

Macoun

OpenStreetMap und MapKit

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Ablauf

- MapKit
- OpenStreetMap
- Fragen

MapKit

MapKit Historie	
iPhone OS 1	private
iPhone OS 2	private
iPhone OS 3	Annotations, UserLocation
iOS 4	Structs, Overlays
iOS 5	Heading, Tracking
iOS 6	Apple Maps (Vektorbasiert), Search, Map.app-API
iOS 7	Directions, TileOverlays, Camera, Snapshots
iOS 8	-
iOS 9	Compass, Scale, Traffic, Flyover

Benutzung

- MapView
- Delegate
- Annotations / Overlays

Demo

Fazit

- Große Akzeptanz und Bekanntheitsgrad
- Guter Funktionsumfang
- Kartenmaterial nicht immer zufriedenstellend

OpenStreetMap

Verwendungsmöglichkeiten

- Kartenmaterial

Demo

```
@interface MKTileOverlay : NSObject <MKOverlay>

- (instancetype)initWithURLTemplate:(nullable NSString
*)URLTemplate

@property CGSize tileSize;
@property (getter=isGeometryFlipped) BOOL geometryFlipped;
@property NSInteger minimumZ;
@property NSInteger maximumZ;
@property (readonly, nullable) NSString *URLTemplate;
@property (nonatomic) BOOL canReplaceMapContent;

@end
```

```
typedef struct {  
    NSInteger x;  
    NSInteger y;  
    NSInteger z;  
    CGFloat contentScaleFactor; // The screen scale that the tile  
will be shown on. Either 1.0 or 2.0.  
} MKTileOverlayPath;
```

```
@interface MKTileOverlay (CustomLoading)

- (NSURL *)URLForTilePath:(MKTileOverlayPath)path; // default
implementation fills out the URLTemplate

- (void)loadTileAtPath:(MKTileOverlayPath)path result:(void (^)(
NSData * __nullable tileData, NSError * __nullable error))result;

@end
```

```
- (instancetype)initWithURLTemplate:(nullable NSString  
*)URLTemplate
```

```
@property (nonatomic) BOOL canReplaceMapContent;
```

```
- (void)loadTileAtPath:(MKTileOverlayPath)path result:(void (^)  
(NSData * __nullable tileData, NSError * __nullable error))result;
```

Verwendungsmöglichkeiten

- Kartenmaterial
- POIs / Geoinformationen

Demo

```
@protocol MKAnnocation <NSObject>

@property (nonatomic, readonly) CLLocationCoordinate2D coordinate;

@optional

@property (nonatomic, readonly, copy, nullable) NSString *title;
@property (nonatomic, readonly, copy, nullable) NSString *subtitle;

- (void)setCoordinate:(CLLocationCoordinate2D)newCoordinate;

@end
```

```
@interface MKAnnotationView : UIView
- (instancetype)initWithAnnotation:(nullable id
<MKAnnotation>)annotation reuseIdentifier:(nullable NSString
*)reuseIdentifier;

@property (nonatomic, readonly, nullable) NSString*reuseIdentifier;
@property (nonatomic, strong, nullable) id <MKAnnotation>
annotation;
@property (nonatomic, strong, nullable) UIImage *image;
...
@end
```

Fazit

- gute/schnelle Integrationsmöglichkeit
- leicht zu Benutzen
- zusätzliche „Features“

Ausblick

- WatchKit
- MKSnapshots

Ähnliche Vorträge

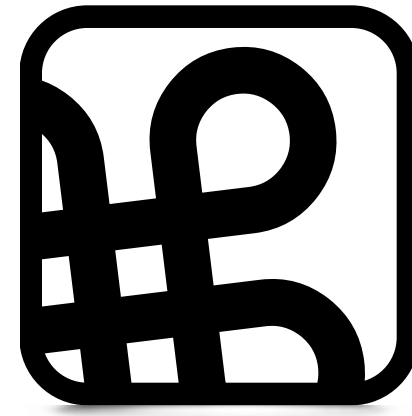
- Macoun 2010 - Digitaler Stadtplan (Ortwin Gentz)
- Macoun 2013 - iOS MapKit Clustering Techniken (Claus Höfele)
- Macoun 2014 - Apple MapKit vs. Google Maps SDK (Ortwin Gentz)

Links

- <https://wiki.openstreetmap.org/>
- <https://www.mapbox.com/developers/>

Fragen?

Vielen Dank



Macoun