

Forfeiture Data Collection

Mobile App with Collector for ArcGIS

Allegan County GIS
www.allegancounty.org/gis

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0.1 Forfeiture Data Collection

0.1.1 Problem and Analysis

Background Treasurer department has an annual responsibility to properly document the tax forfeiture process. The LIS Department built an application in MS Access and MapInfo that consumed a daily export from BSA and was deployed to the field on a laptop. A digital camera was used for site photos and later imported into the laptop.

Statement of Problem Current Tax Forfeiture workflow is built on MapInfo software which has been replaced by ESRI software. The Forfeiture data collection application must be recreated in the ESRI framework.

Analysis Tax Forfeiture Application will facilitate:

- Mobile data collection on handheld device via Collector for ArcGIS configured with Allegan County GIS Portal (**device app**)
 - Device app will:
 - * Synchronize with data in the office (online)
 - * Navigate to forfeiture sites (offline)
 - * Collect data and photos of forfeiture sites (offline)
 - * Synchronize the collected data with data in the office (online)
- Daily form production and printing for each site visited with required data and images.

0.1.2 Design

Overview The Forfeiture Data Collection Application uses BSA, ArcGIS Desktop, ArcGIS Collector for Android, and ArcGIS Portal web maps and apps to enable forfeiture data collection. A daily routine is supported that maintains forfeiture parcel data through the notification period.

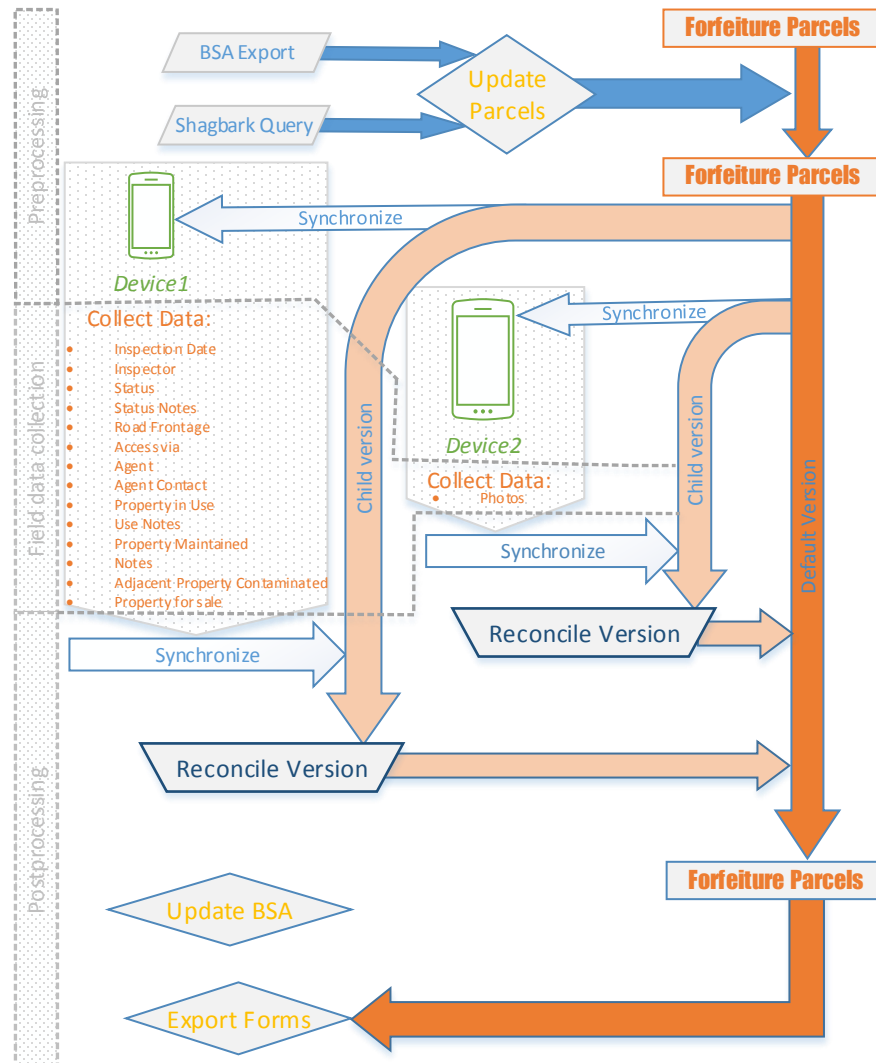


Figure 1: Project Design

BSA data export Details of parcels in the forfeiture process are managed in BSA Delinquent Tax.net. The Treasurer office has a BSA export the parcels that need a site visit. Export of the updated list is the beginning of the daily routine in this workflow.

ArcGIS Desktop tasks Tools are designed to preprocess and postprocess forfeiture parcel data for fieldwork. The user will execute a preprocess script tool that prepares the data for field deployment. After fieldwork, a post process script tool synchronizes data from the fieldwork with the live data on the Allegan County network.

ArcGIS Collector A free mobile application developed and tested on Android is deployed to the field for data collection. The application is configured to work offline(without an internet or cellular connection) by synchronizing before and after fieldwork.

ArcGIS Portal Webmaps and Apps Live data from a publishing (replica of ACPro) enterprise geodatabase (ACPub) running on SQL Server database server (acintsql01) is provided through a feature service (REST service) named TaxReversionParcels. A webmap called Forfeiture Field Map consumes the TaxReversionParcels feature service exposing the forfeiture parcels, for editing. The Forfeiture Field Map is configured to work in the ArcGIS Collector App. The app downloads the webmap, allowing the user to collect the necessary information on each forfeiture parcel in the field disconnected and uploads the changes when reconnected.

Forfeiture Data Collection Three parts of the daily routine:

1. Pre-processing (in the office):
 - Export current forfeiture list from BSA
 - Update webmap layers with results from BSA export
 - Synchronize from webmap layers to field collection device (**device app**)
2. Field data collection with device app:
 - Support navigation to forfeiture sites
 - Provide a checklist of data points about the site
 - Attach photos to the site
 - Save results for synchronization in post-processing
3. Post-processing (in the office)
 - Synchronize data and images collected in device app to webmap layers

Backend data details

Location of production data

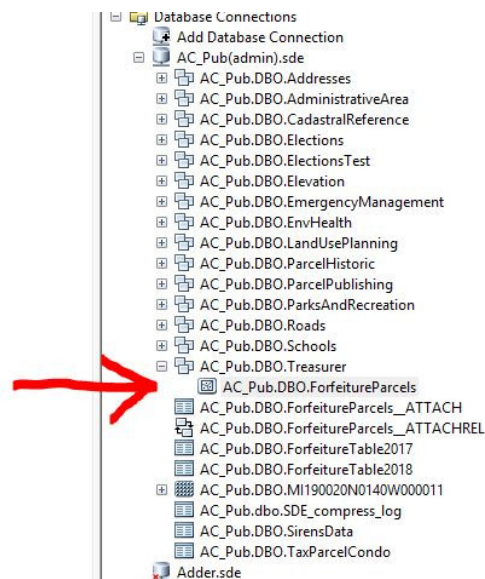


Figure 2: live data

ForfeitureParcels feature class

Collector Setup Details

Install Collector for ArcGIS Available from the Google Play Store

App setup

- Connect to Allegan County GIS
 - Sign In : enter this website address

`https://gis.allegancounty.org/portal_webadaptor`
 - Username is JMorris or CAndress
 - Password: (enter password)

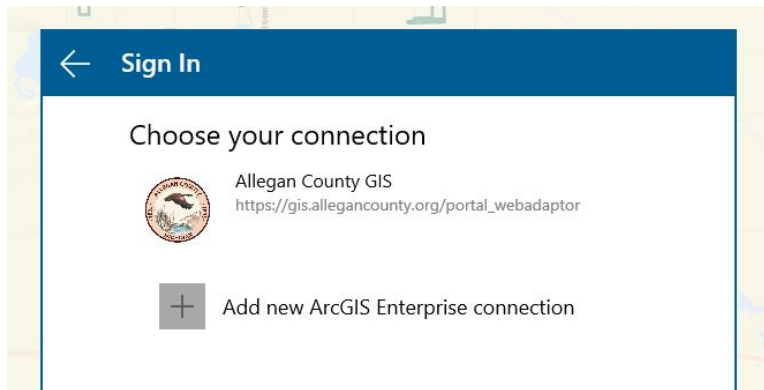


Figure 3: Collector Connection

- Find the map Forfeiture Field Map under Treasury Services
- Download the field map
- Select area needed and detail needed

Synchronize app

Webmap details

0.1.3 Hard Copy Record

0.1.4 User Manual

Preprocessing

fieldwork

postprocessing

Sync Edits

reconcile Versions

print forms for sites visited

update BSA

0.1.5 Software