



**DIMITTECH**

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## Time for a new time?

Free thoughts by Konstantin Dimitrov

This is something I've been wanting to put in written text for so long! Alright, it is a really old topic that has been chewed by various people through many centuries. Why do we keep using the 5000 years old time measuring in the way it is now and has been for hundreds of generations before? Is it the social inertia or something else that is stopping the world from switching to a more scientifically and human convenient time?

What do we have now, we all know:

**year**= one full turn of the Earth around the Sun.

**day** = one full cycle day/night or one full turn of the Earth around its own axis.

These two are the foundations of the whole time measuring system:

1 year = 365.25 days

1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

1 second = (defined much later in time) according to the current definition:

"The duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom" *Source: Wikipedia*

In addition to these we have the leap years and the leap seconds to further adjust the time in accordance with the way our planet is rotating around itself and the Sun.

We also use months, weeks, fortnights and a few other measures, when referring to time.

This whole system, however is very old and somehow doesn't fit into the today's much more scientifically built world. In addition it is not built on the basis how the human brain works with numbers. How many people can tell without entering into deep thinking how many days there are between 22<sup>nd</sup> of February and 16<sup>th</sup> of August? Or how many hours do we work during a month time?

All this stuff has been something really irritating for me and since very young I had the aim to do something about it. After many years and countless number of ideas (some of them apparently already been tested in the past), here is what is left as a final proposal:

1 year = 365.25 days (we can't change that anyway)

1 day = 100 intervals (or 'hours' for the more conservative thinking)

1 interval = 100 centivals (or 'minutes')

1 centival = 100 ticks (or 'seconds')

1 tick = 0.0864 current seconds.

Here is the thing. The current 'second' is pretty much the core of all evil. Over the years many attempts to change the time measuring have failed mostly because they all have tried to rely on that old second. But it is not something that actually exist in the nature but rather an artificial measure that we have put some value to simply to justify its use. The second must be changed!

The new system, which I call "**C10 time**" actually has many advantages. It is decimal i.e. close to the way we calculate numbers. One day has exactly 1,000,000 ticks. This is all good but the year still has 365.25 days in the nature. How do we get around that?

Here is the way I think we should have it:

1 year = 36.5 decades (or 'weeks'). Months are obsolete and not needed any more. If the year is an odd number it will be a 'leap' year and have 37 decades. "Normal" years will have 36 decades. That means every second year will be a leap year. In addition to that an even year, which normally has 36 decades, but is multiple of 40 will also become a leap year and has 37 decades to adjust for the remainders of all past years. So, every second year will be leap and we will have a 'super leap' year once in every 40 years!

Or this summarised:

1 year = 365.25 days; 37 decades if the year number is odd or multiple by 40, and 36 decades otherwise (36525 intervals, 3652500 centivals, 365250000 ticks)

A decade has 10 named days.

The date can be expressed as a decade number, followed by the day by its name or number: 34<sup>th</sup>Tuesday (assuming there will be a day named 'Tuesday' as one of the ten in decade). In this example obviously the reference is to the 342<sup>nd</sup> day of the year (34 full decades, second day in the 35<sup>th</sup> decade). Also, it is very clear that between 34<sup>th</sup>Tuesday and 35<sup>th</sup>Tuesday there are exactly ten days time or one decade.

## **C10 summary**

Base measure: **tick**

1 **tick** = 0.0864 standard SI seconds (or exactly 11.574074074 Hz)

1 **centival** = 100 ticks

1 **interval** = 100 centivals (10000 ticks)

1 **day** = 100 intervals (10000 centivals, 1000000 ticks).

1 **decade** = 10 days (1000 intervals, 100000 centivals, 10000000 ticks). The ten days also have individual names.

1 **year** = 365.25 days; 37 decades if the year number is odd or multiple by 40; 36 decades otherwise (36525 intervals, 3652500 centivals, 365250000 ticks)

Display form in watches:

**nn:cc** (interval and centival - 0:00 to 99:99)

.....:tt (tick - 00 to 99)  
aa dd (decade and day - 1.1 to 37.10)  
yyyy (year)

## **C10 intersections with current time and C10 time zones**

There are 400 intersection moments (occurring at every 216<sup>th</sup> standard second) between the standard and C10 times, assuming that the tick is always zero.

Setting a C10 clock in a standard time environment is only possible at any of those 400 moments.

World is divided in 10 equally wide zones: 0 to 9, each containing 10 intervals.

The border between zone 9 and zone 0 is where the date is changed.

Zones are only positive numbers.

I built a simple electronic prototype at home for tests. It is amazing how on the third day one can really start thinking in C10: "...it is 33 o'clock", obviously we are 1/3 into the day. "55 o'clock" is time when people usually have their lunch as just after half into the day, "75 o'clock" - people normally go home after work, "90 o'clock and above" - time for bed. I tested the system with my two kids (5 and 10 years old) and they needed just a few words to understand it! Now, how many books and pictures have been made to explain to little kids how current time works?

Another good thing about C10 is the actual length of its base measures: 1 interval takes about 14.5 current minutes – long enough time for everyday use, but far not as long as the hours in a 10-hour day. One centival refers to about 8.5 current seconds – very convenient for referring to short events in the everyday human life. One tick – a very short time, good for scientific use.

Of course it is way too optimistic to assume that everyone will happily just switch to a new time in matter of days. Many people still can't even switch to the metric system. In the most favourable estimation it may take up to a century for such a change to happen. Various ethnic, religious and even business groups may strongly oppose to any change at all. But a change must start from the children. If the very young people adopt and understand a new way of measuring the time, it will eventually be passed on to the next generation, to the one after it and so on until one day fully adopted.

Liked it? Feel free to write me at [kon@dimitech.com](mailto:kon@dimitech.com)