



# NEWS! From the NAVAL OBSERVATORY

U.S. NAVAL OBSERVATORY

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## U.S. Naval Observatory Press Release

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FOR IMMEDIATE RELEASE

## USNO and NIST Formally Coordinate Timing Efforts

The US Naval Observatory (USNO) and the Time and Frequency Division of the National Institute of Standards and Technology (NIST) have signed a formal Memorandum of Understanding to align their respective Coordinated Universal Time (UTC) programs.

UTC, the international time standard, is generated by the International Bureau of Weights and Measures (BIPM) in Sèvres, France, under the terms of the Treaty of the Meter. Clock data contributed by over seventy timekeeping laboratories around the world are used to form this time scale. UTC is published monthly in the form of time differences between UTC and the clock times of the contributing laboratories, approximately a week after the previous month's data are submitted to the BIPM. It is realized in real-time by the participating laboratories. These local realizations of UTC are designated by abbreviations of the name of their institution in parentheses following the term UTC, such as UTC(USNO) and UTC(NIST).

According to the America Competes Act of 2007, maintenance of UTC in the United States is a joint responsibility of the Secretary of Commerce and the Secretary of the Navy. These parent bodies have delegated their timekeeping responsibilities to NIST and USNO for execution. NIST provides a standard used principally for commercial and industrial development of U.S. products, and for trade certifications and licenses. It certifies compliance of U.S. products with national and international standards. UTC(USNO) is the standard for real-time timekeeping requirements principally for the U.S. Department of Defense, but it also serves as the time standard for many civilian applications that utilize the Global Positioning System (GPS) as a timing reference.

The signing of this Memorandum of Understanding ensures alignment and coordination between USNO and NIST and, perhaps most importantly, provides formal traceability between UTC(USNO) and UTC(NIST). USNO and NIST have agreed to maintain equivalence of their time scales at the level of 50 nanoseconds and both time scales will then serve as national references for both time and frequency. Metrological traceability

between USNO and NIST timescales will be made available in a new weekly publication of UTC(USNO)-UTC(NIST) time differences as well as via the BIPM publications.

“USNO and NIST have a long history of collaboration,” said CAPT Brian Connon, Superintendent of the US Naval Observatory. “This MOU formally captures work that is already being done and provides clear identification of roles and responsibilities to avoid duplication while providing useful redundancy and backup capability. In addition, it provides our timing users with a clear path of traceability between UTC(USNO) and UTC(NIST).”

Dr. Thomas O’Brian, Chief of the NIST Time and Frequency Division, added “The long and successful history of coordination and collaboration between USNO and NIST continues to broadly benefit the nation. Precision timing underpins many key technologies and national priorities. The dedicated scientists, technicians and administrative staff at USNO and NIST take very seriously their responsibilities to provide the highest accuracy and reliable timing and related measurements.”

The five-year agreement allows for expanded coordination in research and implementation of time scales, development of standards, dissemination of time and frequency, and collaboration in other areas of mutual interest.



CAPT Brian Connon, Superintendent of the U.S. Naval Observatory and Dr. Tom O’Brian, Chief of Time and Frequency Division, NIST sign a Memorandum of Understanding. (Picture courtesy NIST, Jim Burrus)