Twist on Time

Twist on Time is a plugin that allows users to run multiple timers at the same time in the ATAK application. This project was developed by Georgia Tech Junior Design Team 0336 in the Spring 2021 semester in collaboration with the 75th Ranger Regiment.

The current release notes, an install guide, and an installation walkthrough are listed below.

There is also a detailed design document in this repo. That document goes into more detail about the plugin and our design choices.

Release Notes

Features in This Release:

- Users can create custom and preset timers, with preset timers being persistent and remaining across sessions
- Users can start, pause, reset, or delete running timers
- Users can run multiple timers at the same time
- Users can give timers custom notifications
- Users can set preset timers

Bug Fixes:

- Recent bug fixes include being able to delete preset timers, and timer name getting cutoff.

Known Bugs:

Currently there is 1 known bug. It is listed below.

- When the timer is name is comprised of large letters such as 10 W's, the timer's name may overlap with the timer duration on the home and preset screens.

Install Guide

Various components detailing the project setup is listed below. A full walkthrough detailing how to setup the plugin is listed below.

- **Project Pre-requisites:**

- o Install Android Studio
- o Download an Android Virtual Device Manager (AVD) with API level 21
- **Project Dependent libraries**
  - o Download the ATAK.apk file from this link (http://bit.ly/atakapk) and place it somewhere you can remember.
  - o Within Android Studio, navigate to your preferences and ensure that the Android SDK is set to API Level 21.
- **Project Download instructions:**
  - o Clone the TwistOnTime repository from Github to your computer. You can navigate to your desired folder through Terminal, and type "git clone https://github.com/FuadYoussef/TwistOnTime.git".
- **Project Build/Install Instructions**
  - o Within Android Studio, open the following project: atak-civ/plugin-examples/plugintemplate
  - o Within Android Studio, navigate to the Android Virtual Device Manager (AVD) and create a new virtual device. Use the (Phone) Pixel 2 API 28 as your virtual device.
  - o In the AVD, select the play button to launch the Pixel 2 AVD in the emulator. Now, drag the ATAK.apk file you downloaded in step 2 onto the Pixel 2 screen to install the ATAK application.
  - o In the emulator, open the newly downloaded ATAK application, and be sure to agree to all permissions. You might be asked to type in a passcode. NOTE: keep this passcode in a safe place!
  - o Keep your emulator running. Now we are ready to begin the installation process of the Timer plugin. Go back to Android Studio and select "Gradle" on the right-side of your screen. Navigate to and double-click on plugintemplate/Tasks/install/uninstallCivDebug. Then, navigate to and double-click on plugintemplate/Tasks/install/installCivDebug. After a few moments, you should see an alert on the emulator's screen asking "Would you like to load this installed plugin into ATAK?" -- be sure to select "OK".
  - o Now, your current ATAK application is running on your virtual device!
- **Project Run instructions:**
  - o In the ATAK app, select the three vertical dots on the top-right of the screen, and scroll down to the "Twist on Time" plugin. Half of the screen will be populated with the new timer plugin.
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- **Troubleshooting:**
  - o If you receive a version downgrade error when trying to install the plugin, first run uninstallCivDebug under the Gradle tab, and then after the process is completed, run installCivDebug under the Gradle tab.

Installation Walkthrough

1. Clone the TwistOnTime repository from Github to your computer. You can navigate to your desired folder through Terminal, and type "git clone https://github.com/FuadYoussef/TwistOnTime.git".
2. Download the ATAK.apk file from this link (http://bit.ly/atakapk) and place it somewhere you can remember.
3. Within Android Studio, navigate to your preferences and ensure that the Android SDK is set to API Level 21.
4. Within Android Studio, open the following project: atak-civ/plugin-examples/plugintemplate
5. Within Android Studio, navigate to the Android Virtual Device Manager (AVD) and create a new virtual device. Use the (Phone) Pixel 2 API 28 as your virtual device.
6. In the AVD, select the play button to launch the Pixel 2 AVD in the emulator. Now, drag the ATAK.apk file you downloaded in step 2 onto the Pixel 2 screen to install the ATAK application.
7. In the emulator, open the newly downloaded ATAK application, and be sure to agree to all permissions. You might be asked to type in a passcode. NOTE: keep this passcode in a safe place!
8. Keep your emulator running. Now we are ready to begin the installation process of the Timer plugin. Go back to Android Studio and select "Gradle" on the right-side of your screen. Navigate to and double-click on plugintemplate/Tasks/install/uninstallCivDebug. Then, navigate to and double-click on plugintemplate/Tasks/install/installCivDebug. After a few moments, you should see an alert on the emulator's screen asking "Would you like to load this installed plugin into ATAK?" -- be sure to select "OK".
9. In the ATAK app, select the three vertical dots on the top-right of the screen, and scroll down to the "Twist on Time" plugin. Half of the screen will be populated with the new timer plugin.
10. Make sure in device settings you enable storage permissions for both ATAK and the Twist on Time plugin to ensure that Presets work properly. These permissions can be changed by going to the settings app on AVD, navigating to app permissions and selecting Twist on Time and ATAK.
11. All done! Great work!