link utili

developer.android.com

code.google.com/intl/it/android/add-ons/google-apis

stackoverflow.com

android.stackexchange.com

MapController
Centrare la mappa in un punto
Zoom
Animare un posizionamento

Overlay
Permette di visualizzare elementi georeferenziati

Android Maps e Localizzazione

Localizzazione

Android Maps e Localizzazione

- visualizzazione, controllo, customizzazione Google Maps
- servizi di georeferenziazione
- integrazione con i sistemi GPS

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MapActivity

Classe astratta Specializzazione di una Activity

implementazione necessaria di isRouteDisplayed()
per motivi "amministrativi" definiti nei termini di
licenza.

MapView

```
<com.google.android.maps.MapView
android:layout_width="fill_parent"
android:layout_height="fill_parent"
android:apiKey="<mia chiave>" />
```

```
public class EsempioActivity extends MapActivity {
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        MapView mapView = (MapView)findViewById(R.id.mapvi
        mapView.setClickable(true);
        mapView.setBuiltInZoomControls(true);
        mapView.setSatellite(true);
    }
    @Override
    protected boolean isRouteDisplayed() {
    return false;
    }
}
```

public MapController getController()

[MapController]

- centrare la mappa in una particolare location
- gestire delle animazioni di posizionamento della mappa
- gestire lo zoom

Overlay

LocationManager

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MapCon

- **centrare** la mappa in una particolare location
- gestire delle **animazioni** di posizionamento della mappa
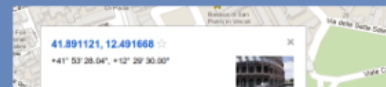- gestire lo **zoom**

LO...

GeoPoint

public GeoPoint(int latitudeE6,int longitudeE6)

latitudine in gradi per 1E6   longitudine in gradi per 1E6

int lat = 41891121;   int lon = 12491668;
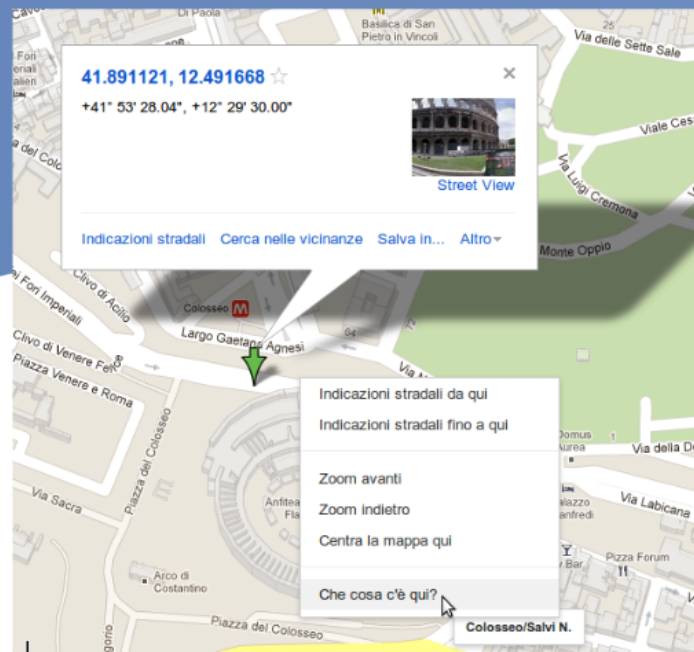
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PREZI

MapController

Centrare la mappa in un punto

```
GeoPoint romaGeoPoint = new GeoPoint(41891121,12491668);
mapController.setCenter(romaGeoPoint);
```

Zoom

```
mapController.setZoom(int);
mapController.zoomIn();
mapController.zoomOut();
```

Animare un posizionamento

```
public void animateTo(GeoPoint point)
public void animateTo(GeoPoint point, android.os.Message message)
public void animateTo(GeoPoint point, java.lang.Runnable runnable)

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Z

mapC
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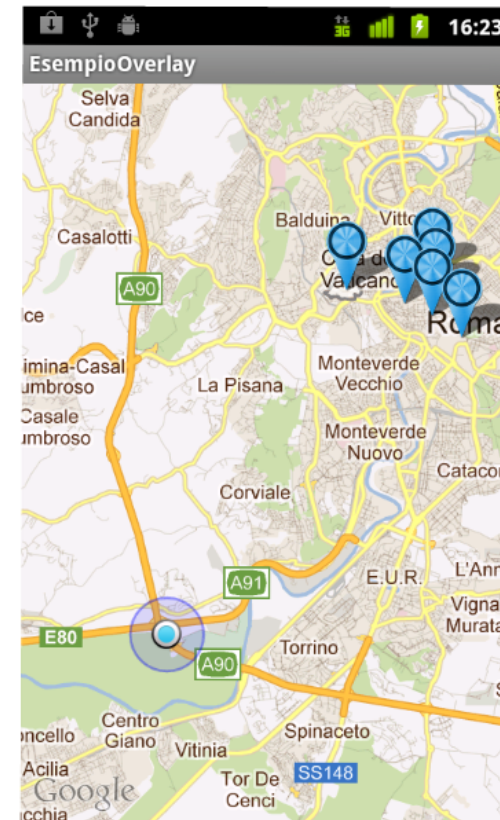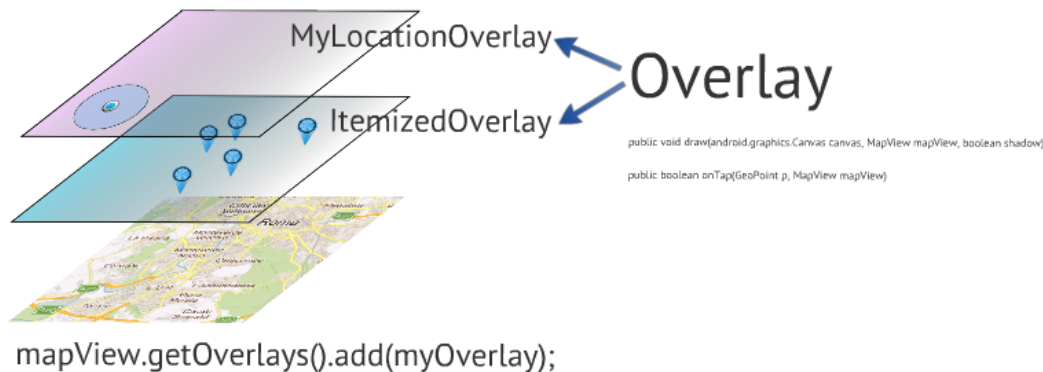
Overlay

Permette di visualizzare elementi georeferenziati aggiuntivi sulla mappa:

- **markers**
- **posizione utente**
- **aree e immagini**

MyLocationOverlay → Overlay

ItemizedOverlay →

public void draw(android.graphics.Canvas canvas, MapView mapView, boolean shadow)

public boolean onTap(GeoPoint p, MapView mapView)

mapView.getOverlays().add(myOverlay);

EsempioOverlay

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MyLocationOverlay

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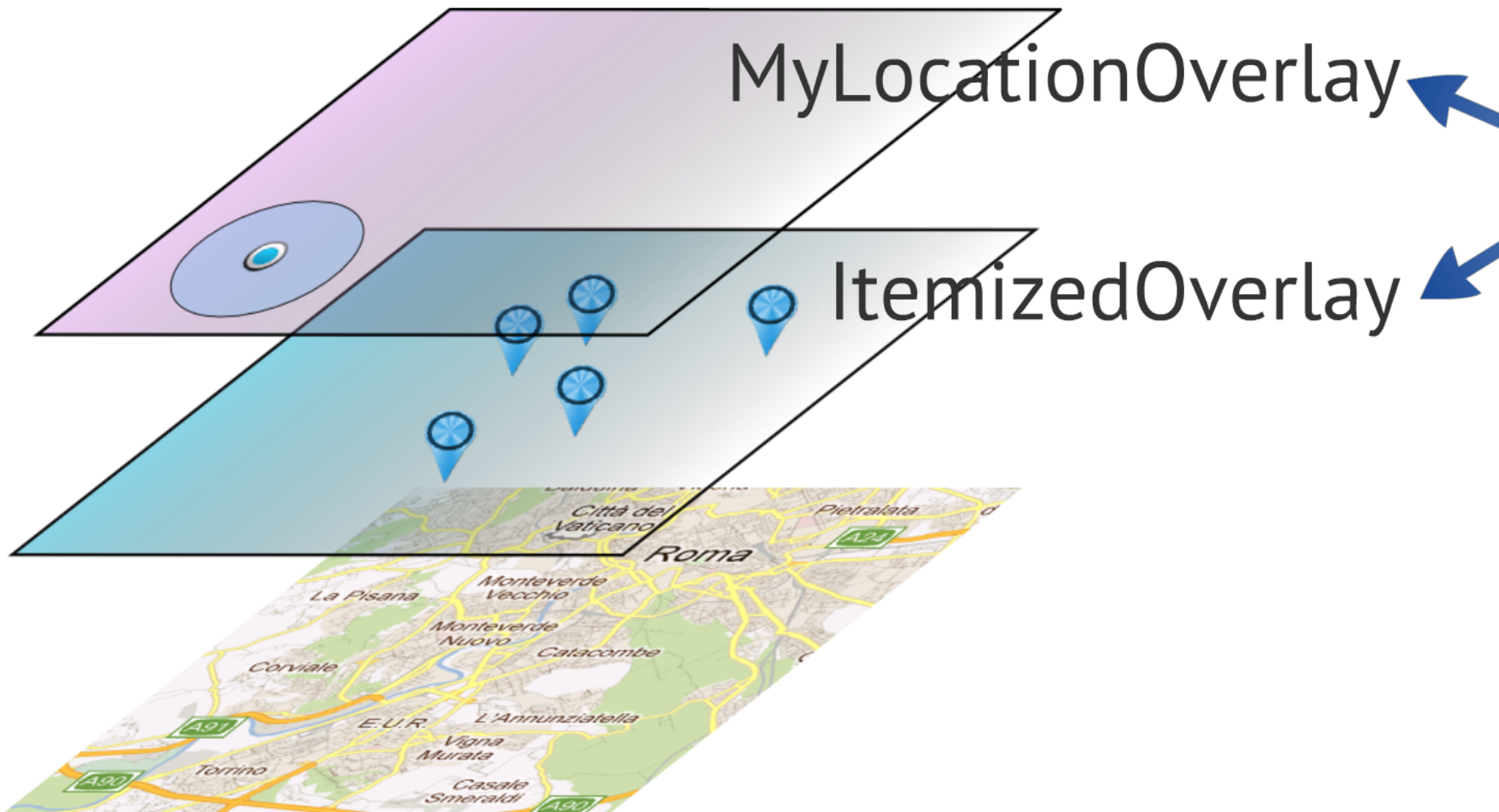
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Localizzazione

proximity...

public void addProximityAlert (double latitude, double longitude,
float radius, long expiration, PendingIntent intent)

lastKnowLocation...

public Location getLastKnownLocation(String providerName);

LocationManager.GPS_PROVIDER
LocationManager.NETWORK_PROVIDER
LocationManager.PASSIVE_PROVIDER

LocationManager

- ricevere notifiche sulla posizione del dispositivo
- lanciare un Intent nel caso in cui l'utente entri in
  prossimità di una particolare posizione geografica

public void requestLocationUpdates (String provider, long
minTime, float minDistance, LocationListener listener)

public void onLocationChanged(Location location) { ... }
public void onProviderDisabled(String provider) { ... }
public void onProviderEnabled(String provider) { ... }
public void onStatusChanged(String provider, int status, Bundle extras) { ... }

LocationManager locationManager = (LocationManager)getSystemService(Context.LOCATION_SERVICE);

LocationProvider

forniscono dati di posizione acquisiti
da una determinata tecnologia

- GPS
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<uses-permission
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- Rete (WiFi e CellID)
  LocationManager.NETWORK_PROVIDER

<uses-permission
android:name="android.permission.
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public LocationProvider getProvider (String name)
public List<String> getAllProviders ()

public String getBestProvider (Criteria criteria, boolean enabledOnly)

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code.google.com/intl/it/android/add-ons/google-apis
stackoverflow.com
android.stackexchange.com

Android Maps e
Localizzazione

```
try{
    marcoVettorello = new SoftwareEngineer("R&D");
    mobile.call("+39 392 9441337");
    email.writeTo("marco.vettorello@t-connect.it");
    follow.tweet("@markov02");
}
catch(Service s){
    Android.getMobileApps();
    Java.getMiddlewares();
    Web.getWebApplication();
    Indoor.getLocalization();
    WirelessSensorNetwork.getSmartEnergy();
}
```