AppStudio for ArcGIS: Advanced Topics

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AppStudio 3.0 – Highlights
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• Upgrade to Qt framework 5.10
• ArcGIS Runtime upgraded to 100.2.1
• Enhancements and bug fixes to Player
• Map Tour template – better offline support and other enhancements
• Map Viewer template – lots of new features (Measure tool and biometric authentication) and enhancements
• Quick Report template – important bug fixes and enhancements (audio and video support, better offline support)
• Support for connecting to high-accuracy GPS receivers and location accuracy metadata
AppFramework Updates at 3.0

- Text to Speech
- Local Notification
- Biometric Authentication
- Share sheet
- SQL Storage
- Secure Storage
- High Accuracy GPS
- Bluetooth + LE
ArcGIS Companion

A native mobile app created to complement your ArcGIS Organization.
Trek2There


Trek2There

- Location sensor
- Compass
- Device orientation sensors
  - Tilt, Rotation, Gyroscope
- Device discovery
- GNSS receivers
- Camera
- App linking
MyUSNG

- Position source
- Coordinate conversion
- Coordinate parser
- Clipboard
- Geosearch
- Simple map display
QuickCapture


QuickCapture
A BIG button mobile app to capture data while on the go
Utility Line Inspections

Windshield Damage Assessments

Pipeline inspections (on foot, vehicle or helicopter)

Pest mapping
QuickCapture

- Offline storage in SQLite database
- User defined function in SQLite
- Capturing locations in background
- Text to speech
- Coordinate format conversion
What’s new in AppStudio 3.1 Beta
ArcGIS Runtime has been updated to 100.3.1
Android related updates

- **Android API** level has been updated to 26

- Minimum Android version has been updated from 16 to 19

- **Google Play Services security** provider can now be configured for Android apps

- Improved **Background Location** performance for Android
Android related updates

• The **Local Notification** plugin now supports Notification Channels on Android 8.0+

• Gradle is now used instead of Ant for building Android apps

• Users can now choose between OpenGL and Angle rendering on Windows

• Apple Transport Security can now be configured
Other Updates

• Users can now choose between OpenGL and Angle rendering on Windows

• Apple Transport Security can now be configured
Player Updates
AppStudio Player for ArcGIS has had a full UI redesign

Download via:
Apple’s TestFlight: send your email to AppStudioFeedback@esri.com or leave your email in EAP forum to be granted access to AppStudio Player
Android Open Beta: available to everyone, search for AppStudio Player Beta in Google Play Store
AppFramework Updates

- Support communication with Bluetooth Low Energy (LE) devices
  - New components in AppFramework Devices plugin
    - BluetoothLEDevice
    - BluetoothLEService
    - BluetoothLECharacteristic
    - BluetoothLEDescriptor
    - ServiceListModel
    - CharacteristicListModel
    - DescriptorListModel
AppFramework Updates

- Bug fixes and enhancements for Position and Devices plugins
AppFramework Updates

- New Email Composer component, allowing you to launch an email client with a pre-filled draft email
AppFramework Updates

• Added the option to open a URL link in Safari through share sheet
AppFramework Updates

- Added new CryptographicHash and MessageAuthenticationCode components to provide a way to generate cryptographic hashes or hash-based message authentication codes.
AppFramework Updates

• New `checkCapability()` method to check permissions that have been granted
  - Location
  - Storage
  - Camera
  - Microphone

• New method, `isAppInstalled(QString appIdentifier)`
  - to check if an app is installed on the user's device
AppFramework Updates

• SecureStorage maximum key and value lengths
  - defined by the operating system with
  - newly added properties - `maximumValueLength` and `maximumKeyLength`

• Clipboard support has been added for UWP

• Vertical accuracy is now supported on Android
Where to download beta version?

- AppStudio Desktop (Windows, MacOS, Linux) builds are available in AppStudio for ArcGIS Early Adopter Program (EAP)

- AppStudio Player (iOS) is available in Apple’s TestFlight, please send your email to AppStudioFeedback@esri.com or leave your email in EAP forum to be granted access to AppStudio Player

- AppStudio Player (Android) is available to everyone as Android open beta, you can search for *AppStudio Player Beta* in Google Play Store
AppStudio Apps
Built by Users
The ultimate guide to the 2018 New Zealand Agricultural Fieldays

Fieldays - Official App
GPS-IT

Custom, Offline, MMPK, Direction, Vector tiles

The ultimate guide to the 2018 New Zealand Agricultural Fieldays
Salisbury311 is a public mapping application that allows community members to be involved with the upkeep of their city by submitting problems or observations to Salisbury city staff. Submissions by users are turned into work orders that are e-mailed to the appropriate city department.
The app also gives you access to see where there are protected rock and dunes. You can view section 3-registered nature area information using this app. When you are near a section 3-registered nature area, you will receive a notification.
TerraTRUTH is a simple to use app that help concerned citizens monitor and document their public lands.

Template, Quick Report, Citizen science
GoTime is an app provided by MassDOT to complement the roadside travel time signs and Work Zone signs found on highways in Massachusetts. Users can select, view, and favorite the real-time travel signs to display congestion information for that segment of roadway.
Custom app created by Esri Partner
Quickly created as proof of concept
Utilizing the existing web GIS services

Custom, Public information
The Sustainable Dairying: Water Accord (SDWA) is a commitment to New Zealand to enhance the overall performance of dairy farming as it affects freshwater through continuous improvement and partnership. The Accord is a voluntary environmental initiative designed to contribute towards clean, healthy freshwater resources including streams, rivers, lakes, groundwater and wetlands in dairying areas.
TURT
Turtles Uniting Researchers and Tourists

Quick Report Template
Created by a Marine Biologist at Loma Linda
No Developer Skills
Helps users navigate their way to magnificent temples located in Bagan, Myanmar. Users can also browse gorgeous looking photos of local tradition and culture as well as different temples scattered across the old city which was once a capital.
Livstræ allows you to take photos of the tree, indicate the location of the tree using maps and GPS, as well as describe the tree. Data is automatically transferred to the Danish Nature Agency.
With the Visit Gozo app, you can explore Malta’s sister island and find useful information about what you can do while on the island, where to stay, what to experience, the island’s points of interest, bus routes and a host of places where you can have fun.
Use the Allentown 311 Quick Reporter to capture an observation and submit it to city staff for action.
BlueBays displays the location of metered and not-metered disability car park spaces in South Australia. This app empowers you to collect, map and share the locations of disability car parking spaces that you visit.
Mappa Malta provides its users with a wide range of GeoLocation services, everything you need in one convenient map.
WFA Pocket is a mobile app that embodies the latest wildland fire behavior science into a robust tool for the firefighter and Fire Behavior Analyst. Leveraging the science developed by the US Forest Service Missoula Fire Sciences Lab, this app enhances calculations with a 3D interactive map interface, real-time weather integration, and seamless fuels data assimilation.
Please Take Our Survey on the App

Download the Esri Events app and find your event

Select the session you attended

Scroll down to find the feedback section

Complete answers and select “Submit”