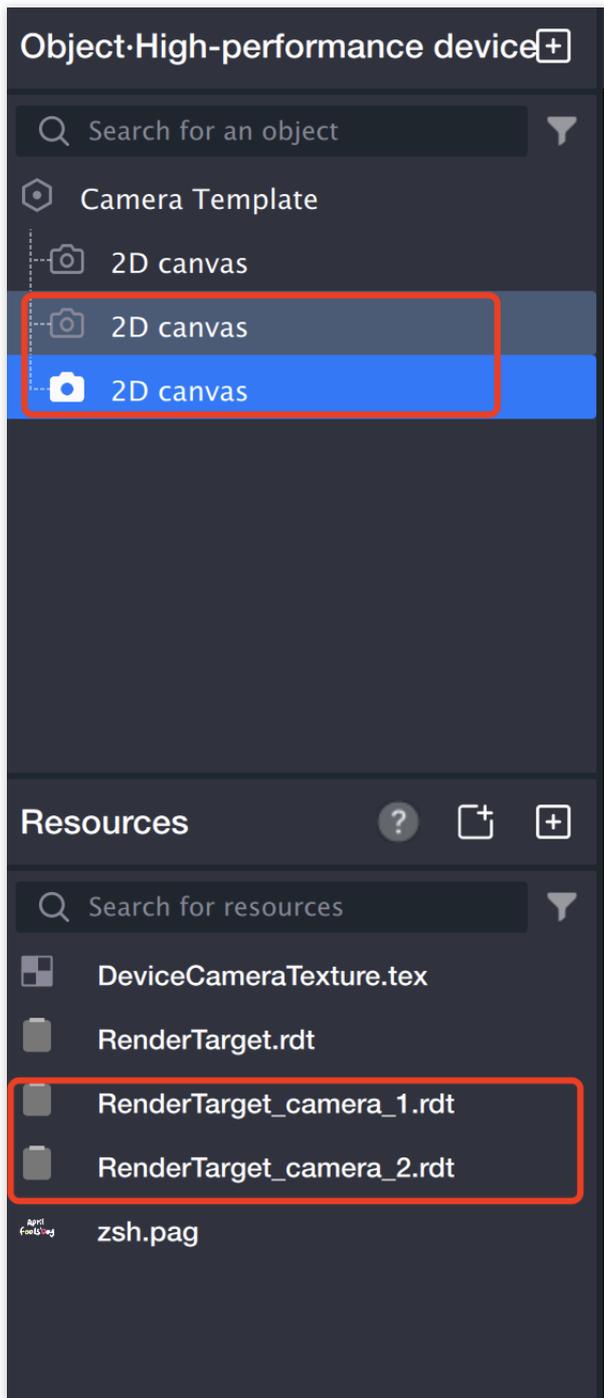
2. Create Canvas

2.1 Add a **2D Canvas** in the Object panel.



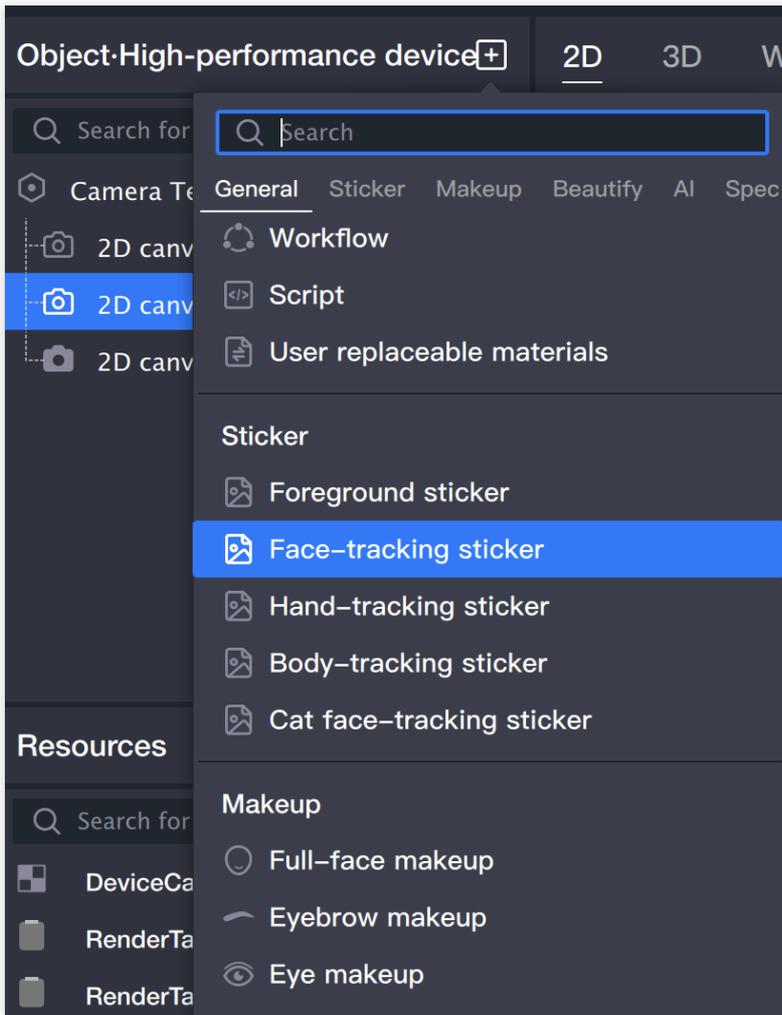
2.2 Add another 2D canvas (same steps as (1))

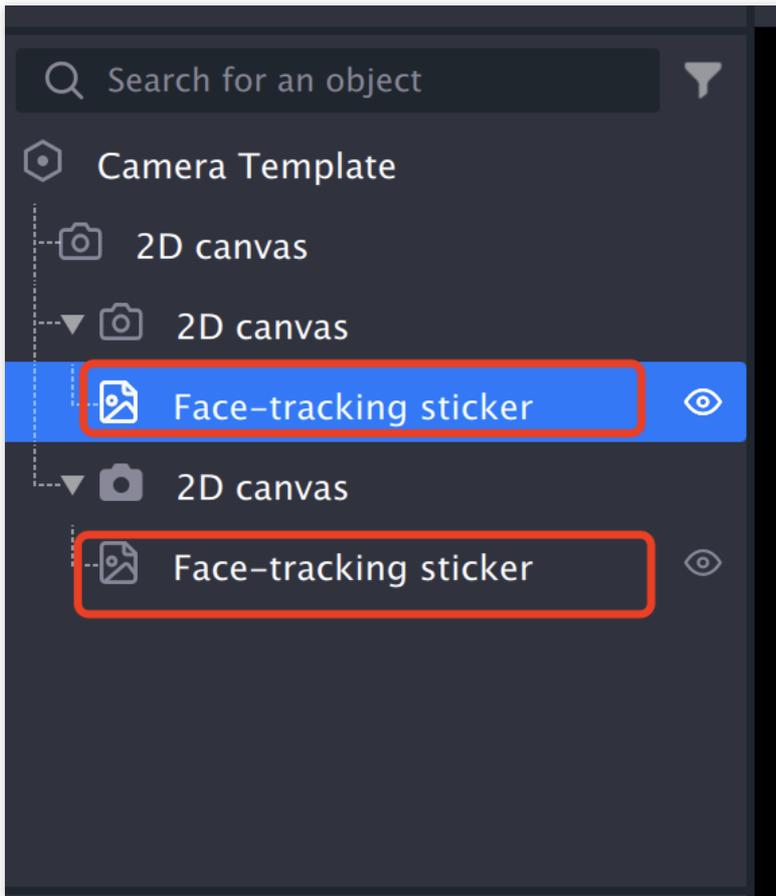
2.3 At this point, the Resource panel will add RenderTarget_camera_1.rdt and RenderTarget_camera_2.rdt files.



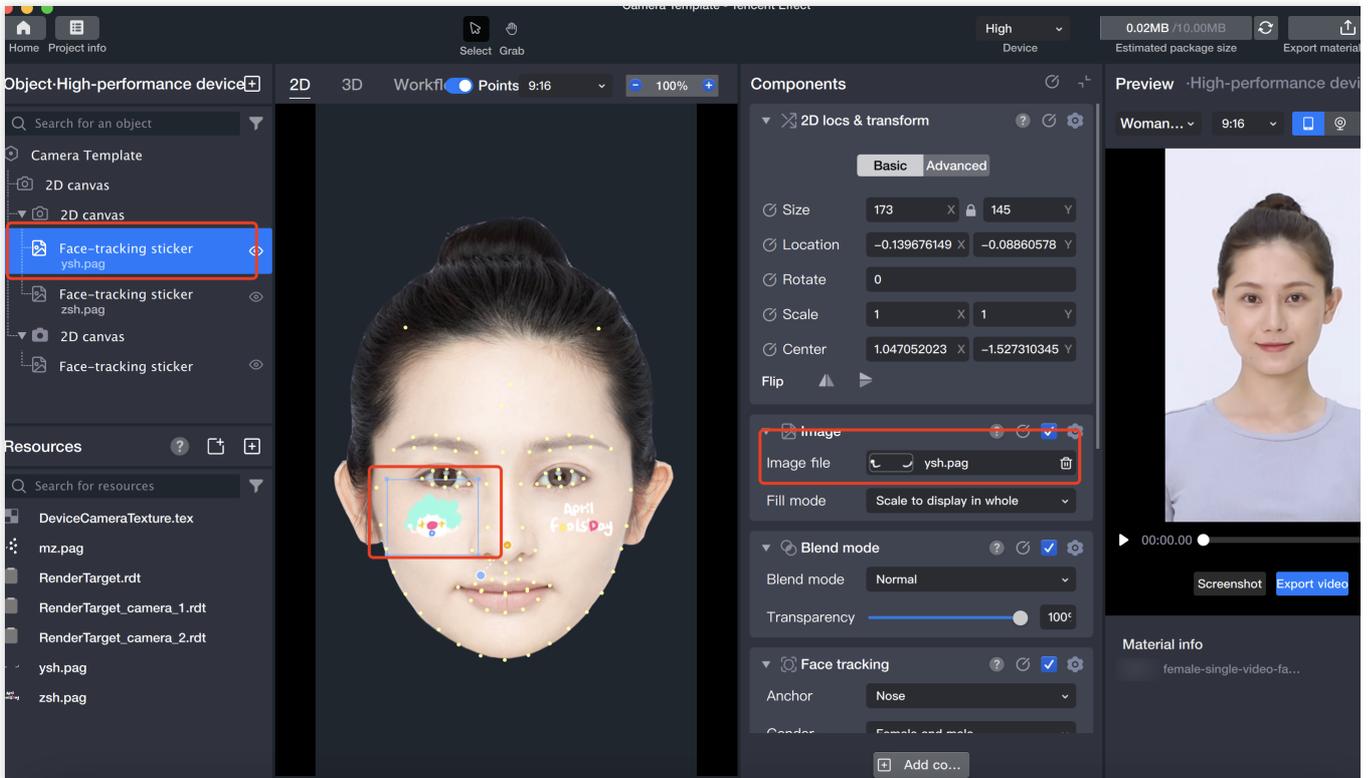
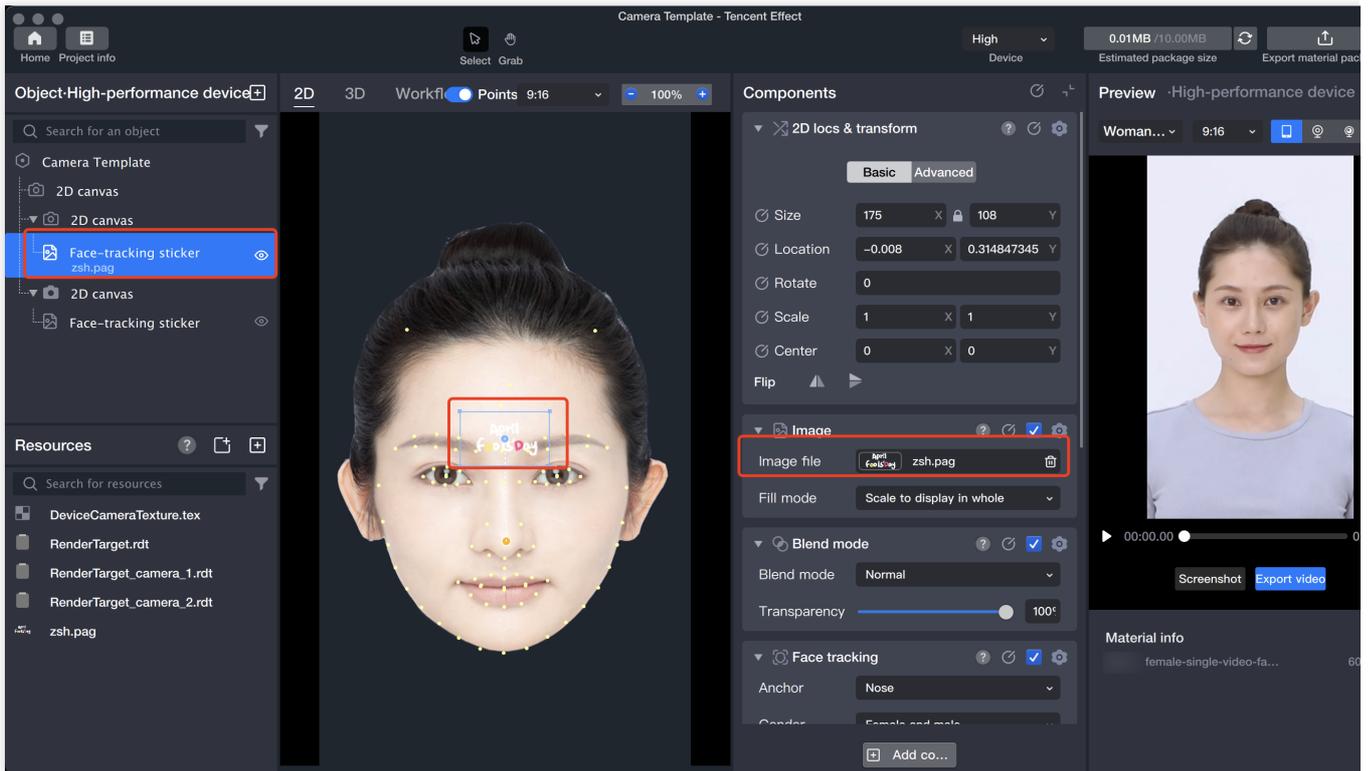
3. Create face-tracking stickers in the first two 2D canvases

3.1 Add a **Face-tracking Sticker** in each of the first two 2D canvases.

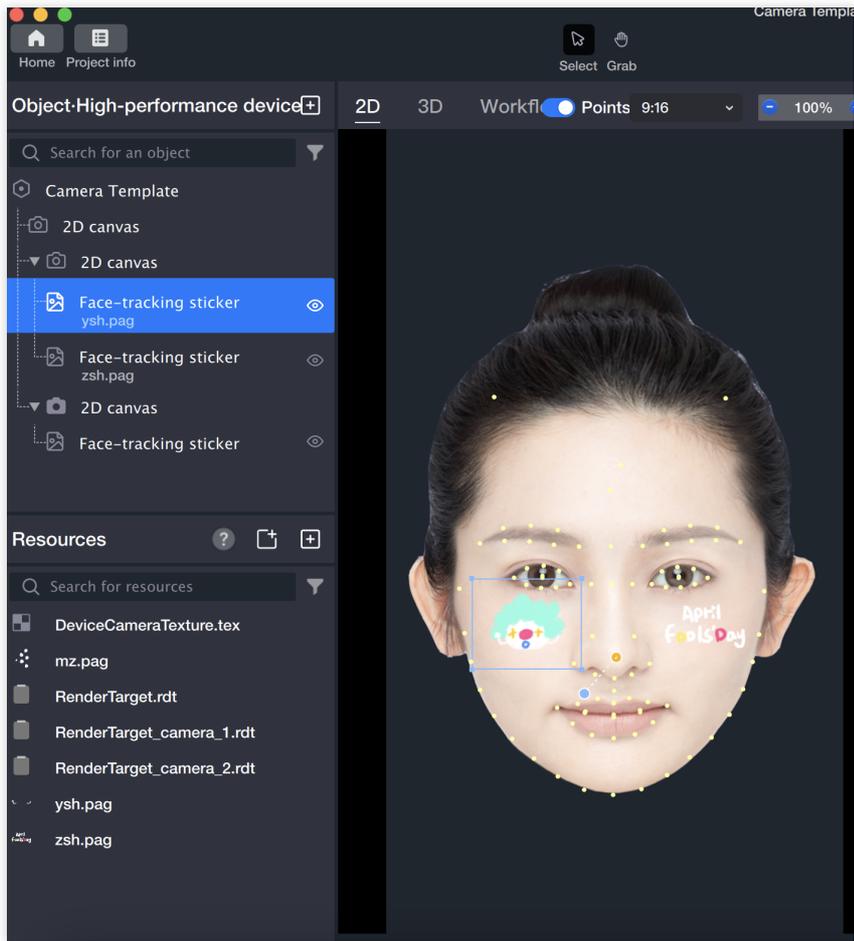




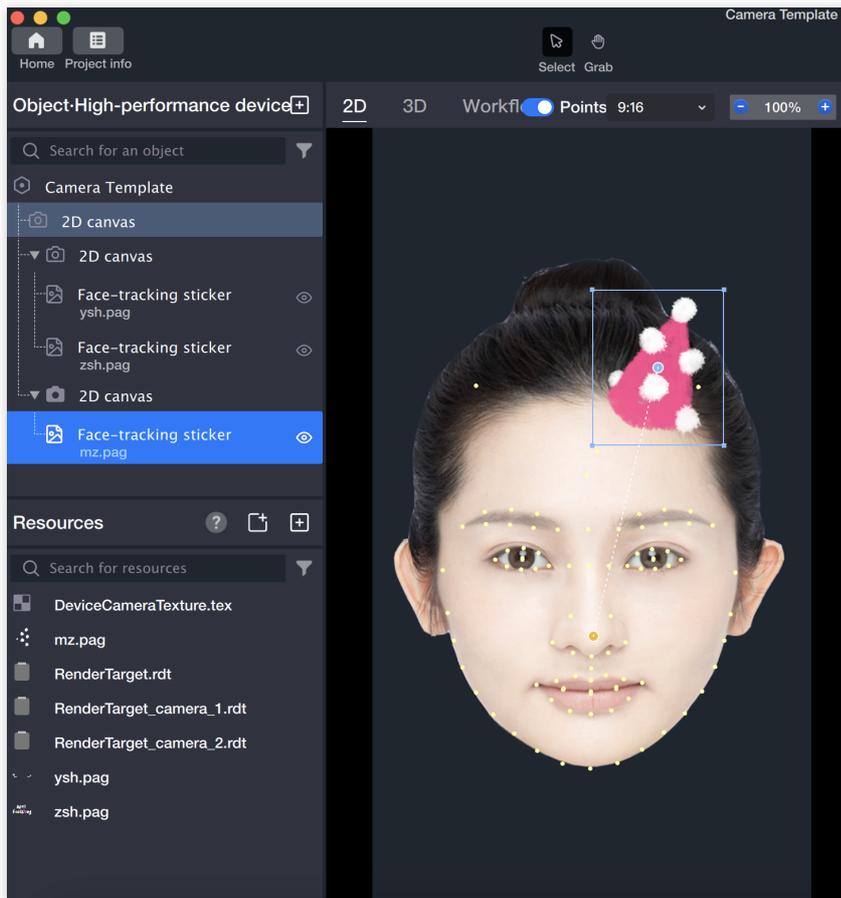
3.2 Add **Image File** to the first two face-tracking stickers.



3.3 After properly adjusting the material position, the first canvas effect is obtained:

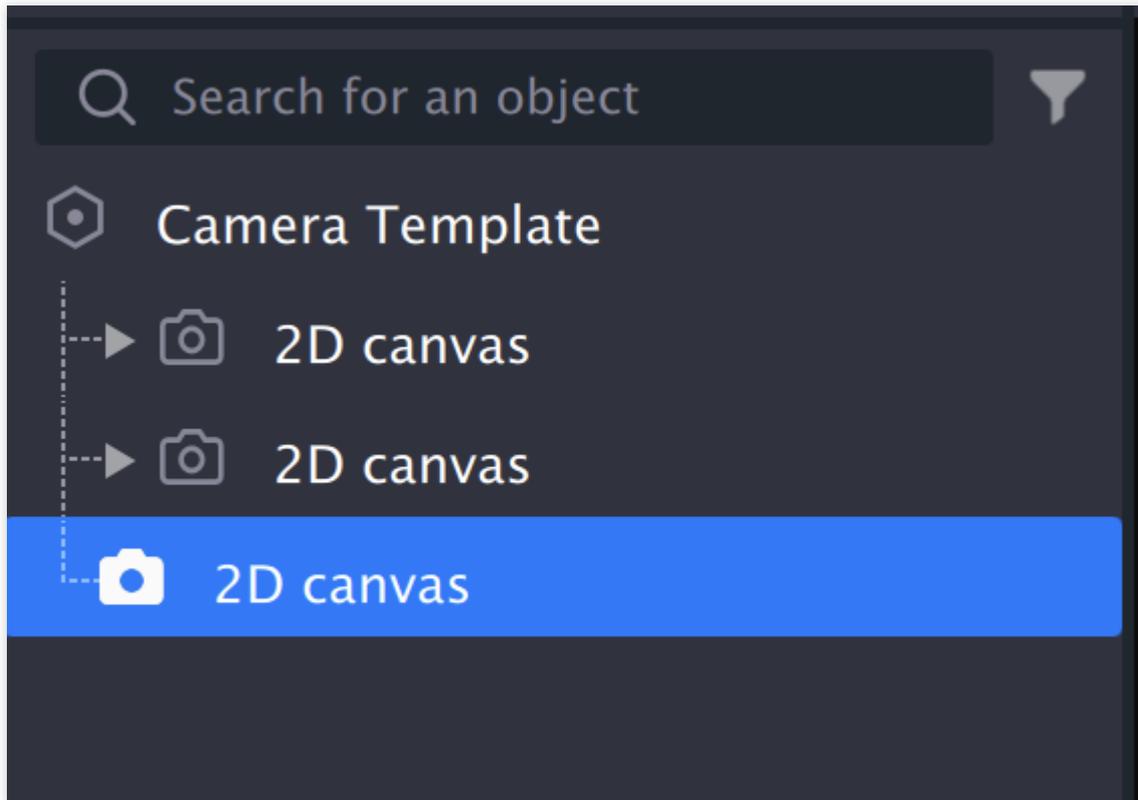


3.4 Repeat the same operation for another 2D canvas, and the second canvas effect is:

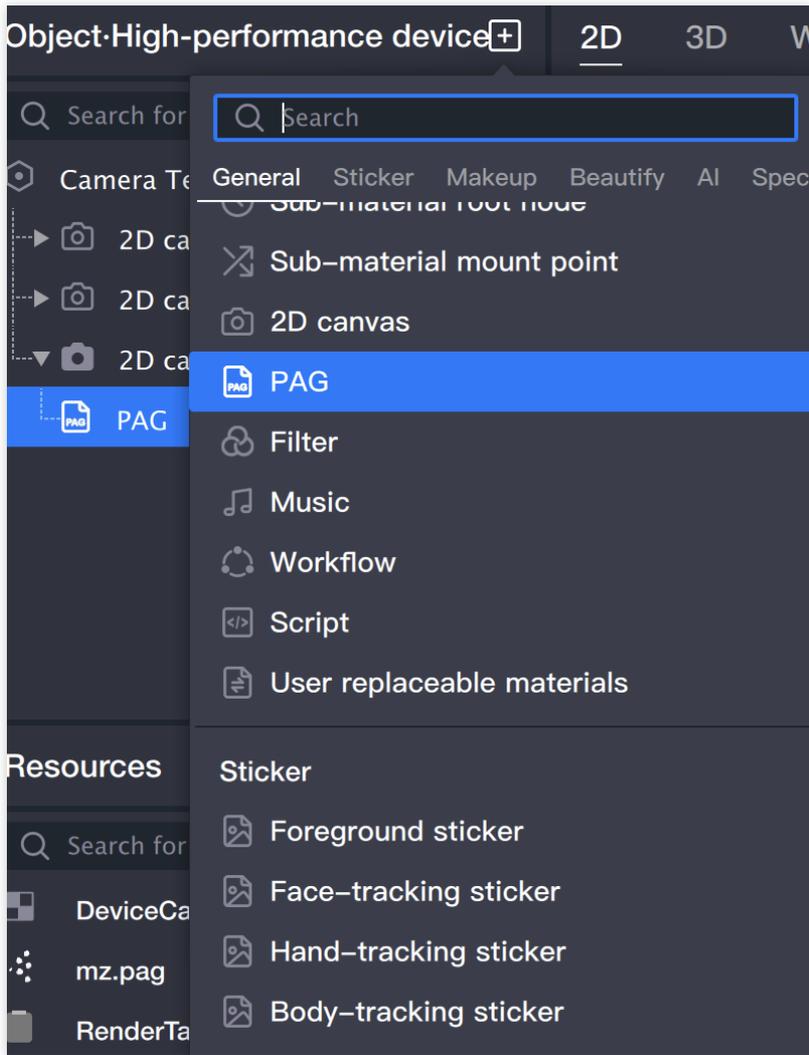


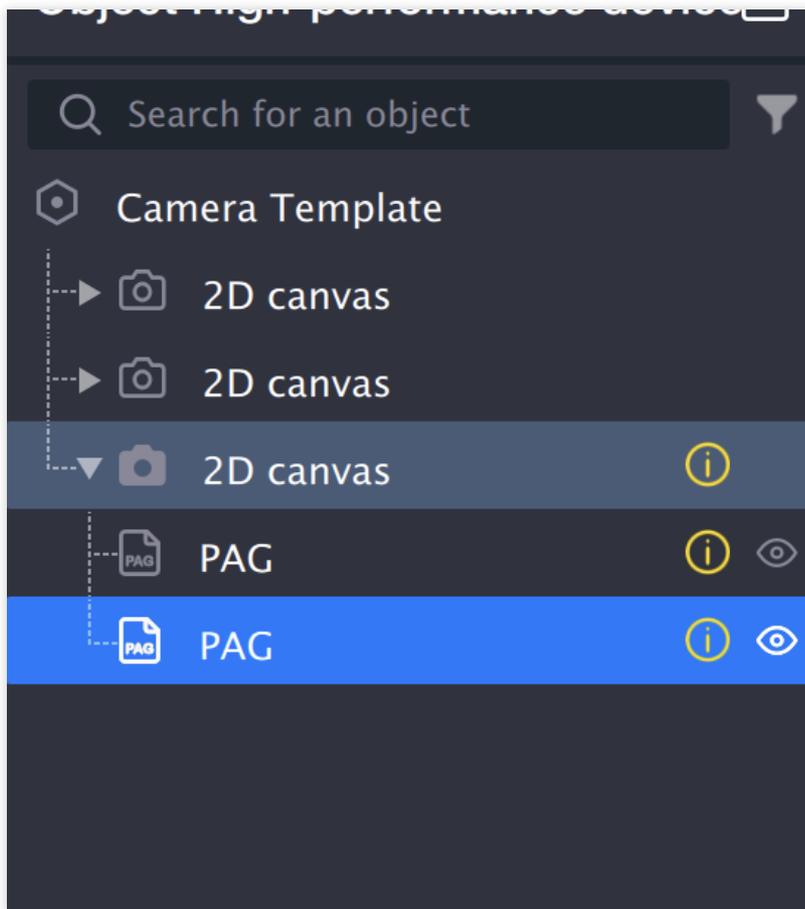
4. Add the first two canvases in top-down order to the third canvas

Since the Tencent Effect object panel has a rendering order logic, the topmost content on the screen is at the bottom of the object panel; if we want to make a multi-frame shooting project, there should be three 2D canvases in the object, so the bottom 2D canvas should be used to place the top two canvases, that is, the third canvas is the final rendering layer. The following figure shows the hierarchical relationship between the three canvases, so the first two canvases need to be added to the third canvas in top-down order, as follows:

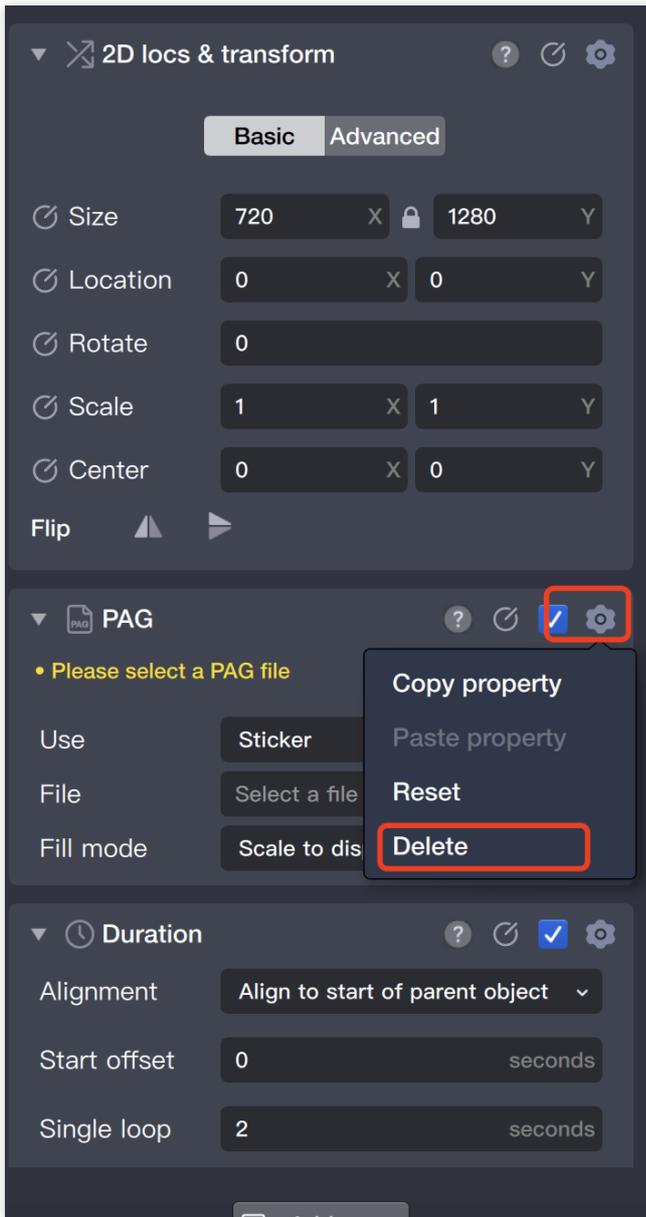


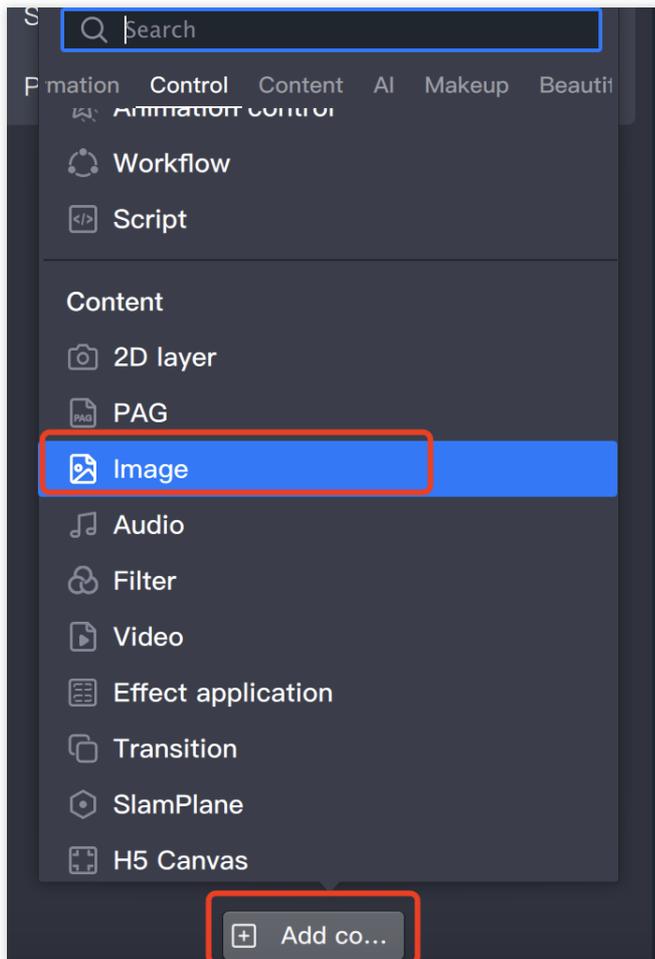
4.1 Add two **pag** components on the third 2D canvas.



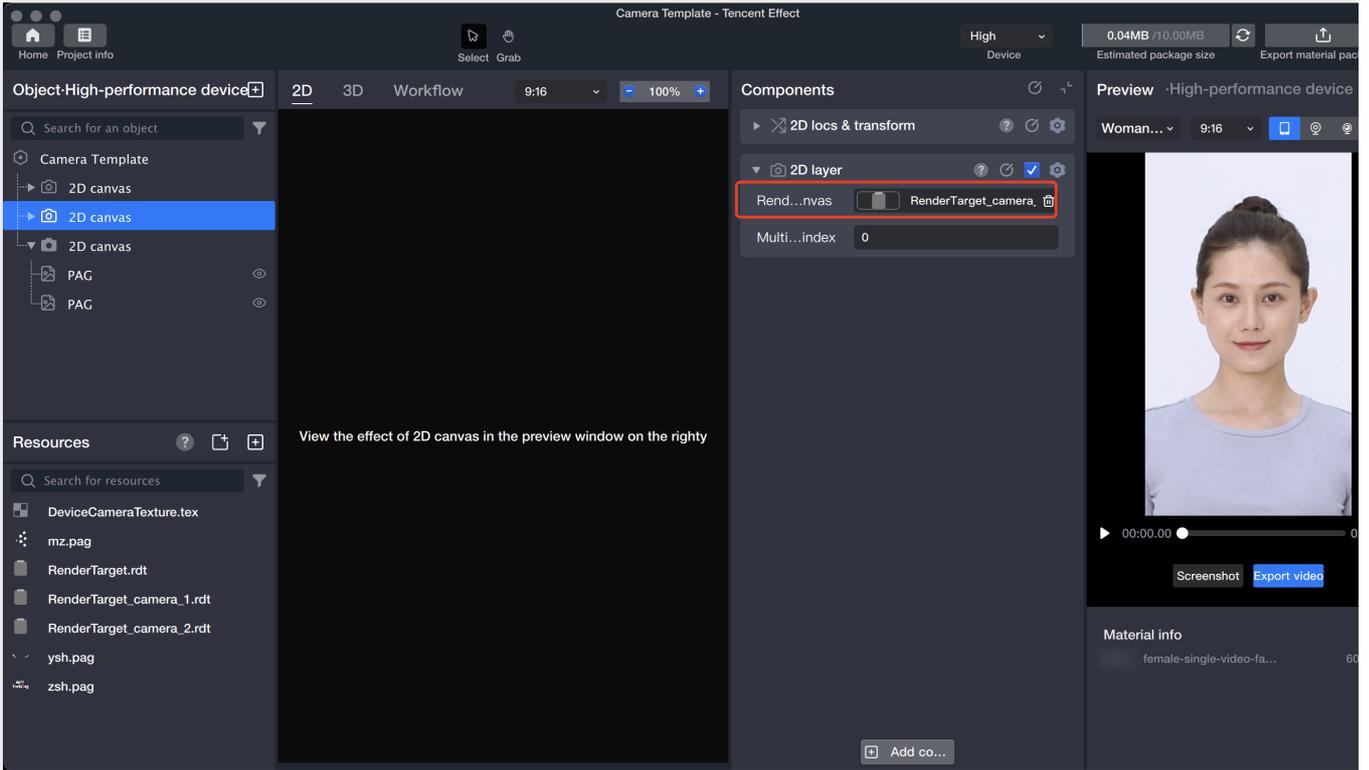


4.2 Change the **pag** component of the added two pag objects to **Image** component: first delete the **pag** component, then add a new **Image** component.

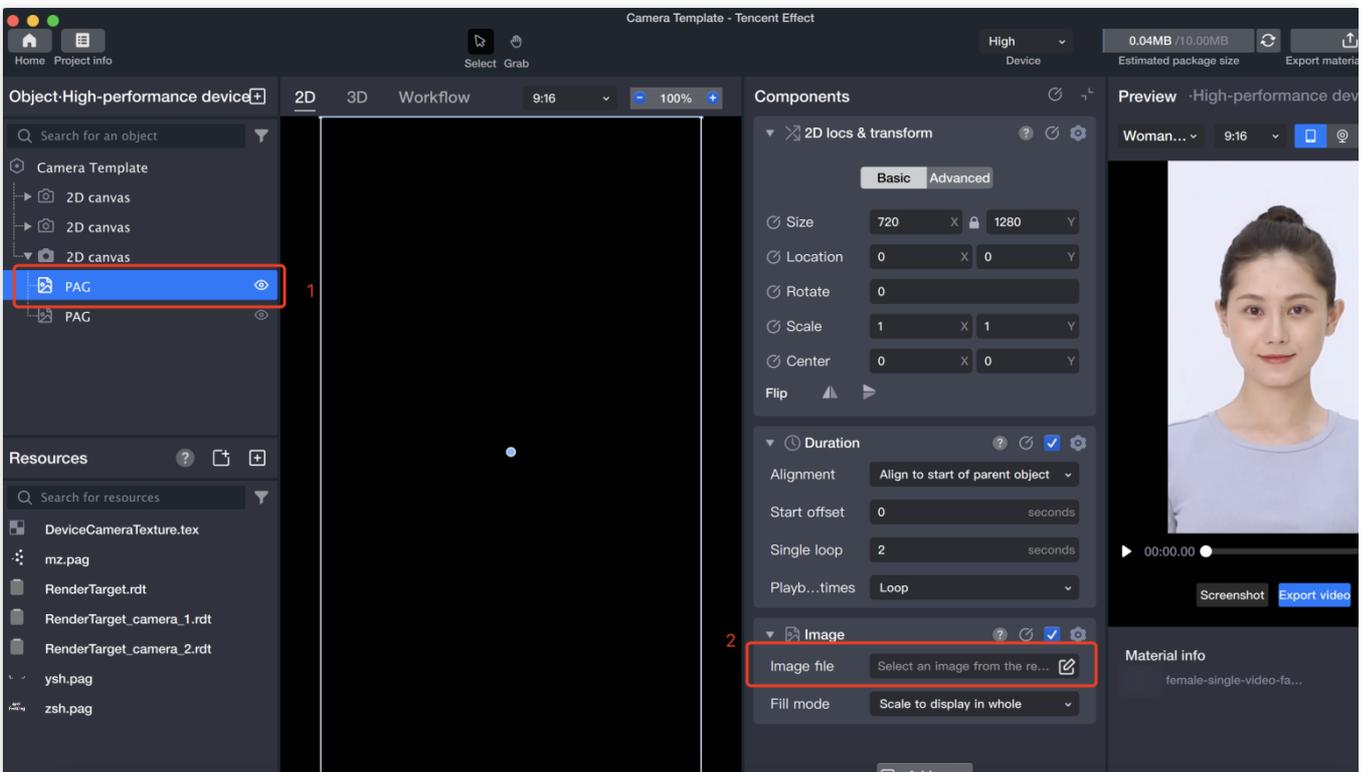


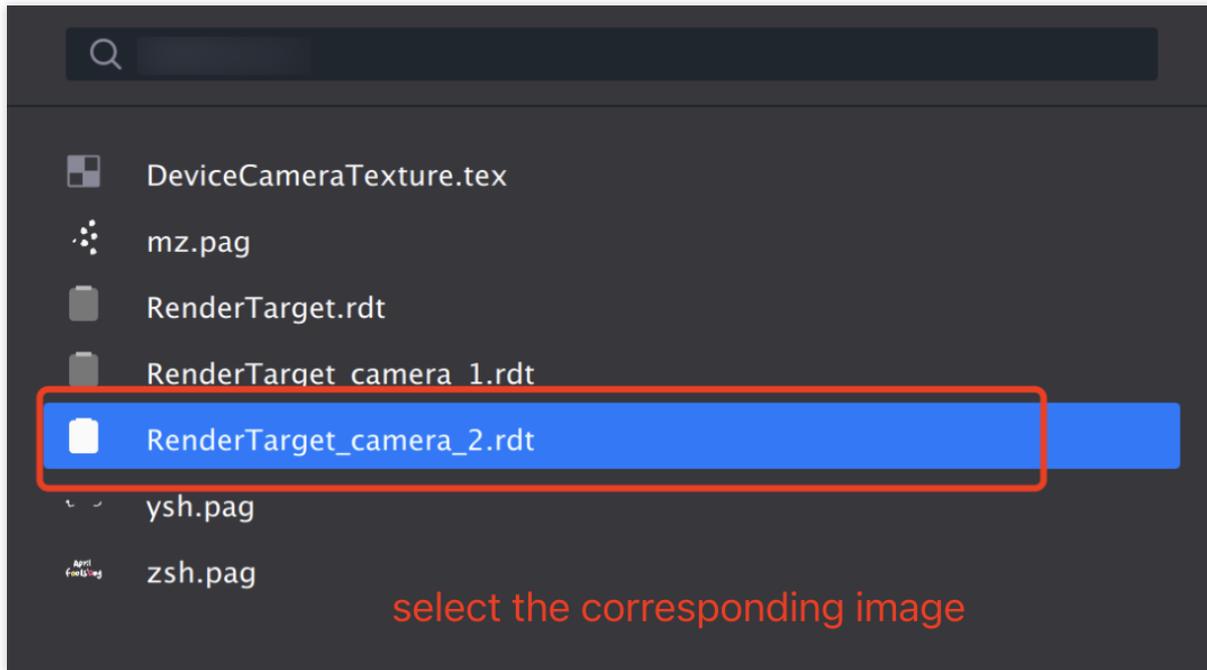


4.3 Check the rendering files of the first two 2D canvases (the same search method for the second canvas as for the first one).



4.4 Select the corresponding image files for the **Image** components of the two **pag** objects.

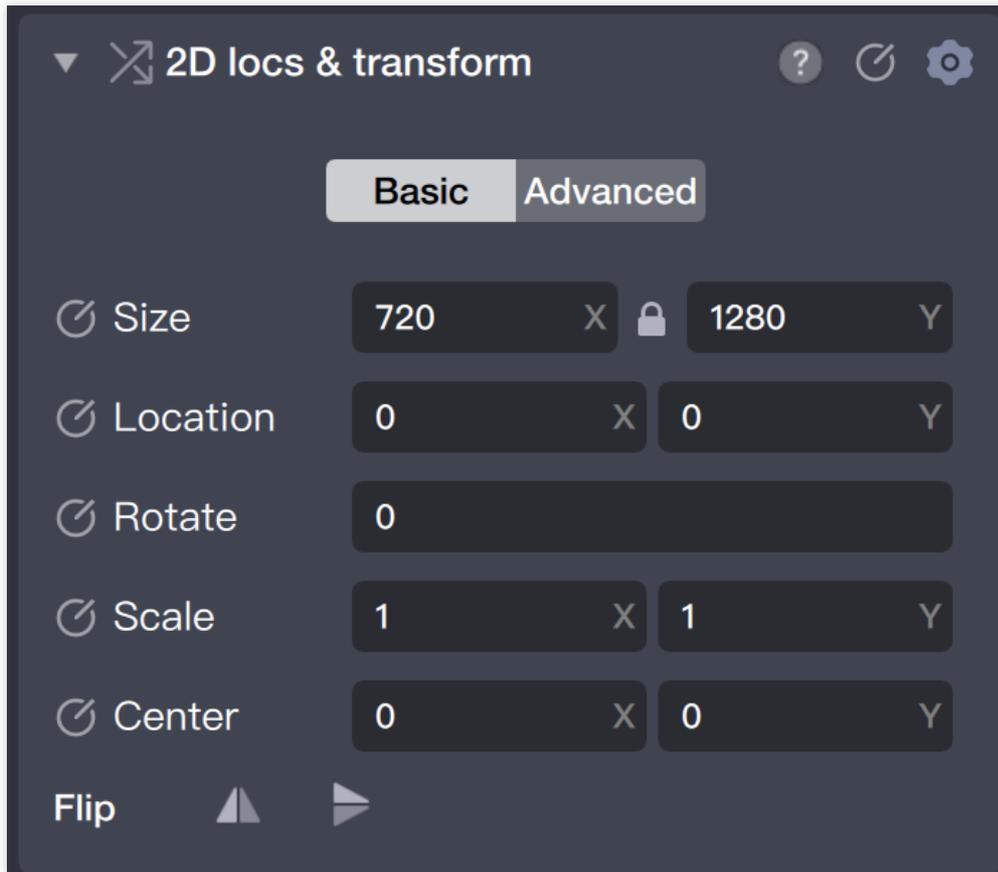




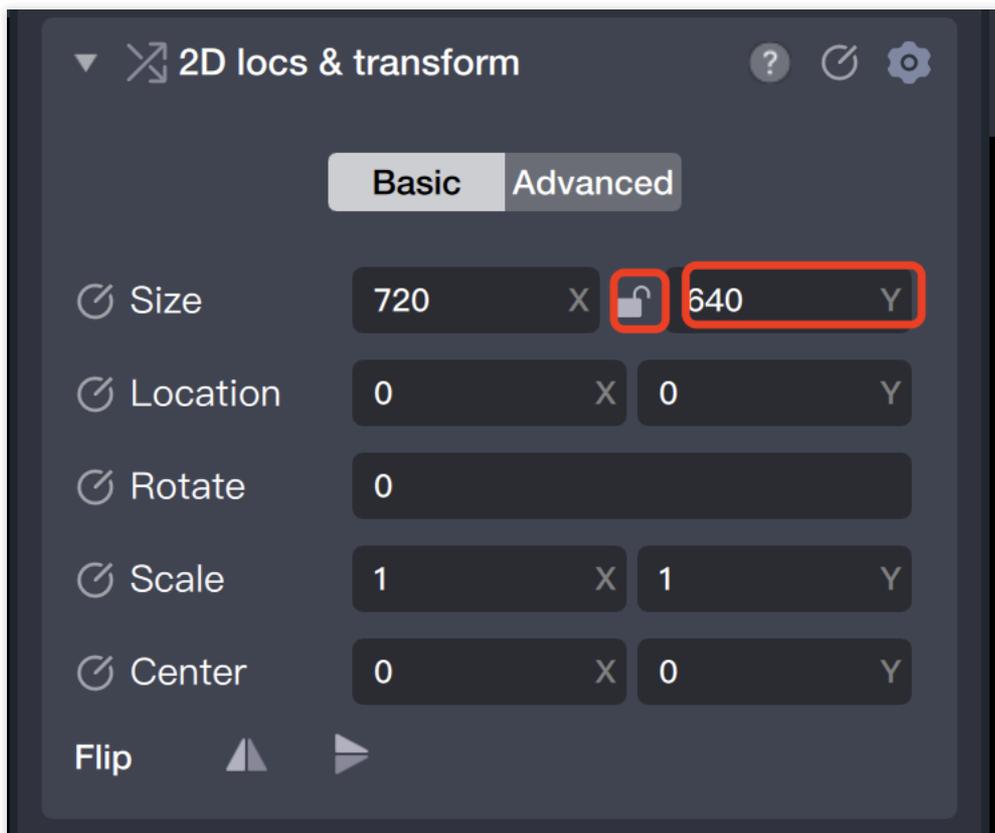
the second PAG file is operated in the same way

5. Adjust the size and position of the **[Image]** component.

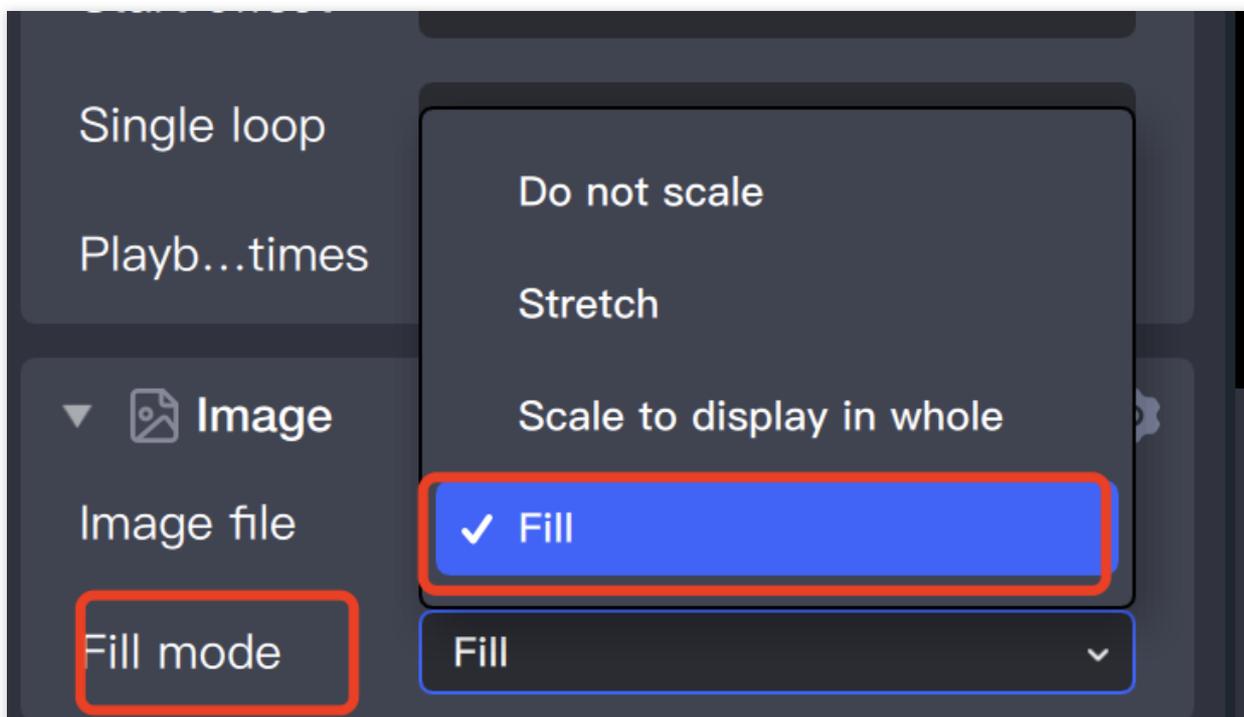
5.1 Select the first **pag** object, find its position and transformation in the component panel, and unlock the size parameters.



5.2 Adjust the H (Height) value to half the size, i.e., 640.

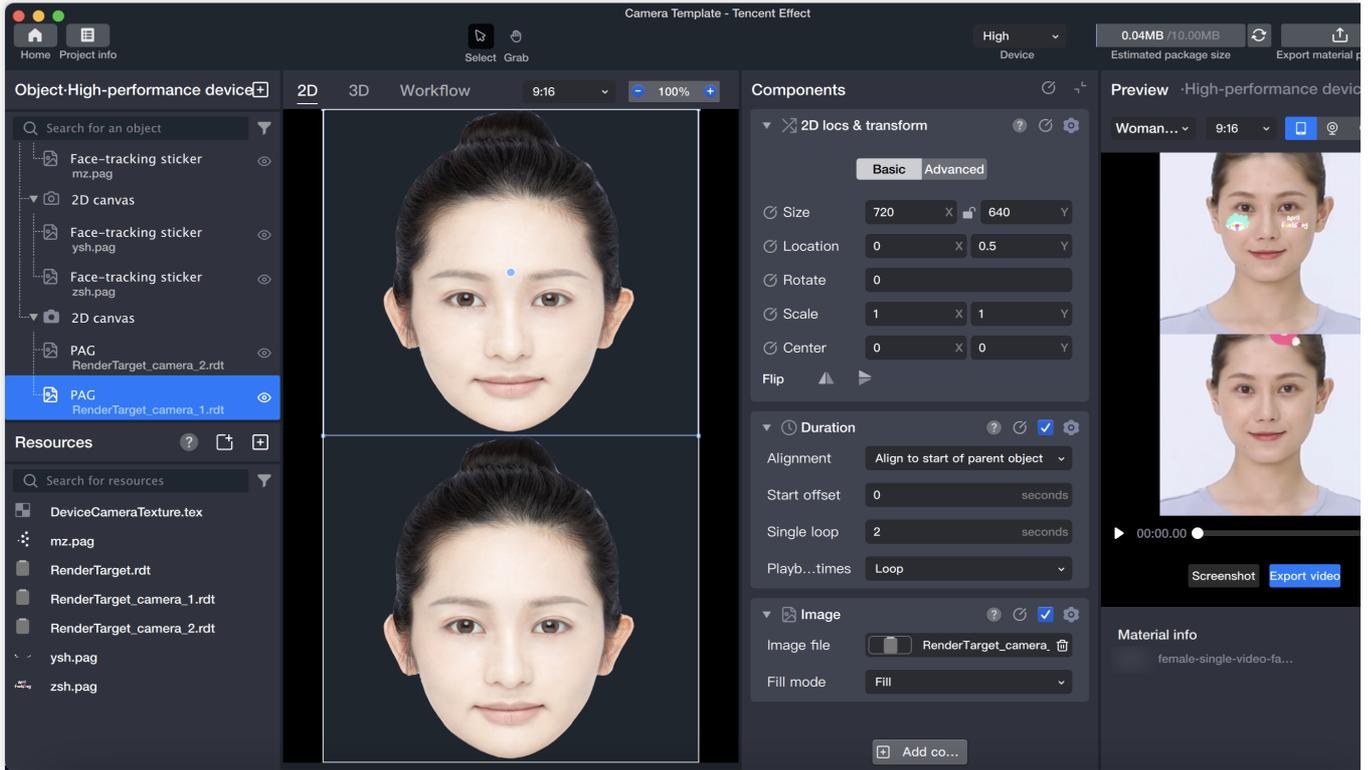


5.3 In the component panel, set the image's filling mode to fill.

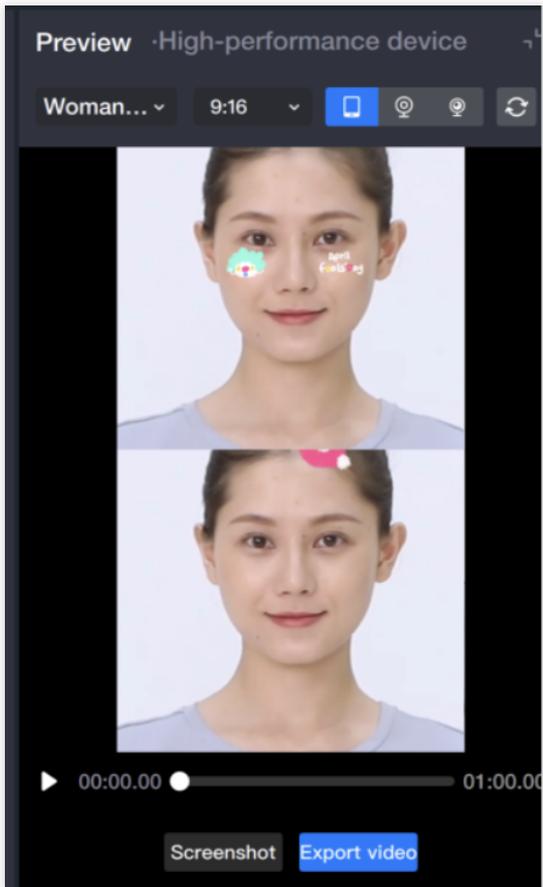


5.4 Move this image object to the top.

5.5 Repeat the above steps, adjust the size of the second image object and drag it down, finally showing the following form:



6. Preview



Sample Project

[Sample project](#) .

[Material package](#) .

Post-processing

Last updated : 2024-03-25 11:43:19

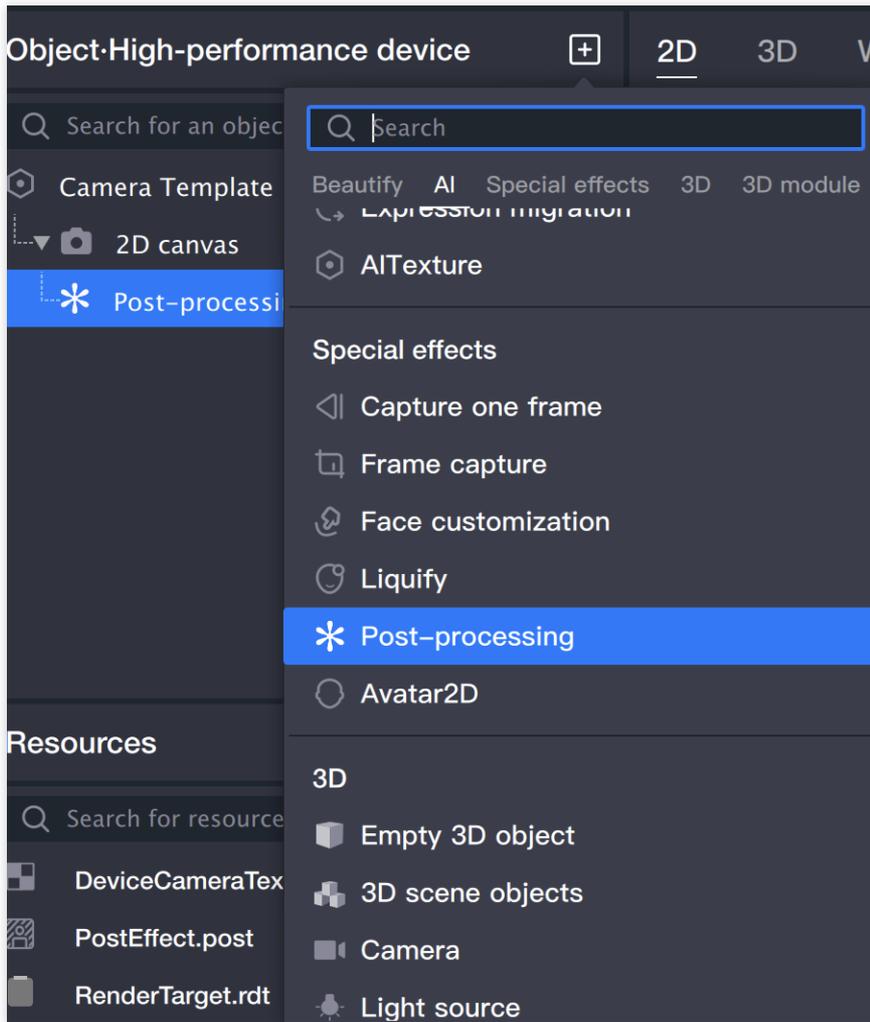
Introduction

By applying post-processing effects, you can add blur, hazy, colorful filters, noise reduction, and kira effects to your videos.

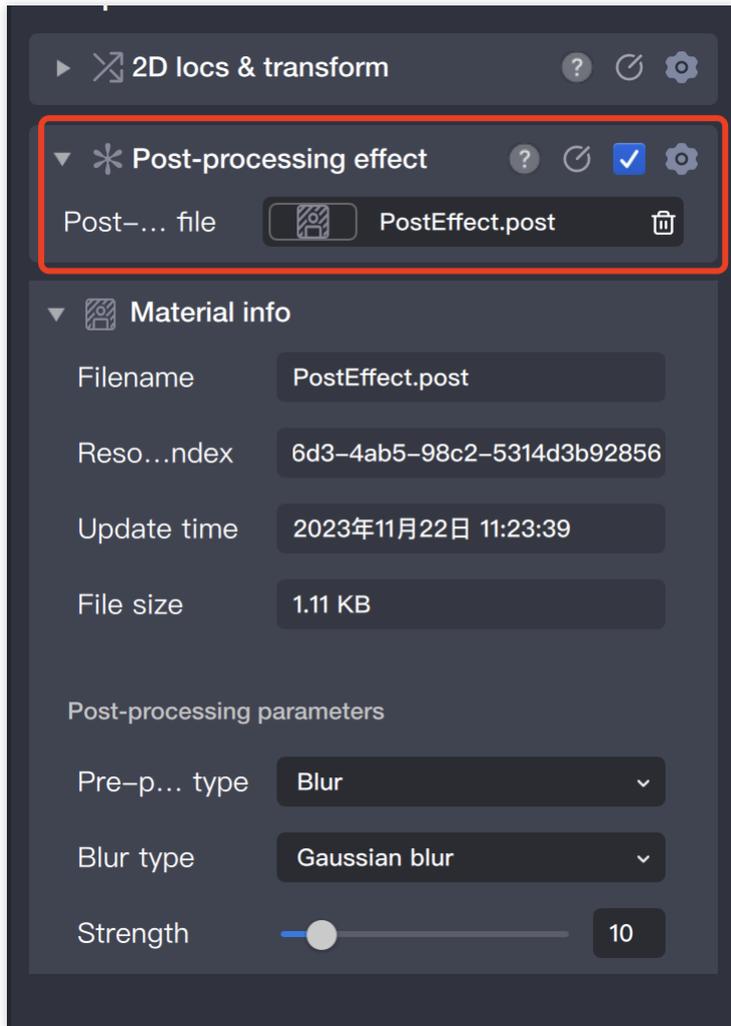
Basic Usage: Global Blur

1. Add a post-processing object

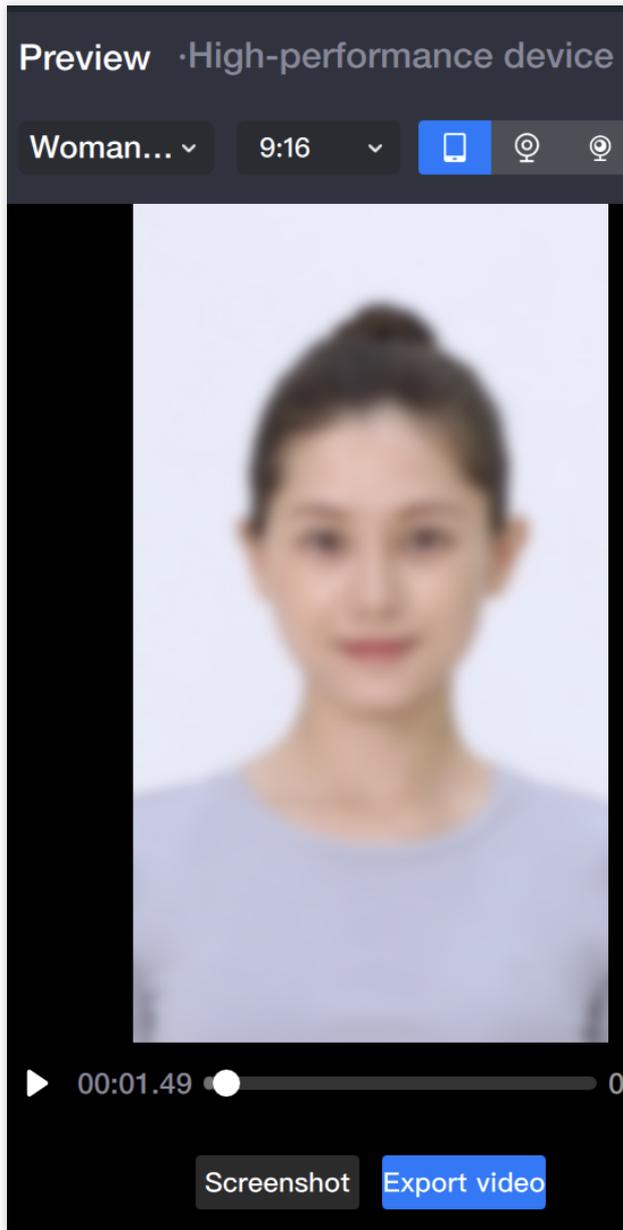
1.1 Add a **Post-processing** object in the object panel.



1.2 This object will automatically add a post-processing effect component, and the post-processing file property in the component will point to a file in the resource panel: PostEffect.post. All subsequent post-processing effect modifications and parameter adjustments are based on this file.

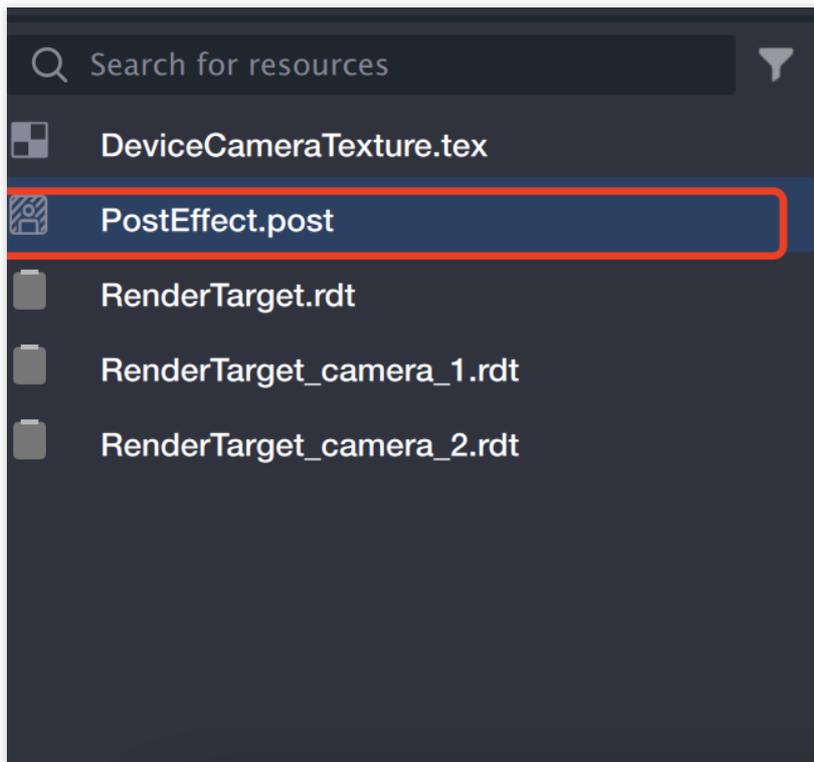


1.3 After adding the post-processing object, you can see the default post-processing effect: blur in the preview panel.

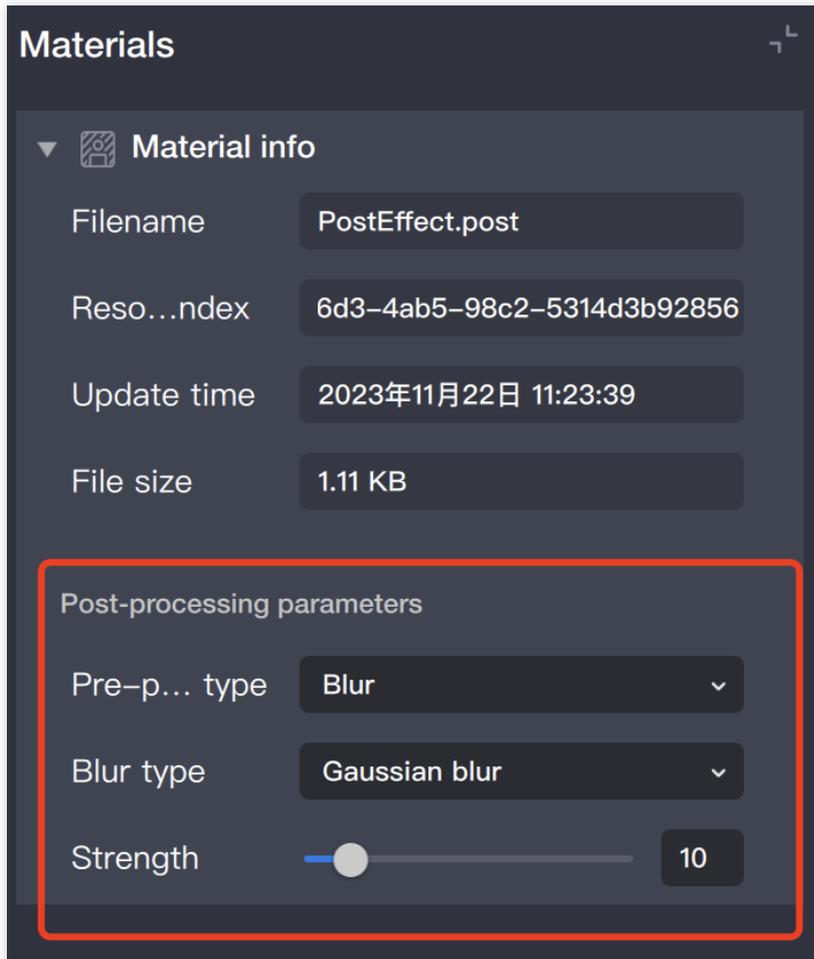


2. Modify post-processing effects

2.1 Select the post-processing file mentioned above in the resource panel: PostEffect.post

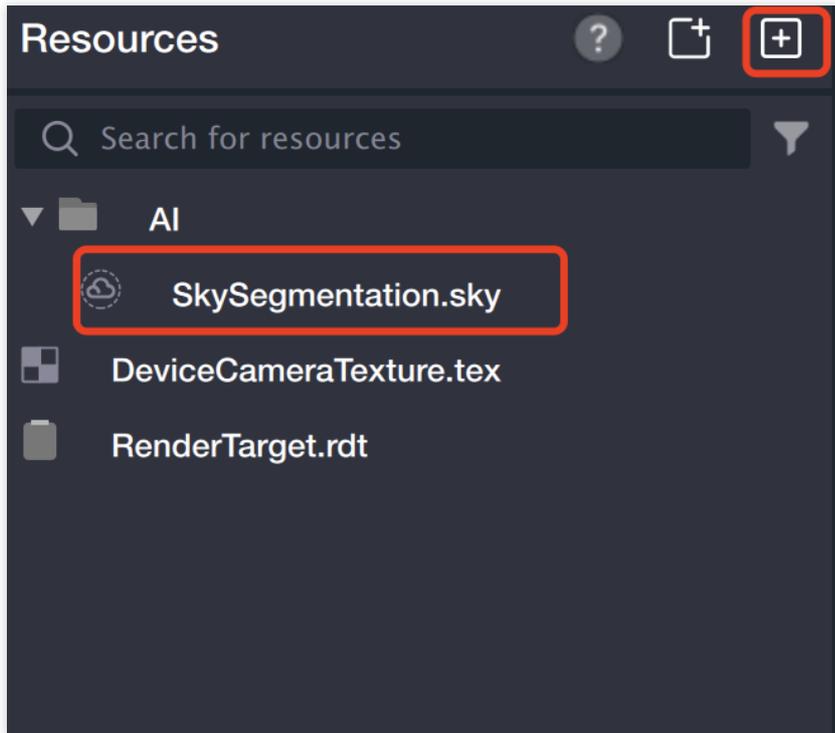


2.2 Modify the post-processing parameters in the component panel.



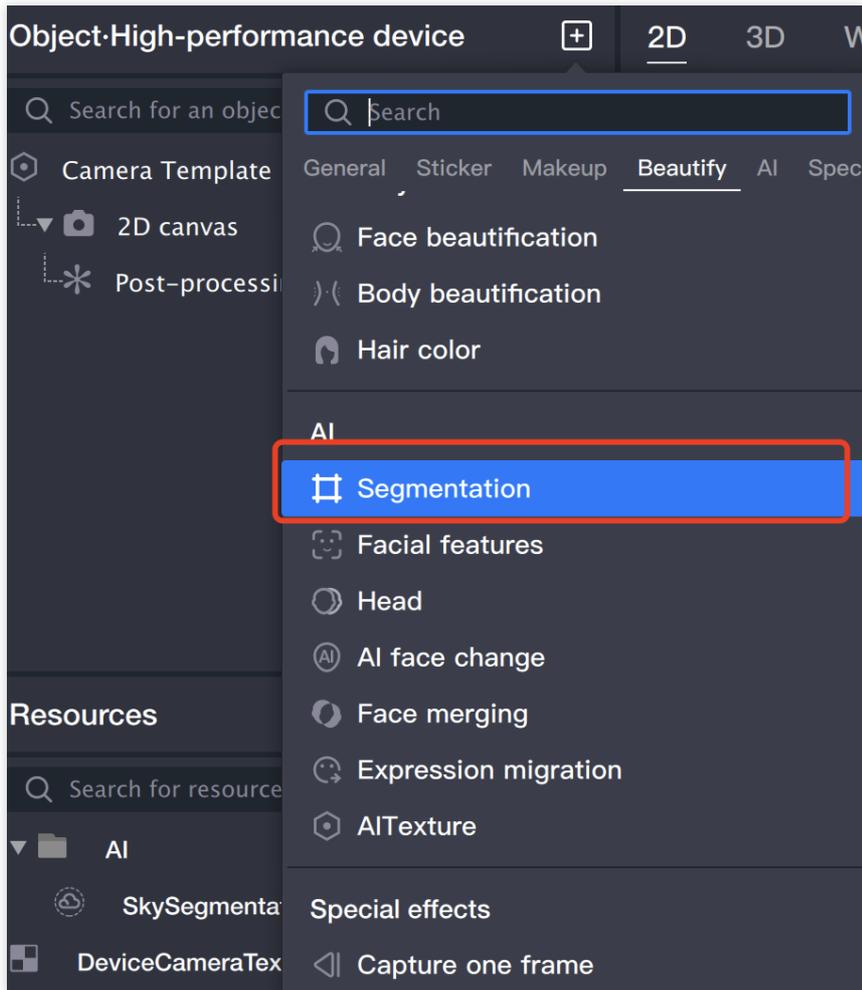
Local Blur

1. First, add a global blur effect.
2. Locally add a mask image for local blur

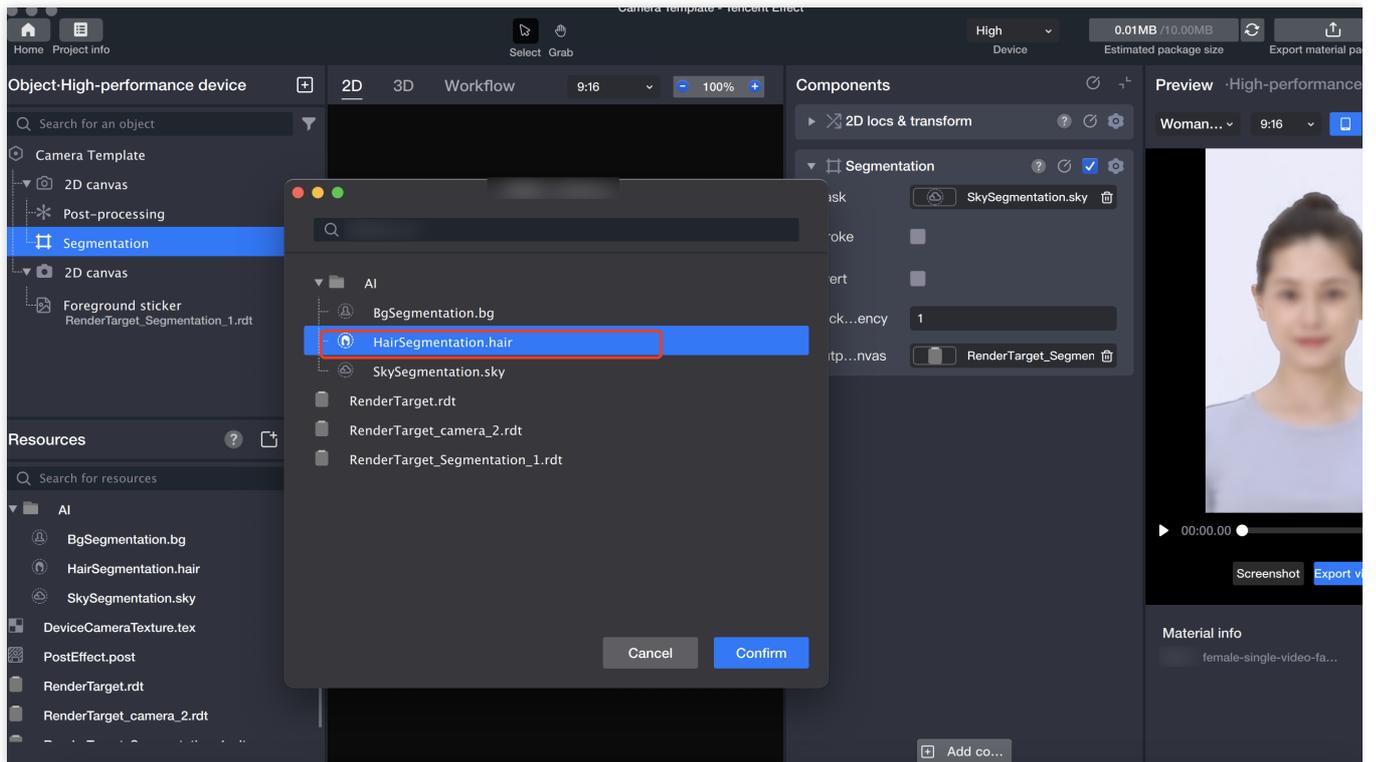


3. Add a [Segmentation] object.

3.1 Add a **Segmentation** object in the object panel.

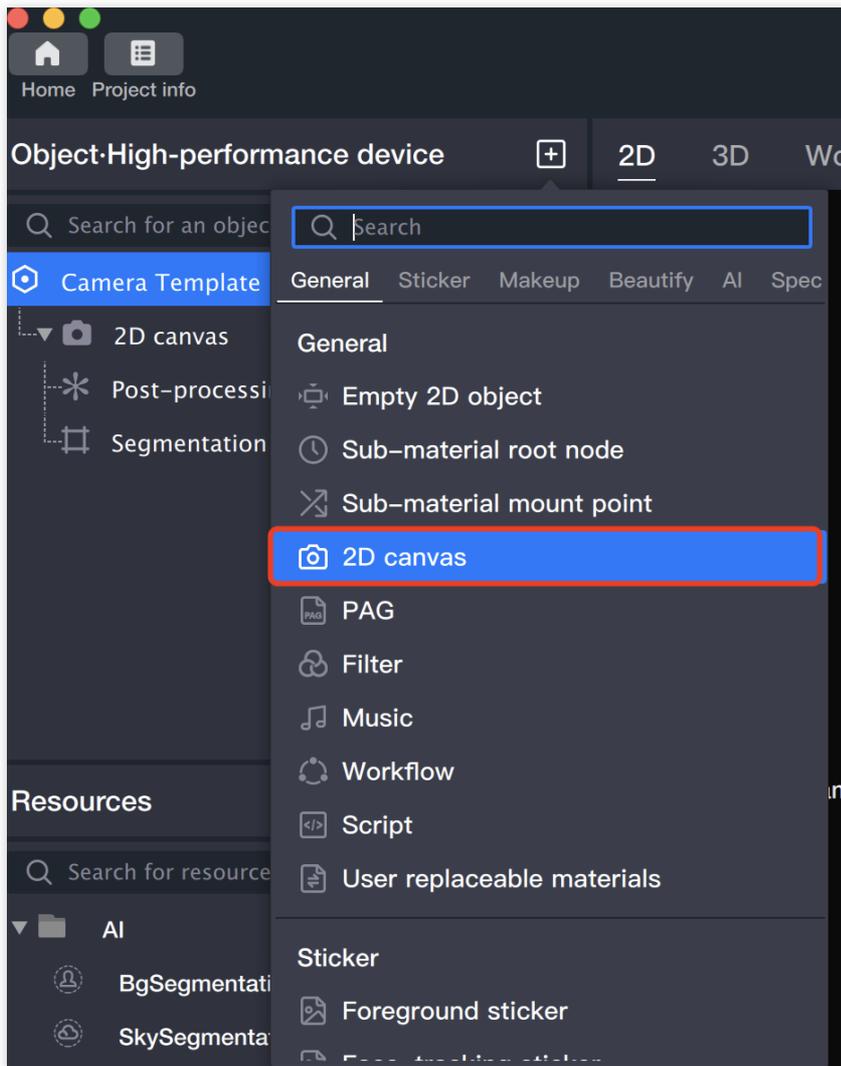


3.2 After adding the **Segmentation** object, the mask image in the component panel will automatically be filled with the imported mask image.

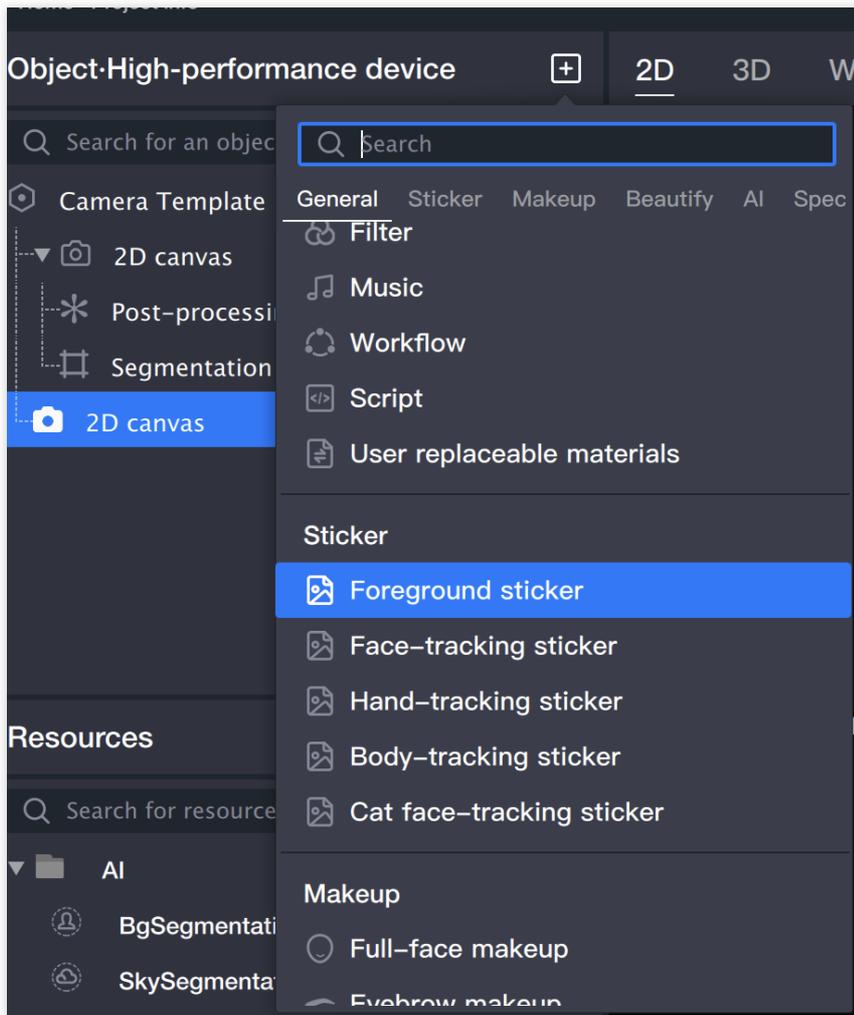


4. Use the mask image to achieve local blur.

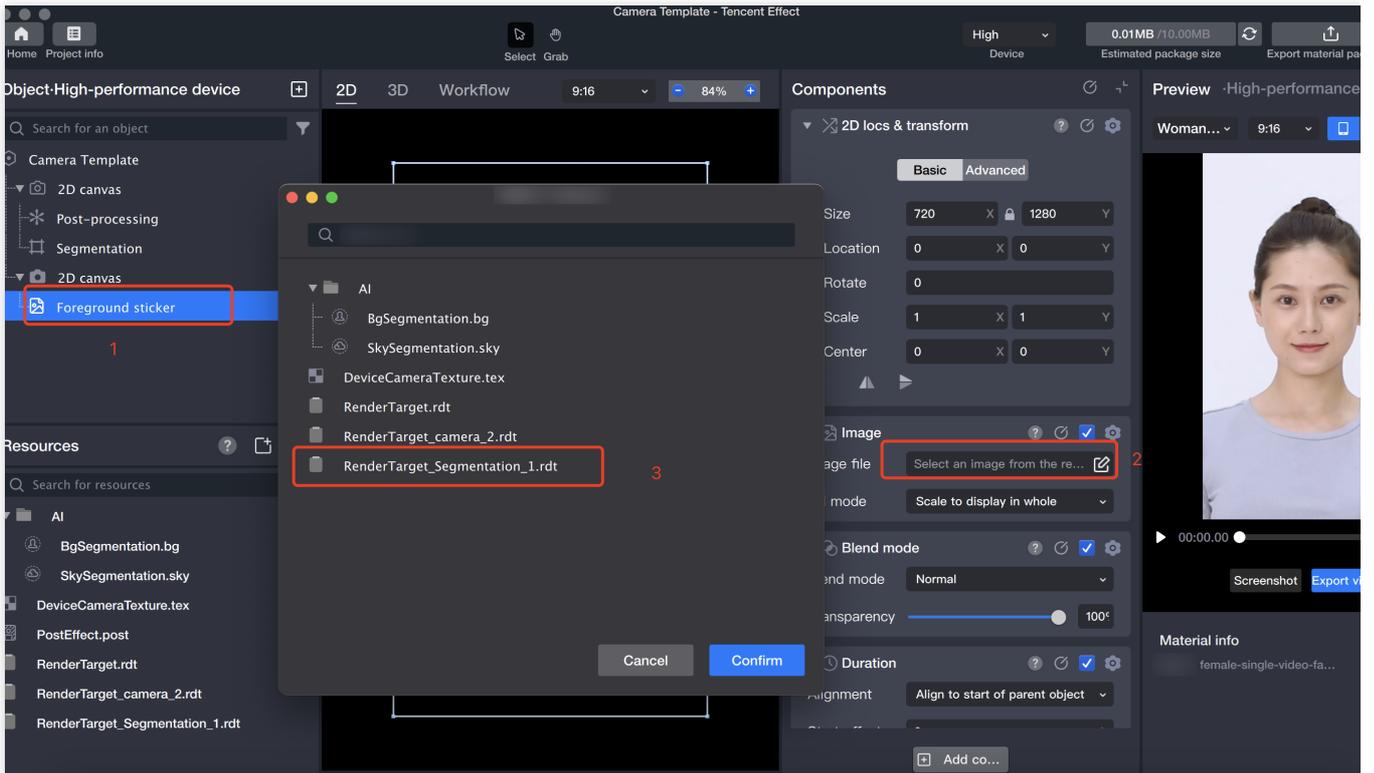
4.1 Create a new 2D canvas in the object panel.



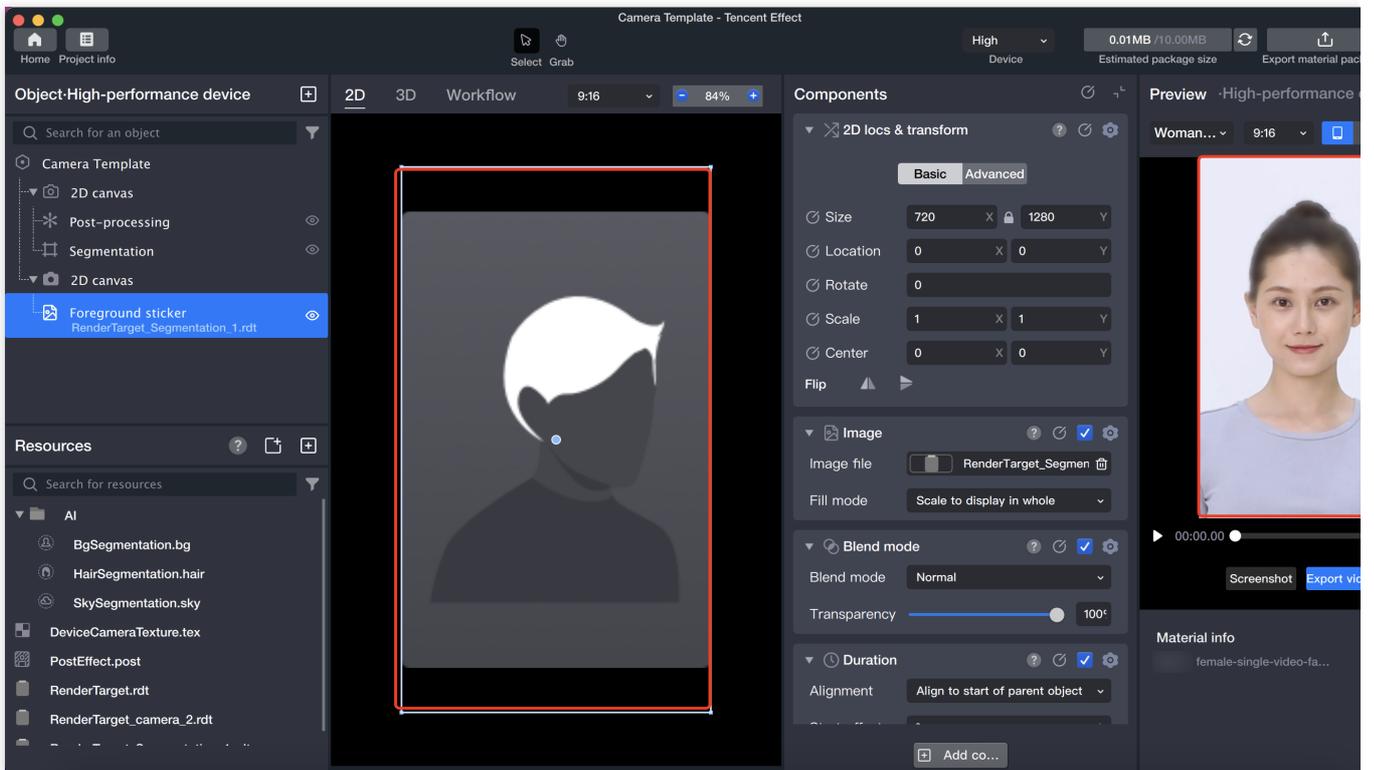
4.2 Add a **Foreground Sticker** object on the newly created canvas.



4.3 Select the output canvas of the **Segmentation** object as the foreground sticker.

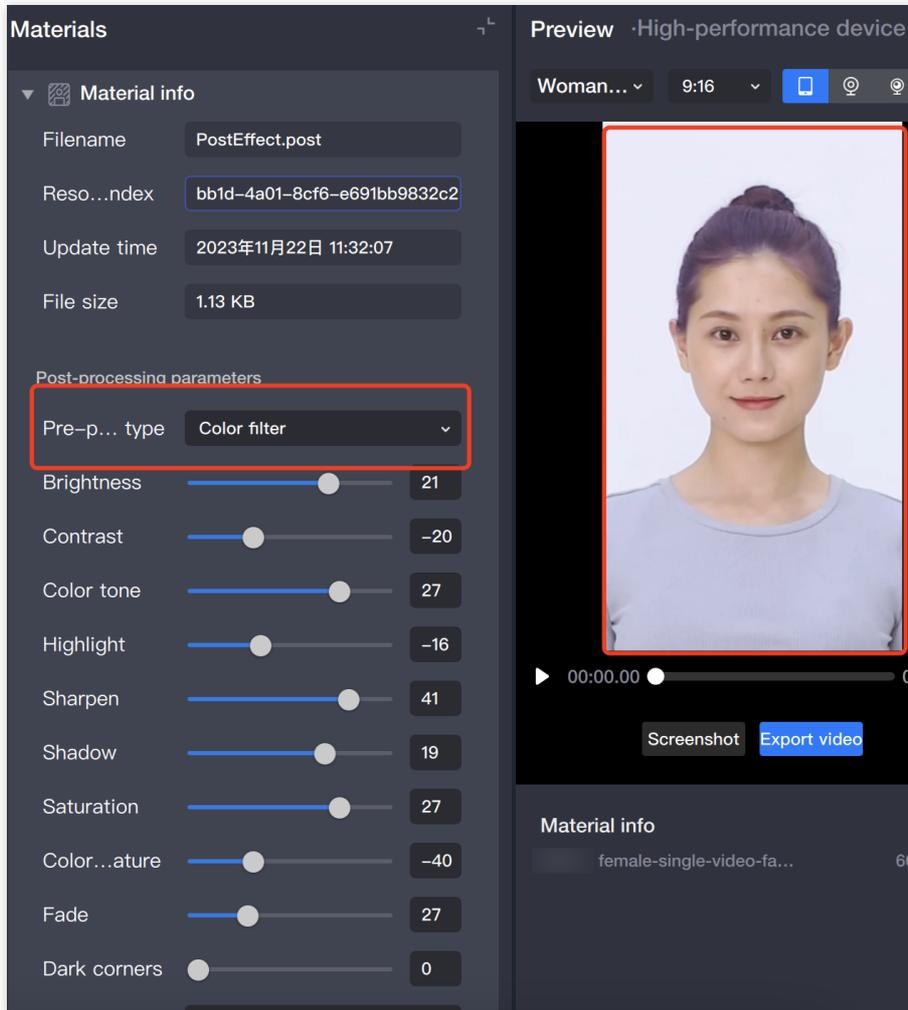


5. Preview.



adjust the PostEffect.post

we can get different effects
for example:

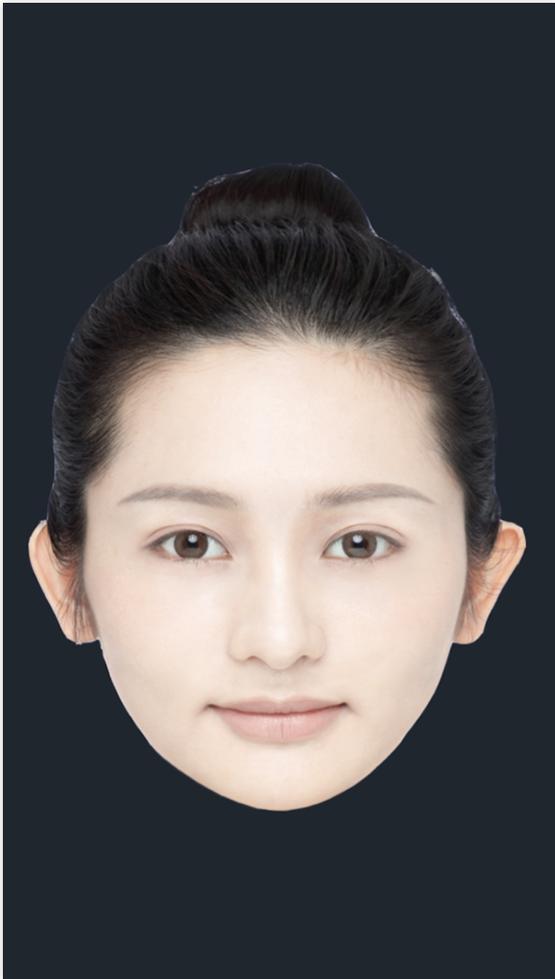


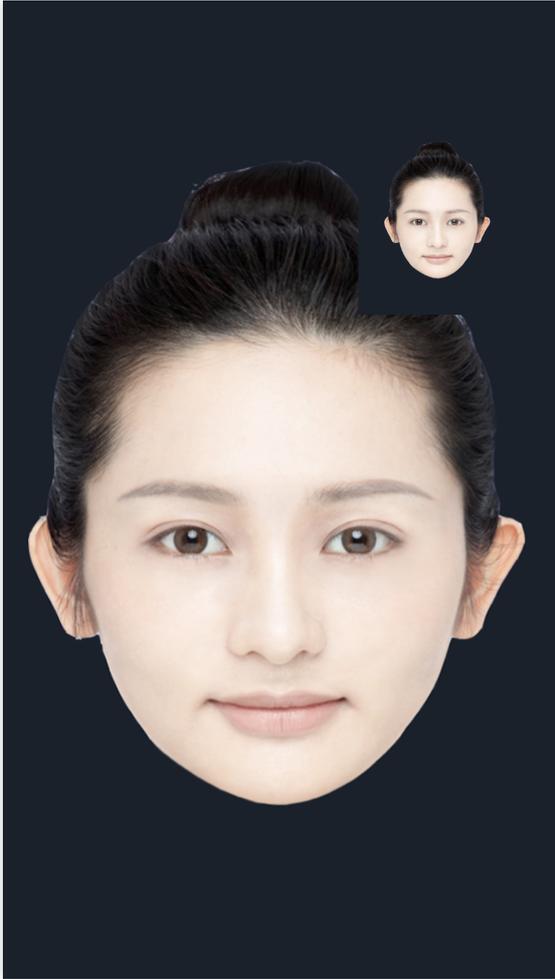
Freeze Frame & Frame Capture

Last updated : 2024-03-25 11:43:19

Introduction

capture one frame is similar to frame capture, which means capturing the result image of a certain rendering for other processing. capture one frame only captures one frame at a specific time, while frame capture captures multiple frames based on conditions. The captured result can be considered as a simple image, which can be used for Foreground Sticker, Tracking Sticker, and any other components that require input images.





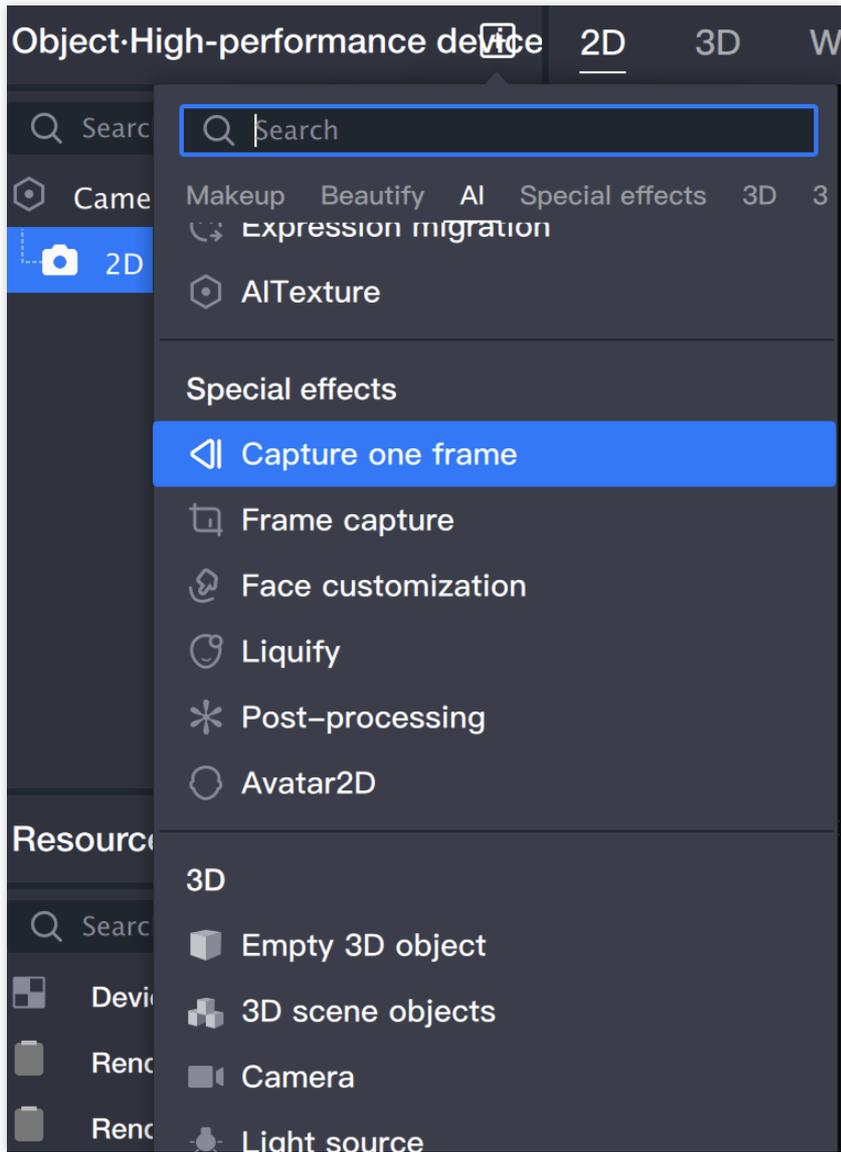
Original Image

After adding frame capture

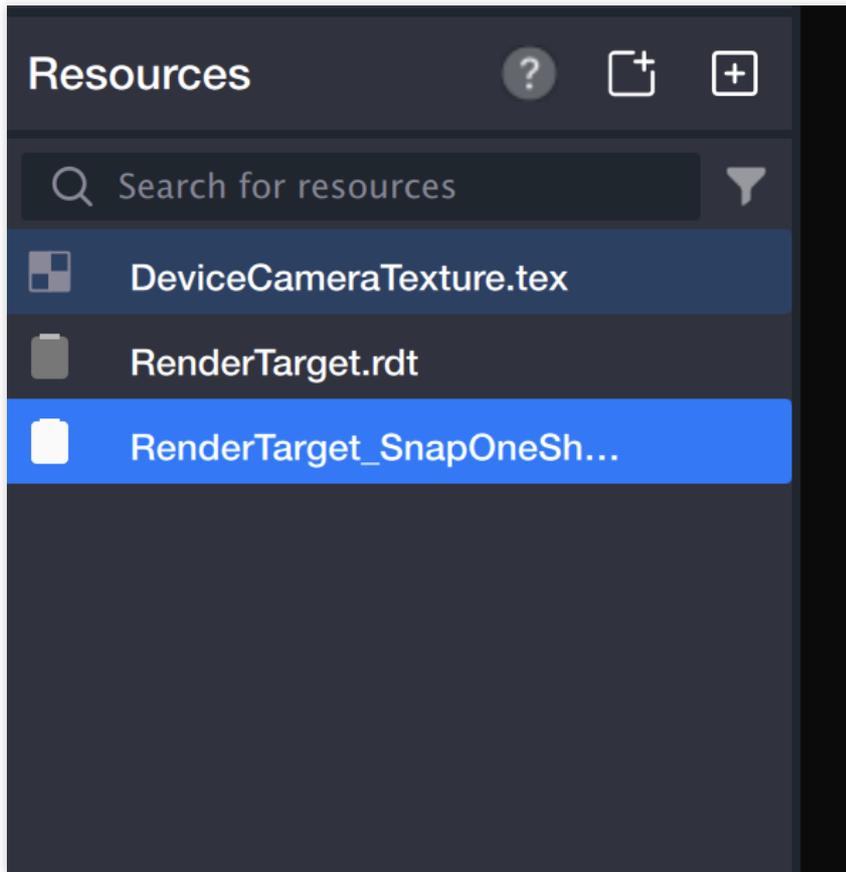
Basic usage of capture one frame.

1. Add a capture one frame Object.

1.1 Add "capture one frame" in the Object Panel.

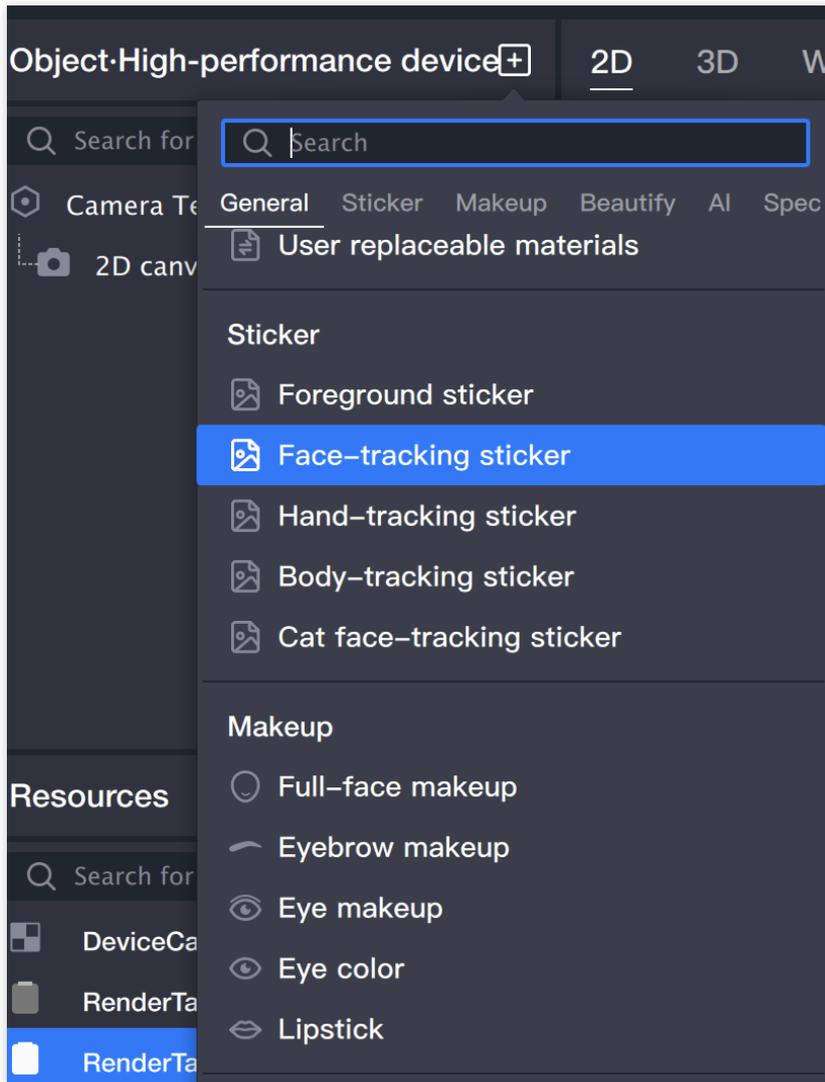


1.2 After creating a capture one frame Object, you can see that a `RenderTarget_SnapOneShot_2.rdt` will be automatically added to the Resource Panel. This file serves as the output of the capture one frame Object.

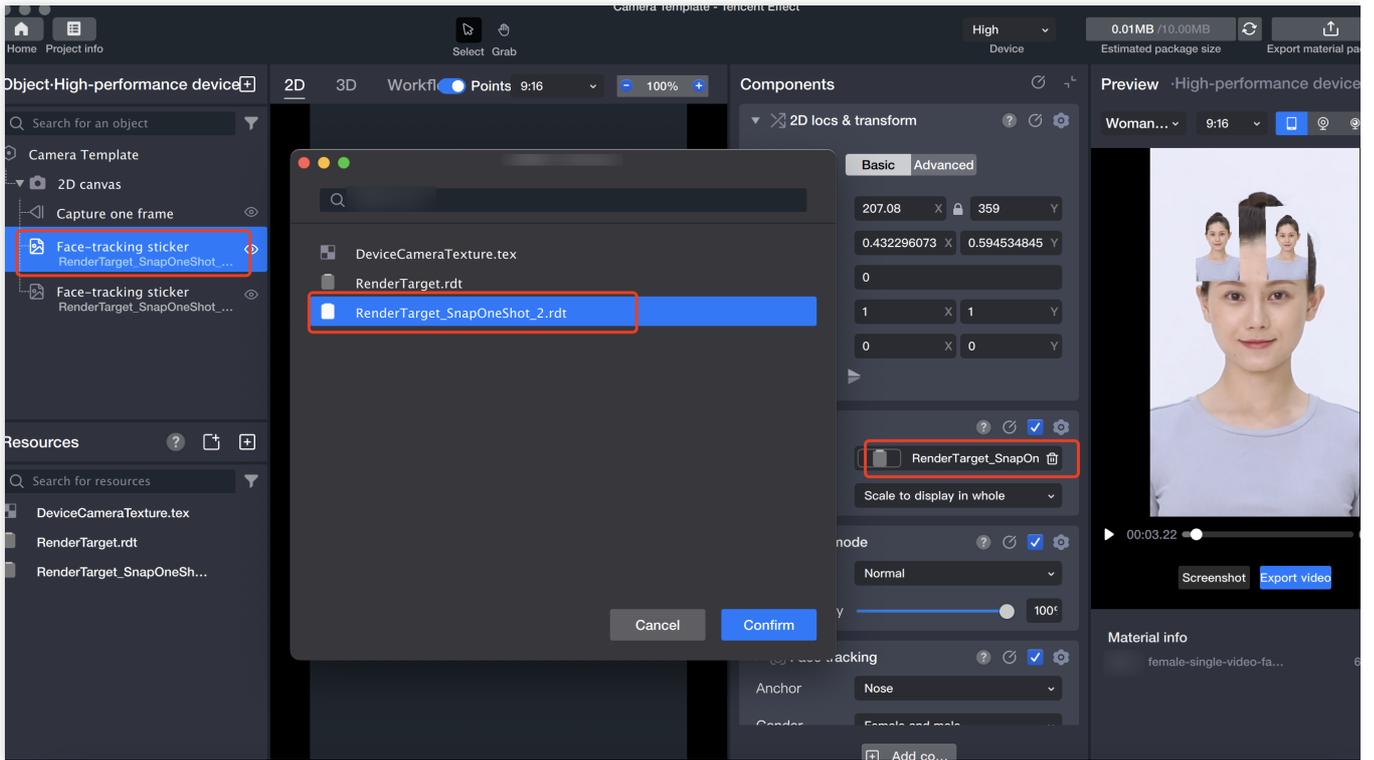


2. Add a Face-following Sticker to the output image.

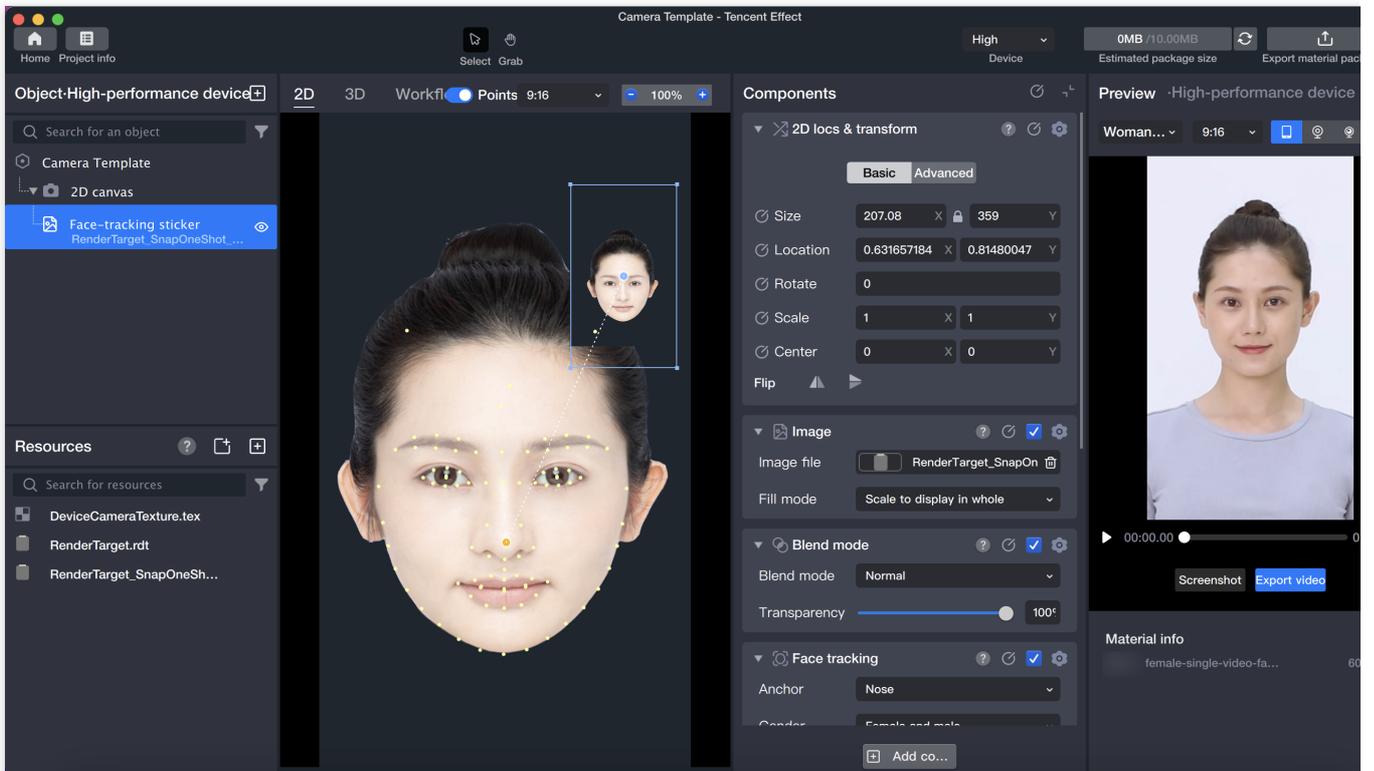
2.1 Add "Face-following Sticker" in the Object Panel.



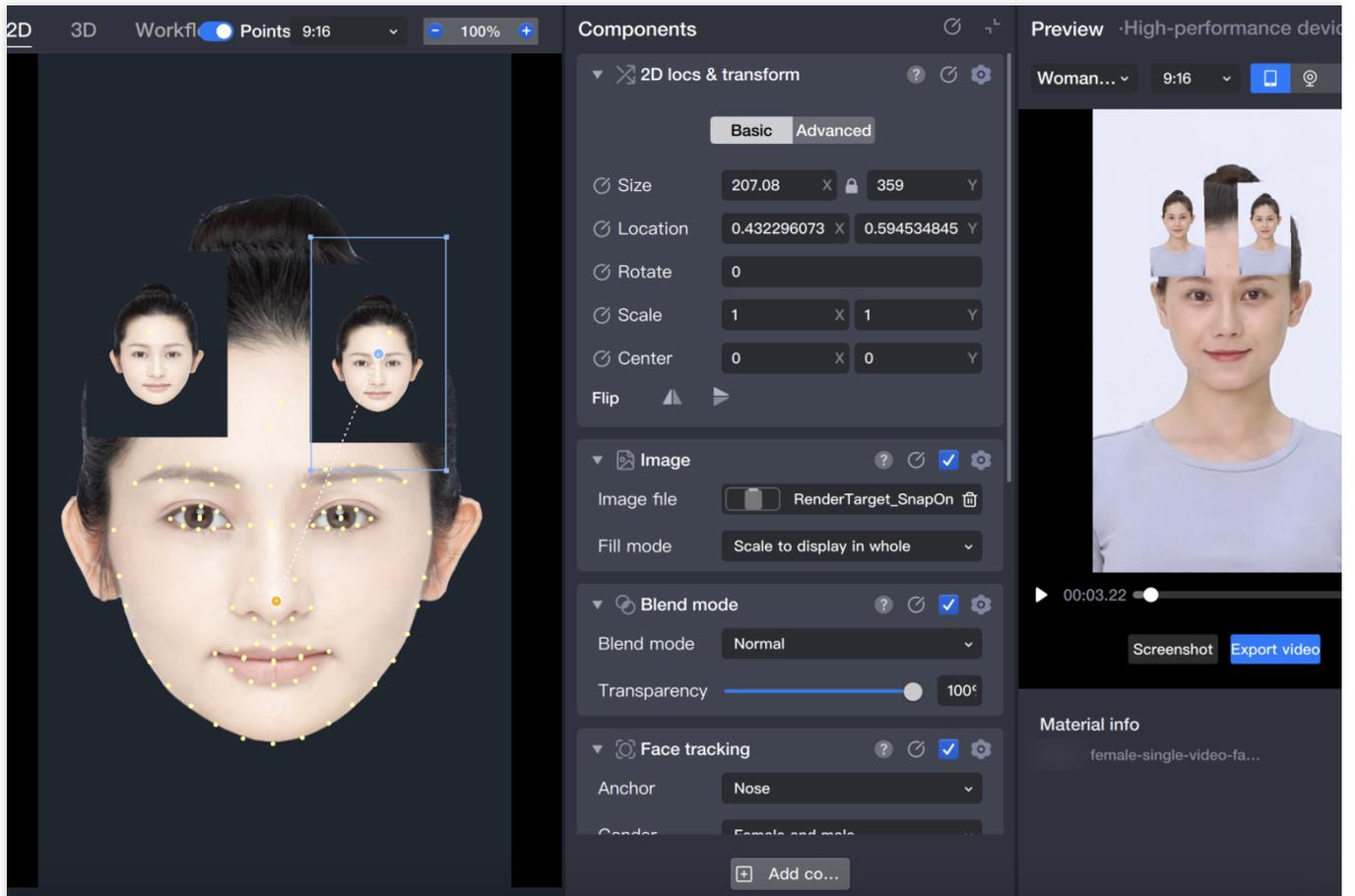
2.2 Select the output image of the capture one frame in the image file.



2.3 Adjust the size and position of the output image of the capture one frame.



the output image :



Basic usage of frame capture

Similar to the usage of capture one frame, the difference is that the added object is "frame capture", and the generated file in the Resource Panel is `RenderTarget_frame capture_1.rdt`.

The difference is that the frame capture Object will continuously capture images, so you can see in Tencent Effect that the image of the Face-following Sticker (input as the captured image of the frame capture Object) also changes over time.

Background Removal + GAN

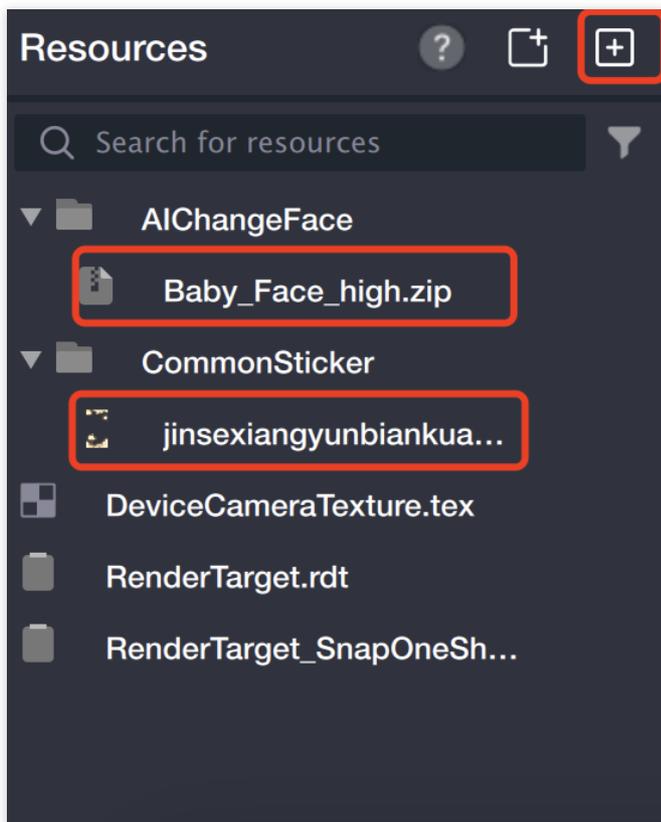
Last updated : 2024-03-25 11:43:19

Introduction

In Tencent Effect, different gameplay can be combined to achieve diversified gameplay. For example, background removal and GAN can be used at the same time, replacing the background of the video while also replacing the characters in the video with cartoon faces.

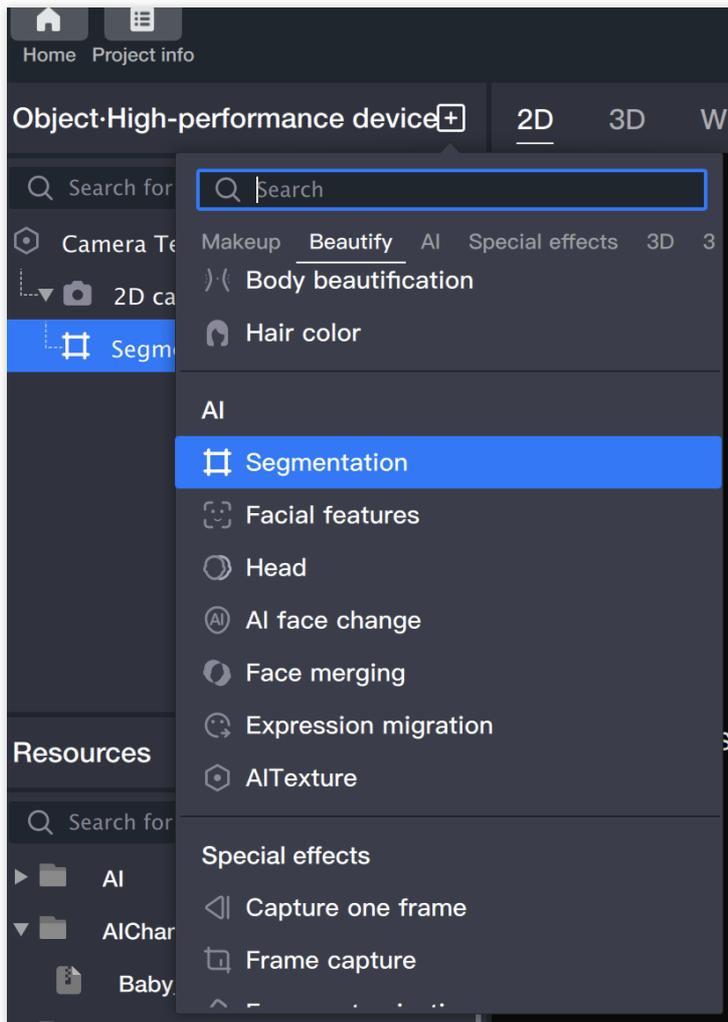
Basic Usage

1. Import materials

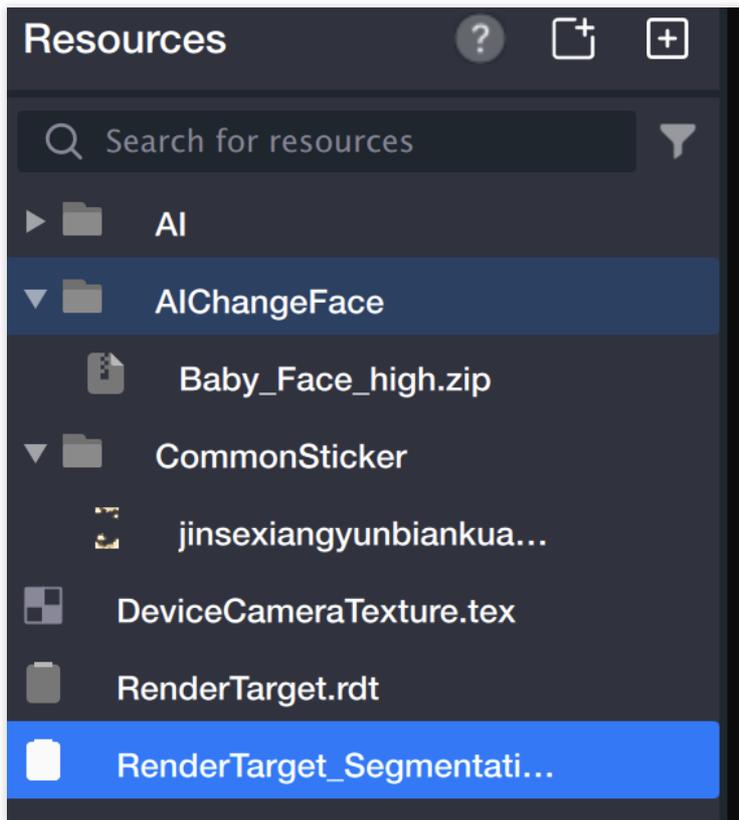


2. Create a segmentation object.

Add a "Segmentation" object in the object panel.

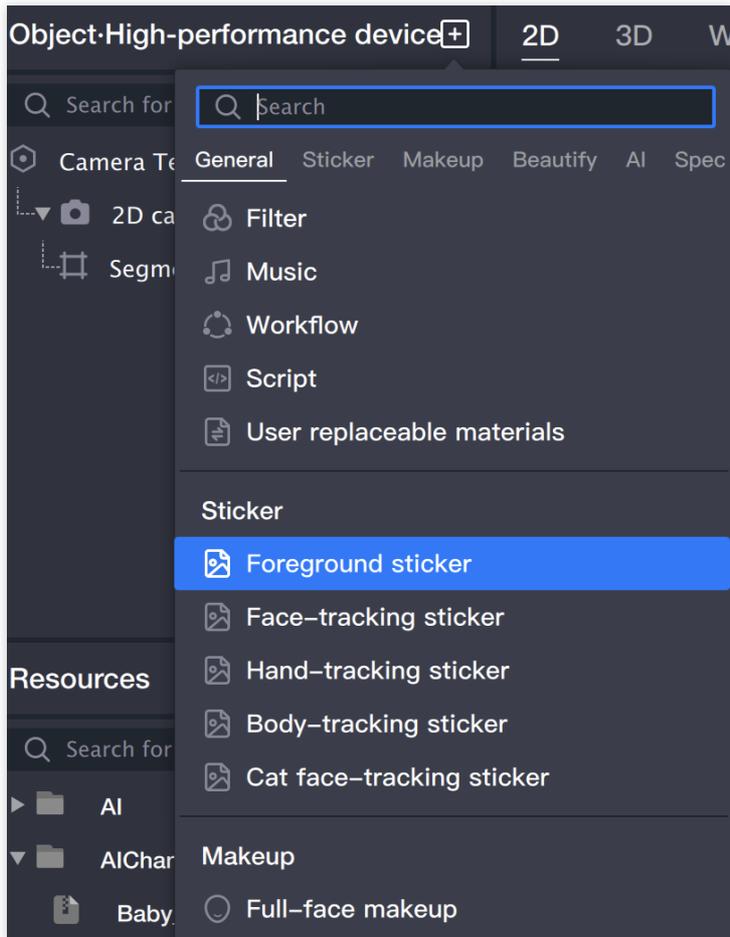


In the resource panel, a `RenderTarget_Segmentation_1.rdt` generated by the segmentation object appears.

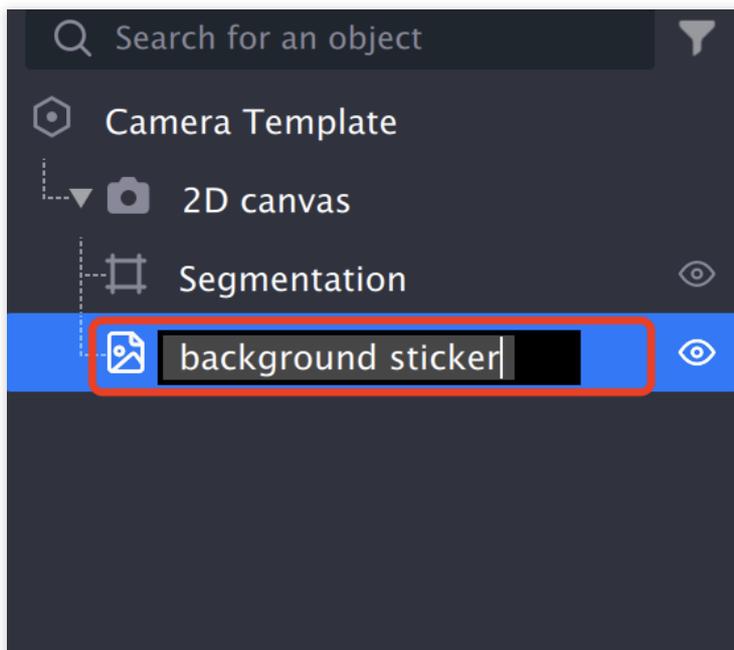


3. Add background

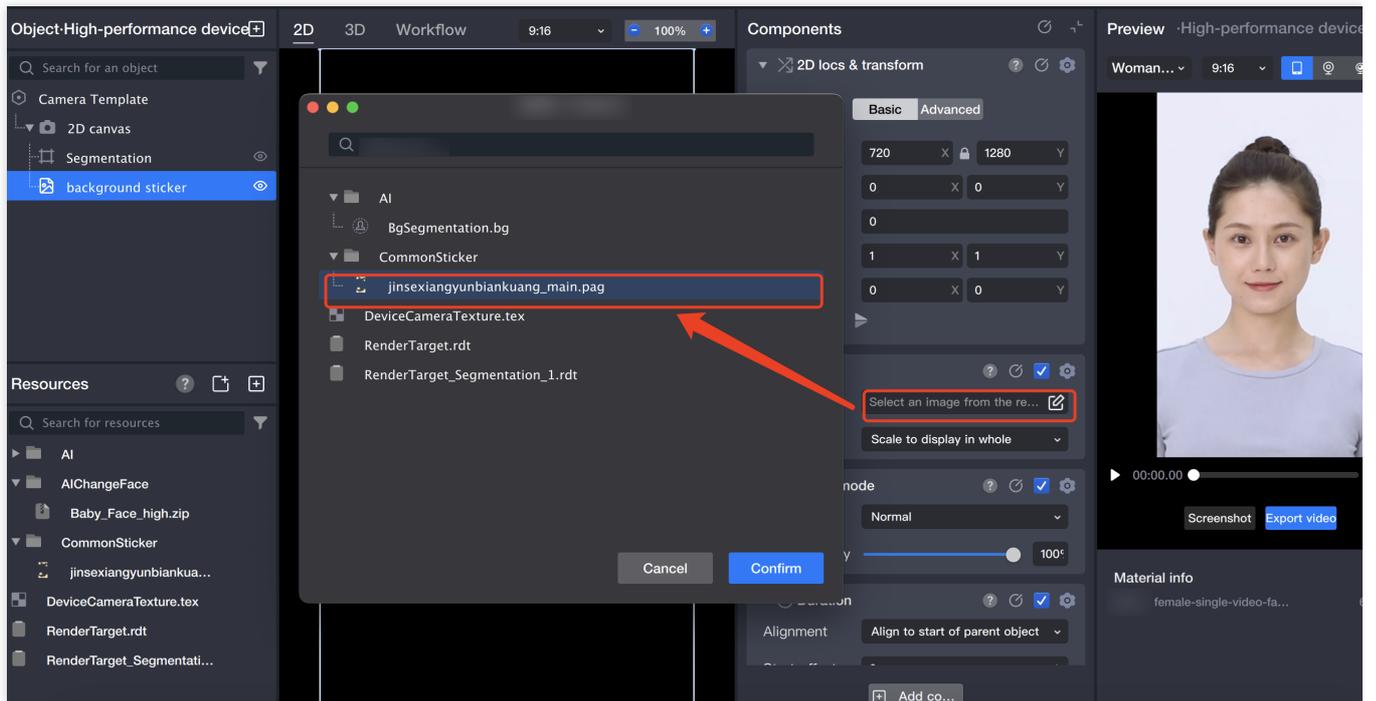
3.1 Add a "Foreground Sticker" in the object panel: This sticker will be used as the background.



3.2 Rename the "Foreground Sticker" to "Background" (to distinguish it from the foreground stickers added later).



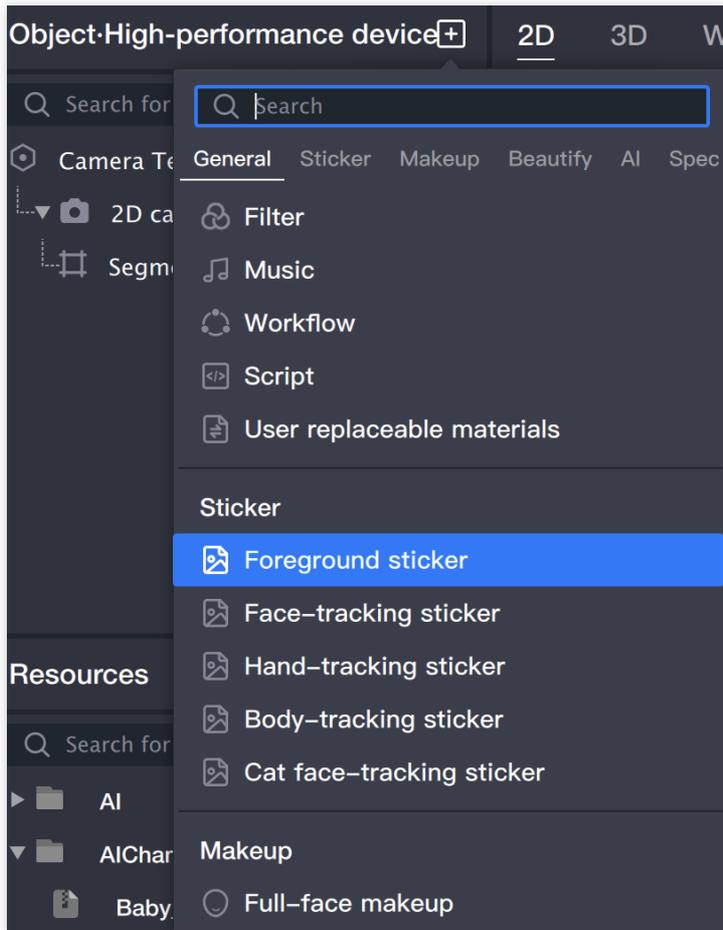
3.3 Select the image file in the component panel.



3.4 Adjust the resource to the appropriate size.

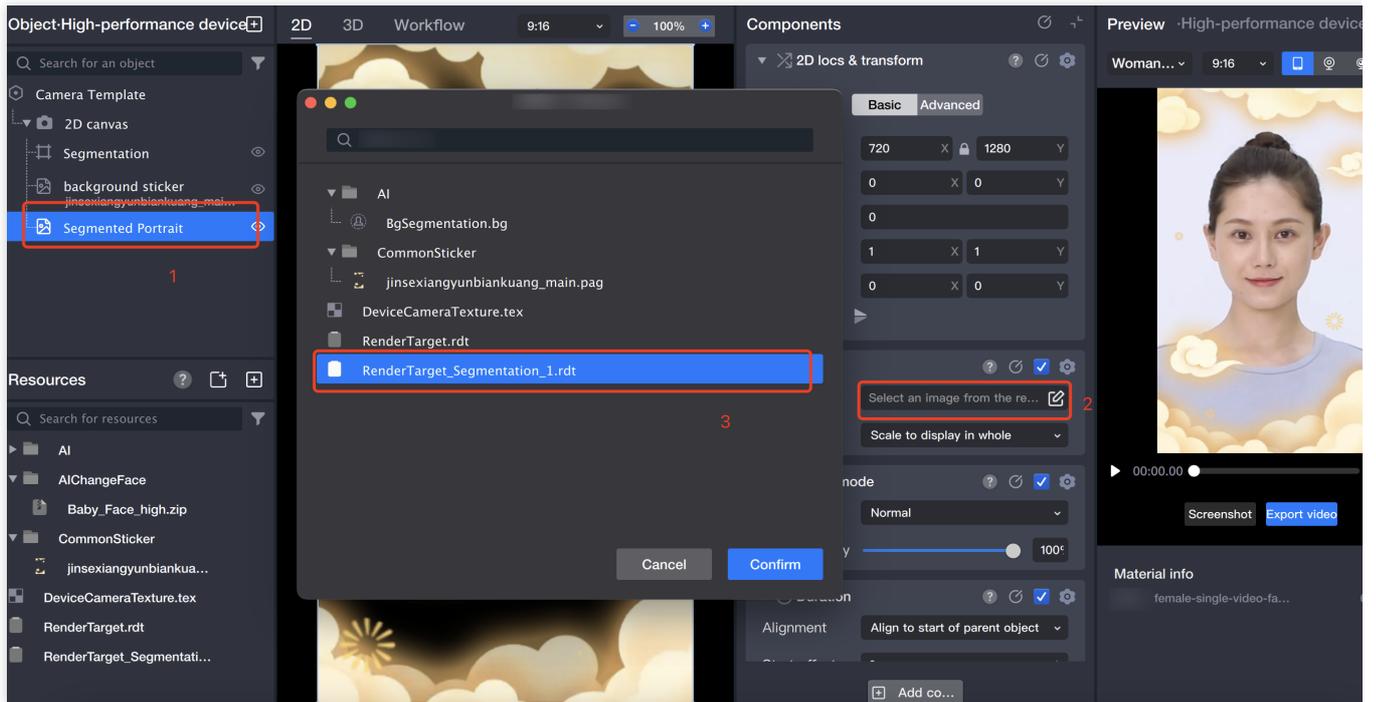
4. Add foreground

4.1 Add a "Foreground Sticker" in the object panel: Add the segmented portrait to a canvas.



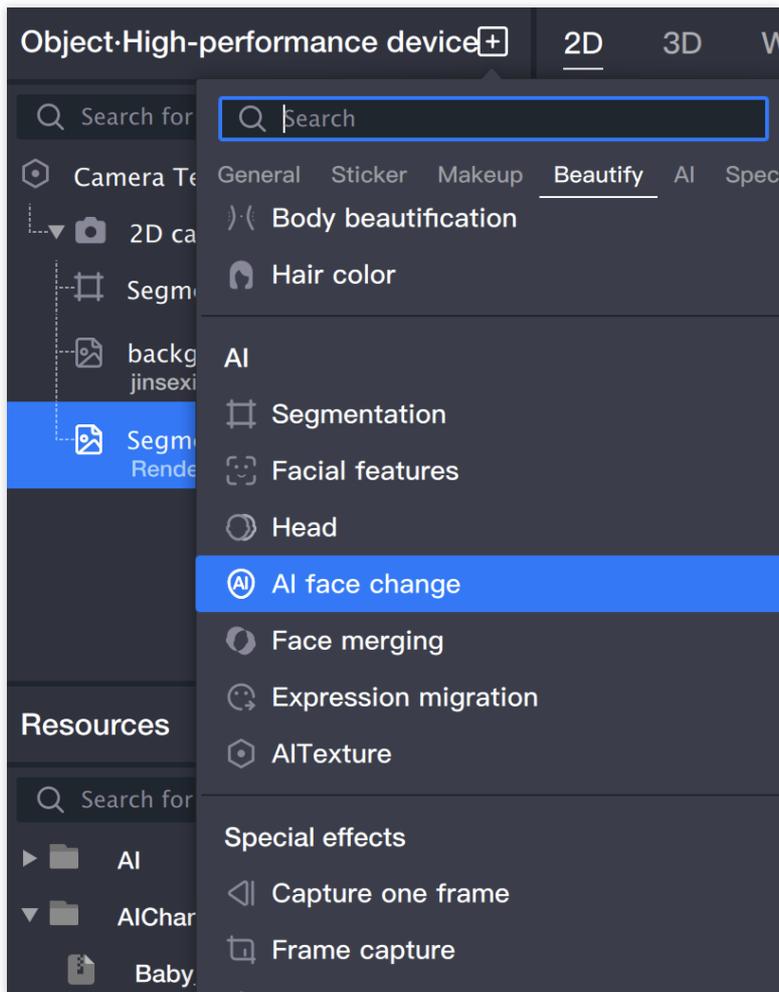
4.2 Rename the "Foreground Sticker" to "Segmented Portrait".

4.3 In the component panel, select the image file for the "Foreground Sticker": Select the RenderTarget_Segmentation_1.rdt file generated when the segmentation object was created, which is the foreground showing the just segmented portrait.

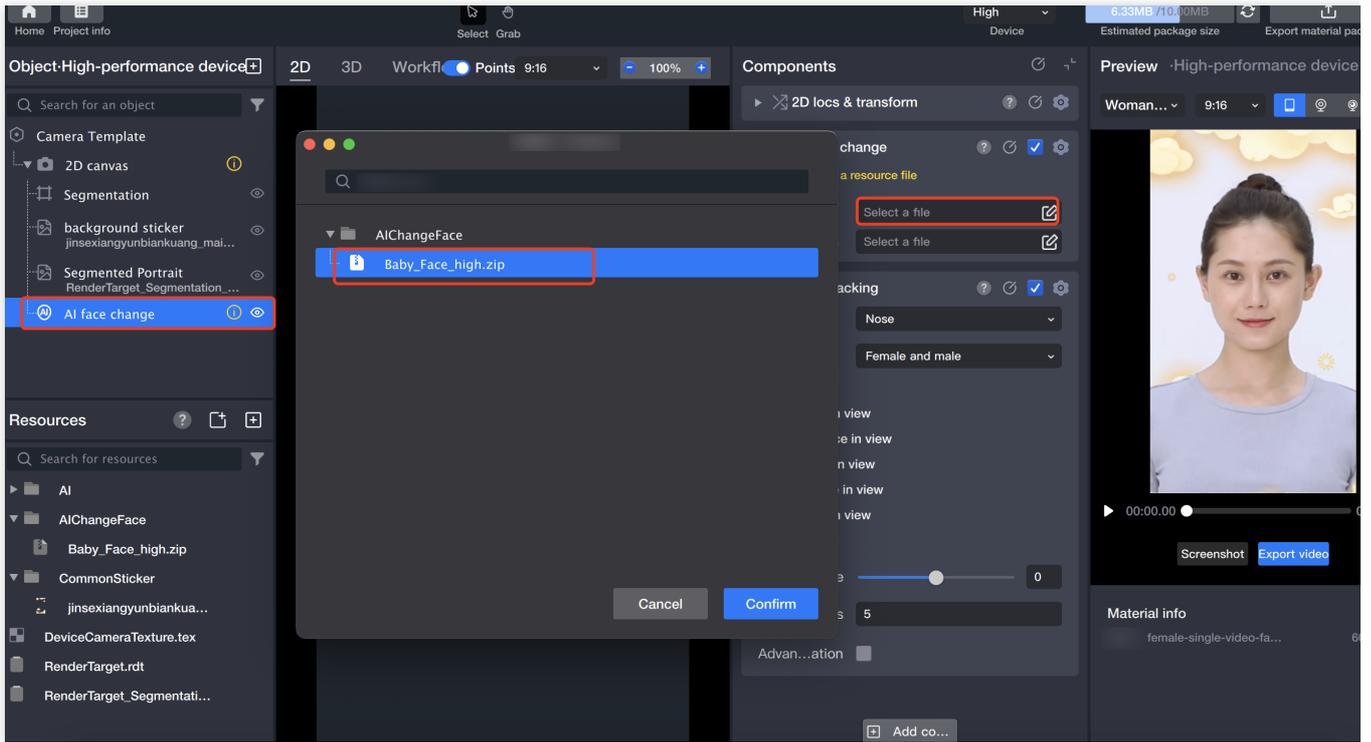


5. Add GAN

5.1 Add a "GAN" in the object panel.



5.2 In the component panel, import resources for the "GAN" object.



6. Preview



