

GPS Week to Rollover in April 2019: Are You Ready?

By Jacob Elliott

If you are like most shops, odds are you have not updated your GPS receivers since 2016 when the GPS clock added another second to 18 ahead of UTC. In April of 2019, we will observe another GPS clock transition in the form of a week number rollover. If you've been neglecting this important, but often overlooked component of your equipment, the time to update may be now.

Similar to mobile device updates containing bug fixes and patches to security vulnerabilities, updates to GPS receivers contain vital fixes to their operation. Your unit may be performing and able to output positioning, but you may be losing precision and time to gain an acceptable fix. If the receiver is best prepared for a given days constellations, it can save time and ensure quality. *Javad GNSS*® lists recent updates addressing multipath reduction enhancements, RTK performance improvements, measurement engine and GPS ephemeris related updates, to name a few.

Users of static-base updated solutions are especially vulnerable. When using radio-rover corrections, the fluctuation in accuracies caused by dated firmware may be more apparent. Multi-sensor systems using time as the master record are always more susceptible to ephemeris and clock alterations when compared to a static-collect used to rotate a parcel into datum. Be sure to match your firm's abilities to collect with its capabilities to perform.

If you have had that ring in your ear to update your equipment, this Christmas season may be the perfect time to treat yourself and the professionals working for you.

-The author is a Staff Surveyor at Tectonic Surveying and Engineering in Mountainville, NY. He has been running kinematic systems across the North American and Australian Continents since 2006 and hails from the Cascade Range of the PNW. He currently resides in Hoboken, NJ.