

CRITEREA & Calendar: AIM

The 'New Format' of the possible calendar for ALL sections of society:

1. Must be useful for all people of the Earth, uniting them;
2. Must reflect the visible periodical movements of the heavenly bodies: the Sun; the Earth, and the Moon;
3. Must be solar, lunar, and earthly i.e. lunisolar;
4. Must not abolish the former, existing and future calendars (national, state and local);
5. Must keep a simple transitional table between the calendars – thus, must not set on or trigger discomfort among people of the Earth leading to confrontation i.e. be easy to peg along with 'new format';
6. Must be simple, intelligible, and easily remembered calendar;
7. Must exist or capable of existing for a long time, thus improving value for Mean Year/Lunation.

My proposal in brief revolves around DUAL use of the existing (24hx 60mx 60 second) clocks/time-keepers; and the proposed (24hx100m_d x100s_d) clock of 240000 s_d during an atomic day; and the format for 364-day Calendar (with or without Leap Days/Weeks), using Leap days or Leap Weeks – to be used as World Peace Days/Weeks – as and when inserted; retaining the 'general' distribution of days during the years as per Keplers' Planetary Laws and 7-day week cycle, so that the 'Modified Calendar' can be used for the *WHOLE WORLD* – whenever Gregorian calendar is corrected for betterment of astronomical 'exactness needed in current 'Atomic & Space Age'. Thus, my approach to the Reform of Gregorian Calendar is *to 'satisfy the impacts feared towards COST that need be incurred' if and when need 'reform' be brought.*

The format of my proposed calendar meets and need:

1. No change to 7-day Sabbath/weekly cycle;
2. No change to 12/24-hour clock face that read both time scales i.e. conventional along with decimal divisions for Time of the HOUR;
3. No/or minimal change to currently used Gregorian calendar on 'modification' i.e. by simply shifting July 31st to 2nd month as February 29th (all years), following Keplers' Laws of Planetary motion;
4. No major change to mathematical/trigonometric functions, for astronomical calculations, getting better resolution (278%);
5. To find the most easily adaptable scheme with least possible changes – i.e. to get a **surest, easiest and cheapest** proposal, that seems practical to rectify our current calendar, also useful for ISO:8601:2004 **Descending Order Dating & Time Representation** along with 'Day of the Week, like [yyyy – mm/ww – dd/ddd followed by Time of the HOUR, using 'H' as sign of separator **hh: m_dm_d: s_ds_d**] at 'little or NO expense to tax-payer'.

FEATURES CONSIDERED

*I have seen some 40 formats posted at 'Solar Calendar forum – Face Book', in addition to my updating of *several options since 1970-71, improving and consolidating results & options to improve upon the previous <http://www.brijvij.com/synopsis-n-364d-options.doc>. This author shall welcome any improvement and updates – other than the following FEATURES, already considered, http://brijvij.com/bb_comparative-study.pdf:*

- Each Year in 4 Quarters/91days/13Weeks;
- The Year has 13th NEVER A FRIDAY;
- ALL YEARS HAVE FEB.29th in EVERY YEAR;
- PERPETUAL i.e. months/Days DO NOT CHANGE, with YEARS;
- People born on July 31st and February 29th CELEBRATE jointly their birth day/date (Thursday i.e. February 29). Thus, No Change in Birth Dates/ DAYS. First such event can be in Y2013.
- Pending 'Public reaction, it is felt World Governments – consider RETIREMENT date for individuals born on July 31 "get retirement on the day before August 01 i.e. after the last day of JULY – so they do not suffer financial concerns".
- Caters to a Leap Sunday – between June 30th and July 01st (June 31st) on modifying Leap Day Rule from (div.4/Skip 100th/count400th Rule) **TO** (div.4/Skip 128th Rule); and a World Peace Day (December 31st). Introduction of Leap Day can be replaced with **Leap Weeks** plus some

Keplers' Additional Leap Weeks on div.six (6); div.seven (7) or div. eight (8) using 896-yr/159 LWks as already discussed, getting Mean Year =365.2421875 days.

- **Easy to re-construct HISTORY** (using Julian/Gregorian calendar) on adding/removing ONE day over 3200-years being the difference in Mean Year of 365.2425 days & 365.2421875 days.
- Please see the Format & Features, discussed with listserv and shared *through 'MEDIA'* during past 40-years: http://brijvij.com/bb_comparative-study.pdf and its 'reproduction ALL year 1-month' at page 3/13 along with comparisons of theWorldCalendar proposal & most others.

Why retain the FORMAT of Gregorian calendar

Why the Format of Gregorian calendar, need not change

1. The current calendar year stays in sync fairly well with the seasonal year. More exactly, the vernal equinox always occurs during a 51-hour period spread over March 19, 20 and 2;
2. Everyone is familiar with its format i.e. the Gregorian calendar;
3. The rules of the Gregorian calendar are already embedded in innumerable computer programs;
4. The calendar is an integral part of the vernacular of many cultures, needing NO educating;
5. The 'new format' maintains an uninterrupted seven-day week, which is important to religious groups.
6. It may be difficult to promulgate changes to the calendar because all countries that use it would need to agree to make a change. The Gregorian calendar took nearly 350 years to be adopted by all countries that previously used the Julian calendar – Why incur expenses & waste tax-payer's money!

ACCOMODATING NEEDS FOR GLOBAL USE

1. The structure of the months is irregular, with month lengths ranging arbitrarily from 28 days to 31 days – perhaps following Keplers' Laws of Planetary Motion.
2. The leap year rule is hard for many people to understand: "An extra day is added at the end of the second month every four years, except in years whose number is divisible by 100 except in years whose number is divisible by 400 – suggested to be reviewed, along lines of known RHYME."
3. The conventional 7-day-week cycle does not fit exactly into a Common Era year (there are always one or two days left over). This means that it is difficult to know which day of the week a CE date falls on.
4. The suggested 896-yr/159 LWks cycle resolve this; and 'New Era' can be linked at Year Zero AD/BCE counted from $[(Y2000-80 \pm 128) \div 128]$ i.e. Y 1920.
5. The irregularity of the structure of the CE Calendar makes it difficult to formulate schedules of events occurring on certain days of the week which can be re-used from year to year.
6. That irregularity also makes it very difficult to design schedules which can be used in any quarter (of three months), term (of four months) or semester (of six months). With proposed 'new format' this can be reconciled!
7. Despite the existence of a proposed standard way of writing CE dates (the ISO 8601 date format) such dates are currently expressed mainly either as month-day-year (in the U.S.) or day-month-year (in Europe and most of the rest of the world). This creates major confusion for people in one part of the world reading dates written by and for people in another part of the world. This confusion can be removed by Standardising Descending Order Date & Representation of Time of the HOUR using (the ISO 8601:2004 date format), explicitly/exhaustively known.
8. The months of the CE Calendar, although called "months", have no relation to the lunar cycles. The sequence of months and the sequence of lunations are completely unrelated, and a new moon or a full moon can occur on any day of the CE month. Some study of 19-year Harappa Lunar-Tithi cycle is placed: http://www.brijvij.com/bb_19yr-slrlnr.fmt.pdf, only need examination & review.
9. The leap year rules cause the timing of the equinoxes and solstices to vary by about 51 hours, which can be reduced if alternative leap year rules were adopted – astronomers & experts are already working on such issues, not affecting the man-on-street!
10. The intercalary day is inserted at the end of the second month instead of at the end of the year, which adds complexity to various date calculations. In particular, the number of days between a particular date in January or February and a particular date after the end of February is not constant. The intercalary day is placed at the end of June (183rd day) making TWO Half Years alike with World Peace Day (December 31st i.e. 183rd day)!

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