

Earth/matriX
SCIENCE IN ANCIENT ARTWORK AND SCIENCE TODAY

Metric Time and The Speed of Light
[259,020.6837 kilometers/metric-second]
Time Systems, Clocks and Spacetime Measurement

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Extract

Metric time is the expression of unitary time for time reckoning on Earth. The conventional 24-hour time system employed today is actually an alternative method of measuring time and telling time. However, scientists have it backwards and call metric time the alternative method, as though the current 24-hour system were the base system. It is the base system because they refuse to employ the unit metric system. This essay explains the difference between metric time and alternative time systems, such as the 24-hour conventional time system employed today. The conventional 24-hour time system is based on the Earth's rotation as is the proposed metric time system. Efforts to overcome these systems by using the number of pulses in an atom of Cesium-133 is discussed regarding methodology and consequences for the measurement of the speed of light.

Today is the tenth of February of 2009, and I was reading about some scientist who tackles the concept of time and its possible definition as of two dimensions of space and one dimension of time. He considers that therein may lie a resolution of the T.O.E. [the theory of everything]. Ho-hum. But what was interesting is that it made me think about the concept of time and its measurement.

We mark time by numbers of seconds, minutes, hours, days, weeks, months, and on years, decades, centuries, millennia which all reflect movement in placement. These are impositions arbitrarily chosen by our conceptualizing a number system. The untenable nature of impositions becomes obvious when one examines the unending debates about when a new millenium begins/ends.

The number-based system we have chosen for measuring and telling time results from the divisions of Earth's rotational period in (24) hours/day, (60) minutes/hour, (60) seconds/minute. This system of telling time is called a 60-base system, which in fact is a misnomer. More precisely, it is a **24-60-60**-base system. [*One could stretch the 60-base point by dividing 24 by 4 = 6 in order to obtain a fractal 6, but again that is stretching the point.*]

Yet, the time concept of day reflects a divisional movement of the 24-hour division of the day, Earth's rotation on its axis, into years, which on Earth vary as sidereal, tropical, anomalistic, etc., days/years. Each reflects a position and placement/motion of the Earth in relation to the Sun (and its solar system and the Universe).

The Metric System of Measuring Time

In the face of the 24-60-60 conventional time system, many scientists today propose an alternative approach to create a ***metric method of time*** measurement (*metric* time) and of telling time (*decimal* time). One often cited method is based on multiples of ten (10.0): a 10-100-100 base time system. They present it as follows:

10 metric hours in one day
100 metric minutes in one metric hour
100 metric seconds in one metric minute

They also propose 10 metric days as constituting one metric week (***dekade***); but, this is of little interest here. One may observe however that the ancient Egyptians-Kemi divided their 360-day year into 36 **decans**, each consisting of ten days, with five remainder days added on at the end in order to achieve the 365-day calendar.

In this case, one metric hour would equal 2.4 hours of current time measurement on a 24-hour clock. There would be **144** minutes of the 24-hour minutes making up a metric hour of 100 minutes. And, there would be **8640** seconds of the 24-hour clock in one metric hour.

A metric second would then be 1/1000000th of one day, or 0.864 of our second.

One could employ a consistently base-10 metric system, such as 10-hours | 10-minutes | 10-seconds. The lengths of each unit would be greatly increased compared to the conventional 24-hour time system. However, in terms of unit 1.0 considerations, the numerical expressions would remain the same, since $10 \times 10 \times 10 = 1000$ and $10 \times 100 \times 100 = 100000$. No matter which one is chosen, the numerical values remain as of unit 1.0 fractal values. Today's scholars consider apparently mainly the 10-100-100 metric alternative, although a 20-100-100 method is also suggested.

The metric second, then, being 1/1000000th of one Earth day, would represent 1/1000000th part of Earth's rotation. This is important to comprehend the analysis presented in this essay. The 24-hour conventional time system basically takes the Earth's rotation as its foundation as well, but when analyzing the speed of light, for example, inconsistencies make their appearance as we shall discuss below.

The speed of light is given today by NIST [National Institute of Science and Technology] and being exactly **299792.458** kilometers per second [the second being the lapse of time on the 24-hour clock of course]. In analyzing the speed of light in a vacuum, problems arise because the second of time is taken for granted. When discussing the possibility of a distinct time system, such as the metric time system, the length of the second is no longer taken for granted.

Personally, I have always wondered why would the speed of light be expressed in such a strange number: 2.99792458 or any one of its fractal expression. I have considered subtracting that value from 3.0 in order to see if the difference holds a key to a better understanding of its value.

$$3000000 \text{ minus } 299792.458 = \mathbf{207.542}$$

Search as I might, the 207.542 value does not really speak to the substance of my research into reckoning time, either by the ancients or by scientists of

[as defined herein] and comparatively as of the conventional second as it is defined. When one changes reference frame, one should be able to make the smooth transition from one spatial reference frame to another, and from one temporal frame to another; in other words, from one spacetime reference frame/level to another, and so on.

In this analysis, I have limited the observations to the speed of light and to a few references to orbital features of some of the planets. All of the physical and chemical constants should now fall in line, along with the Newtonian gravitational constant and so on. The time systems/clocks presented in this essay are based upon the Earth's rotational period because that is how the conventional time system was developed that we employ today. Other time systems/clocks may be developed in relation to other baseline events. I have analyzed that baseline in relation to the speed of light. One could now do that in relation to the gravity constant.

Then, one could change the baseline of Earth's rotational period for the rotational period of one of the other planets, and proceed from there. The theoretical options are endless, just as spacetime/motion is itself an unending realm of inquiry. After completing this study, however, that the 299792.458 value for the speed of light has had a little more light shed upon it. I searched on Google for the 259020.6837 value in its main fractal expressions and found only one citation in Japanese [www.wdic.org/w/SCI]. However, when I clicked on the icon, a window popped up telling me that it was no longer available. Outside of the ideograms in Japanese, the only text that I could understand was "299792.458km/s(259020.6837km/cBeat)".

Other than that single reference, it would appear that none of the scientists of today have given much significance to the 259020.6837 factor as explained in this essay. This factor serves as the basis for the metric time system in relation to Earth's orbital period. What else might one add, but that we possibly should begin thinking "metric" in a different manner.

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