WinFrog Technical Notice: Time Synchronization

April 11, 2007

Overview

A problem with the time synchronization process implemented in WinFrog v3.7 has been found impacting the ability to correctly use UTC times included in some device data.

Software and Versions Affected

WinFrog, WinFrog Remote and WinFrog Lite, v3.7.0 to v3.7.8

Who Is Affected

Operators using WinFrog's time synchronization option and one of the following devices:

- GPS
    - IMCA TELEMETRY
    - NMEA GPS
    - NMEA GPS (Sercel)
    - MultiFix UKOOA
    - THALES SVS
- USBL
    - SONARDYNE (only when being configured for *CSV Acoustic Message* with *LUSBL is synchronized to UTC* selected)

Detailed Description

When the time synchronization is configured and enabled via the Configure Time Synchronization dialog and this dialog is exited with OK, a flag indicating that WinFrog is currently utilizing time synchronization is set. Conversely, if the time synchronization is disabled via this dialog and the dialog is exited with OK, this flag is cleared. This flag is checked when using certain devices whose input includes the UTC time for the respective data. If the flag indicates that WinFrog is currently synchronized to UTC, the UTC time is used as that data's epoch. If the flag indicates that WinFrog is not currently synchronized to UTC, the timestamp for the reception of the data is used as that data's epoch.

The problem occurs when WinFrog is launched and loads the *ini* file or, if already running, loads a *cfg* file. If the time synchronization option is supposed to be enabled, the time synchronization is started and performs correctly, but the aforementioned flag is not set. Those devices that check the flag to determine if the UTC time included in their data should be used or not incorrectly determine that WinFrog is not currently synchronized to UTC and therefore use the timestamp for the data reception for the data epoch rather than the UTC time included in the data. The result is that the application of the affected data is less accurate than it could be given that WinFrog is synchronized.

Symptom(s)

The only place this problem can be observed is in the Calculations Window when displaying the Data Item for a POSITION data item. As a result, it is not apparent in either WinFrog Remote or WinFrog Lite since they do not support Calculations Windows. When the flag indicating that WinFrog is synchronized to UTC is not set, even though WinFrog is actually synchronized, no Position latency is reported (see figure 1). When the flag is set, a position latency is reported (see figure 2).
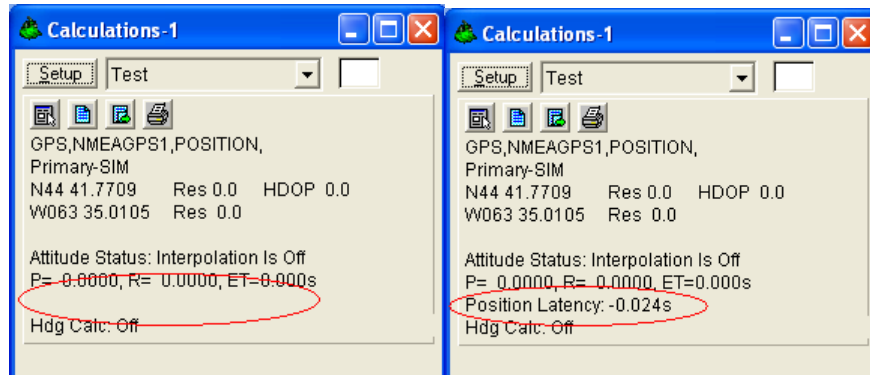

Figure 1   Figure 2

Work-around:

After launching WinFrog or loading a *cfg* file, open the Configure Time Synchronization dialog and exit by clicking OK.

Fix:

This bug has been addressed and is now available in version 3.7.9 on our ftp site. Download instructions are as follows:

Copy and paste the following address into Windows Explorer and click Go:
ftp://ftp.fugro-pelagos.com/
log on as:
username: ftp_public
password: pelagos

Open the WinFrogTechUpdate folder. Each product has its own folder and each zip file has its own password as follows:

WinFrog
\WinFrog\WF379.zip
password: brightday

WinFrog Remote
\Remote\WFR379.zip
password: fraserriver

WinFrog Lite
\Lite\WFL379.zip
password: samsonfive

To run the installation update once you've saved and opened the zip file, double-click on the setup.exe file and follow the instructions.

NOTE: The files will remain on the ftp site until 1700 20April2007 PDT. If there is a problem downloading or if more time is required for download, or if you have any questions or require additional information, please contact us at fptechsupport@fugro.com.