



CITY OF
FARMERS BRANCH
TEXAS

Santa on the Move

Mapping Parade Routes in Real Time

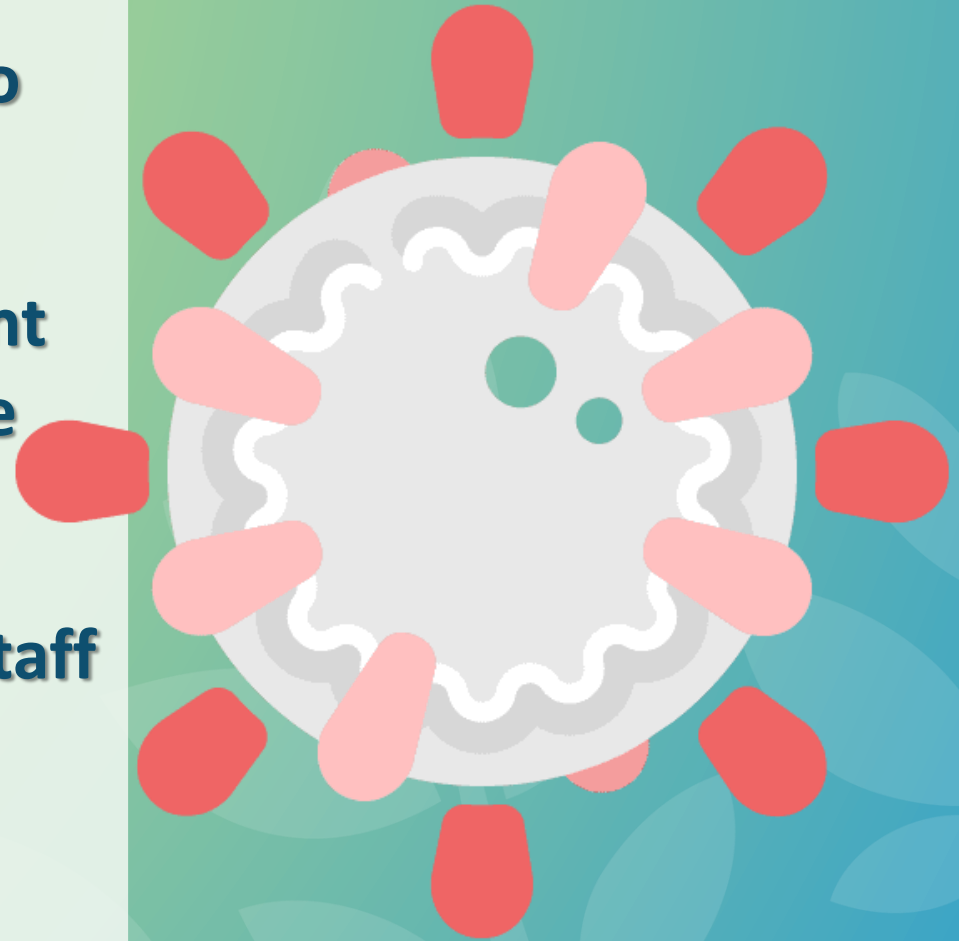
NCTCOG GIS Meeting

FORT WORTH, TEXAS | MAY 16, 2024



Background:

- COVID-19 restrictions forced the City to alter numerous local traditions
- Our normal Santa meet-and-greet event with a photo op was no longer possible
- For our first attempt, the “sleigh ride” was organized solely by Parks & Recs staff who recruited Police and Fire to drive
- Found a steep learning curve when it came to communicating the new plan



What problems needed solving?

Better advertising of the new event

More informed route planning

Limited time available for the event

Better participation metrics

Share timing of route progress

All we needed!



**ArcGIS
Online**



**ArcGIS
QuickCapture**



**Smartphone
or Tablet
with cellular**

Completely off-the-Shelf



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The Trick That Makes Everything Work

- **Must create a custom View Definition**
- **View cannot be altered to be what we need via the normal user interface**
- **Requires the use of the ArcGIS Online REST Services Directory Admin Portal**
- **Update the Service Definition to change the “viewLayerDefinition” property to leverage a TopFilter**

```
{
  "viewLayerDefinition": {
    "topFilter" : {
      "orderByFields" : "esrignss_fixdatetime DESC",
      "groupByFields" : "Creator",
      "topCount" : 1
    }
  }
}
```



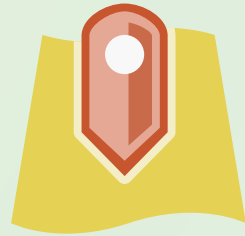
- **Why order by esrignss_fixdatetime instead of CreationDate?**
 - ✓ **Data is uploaded in batches**
- **Why is there a “groupByFields” parameter?**
 - ✓ **Error using TopFilter otherwise**
- **Why group by Creator?**
 - ✓ **Allows for multiple parade vehicles**



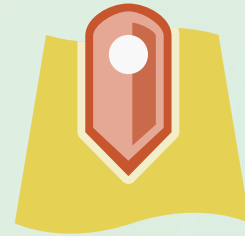
The Basic Workflow



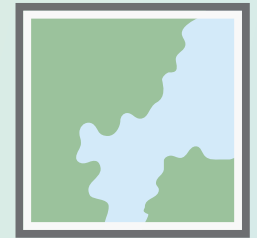
**Streaming Data
Capture Project**



**Hosted
Feature Layer
for GNSS
Location Data
Collection**



**Feature Layer
View - Uses
TopFilter
Layer
Definition**



**Public Web
Map With
Active Refresh
Interval on
Layer View**

Important Notes

ArcGIS Online – Refresh limit of 30 seconds

ArcGIS Online – Location Sharing can't be public

Public Safety AVL data can't be public by policy

ArcGIS Enterprise – Refresh limit of 6 seconds

Leverage Instant Apps and Embed Code

Where to go from here



**Use ArcGIS
QuickCapture
to track
watchers
with location**



**Use ArcGIS
Survey123 to
gather route
planning
information**



**Try a high-
accuracy GNSS
Receiver for
better
location
tracking**



**Network
Analyst can
help develop
a route plan**



What we learned

- **Parents appreciated not standing out in the cold for long periods of time if we were running late**
- **Proved to city leadership we traveled slow for kids**
- **Demonstrated increased participation year over year**
- **Navigating and counting watchers both is a more than should be asked of a single person**
- **Successfully promoted use of GIS at the City**

Questions

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Esri Community Article courtesy Jake Skinner: <https://community.esri.com/t5/arcgis-online-documents/display-latest-feature-in-a-feature-service/ta-p/904523>

Images sourced from Farmers Branch, Esri, Microsoft, Davian Ho for the [Innovative Genomics Institute](#), and the Public Domain