

The background of the slide features a light gray globe with a grid of latitude and longitude lines. To the left of the globe, there is a vertical strip of a black and white checkered pattern. The main title is centered over the globe.

Animation Clip XML Scrip Tutorial

1.1.0.164.5, 2016.05.19



An Animation Clip Script Software Programming Guides

Overview

In this document, we will guide and teach user how to set editing the XML script file of animation clip engine in QCAP SDK.

User can get several sample of animation clip script files by YUAN provide releases.

For example :

EXAMPLE.COOL.QUAD.XML,

EXAMPLE.FADEOUT.XML,

EXAMPLE.PIP.XML,

EXAMPLE.POP.XML,

EXAMPLE.QUAD.XML.

EXAMPLE.BLINDS.HORIZONTAL.XML,

EXAMPLE.BLINDS.VERTICAL.XML,

EXAMPLE.FIT.XML,



Animation Clip Script Support Function List

Animation Type	Animation Behavior
Transform	Move Clip Script
	Scale Clip Script
Alpha	All Clip Script
Venetian Blind	Horizontal blind
	Vertical blind
Scale type	Fit <i>New</i>
	Stretch <i>New</i>
	Fill <i>New</i>

Animation Clip Script Workflow in Software View

Programming Step	Related Programming
Set Total Frames in Animation Clip	<pre><animation-clip frames="60"> </animation-clip></pre>
Set Output Format in Animation Clip	<pre><stage width="1920" height="1080" colorspace="YV12" bkcolor="0 0 0"/></pre>
Create Sprites	<pre><sprites> <sprite name="image-0" id="0" z-order="0"/> <sprite ... /> </sprites></pre>
Set Transform Animation for Sprite	<pre><transform name = "track-0" sprite = "image-0"> <keyframe frame = "1" position = "0 0" scale = "960 540"/> <keyframe frame = "60" position = "0 0" scale = "1920 1080"/> </transform></pre>



STEP 1 Set Total Frames in Animation Clip

```
<animation-clip frames=" 60">  
</animation-clip>
```

Parameter

Name	Description
frames	Specify the number of animation-script frames

Introduction

User can use this function to set the total number of animation-script frames, for example, if user set 300 frames, the animation script will be 300 frames display animation effect.

Example

```
<animation-clip frames=" 60">  
  
</animation-clip>
```



STEP 2 Set Output Format in Animation Clip

```
<stage width="1920" height="1080" colorspace="YV12" bkcolor="0 0 0"/>
```

Parameter

Name	Description
width	Specify the width of the output frame buffer
height	Specify the height of the output frame buffer
colorspace	Specify the color space type of the output frame buffer. Currently, we support YV12 format only.
bkcolor	Specify the background color in the clip. Here, “0 0 0” is black color and “1 1 1” is white color.

Introduction

User can use this function to set animation clip script parameters

Example

```
<stage width="1920" height="1080" colorspace="YV12" bkcolor="0 0 0"/>
```



STEP 3 Create Sprites

```
<sprite name="image-0" id="0" z-order="0" blinds="horizontal 10 top-bottom"/ >
```

Parameter

Name	Description
name	Specify the channel sprite
id	Specify the id of sprite
z-order	Specify the order between all sprites, Here, 0 is buttom most.
blinds	Specify the venetian blinds type Horizontal→ "vertical XX left-right" Vertical→ "horizontal XX top-bottom"

Introduction

User can use this function to create several channels sprite.

User can use this function to select the venetian blinds of horizontal type on Animation.

And user can use XX top-bottom or XX left-right paramant to set horizontal widthofvenetian blinds boundary.

Note

User can set left-right or right-left or top-bottom or bottom-top paraments to control display path of venetian blinds.



Example

```
<sprites>  
  <sprite name="image-0" id="0" z-order="0"/>  
  <sprite name="image-1" id="1" z-order="1" blinds="vertical 10 left-right"/>  
  <sprite name="image-2" id="2" z-order="2" blinds="horizontal 10 top-bottom"/>  
</sprites>
```




STEP 4 Set Transform Animation for Sprite

```
<transform name="track-0" sprite="image-0">  
  <keyframe frame="1" position="0 0" scale="960 540"/>  
</transform>
```

Parameter

Name	Description
transform → name	Specify the animation-script frames
transform → sprite	Specify the corresponded sprite of this transform. It must be one sprite name.
keyframe→ frame	Specify the keyframe index for this transform
position→ position	Specify the left & top position of the sprite window in this frame
scale→ scale	Specify the scale size of the sprite window in this frame

Introduction

The tag is one kind of animation effect in SDK and it is optional setting.

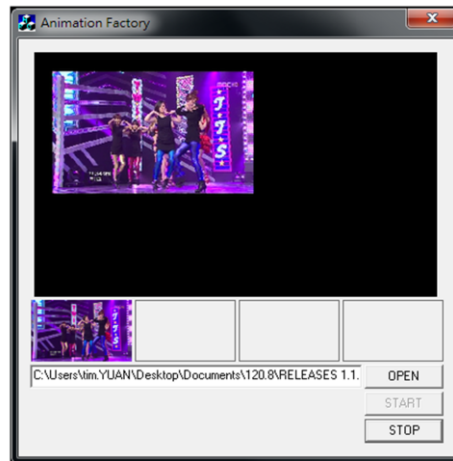
User can use this function to set the transorm animation for one sprite on any keyframe.

Between both keyframes, we will auto generate the interpolated position and scale size by one spline algorithm.

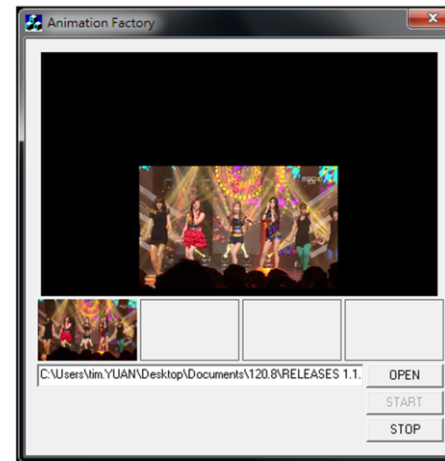
Example

```
<transform name="track-0" sprite="image-0">  
  <keyframe frame="1" position="0 0" scale="960 540"/>  
  <keyframe frame="60" position="500 500" scale="960 540"/>  
</transform>
```

Keyframe frame =1



Keyframe frame =60





STEP 5 Set Alpha Animation for Sprite

```
<alpha name="track-4" sprite="image-0">  
  <keyframe frame="1" alpha="1"/>  
</alpha>
```

Parameter

Name	Description
alpha → name	Specify the name of this transform
alpha → sprite	Specify the corresponded sprite of this transform. It must be one sprite name.
keyframe→ frame	Specify the animation-script frames
keyframe→ alpha	Specify the alpha ratio, the range of 0 to 1

Introduction

The tag is one kind of animation effect in SDK and it is optional setting.

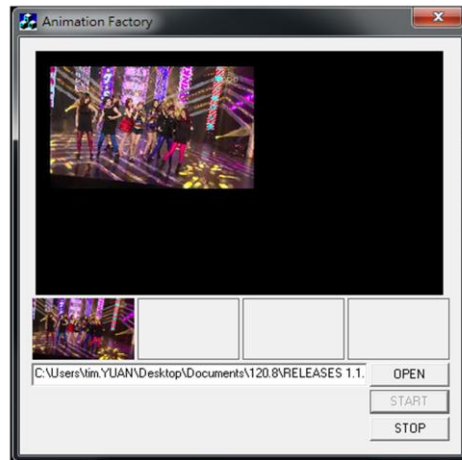
User can use this function to set the alpha animation for one sprite on any keyframe.

Between both keyframes, we will auto generate the interpolated alpha value by one linear algorithm.

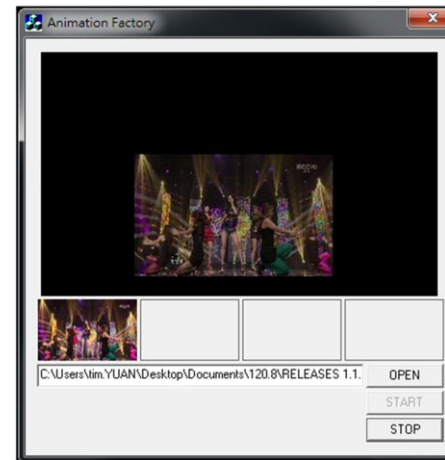
Example

```
<alpha name="track-4" sprite="image-0">  
  <keyframe frame="1" alpha="1"/>  
  <keyframe frame="60" alpha="0.5"/>  
</alpha>
```

Keyframe frame =1



Keyframe frame =60





STEP 6 Set Scale Style for Animation clip

```
<blinds name=" track-4" sprite="image-2">  
  <keyframe frame="1" value="0"/>  
  <keyframe frame="150" value="1"/>  
</blinds>
```

Parameter

Name	Description
blinds → name	Specify the name of this transform
blinds → sprite	Specify the corresponded sprite of this transform. It must be one sprite name.
Keyframe → frame	Specify the animation-script frames
Blinds → value	Specify the venetian blinds display range, the range of 0 to 1

Introduction

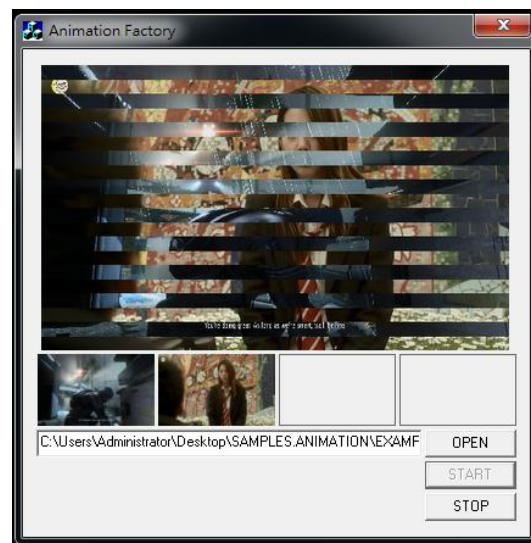
The tag is one kind of animation effect in SDK and it is optional setting.

User can use this function to set the venetian blinds animation for one sprite on any keyframe range.

Between both keyframes, we will auto generate and show the venetian blinds animation by our algorithm.

Example

```
<blinds name=" track-4" sprite="image-2">  
  <keyframe frame="1" value="0"/>  
  <keyframe frame="150" value="1"/>  
</blinds>
```





STEP 7 Set Animation Clip Engine to Scale Style

```
<sprites>
  <sprite name="image-0" id="0" z-order="0"/>
  <sprite name="image-1" id="1" z-order="1" scale-style="fit" bkcolor="0 0 0"/>
</sprites>
```

Parameter

Name	Description
scale-style -> name	Specify the name of scale style. For example: fit, stretch, fill
bkcolor	Specify the background color in the clip. Here, “0 0 0” is black color and “1 1 1” is white color.

Introduction

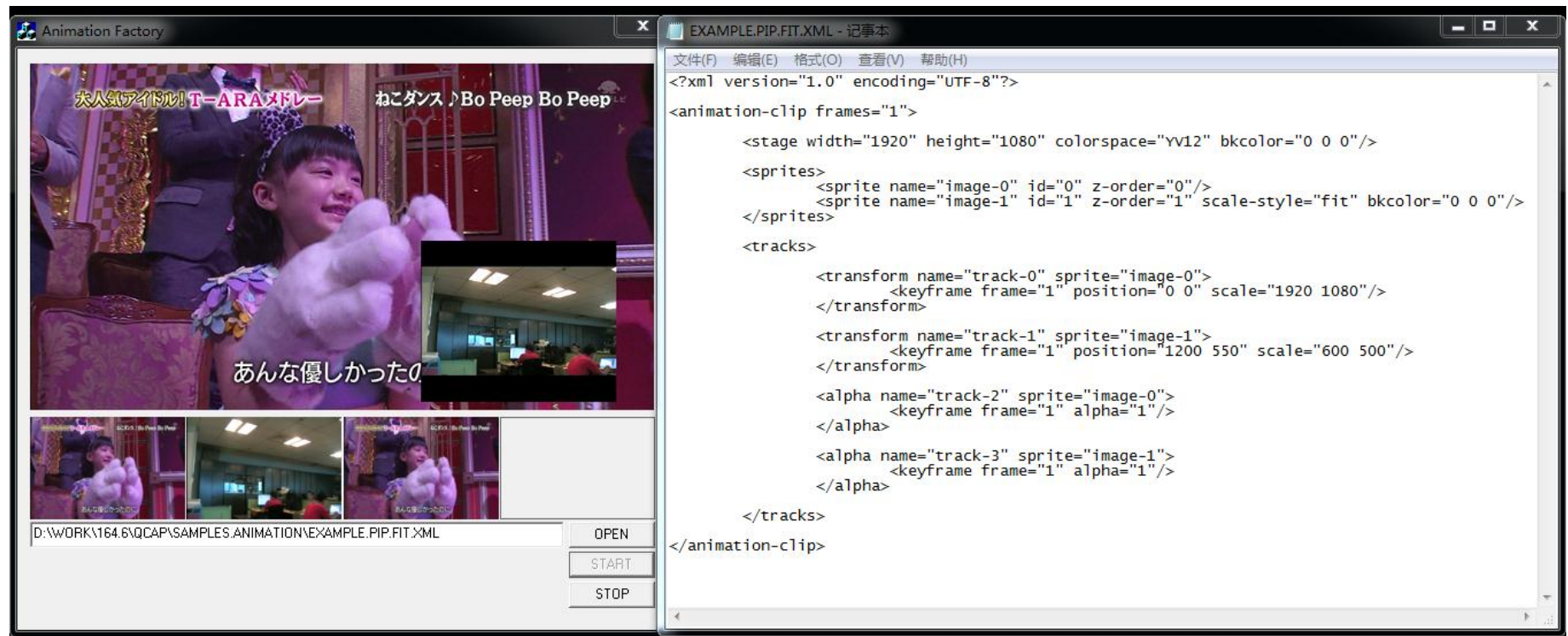
The tag is one kind of animation effect in SDK and it is optional setting.

User can use this function to set the animation clip scale style.

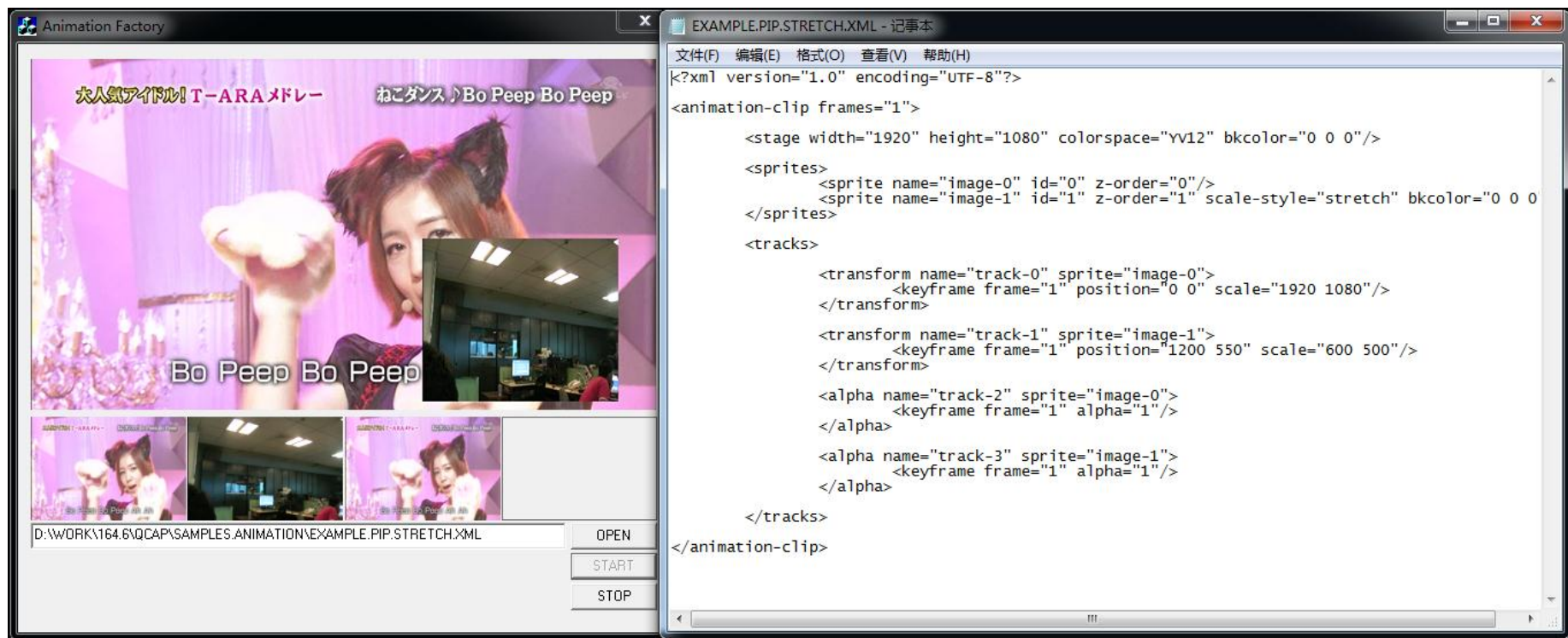
we will auto generate and show the video scale style animation by our algorithm.

Example

```
<sprites>
  <sprite name="image-0" id="0" z-order="0"/>
  <sprite name="image-1" id="1" z-order="1" scale-style="fit" bkcolor="0 0 0"/>
</sprites>
```




```
<sprites>
  <sprite name="image-0" id="0" z-order="0"/>
  <sprite name="image-1" id="1" z-order="1" scale-style="stretch" bgcolor="0 0 0"/>
</sprites>
```



```
<sprites>
  <sprite name="image-0" id="0" z-order="0"/>
  <sprite name="image-1" id="1" z-order="1" scale-style="fill" bkcolor="0 0 0"/>
</sprites>
```

