

IT'S ABOUT  
TIME!



**National Association of Watch and Clock Collectors  
Chapter 50 Puget Sound**

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<http://nawcc50.org>

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# 2015 Off to a GOOD start!

Our first meeting of the 2015 year was held on January 11th at the Edmonds Senior Center. President Mark Smith presided over the meeting. We were happy to welcome new member Wendy Jendro to our meeting, as one of the 41 attending today.

Treasurer Ron Kowalski reported that the Holiday Party was a financial success this year with a small profit as well as good income from the 50/50 drawing. The Chapter is solvent with a current bank balance of \$5,207.

Our 2016 Regional Co-Chairman, Jack Goldberg reported on plans for the 2016 Regional. They are looking at the possible theme of "Art in Horology". Perhaps there could be an advance class on some phase of this theme. Also a possibility of a tour to the West Coast

Clock and Watch Museum in Bellingham.

Tom Payne reported that the Norwest School of Horology is doing well. Classes for the new quarter start this week and all classes have students. He announced that there is an opening for a Clock instructor, as Niles Seifert will be leaving that position.



Attentive audience in our spacious new "upstairs" meeting room

2015 January Meeting, Con't

Our meeting closed with the drawing of the 50/50 winner. For this month, the lucky winner of \$68 was Clint Harris (who also was presenting our program for this month!).

Paul Middents displayed and told us about a Master Clock which he had running for all to see.



Paul Middents with his master clock



Clint Harris telling us about his gear cutting project

We then enjoyed a program by Clint Harris on his project to design and make a supply of "universal" click wheel gears for a kitchen clock. He said that it had taken him 20 years of collecting tools to accumulate the proper tools to cut gears. Clint also brought in and displayed the Sherline CNC mill that he had used to cut these click wheel gears. He described how he designed and made a supply of click wheel gears that could be made into either left or right hand gears.



Clint's Sherline CNC mill



Some of Clint's tooling and parts

# Feb. 8th Meeting

Our next Chapter 50 meeting will be held on Sunday, February 8th, at the Edmonds Senior Center, 220 Railroad Ave, Edmonds, WA.

As usual, the Mart and Hospitality time starts at 12:30 PM, with the meeting to follow at 1:30 PM.

Our program for February will be presented by Ernie Lopez and Ron Kowalski, on the West Coast Clock and Watch Museum in Bellingham.

Snacks will be provided by Dale Keopke.

Please plan to join us, AND remember to bring something for the MART!



## The 2015 Year Begins!

**February 8th – Regular meeting – Edmonds Senior Center.  
Ernie Lopez & Ron Kowalski – Program on the West Coast  
Clock & Watch Museum in Bellingham. Snacks by Dale Koepke.**

**March 8th – Regular meeting – Edmonds Senior Center.**

**April 12th – Regular meeting – Edmonds Senior Center.**

**May – No Regular meeting in Edmonds.**

**May 14–17 – Pacific NW Regional – Clackamas, Oregon**

**June 14th – Regular meeting – Edmonds Senior Center**



National Association of  
**Watch & Clock**  
 Collectors

**Puget Sound Chapter 50**

**2015 Meeting Schedule**

Month	Date	PROGRAM – SPEAKER	HOSTS
January	11th	Clint Harris ONC Gear Cutting	David Hayward
February	8th	Eric Lopez/ Ron Kowalski WCCW Museum Program	Dale Koepke
March	8th		Mark Smith
April	12th		Jeff Grossman
May		Pacific Northwest Regional – Clatsamas, OR May 14 - 17, 2015 <b>NO Regular meeting in Edmonds</b>	
June	14th	National Convention, Chattanooga, TN June 18 - 20, 2015	Doree Payne
July	12th	Multi-Chapter Meeting Ch 50, 135 & WWC	
August		Ch. 121 BBC Williams Park, Langley, BC, Canada <b>NO Regular meeting in Edmonds</b> ? Open house at School	
September	13th		
October	11th	Annual Auction Meeting	
November	8th		
December		Joint Ch. 135/50 Christmas Party Chapter 135 Hosts	

**Tentative**

Future: Pacific Northwest Regional – Tacoma, WA – May 5 - 7, 2016



# 2015's 'Leap Second' Could Scramble Computers

by Kelly Dickerson, Staff Writer

June 30 will be a second longer than any other day this year.

A "leap second" needs to be added in 2015 to make sure the time on atomic clocks stays in sync with Earth's rotational time, but some Internet companies are dreading the day.

Earth's rotation has been slowing down by about two thousandths of a second every day. But atomic clocks, which are now accurate up to quadrillionths of a second, don't change pace. While this situation isn't

an immediate problem, it would eventually cause clocks to become so out of sync with Earth's rotation that they would read noon during the dead of night.

"Earth is slowing down over geological time, and that can lead to a problem when you've got a ton of clocks," Demetrios Matsakis, chief scientist for Time Service at the U.S. Naval Observatory, told Live Science. "What do you do when the day gets longer?"

The solution that the International Earth Rotation Service (IERS) came up with is to add a second every now and then to keep the standard atomic time in sync with Earth's time. This year, the extra second is scheduled for the midway point in the year, at 11:59:59 p.m. Coordinated Universal Time (UTC) on June 30.

This will be the 26th leap second added to a calendar year since the practice began in 1972. In the past, the extra second has messed with computer systems. The last leap second was added in 2012, and it caused problems for big companies like Reddit, LinkedIn, Gizmodo and FourSquare.

The problem is that during the leap second, the computer clock shows 60 seconds instead of simply rolling over to the next minute, or shows the 59th second twice. The computer sees a leap second as time going backward, Matsakis said. The machine registers this as a system error, and the CPU can overload.

Google, to skirt the problem, will add a millisecond to its servers every once in a while throughout the year. This way, the slowed-down servers don't notice when an extra second is slipped in. Another good way to avoid any trouble is to simply shut down a computer system for an hour or two around the leap second, Matsakis said.

But many programmers are oblivious to leap seconds, and this can also cause problems. The additional seconds happen so infrequently and so irregularly that it makes it difficult for computer companies to catch on to the problem. While Reddit, LinkedIn, Gizmodo and FourSquare will likely remember the lesson they learned three years ago, other sites that didn't experience any issues are likely still "blissfully unaware," Matsakis said.

But the leap second could put more than just computer systems at risk. It's a little over-cautious, Matsakis admits, but he said he would not want to be on board a plane during a leap second. The extra second has been known to interrupt GPS receivers, which could be a problem for pilots.

The leap second is a more subtle correction than a leap year. The leap year rule (adding an extra day every four years in February) keeps the Gregorian calendar pretty close to the actual astronomical record of the passage of time. It does so by correcting for the 365.2422 days it takes for the Earth to travel around the sun, compared with 365 days, as humans have rounded this number to.

But Earth's rotation isn't perfect, and there are irregularities from year to year on the millisecond level. Every few years some fine-tuning is needed, and a leap second is added in June or December. This is why June 30 this year will have 86,401 seconds instead of 86,400.

*Courtesy of Live Science*