

Tic Talk Times



NOVEMBER 2018
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Newsletter of Orange County Chapter 69 of the
National Association of Watch and Clock Collectors

Meeting Minutes, October 5, 2018

WHAT IS IT NIST TIME?

The meeting was opened by Paul Martyn after our mart. Thanks to Van Mondale and Phyllis for refreshments. Minutes for September and October will be approved at the November meeting.

Paul told us how he went to the transmissions building in Fort Collins, in Boulder, CO but they wouldn't let him in to visit the facility. Next, he told us the old Institute of Standards and Technology had a short-wave radio that announced the time every 60 seconds at a different MHz. It was accurate to one second accuracy in one million years and now it is accurate to one second in 300 million years.

Gene Osten started the program and said the shortwave in Boulder, WWBH, goes to a military institute WWVH in Hawaii. Fortunately for Gene, he was with his friends, an Air Force Colonel and a Communications person, and he got to see WWVH close up some years ago.

Most people use Coordinating Universal Time. Atomic clocks all around the world send data to the Bureau of Weights and Measures,

and when they receive a month's data it is analyzed.

The International Earth Rotation Service has noticed that the earth is slowing down, so on average a leap second is added ever 18 months. When this happens, you can see it on your GPS because the time will show as follows:

23.59.58

23.59.59

⇒ 23.59.60 ⇐ !

And that is the ONLY time anyone can see that happen!

A nanosecond is 1/1,000th of a million. Light can travel about a foot in one nanosecond. GPS satellites have atomic clocks and use Universal Coordinating Time.

Where do we get the time?

It used to be by phone

Or a computer

Or GPS (which is good)

WWVB (very good, atomic clock)

Shortwave radio, WWVH (Hawaii)

Tonight's program is a DVD from NAWCC from 2013 by Thomas O'Brian from NIST. It is called: Does anybody really know what time it is? Does anybody really care?

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This Month

CARRIAGE CLOCKS AND MORE CARRIAGE CLOCKS

This month's program will begin with a beginner's corner by Paul Martyn on what constitutes a carriage clock. This will be followed by the main presentation which will be an informative DVD on the restoration of carriage clocks. While the DVD is approximately 45 minutes long, but we can fast forward in parts so that members can speak to their experience on each item along any tips or tricks they might have learned the "hard way" (or the easy way) for either cleaning or the restoration of carriage clocks.

See you at the Meeting!



TIME TRIVIA

circa 3,500 B.C., A stick pushed in the ground and called a gnomon was the first primitive way of measuring time by the length of the shadow.

MAY MINUTES — CONTINUED FROM PAGE 1

The atomic clock in Boulder, CO, NIST Branch is a standard time clock measured by Cesium oscillations.

Precision time is used:

- ◆ In telecommunications
- ◆ By electric power which needs to be distributed correctly
- ◆ By GNSS, that is, GPS and Global Navigation Systems from different countries
- ◆ Airplane navigation,
- ◆ Electronic Financial transactions
- ◆ Spacecraft, telescopes, astrophysics
- ◆ ...and Smart Phones

It is distributed by radio, internet and satellite, and the atomic clocks are used for frequency standards.

Over the years, timing accuracy has ever accelerating improvement.

A clock has to have repeating motion and a counting mechanism.

Optical Atomic clocks use laser beams. They can measure gravity, they can search ground for oil, they are also used in medicine.

SHOW & TELL: "K"

Jerry Kleeb showed us a F. Kroeger clock. It is one day and has an Ingraham movement.

The raffle prizes were won by Norton, Paul and Phyllis.

UPCOMING MARTS

OCTOBER 2018

[2018 Rocky Mountain Regional](#)

When: 10/5/2018 - 10/6/2018

Jefferson County Fairgrounds
15200 W 6th Ave
Golden, CO 80401

[2018 Southwest CA Regional](#)

When: 10/11/2018 - 10/13/2018

Del Mar Fairgrounds, Wyland Center
2260 Jimmy Durante Blvd
Del Mar, CA 92014

[2018 Mid-Eastern Regional](#)

When: 10/19/2018 - 10/21/2018

Greensboro Coliseum Complex
1921 W Gate City Blvd
Greensboro, NC 27403

[2018 MKOA Regional](#)

When: 10/26/2018 - 10/27/2018

Biltmore Event Center
401 S Meridian
Oklahoma City, OK 73108

NOVEMBER 2018

[2018 Southern Regional](#)

When: 11/9/2018 - 11/10/2018

Comfort Inn Hotel
2601 Severn Ave
Metairie, LA 70002



National Association of
WATCH & CLOCK
Collectors, Inc.



Full details for all upcoming marts: <http://net.nawcc.org/NAWCC/Events/Events/NAWCC/Events/Events.aspx>

Visit us at www.nawcc69.org

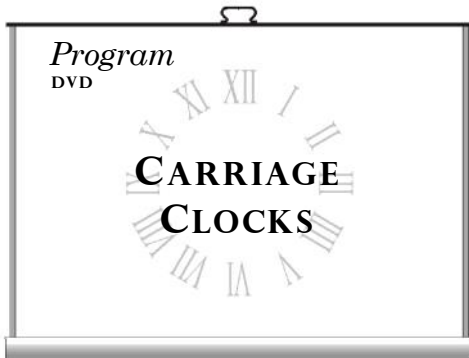
**DATED MEETING NOTICE
PLEASE DO NOT DELAY**

ORANGE COUNTY CHAPTER NO. 69
C/O CORA LEE LINCKENHOKER
7186 CALICO CTR.
CORONA, CA 92881

The National
ASSOCIATION OF
WATCH & CLOCK
Collectors, Inc.



OUR NEXT MEETING: FRIDAY NOVEMBER 2, 2018



Beginner's Corner Mini-Seminar:

What Constitutes a Carriage Clock

Show & Tell:

Any horological item beginning with the letter "L", or any Carriage Clock

Board Meeting:

No board meeting this month

Time: 7:00 – Doors Open
8:00 – General Meeting

Admission \$4.00 – General
\$6.00 – Couples

Location: Acacia Grove Masonic Lodge
11270 Acacia Parkway
(in the Civic Center)
Garden Grove, CA

