Deploy Incident Maps To Mobile Devices Using QR Codes
Exercise Assignment

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Perform or review the five steps necessary to deploy incident maps to mobile devices using QR codes. The five steps are:

1. Create incident maps that are compatible with the Avenza Maps app.

2. Post mobile maps to a NIFC FTP folder.

3. Create QR codes that reference the URL of each mobile map, or of the mobile map folder.

4. Distribute QR codes so personnel can retrieve and install mobile maps.

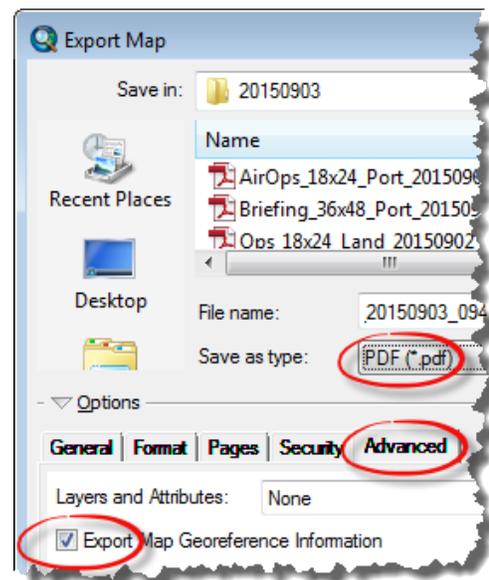5. Use Avenza Map's in-app QR code scanner to install mobile maps.

You will actually perform Requirements 1, 3, and 5, as described in the table below. Requirements 2 and 4 are for your review only.

Requirement 1	Perform the review process in ArcMap.
Requirement 2	Review the process only. Do not post any maps to NIFC FTP folders.
Requirement 3	Perform the process using the provided URLs and QR code generator.
Requirement 4	Review the process only.
Requirement 5	Perform the process if you have an Android or iOS mobile device.

Use the document titled *Deploy Incident Maps To Mobile Devices Using QR Codes – How To* as guidance if you get stuck.
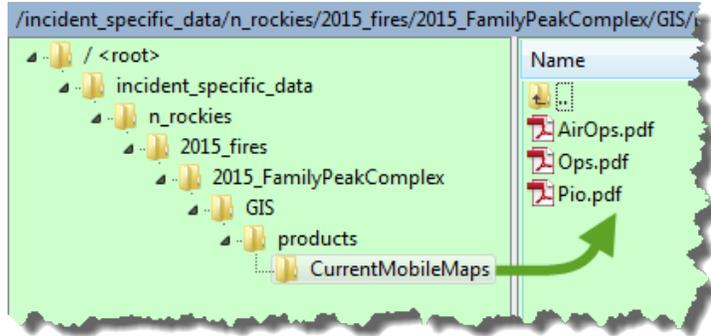
Requirements

1. Review the settings in ArcMap's **Export Map** dialog (click **File – Export Map…**) to see if they match these settings necessary to produce a georeferenced PDF map product.

2. Review these steps necessary to post mobile maps to a NIFC FTP mobile map repository.

- Use an FTP client like FileZilla or WinSCP and your NIFC FTP credentials to connect to the incident's **Products** folder.

- Use the FTP client to post a map to the dated **Products** subfolder corresponding to the map's valid date, and retain the map's full GSTOP-compliant name.

- Use the FTP client to re-post the same map to the **CurrentMobileMaps** subfolder, and rename the map to its shortened name…like AirOps, Ops, Pio, etc.

- Each time the map is updated in ArcMap, it should be posted to the appropriate dated **Products** subfolder, and then re-posted to the **CurrentMobileMaps** folder as a replacement for the previously valid edition of the map. Rename the replacement map with the expired map's name in order to retain an identical map name for the duration of the incident.

- Close the FTP session.

3. Practice the steps necessary to create QR codes that reference the URL of each mobile map, or of the mobile map folder. For the purposes of this exercise, use these URLs.
    - URL of the **CurrentMobileMaps** folder:
      https://ftp.nifc.gov/public/incident_specific_data/n_rockies/2015_fires/2015_FamilyPeakComplex/GIS/products/CurrentMobileMaps/

    - URL of the **Pio.pdf** map:
      https://ftp.nifc.gov/public/incident_specific_data/n_rockies/2015_fires/2015_FamilyPeakComplex/GIS/products/CurrentMobileMaps/Pio.pdf

    Use the QR code generator at http://www.qr-code-generator.com/ and the provided URLs to create a QR code for the **CurrentMobileMaps** folder and for the **Pio.pdf** map.

4. Review the various locations and methods you could use to distribute the QR codes for use by incident personnel, or by others with an interest in the incident.
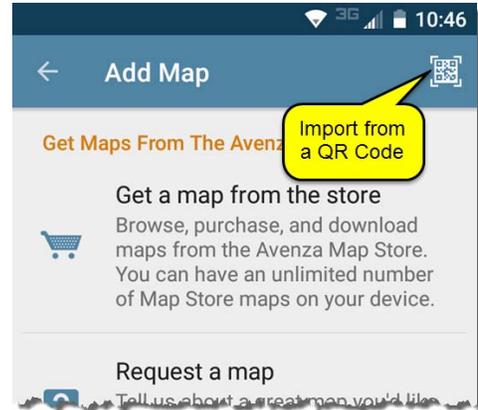
    Examples include: on hardcopy maps, in the daily Incident Action Plan (IAP), near briefing areas, on camp bulletin boards, at public information sites, and in online content.
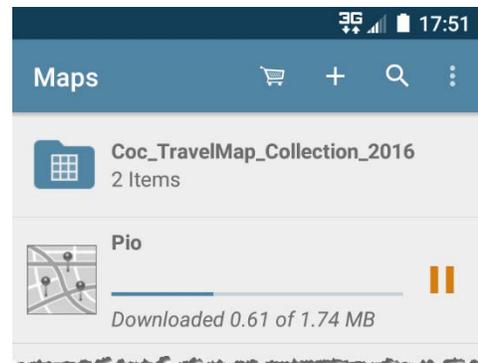
5. If you have a mobile device and the Avenza Maps app installed, use its native QR code scanner to observe the results of scanning each QR code created in Requirement 3.

Scanning procedures and icons may vary somewhat between Android and iOS devices. The example illustrated here is from an Android phone.

- Open the Avenza Maps app on an Android or iOS mobile device.

- Press the "+" icon on the **Maps** page to download or import a map.

- Press the **QR code icon** on the **Add Map** page, as shown at right.

- Scan the QR code for a map of interest, and accept its installation. Be patient while the map downloads, processes, and tiles its content.

In situations where the QR code encodes an individual map's URL, the map will download directly to Avenza Maps, as seen at right.

If the QR code encodes the URL of a folder containing multiple maps, users will have to select a map from among those in the folder, wait for the map to open in a browser, or in a PDF viewer, and then redirect it to Avenza Maps using an "Open In…" or "Open With..." option.