Mapping a Fox Hunt

(With useful (free) software)

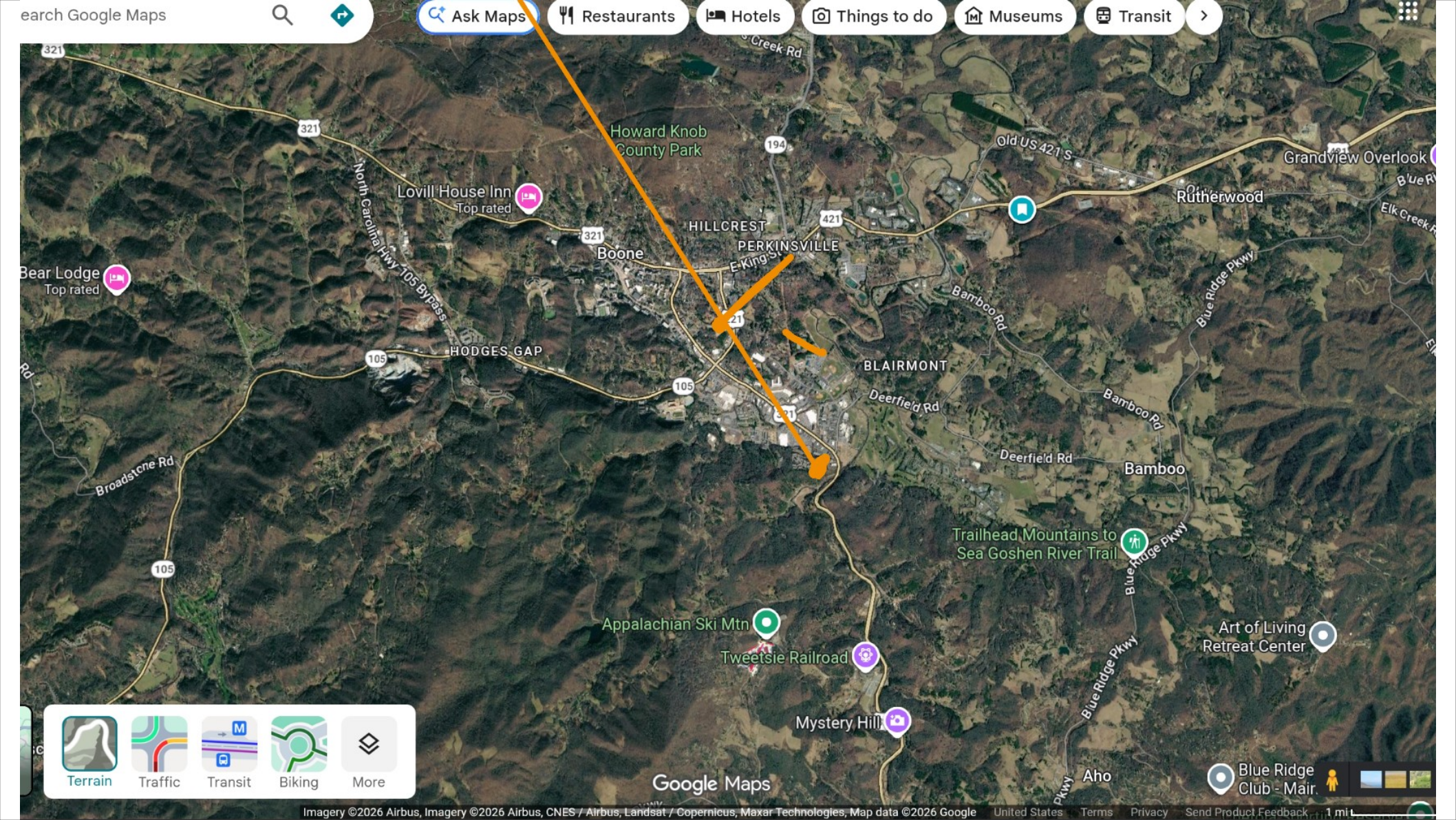


October 2026

Presented by Avery / KX4KAT

Recap from the foxhunt




earch Google Maps
Ask Maps
Restaurants
Hotels
Things to do
Museums
Transit
Howard Knob County Park
Lovill House Inn
Top rated
Bear Lodge
Top rated
Boone
HILLCREST
PERKINSVILLE
HODGES GAP
BLAIRMONT
Rutherwood
Grandview Overlook
Bamboo
Trailhead Mountains to Sea Goshen River Trail
Appalachian Ski Mtn
Tweetsie Railroad
Mystery Hill
Art of Living Retreat Center
Blue Ridge Club - Mair.
Aho
Old US 421 S
Bamboo Rd
Deerfield Rd
Broadstone Rd
North Carolina Hwy 105 Bypass
Blue Ridge Pkwy
Terrain
Traffic
Transit
Biking
More
Google Maps
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What worked well



- General strategy
  - Get the first reading form a high location
  - Follow that reading to a new location, get a new reading, etc...
- Using a map to plot our activities
  - Provided a useful way to keep track of directional readings
  - Excalidraw can be used offline!

What could be better



- Have the map prepared ahead of time
- Use a better screenshot for the map
- Use a compass
- More accurate map annotations
- Use coordinates to increase accuracy for annotations

Map Providers

- Google Maps
  - Easy to find locations
  - Multiple map layers
  - https://maps.google.com/
- GISSurfer
  - MGRS grid overlay
  - Lots of different map layers
  - Specific “screenshot mode” (hides interface items)
  - https://mappingsupport.com/p2/gissurfer.php
- m0ahn.co.uk
  - Maidenhead grid
  - https://www.m0ahn.co.uk/interactivelocatormap.html

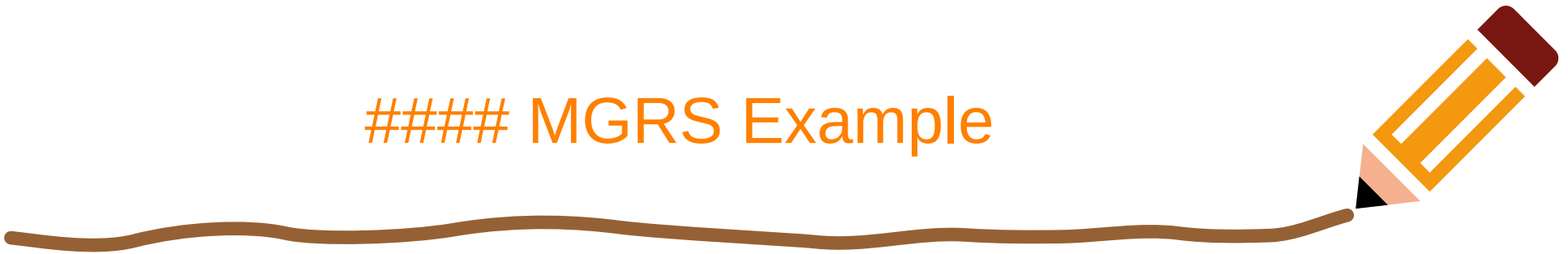


Coordinate systems



- MGRS vs USNG vs UTM
  - MGRS - Military Grid Reference System
  - USNG - United States National Grid (fully compatible with MGRS)
  - UTM - Universal Transverse Mercator
- MGRS uses UTM zones, USNG is the US part of the MGRS map
  - MGRS is used by NATO
  - USNG is common for US SAR and FEMA

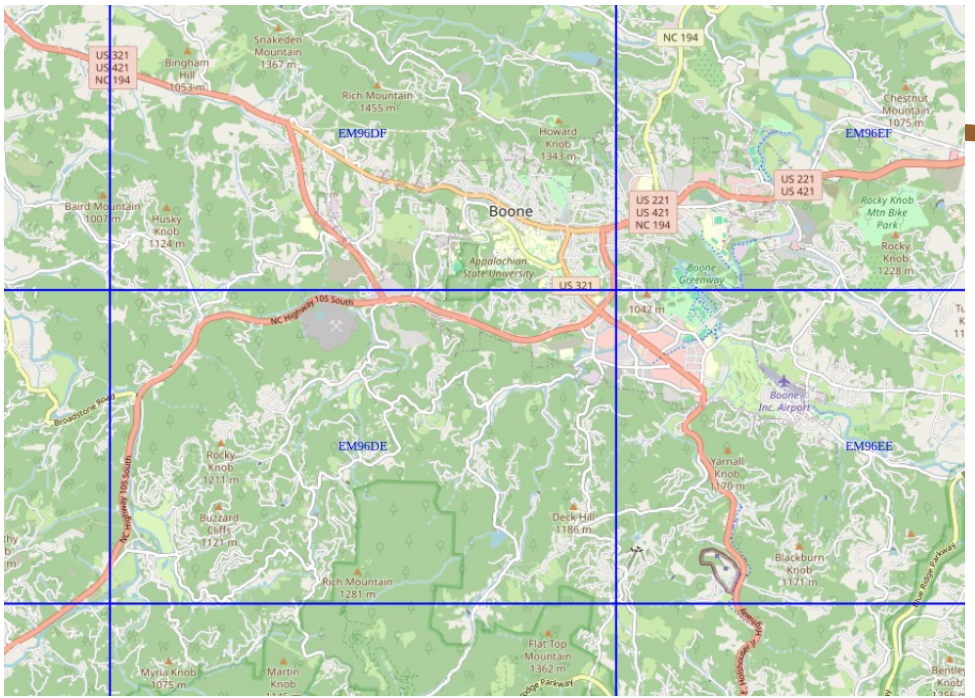
MGRS Example

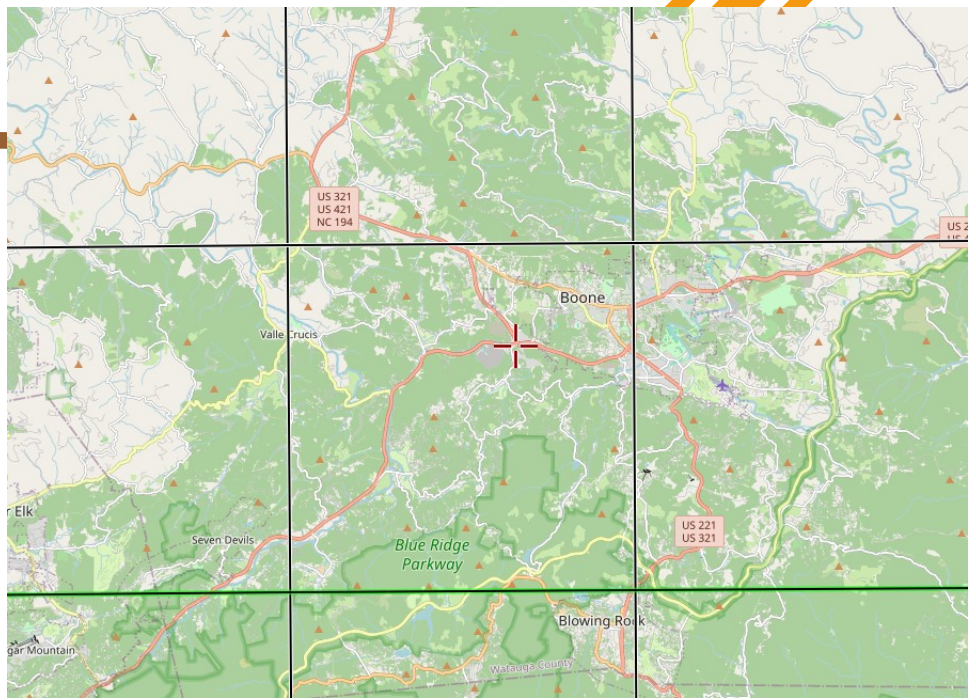


- Example: 17S MA 373 070
  - 17S - UTM Zone
  - MA - 100km x 100km grid square
  - 373 - Easting
  - 070 - Northing
  - Every additional East and North number adds to the precision. IE `17S MA 3 0` is a 10km x 10km square, but `17S MA 37310 07090` is a 1m x 1m square.

Maidenhead vs MGRS

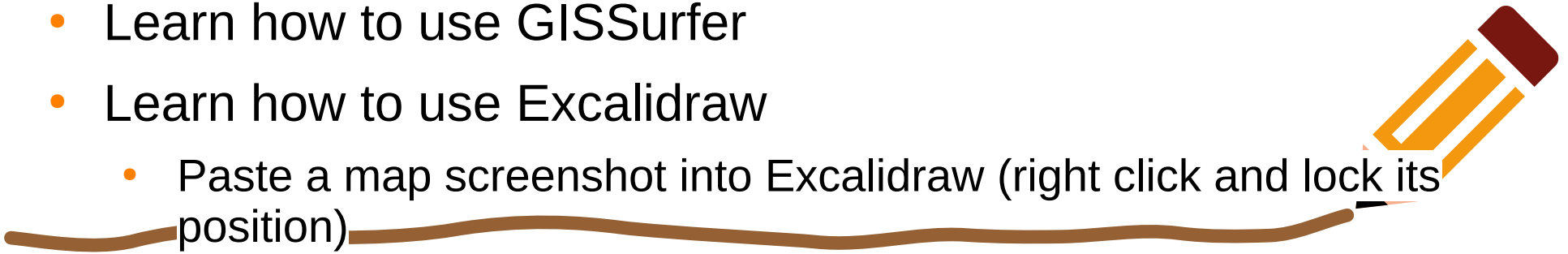
- Maidenhead: EM96de69
  - EM96de (left - m0ahn.co.uk) vs 17SMA30 (right - GISSurfer)





Goals

- Learn how to use GISSurfer
- Learn how to use Excalidraw
  - Paste a map screenshot into Excalidraw (right click and lock its position)
  - Practice annotating on the map
  - Use a compass and/or GPS to find directions and/or location
  - Try sharing the Excalidraw session with a friend



References (1/2)



- GISSurfer
  - https://mappingsupport.com/p2/coordinates-mgrs-gissurfer-maps.html
- m0ahn.co.uk
  - https://www.m0ahn.co.uk/interactivelocatormap.html
- Excalidraw
  - https://excalidraw.com/

References (2/2)



- US SAR uses USNG
  - https://modernsurvivalblog.com/survival-skills/location-coordinates-format-for-sar-emergency-responders/
- US States adopt USNG for response efforts
  - https://medium.com/@USNGHawaii/usng-for-use-by-state-emergency-response-services-8aef6b90173e
- FEMA will use USNG
  - https://en.wikipedia.org/wiki/United_States_National_Grid