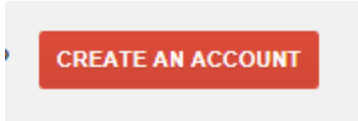


INRCOG Google Maps Projects

Dan Schlichtmann

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Getting Started

- Open Google Account
 - Click Gmail tab.
 - Click Create an Account in the Corner. 
- Go to “Maps” tab from the Google homepage.

Create Google Map

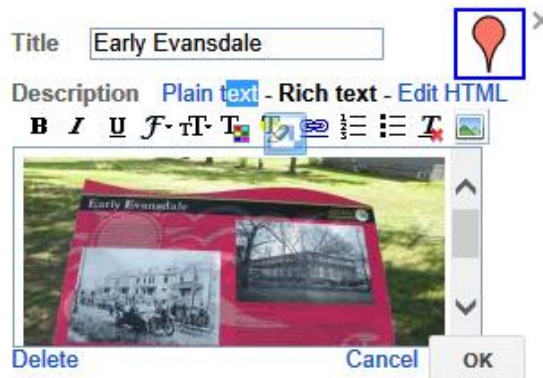
- Mapping Options
 - **Standard**: Google.com → Maps → My Places → Create Map
 - **New! Maps Engine Lite**
 - Look for the “New! [Get advanced features with Maps Engine Lite](#)” hyperlink to access this page while under the MAP tab.

Create Google Map

- [Standard Map Option](#)
 - “Create Map” Click this button to make a new map.
 - Give the map a title and description
 - Choose Public or Unlisted(Private)
 - Creating a custom map directly in Google maps doesn’t work very well.
 - When I tried to add a point it wouldn’t work.
 - Drawing line, line along road and polygon features works well.
 - Create a kml/kmz file in ArcGIS or Google Earth.
 - I used ArcGIS to create
 - Import from Google maps when you have all of your map features.
 - Edit the map by clicking the Red EDIT button.
 - Some customization available in Google maps of symbology.
 - When you are done you can export the map as a kml.
 - This is good for a backup of the file.
 - Can view the map in Google Earth.

Prairie Pathways Map

- Standard Google Map.
- Exported points from ArcGIS into KML format.
- Individually symbolized each point.
 - I used Purple with dot for panels with maps. I also placed the text “This is a Map Panel” in the legend.
 - I used red without a dot for a standard panel.
 - I added a picture to the popup box.



Prairie Pathways Map

- You can change the title, Add a picture, and other HTML programming customization you want to add. For example I added:
- ``
 - This HTML has a default picture that shows at low resolution. If the user hovers the mouse over the picture they see “Click for a More Detailed Picture” Then if the user clicks on the picture a more detailed picture is opened.

Picture Storage

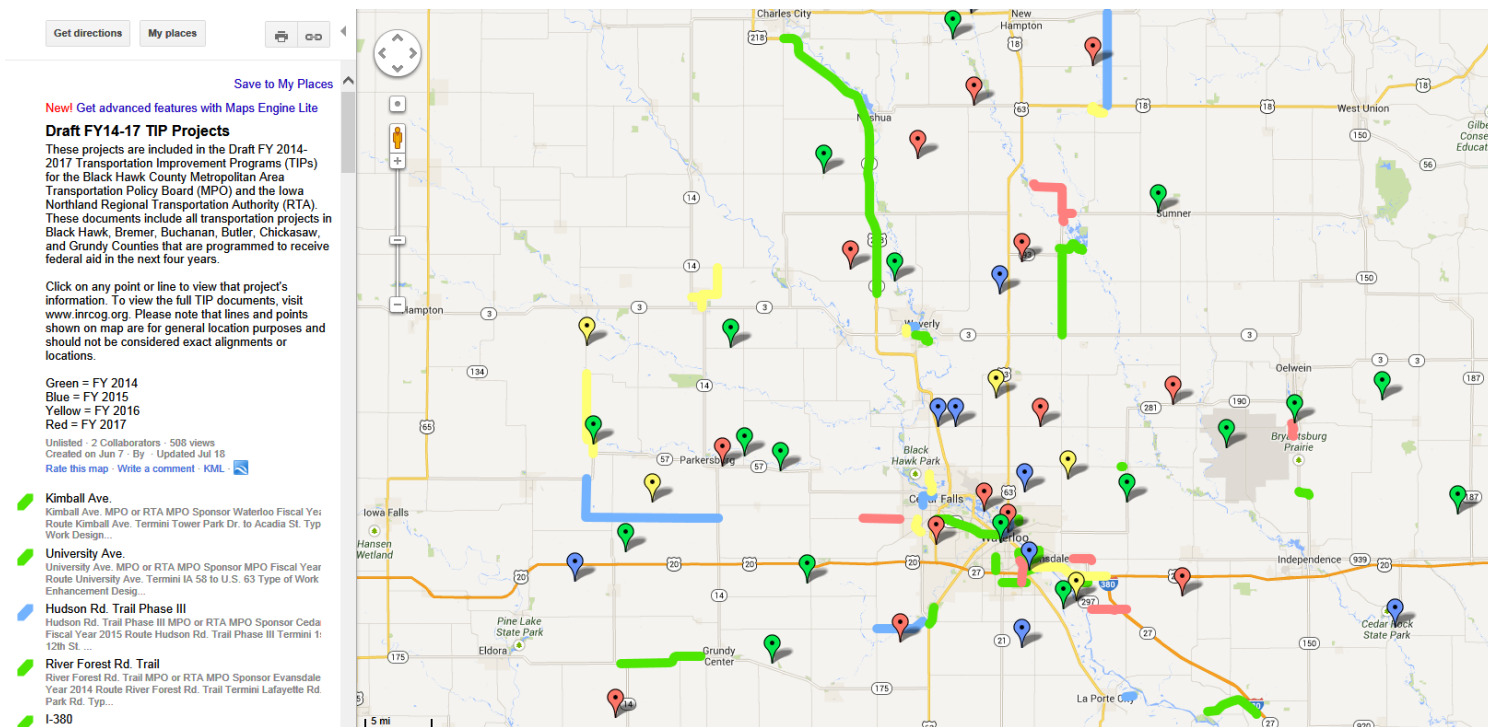
- Google Drive has 15GB initial storage capacity.
 - You can purchase more storage if necessary
- More redundant availability of data to the user than a locally hosted server.
- I had problems with some pictures while preparing for this presentation.
- I stayed with INRCOG server for pictures

Gather GPS location for maps with iPhone Pictures.

- Can obtain Latitude Longitude and Elevation from iPhone picture data.
- In windows right click on picture file → Properties → Details tab → GPS.
 - Latitude, Longitude (In degrees minutes seconds) and Altitude in Meters.
 - [Degrees Minutes Seconds Converter](#) F.C.C.
 - Lat – 42deg 26 min 46.2 sec = 42.446167
 - Long – 92deg 19 min 13.79 sec = 92.320497
 - [42.446167 -92.320497](#) (Remember negative for Longitude) paste into google maps for location.
 - I used this for a KOA campground that was recently constructed. The aerial photograph doesn't show anything but a field.

MPO/RTA TIP Projects FY14-17

- [Google Map](#) (Created by Andrea White INRCOG) showing current Transportation Improvement Program project locations.



MPO/RTA TIP Projects FY14-17

- You can click on attributes and get detailed information about the project.
 - This data was imported with the KML.
- Export data from ArcGIS as KML. Import the KML to Google maps.
 - Manually change the colors of each line and point. The Maps Engine Lite program is better for symbolizing data like this.
 - You can automate the color choices based on year for points and lines.

Maps Engine Lite

- Maps Engine Lite Option (<https://mapsengine.google.com/map/?gmp=mpp&pli=1>)
 - Newer Option. Features are likely to expand in the future.
 - Georeference the data using Latitude and Longitude values in a table.
 - Limited Capabilities
 - » 3 Layers Total(Max)
 - » 100 max records per layer.
 - This causes problems when working with large datasets.
 - » When showing multiple points at the same latitude and longitude only the last record will be displayed (unless they are in a separate layer).
 - » More advanced style capabilities than the standard google maps. (Uniform Style, Individual Styles, Symbolize by a column (i.e. year).)
 - » Layers can be turned on and off.
 - » Labeling capabilities. Not very useful with large datasets. The map becomes to cluttered with labels.
 - » No options to add pictures to your point descriptions.
 - You can choose different base maps. For example Map, Satellite, Terrain, Light Political, Mono City, Simple Atlas, Light Landmass, Dark Landmass, Whitewater.

Maps Engine Lite

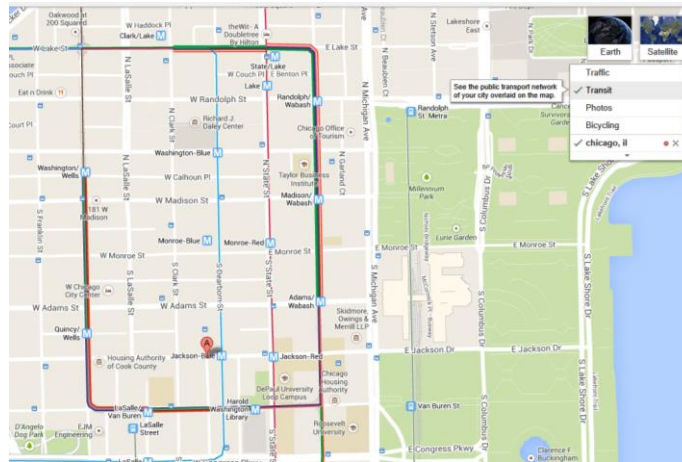
- Maps Engine Lite Option (Cont.)
(<https://mapsengine.google.com/map/?gmp=mpp&pli=1>)
 - Easier to draw point, line or polygon features directly onto the map. This program doesn't have quirky problems drawing on the map like the standard google map.
 - Can edit tabular data using the “data” tab.

Black Hawk County Gaming Awards

- For this map I used the Google Maps Engine Lite Option.
- We created this map using an hourly rate for the project.
- Start by clarifying grant award locations, Project Name and Date in GIS. This is over 50% of the project. Once your data is clarified you can use it in GIS and Google maps.
- Problems Encountered:
 - Only 3 layers available.
 - Only 100 records per layer. I had difficulty separating out 100 records out of a nearly 300 record dataset.
 - Points with the same Lat, Long only display the most current data point. Other points disappear underneath the top point.
- Advantages of Google Maps Engine Lite Option:
 - Easy to symbolize data with common features (Example: Year).
 - Can auto label the data. Works well with points. Not as well for lines.

Transit Maps

- For Transit maps we could use [Maps Engine Lite](#).
- In Google Maps the Transit layer is not available for most cities.



- ([Chicago Google Transit Map](#)).
- Only Google Transit routing available. If a transit layer is available it only shows Train routes not Bus routes. It doesn't give the rider a full view of all the available transit routes.

Transit Maps

- I may use the Maps Engine Lite to make a MET Transit map in the future. [Sample Transit Map](#).
 - Show Example MET transit routes map.
 - Can import Point data in CSV or XLSX format. We cannot import line GIS data. Easy to draw features.
 - It is more interactive than a PDF map.
 - With 3 layer options you can create a 1. Route layer 2. Stop Layer 3. Optional: maybe points of interest near the stops.
 - We can also mix Lines and polygons on a single layer.
 - We can label features. The Label is a simple label that works well on points. On lines it doesn't follow the line. It only displays the text straight out to the right of the feature.
- When complete click "Share" button to change sharing options to public and copy the hyperlink for use on webpages and/or e-mail correspondence.

Google Transit

- Created using National Rural Transit Assistance Program RTAP examples and tools.
<http://demopro.nationalrtap.org/Default.aspx>
- Sign up for account. No Cost.
- Download GTFS builder Files.
- Click Support Center to view tutorial videos.
- Show sample excel spreadsheets.

Google Transit

- Met Transit account for Google transit
- Login to Google Account: [Met Transit Account](#)
- GTFS Validation Report: Show Report from gmail account.
- Discuss overview
- Discuss Stops
- Discuss Calendars
- Discuss Queries

Improve Google Maps

- <http://www.google.com/mapmaker>
- Must have a google account to update data.
- Correct mistakes on google maps.
 - I have used this format frequently to correct the location of businesses, city hall, roads, parks and many other mistakes that I noticed on Google maps.
 - Your edits must be reviewed by google employees.
 - They will either accept or deny your edit.
 - Google may ask for clarification
 - They have certain rules you will learn.
 - Bike trail next to road is a “Bicycle Friendly Roads”
 - Google’s responses are not always consistent since you get a different reviewer each time. ([Show 1st Street Cedar Falls Example](#)). If you prefer to show as a trail try drawing in your feature as a trail first then if you are rejected accept the “Bicycle Friendly Roads” Category. In this example of 1st Street in Cedar Falls Google initially rejected my “trail” category and told me they would accept “Bicycle Friendly Roads”. It looks like since my discussion last year they have decided to make 1st street both a “Bicycle Friendly Road” and a “Bike Trail”.

Improve Bing Maps

- Can report some errors for bing to review.
- For point features you can click “report a problem” after clicking on the feature.
- If you select a city you can click “Report a problem” below the city name.
- No map data for trails.

Questions?

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