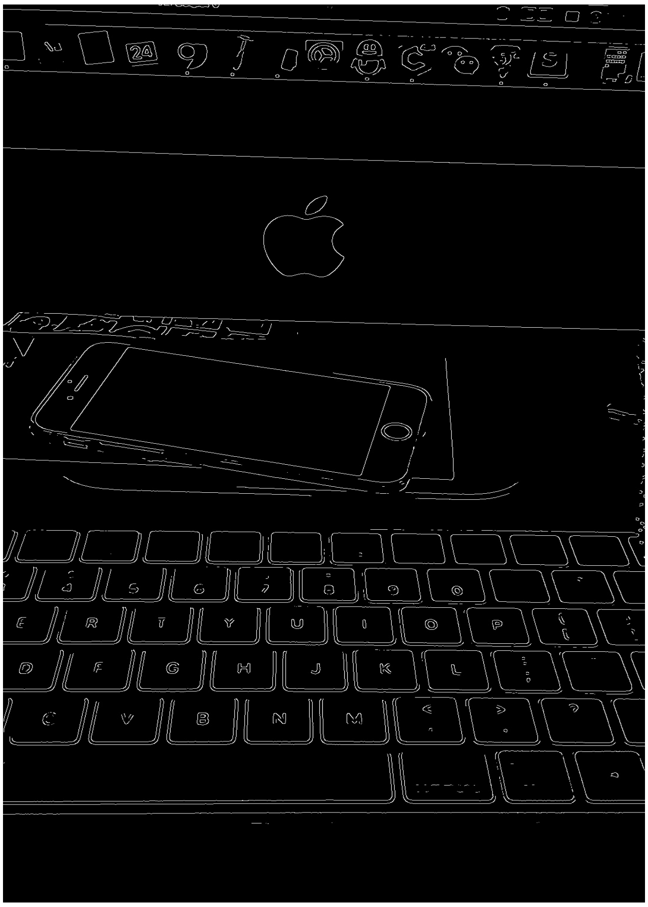
title: "基于GPUImage的相机滤镜" layout: post date: 2017-07-25 image: /assets/images/markdown.jpg headerImage: false tag: - iOS

category: blog

相机滤镜如图



GPUImage 相机

GPUImage提供了丰富的滤镜，简单的说就是4步走，

1 初始化相机

```
// 相机使用 GPUImageStillCamera
self.videoCamera = [[GPUImageStillCamera
alloc]initWithSessionPreset:AVCaptureSessionPresetHigh
cameraPosition:AVCaptureDevicePositionBack];
self.videoCamera.outputImageOrientation = UIInterfaceOrientationPortrait;
self.videoCamera.horizontallyMirrorFrontFacingCamera = YES;
```

2 初始化滤镜

```
_mFilter = [[GPUImageStretchDistortionFilter alloc] init];
```

3 创建预览层并把滤镜输出至预览

```
self.filterView = [[GPUImageView alloc] initWithFrame:self.view.frame];
[_mFilter addTarget:self.filterView];
```

4 相机获取视频数据输出到滤镜

```
[self.videoCamera addTarget:_mFilter];
[self.videoCamera startCameraCapture];
```

切换滤镜的操作

```
// 移除之前滤镜
[self.videoCamera removeAllTargets];
_mFilter = (GPUImageFilter *)self.fillerArray[self.index %
self.fillerArray.count];
[self.videoCamera addTarget:_mFilter];
[_mFilter addTarget:self.filterView];
```

基于GPUImga的相机滤镜

GPUImage 录像

```
录像使用GPUImageVideoCamera
videoCamera = [[GPUImageVideoCamera alloc]
initWithSessionPreset:AVCaptureSessionPresetHigh
cameraPosition:AVCaptureDevicePositionBack];

videoCamera.outputImageOrientation = UIInterfaceOrientationPortrait;
videoCamera.horizontallyMirrorFrontFacingCamera = NO;
videoCamera.horizontallyMirrorRearFacingCamera = NO;

filter = [[GPUImageSepiaFilter alloc] init];
[videoCamera addTarget:filter];
GPUImageView *filterView = [[GPUImageView alloc]
initWithFrame:self.view.frame];
filterView.center = self.view.center;
[self.view addSubview:filterView];

NSString *pathToMovie = [NSHomeDirectory()
stringByAppendingPathComponent:@"Documents/Movie.m4v"];
unlink([pathToMovie UTF8String]); // If a file already exists, AVAssetWriter
won't let you record new frames, so delete the old movie
NSURL *movieURL = [NSURL fileURLWithPath:pathToMovie];
movieWriter = [[GPUImageMovieWriter alloc] initWithMovieURL:movieURL
size:CGSizeMake(480.0, 640.0)];
movieWriter.encodingLiveVideo = YES;

[filter addTarget:movieWriter];
[filter addTarget:filterView];
[videoCamera startCameraCapture];
_movieURL = movieURL;
```

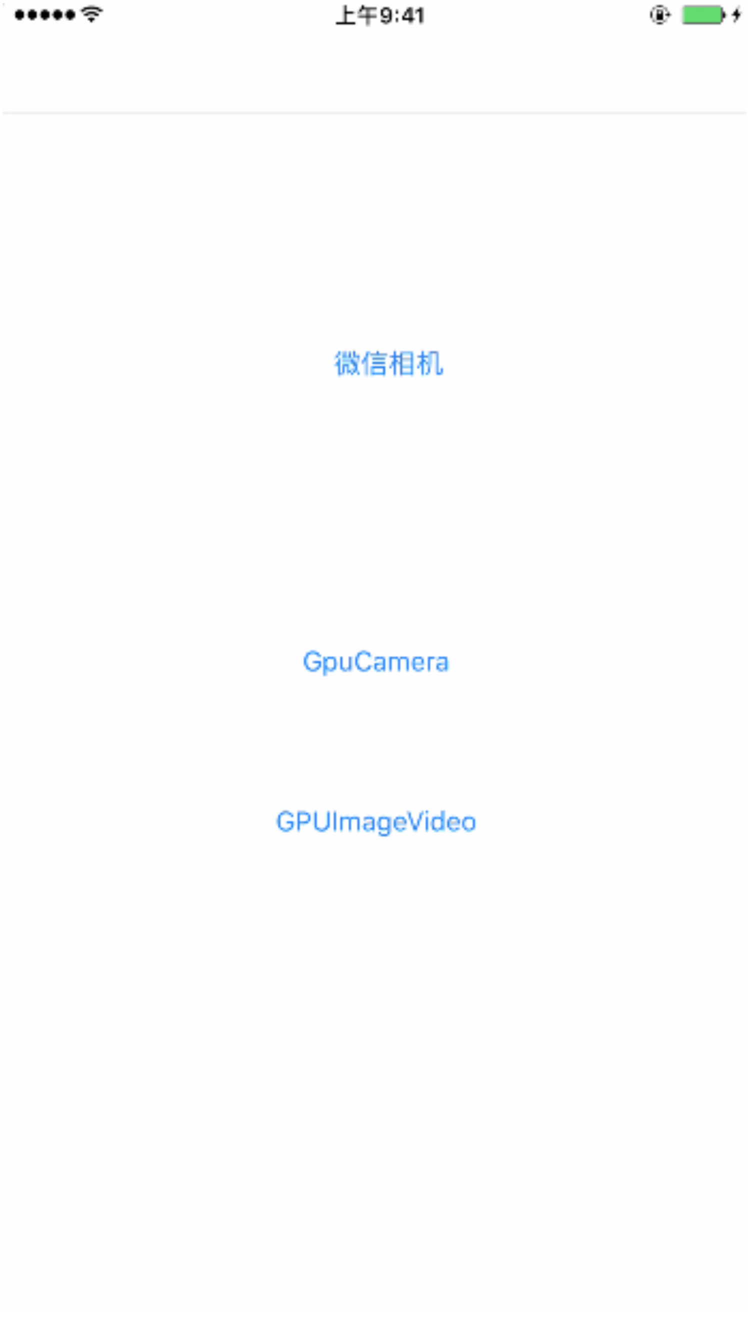
开始录像的操作

```
videoCamera.audioEncodingTarget = movieWriter;
[movieWriter startRecording];
```

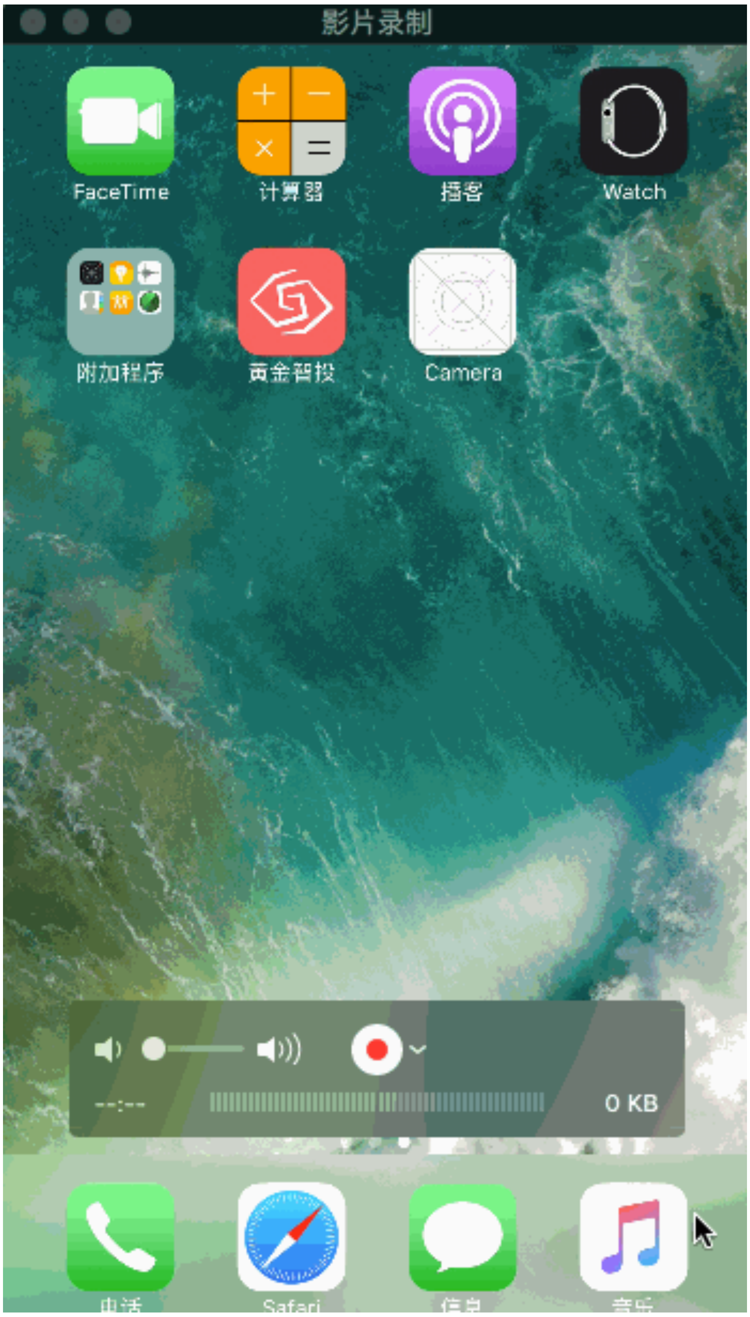
结束录像并保存到相册

```
[filter removeTarget:movieWriter];
videoCamera.audioEncodingTarget = nil;
[movieWriter finishRecording];
NSLog(@"Movie completed%@",_movieURL);

ALAssetsLibrary *library = [[ALAssetsLibrary alloc] init];
if ([library videoAtPathIsCompatibleWithSavedPhotosAlbum:_movieURL])
{
    [library writeVideoAtPathToSavedPhotosAlbum:_movieURL
completionBlock:^(NSURL *assetURL, NSError *error)
     {
         dispatch_async(dispatch_get_main_queue(), ^{

             if (error) {
                 UIAlertView *alert = [[UIAlertView alloc] initWithTitle:@"错
误" message:@"视频保存失败" delegate:nil cancelButtonTitle:@"OK"
otherButtonTitles:nil];
                 [alert show];
             } else {
                 UIAlertView *alert = [[UIAlertView alloc] initWithTitle:@"成
功" message:@"已保存到相册" delegate:nil cancelButtonTitle:@"OK"
otherButtonTitles:nil];
                 [alert show];
             }
         });
     }];
}
```

基于GPUImga的录像滤镜



模仿微信相机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Watch
附加程序
黄金智投
Camera
--:--
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电话
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信息
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