NTS GIS Network- Meeting Minutes
Tuesday, Jan 16th, 2018, 1:00 pm Mountain Time (12pm PT, 2pm CT, 3pm ET)

MEETING AGENDA

1. **Welcome & Introductions** (Peter Bosnall/Kerry Shakarjian)

   Meeting Attendees:
   1. Peter Bosnall - National Park Service, National Trails System GIS Specialist, Webinar moderator
   2. Kerry Shakarjian - NPS, GIS Specialist; CDT GIS Data Manager, Webinar note taker
   3. Rob Chohan, Mobile Architect, ⓔπ Maps - Webinar Presenter (Rob@RobLabs.com)
   4. Stafford Hazelett, member Oregon-California Trails Association, Portland, Oregon*
   5. Jill Jensen, National Trails Intermountain Region, Salt Lake City, UT
   6. Tiffany Stram - GIS/IT Specialist, Ice Age Trail Alliance, Cross Plains, WI
   7. Dave Vincent - USGS Salt Lake City, UT
   8. N Torres -
   9. Sarah Rivera, National Trails Intermountain Region, Salt Lake City, UT
   10. Jen Carlino -
   11. Laura White - USFS AZ Trail
   12. Matt Robinson - NPS, AT
   13. Candace Bogart - USFS Region 3 GIS
   14. Don Owen
   15. Reese Hirth - NPS, Geographer
   16. Jorge - Selma to Montgomery National Historic Trail

2. **Announcements & Information from Audience**
   a. Happy New Year and thank you for a successful 2017!
   b. Notes from previous calls can be found on the NTS GIS Network site: **http://pnts.org/new/national-trails-system-gis-network/**
   c. Joint USFWS/NPS Geospatial Training Workshop: March 5-9, 2018 in Harpers Ferry, WV
   d. ESRI Federal GIS User Conference: March 20-21, 2018 in Washington D.C.

3. **Discussion Topic**

   Presenter – Rob Chohan, Mobile Architect, ⓔπ Maps

   Creating Mobile-first Offline Maps using Authoritative Trails Data

   ⓔπ Maps are designed with mobile in mind from the beginning. "Mobile-first" means that the customers experience is great once they download the app. And if the application is backcountry or search and rescue, then the customer is ready to "go well prepared". We build our maps using Authoritative Trails data from the US Forest Service and US Geologic Survey. We take care to use shaded relief and 40 foot contours from the USGS. We also adhere to the National Park Service iconography for a consistent experience. We will also discuss some of the image compression and data reduction techniques that we use to fit the entire map fits in the mobile app.

   Notes:
   - Maps for mobile in the backcountry/offline
   - Mobile First means designed for mobile first, natively offline
   - Building the map: shaded relief, National Map Geographic Names, trail data, contours, Open Map Tiles (Road/Water data)
   - Authoritative Map Data - federal datasets are authoritative: FS Topo, FSGeodata, USGS Topos/National Map, NPS IRMA.nps.gov, raster data from OSGEO then used WebP (Chrome, Opera, Android browsers only) to compress 3x smaller than PNG formats, Used NPS icons for symbolizing points
   - Used github/Mapbox to render the WebP rasters
   - Used Mapbox tippecanoe to make raster/vector tiles
   - Search for "ePi offline maps" in the Apple App store, also works on Android but development more focused on iOS devices

- Works with phone GPS to show your location on the map
- Methods & Process/Issues: https://github.com/roblabs/gdal-geopdf/ or https://github.com/roblabs/gdal-geopdf/issues
- Search "epi offline maps"
  - iOS — https://itunes.apple.com/us/developer/epi-rational-inc./id416401310
  - Android — https://play.google.com/store/search?q=com.roblabs.papermaps&c=apps
- Open Map Tiles
  - open source mapping made for self hosting — http://openMapTiles.org
- Mapbox
  - WebP compression changes for the Mapbox iOS SDK for rendering raster & vector map data — https://github.com/roblabs/mapbox-gl-native
  - Tippecanoe, converting to Mapbox Vector Tiles — https://github.com/mapbox/tippecanoe
- USGS
  - US Topo & The National Map — http://nationalmap.gov
- Forest Service
  - https://data.fs.usda.gov/geodata/edw/datasets.php
  - https://data.fs.usda.gov/geodata/
- NPS
  - https://public-nps.opendata.arcgis.com
  - https://www.nps.gov/maps/tools/symbol-library/
  - IRMA.nps.gov

4. **Future Meeting Dates & Topics**
   a. Feb 20, 2018 – TBD
   b. Mar 20, 2018 – TBD
   c. Apr 17, 2018 – TBD

We always welcome suggestions for additional topics for discussion or presentations. Please contact Ryan Cooper, Peter Bonsall, and/or Derek Nelson with your suggestions!

NTS GIS Email Address: ntsgis@nps.gov
NTS GIS Network Email List: ntsgis@webmail.itc.nps.gov
NTS GIS Network Website: http://pnts.org/new/national-trails-system-gis-network/

NTS GIS Network Mission:
We established the NTS GIS Network as a way to connect the diverse array of National Trails System staff and partners who use GIS systems and products in their work. One of our goals is to facilitate the sharing of information and tools that help us do our jobs more efficiently and innovatively. Because the national trails system is managed as a collaboration of agencies and partner organizations, the NTS GIS Network is open to anyone.