

JERSEYANA

By Marc Mappen

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WITHOUT looking at your watch, do you know what time it is?

Chances are you can come pretty close to the correct time, even though you may be reading this at the breakfast table on a relaxed Sunday morning.

But wait a minute. What, after all, is "correct" time? For most of human history, time was determined by the position of the sun. When it was directly overhead, the time was noon.

The problem is that noon occurs at a different time depending on your position on the earth's surface. For example, the sun is directly above Boston 12 minutes before it is above New York. Back in the early years of the country, it didn't bother anyone that high noon in Boston was 11:48 A.M. in New York. The two cities simply set their clocks differently, as did cities and towns around the nation.

So things might have long remained had it not been for a bright New Jersey lad, William Frederick Allen, who was born in Bordentown in 1846 and who as an adult lived with his wife and children in South Orange.

Allen was a railroad man. At the age of 16 he went to work for the Camden & Amboy Railroad, and by his early 20's he was the line's chief engineer. When he was 26, he took a new job as editor of the "Official Guide of the Railways and Steam Navigation Lines in the United States and Canada," the nation's main compendium of railroad timetables.

Allen recognized that the patchwork system of local time was a nightmare for America's railroad lines, each of which set its clocks and its schedules according to the time of its headquarters city or of the main city in its region. A husband and wife traveling from, say, Boston to visit friends in Columbus, Ohio, faced a hodgepodge of conflicting timetables every time they changed from one line to another. Allen calculated that American railroads were operating on 50 different time schemes.

Allen made it his mission to end this confusion by establishing uniform time zones across the nation. He got himself appointed to the post of secretary of the General Time Convention, an organization of like-minded railroaders, and for a decade he lobbied with

astronomers, geographers, meteorologists, engineers, telegraph operators, railroad owners and government officials to persuade them that America needed a standard clock.

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There was not enormous public support for the idea. After all, most Americans in those years were farmers and lived much as people always had, getting up when it was light and going to sleep when it was dark, planting and harvesting when the seasons changed.

Even for a merchant or factory owner, it made little difference whether time in one town matched the time in another. So most Americans seemed perfectly happy with the local time they had grown up with.

The United States Senate looked into the matter, and rejected any reform on the grounds that trying to change time was as difficult as it would be to introduce new weights and measures. (The Senate had a point; look what happened to the metric system in the United States.)

Allen decided that the only way to accomplish the change was for the railroads to do it themselves without waiting for the government or its citizens to agree. He drew up a map of the United States divided into four time zones -- Eastern, Central, Mountain and Pacific.

Time was made uniform for all cities and towns within each zone, so that in the Eastern time zone, for example, noon was exactly the same moment in New York and Boston. In crossing from one zone to another, standard time changed by exactly one hour.

The cleverest part of his scheme was the boundaries between the zones. They had little to do with state lines, mountains or rivers. Instead, the boundaries were based on the junctures between major railroad lines.

For the technically minded, herewith is a technical explanation. Each of Allen's four time zones was roughly 15 degrees of longitude wide. The time in each was based on a longitudinal line (or meridian) that ran down the middle. For example, noon in the Eastern time zone was defined as the time the sun was directly over the 75th meridian. Central time was defined by the 90th meridian, Mountain time by the 105th and Pacific standard time by the 120th.

Allen sent his proposal to every American railroad and got most of them to agree to the change. The time set for the transition to the new system was noon on Sunday, Nov. 18, 1883 (110 years ago this month), a date that became known as the "day of two noons."

All across the country on that day, trains stopped in their tracks at local noon while conductors reset their watches to the new time, and then started up again. Crowds gathered in cities to watch clocks be reset. In Trenton, the time was set ahead by 1 minute 3 seconds; in Newark, clocks were set back by precisely 3 minutes 48 1/2 seconds.

In the crossroads state of New Jersey, the change was welcomed. The Trenton Times editorialized that although the change was complex, it "will prove so advantageous and popular that no one will desire its abolishment." When a female customer in Newark's Lackawanna station asked for a new schedule, the proud clerk replied, "No, madam, we don't fix the timetable; we fix the clock."

But in some other parts of the country, there was outrage that the old way of keeping time had been taken away by the powerful railroads. A letter writer to a Kentucky demanded to know "if anyone has the authority and right to change the city time without the consent of the people, and what benefit Louisville can derive from it?" The newspaper agreed that the change was a Yankee attack on state's rights.

A leftist in Boston said the change was a "piece of monopolistic work adverse to the workingman's interest." The residents of Bangor, Maine, voted overwhelmingly to hold on to their old time.

But most Americans became used to the new system, and it was finally adopted by the Federal Government in 1919. Today the nation's standard time remains much as Allen designed it in 1883.

Allen became a nationally known figure. A New York reporter joked that he could be seen striding down Broadway with a precise step, as if on his own internal timetable.

Michael O'Malley, a historian, writes in "Keeping Watch: A History of American Time" (Viking, 1990) that Allen's invention of standard time was a milestone in the transformation of America from a collection of isolated local communities to a modern, unified, industrial nation, dominated by big organizations like the railroads.

There's much truth to that. We can be nostalgic about an age when everything was local, when life was ordered by the bell in the village steeple. It was an age when there were no VCR's to program, no conference calls to make and no jet planes to catch -- a time when people weren't slaves to that little god we strap on our wrists every morning.