Time The Sat.
for visual occultation observations
A Network Time Protocol (NTP) app. for Android smartphones

Presented to TTSO8
Friday, 18th April 2014
By Dave Gault

Slide 1)   **Title Screen**
· No description

Slide 2)   **SAT-Flare and TimeTheSat.**
· Author: Simone (surname not known).
· TimeTheSat. is an smartphone app. that was written to be a component of the SAT-Flare forum, setup to predict, publicise, aid observations, collect and analyse data from passes of artificial satellites, typically the International Space Station and Iridium Flares.
· Should be used with earphones with a press-to-talk mike button. This is used to trigger a timestamp.

Slide 3)   **What is NTP (Network Time Protocol)**
· NTP is a stratified system of time servers that supply time on request.
· the reference level (Stratum Zero) are atomic clocks.
· a time server may be dropped form service if the connection is poor.
· Time is dependant on connection speed and distance to server.
· Good apps ping the server and time the reply in an attempt to measure latency
· Excellent apps;
   · make allowance for variable download and upload speed
   · constantly monitor and adjust the latency value.
   · report latency measures

Slide 4)   **TimeTheSat. Menus**
· Main Menu; most frequently used for occultation observations
   · ReSynch – to re-ping the server.
   · Select NTP Server – choose the "best" server – the lowest TAcc value
   · Save Times
· Select a NTP Server Menu
   · Choose the au.pool server as this usually gives the lowest TAcc value.

Slide 5)   **Saving Times, the Times.txt and TAcc**
· If the phone's GPS is on, observer's Geolocation data is listed.
· On activation of the mike button on the earphones, a green timestamp is made.
· At the end of the observation, select "Save Times" from the main menu.
· A .txt file is created, each with a unique filename.
· A typical .txt file is shown.
   · Note the TAcc value.
   · This should be added to the observer PE value.

Slide 6)   **TimeTheSat. is OK for <u>Visual</u> Occultations Observations**
· *<u>provided</u>* TAcc is added to Observer PE value.