

Time zone

From Wikipedia, the free encyclopedia with additions by R.A. Demarchi <Newtimezones.com>

A time zone is a region of the Earth that has adopted the same standard time, usually referred to as the local time. Most time zones are exactly one hour apart, and by convention compute their local time as an offset from Greenwich Mean Time (GMT. See also Universal Coordinated Time or UTC).

Standard time zones can be defined by geometrically subdividing the Earth's spheroid into 24 lunes (wedge-shaped sections), bordered by meridians each 15° of longitude apart. The local time in neighboring zones is then exactly one hour different. However, political and geographical practicalities can result in irregularly-shaped zones that follow political boundaries or that change their time seasonally (as with daylight saving time), as well as being subject to occasional redefinition as political conditions change.

There are different definitions of *time zone* which generally fall into two meanings: a time zone can represent a region where the local time is some fixed offset from a global reference (usually UTC), or a time zone can represent a region throughout which the local time is always consistent even though the offset may fluctuate seasonally.

Prior to the adoption of time zones, people used local solar time (originally *apparent* solar time as with a sundial) and later mean solar time. Mean solar time is the average over a year of apparent solar time. Its difference from apparent solar time is the equation of time.

Each lune which comprises a time zone is exactly 15 degrees in longitude or sixty minutes across which translates to four minutes of time for each degree of longitude. Time zones consist of a median meridian plus an eastern and a western longitudinal boundary, creating a western half and an eastern half. The two boundaries of a time zone are located 7.5 degrees of longitude on either side of the median meridian. Thus, when traveling from one time zone into another, the time change occurs when crossing the boundaries of the time zone and not the median meridian.

Another characteristic of time zones is that the eastern segment of a time zone averages one half hour ahead of the western segment. Thus the province of Newfoundland which is situated in the eastern half of the UTC -4Time Zone sets its clocks one half hour ahead of the other of the Maritime Provinces (i.e. -3.5 UTC) which are situated within the western half of the time zone (i.e. -4 UTC).

Each half of a time zone can be further subdivided into three ten minute sections which can more closely approximate the locality where sun is at or near its 12:00 noon apex. Dividing a time zone into two halves or six ten minute sections, thus provides a means by which any particular county or district can determine the deviation its assigned time from solar time within a half hour in the case of the former and ten minutes or less

in the case of the latter. This then provides a means by which one can judge which time zone best fits a particular locality. It also shows the difference in time between solar or natural time and the time set by legislation.