自定义高德地图大头针气泡

第一步：自定义一个继承UIView的大头针气泡视图 DDCustomCalloutView

DDCustomCalloutView.h

```objc
#import <UIKit/UIKit.h>

@interface DDCustomCalloutView : UIView

@property (nonatomic, strong) UILabel *textLabel;

@end
```

DDCustomCalloutView.m

```objc
#import "DDCustomCalloutView.h"

#define kArrorHeight 10

@implementation DDCustomCalloutView

- (void)drawRect:(CGRect)rect
{
    CGFloat width = rect.size.width;
    CGFloat height = rect.size.height-kArrorHeight;
    //圆角半径
    CGFloat radius = (self.frame.size.height-kArrorHeight)*0.5;

    CGContextRef context = UIGraphicsGetCurrentContext();
    // 移动到初始点
    CGContextMoveToPoint(context, radius, 0);
    // 绘制第1条线和第1个1/4圆弧
    CGContextAddLineToPoint(context, width - radius, 0);
    CGContextAddArc(context, width - radius, radius, radius, -0.5 * M_PI, 0.0, 0);
    // 绘制第2条线和第2个1/4圆弧
    CGContextAddLineToPoint(context, width, height - radius);
```

```
    CGContextAddArc(context, width - radius, height - radius, radius, 0
.0, 0.5 * M_PI, 0);
    // 绘制第3条线和第3个1/4圆弧
    CGContextAddLineToPoint(context, radius, height);
    CGContextAddArc(context, radius, height - radius, radius, 0.5 * M_P
I, M_PI, 0);
    // 绘制第4条线和第4个1/4圆弧
    CGContextAddLineToPoint(context, 0, radius);
    CGContextAddArc(context, radius, radius, radius, M_PI, 1.5 * M_PI,
0);
    // 闭合路径
    CGContextClosePath(context);
    // 填充半透明黑色
    CGContextSetFillColorWithColor(context, [UIColor whiteColor].CGColo
r);
    CGContextDrawPath(context, kCGPathFill);


    self.layer.shadowColor = [[UIColor grayColor] CGColor];
    self.layer.shadowOpacity = 1.0;
    self.layer.shadowOffset = CGSizeMake(0.0f, 2.0f);
}
```

第二步：继承自高德地图的MAAnnotationView自定义一个大头针视图DDCustomAnnotationView

DDCustomAnnotationView.h

```
#import <MAMapKit/MAMapKit.h>
#import "DDCustomCalloutView.h"

@interface DDCustomAnnotationView : MAAnnotationView

@property (nonatomic, strong) DDCustomCalloutView *calloutView;


@end
```

DDCustomAnnotationView.m

```
#import "DDCustomAnnotationView.h"
```

```objc
#define kCalloutWidth        120.0
#define kCalloutHeight        45.0


@interface DDCustomAnnotationView ()

@end

@implementation DDCustomAnnotationView



- (void)setSelected:(BOOL)selected animated:(BOOL)animated
{
    if (self.selected == selected)
    {
        return;
    }

    if (selected)
    {
        if (self.calloutView == nil)
        {
            self.calloutView = [[DDCustomCalloutView alloc] initWithFrame:CGRectMake(0, 0, kCalloutWidth, kCalloutHeight)];
            self.calloutView.center = CGPointMake(CGRectGetWidth(self.bounds) / 2.f + self.calloutOffset.x,
                                                  -CGRectGetHeight(self.calloutView.bounds) / 2.f + self.calloutOffset.y);

            [self addSubview:self.calloutView];
        }
    }
    else
    {

    }

    [super setSelected:selected animated:animated];
}
```

第三步：加载地图，添加大头针，显示气泡

以下代码写的比较low，建议大家在使用高德地图的时候根据自己项目实际情况封装后再使用。

ViewController.m中

```objc
#import "ViewController.h"
#import <AMapFoundationKit/AMapFoundationKit.h>
#import <MAMapKit/MAMapKit.h>
#import "DDCustomAnnotationView.h"

@interface ViewController ()<MAMapViewDelegate>

@property (nonatomic, strong) MAMapView *mapView;

@property (nonatomic, strong) MAPointAnnotation *startAnnotation;
@property (nonatomic, strong) MAPointAnnotation *endAnnotation;

@end

@implementation ViewController


- (void)viewDidLoad {
    [super viewDidLoad];
    // Do any additional setup after loading the view, typically from a
 nib.

    //初始化大头针信息
    [self initAnnotaiton];

    //初始化地图并添加
    [self setUpMapView];

    //将大头针添加到地图上
    [self.mapView addAnnotations:@[self.startAnnotation,self.endAnnotat
ion]];

    //调用此方法直接显示出大头针气泡，调用此方法会执行大头针的点击代理
    [_mapView selectAnnotation:self.startAnnotation animated:YES];
    [_mapView selectAnnotation:self.endAnnotation animated:NO];

    //地图移动，缩放
    MACoordinateRegion region ;//表示范围的结构体
    region.center = self.startAnnotation.coordinate;//中心点
    region.span.latitudeDelta = 0.1;//经度范围（设置为0.1表示显示范围为0.2的
纬度范围）
    region.span.longitudeDelta = 0.1;//纬度范围
    [_mapView setRegion:region animated:YES];
}

- (void)initAnnotaiton {
    _startAnnotation = [[MAPointAnnotation alloc]init];
    _startAnnotation.coordinate = CLLocationCoordinate2DMake(39.9084153
7, 116.45969689);
    _startAnnotation.title = @"国贸";
```

```objectivec
    _endAnnotation = [[MAPointAnnotation alloc]init];
    _endAnnotation.coordinate = CLLocationCoordinate2DMake(39.92000603,
 116.39465332);
    _endAnnotation.title = @"故宫";
}

- (void)setUpMapView {
    _mapView = [[MAMapView alloc]initWithFrame:self.view.bounds];
    _mapView.showsScale = NO;
    _mapView.showsCompass = NO;
    _mapView.delegate = self;
    [self.view addSubview:_mapView];
}


#pragma mark MAMapViewDelegate
//添加大头针代理
- (MAAnnotationView *)mapView:(MAMapView *)mapView viewForAnnotation:(i
d <MAAnnotation>)annotation
{
    if ([annotation isKindOfClass:[MAPointAnnotation class]])
    {
        static NSString *resuedIndentifier = @"DDMAPointAnnotationId";

        DDCustomAnnotationView *annotationView = (DDCustomAnnotationVie
w *)[mapView dequeueReusableAnnotationViewWithIdentifier:resuedIndentif
ier];

        if (annotationView == nil) {
            annotationView = [[DDCustomAnnotationView alloc]initWithAnn
otation:annotation reuseIdentifier:resuedIndentifier];
        }

        if (annotation == self.startAnnotation) {
            UIImage *image = [UIImage imageNamed:@"startgreen"];
            annotationView.image = image;
            annotationView.centerOffset = CGPointMake(0, -0.5*image.siz
e.height);
        }

        if (annotation == self.endAnnotation) {
            UIImage *image = [UIImage imageNamed:@"endred"];
            annotationView.image = image;
            annotationView.centerOffset = CGPointMake(0, -0.5*image.siz
e.height);
        }


        return annotationView;
    }

    return nil;
}
```

```objective-c
//大头针点击代理
- (void)mapView:(MAMapView *)mapView didSelectAnnotationView:(MAAnnotationView *)view {

    DDCustomAnnotationView *annotationView = (DDCustomAnnotationView *)view;

    annotationView.calloutView.textLabel.text = view.annotation.title;
}


- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}


@end
```

自定义高德地图气泡大体思路就是这样，高德开放平台上的demo和这里相差无几。其中细节大家可做优化或者根据自己的项目需要做不同的封装。

除此之外我还试过直接找到MAAnnotationView的位置，直接在地图上添加一个view的做法，也是可以实现的，看项目需要了。