The TSQLTimestamp and TSQLTimestampParam classes and corresponding interfaces provide read/only and read/write access to columns and parameters, respectively, with the Date, Time, Timestamp, Time with Time Zone and Timestamp with Time Zone types.

The ISQLData.GetAsDateTime and the ISQLParam.SetAsDateTime methods are still available for simple use. However, the new interfaces provide more date/time formats and are the only way that time zone data can be accessed.

Internally, Firebird stores date/time information as three 32-bit unsigned integers:

- Date: In days from From 01.01.0001 AD to 31.12.9999 AD
- Time: In deci-milliseconds from 0:00 to 23:59:59.9999
- Time Zone:
  - 0 to 2878 represent time zone offsets (in minutes) from -23:59 to 23:59
  - Higher values identify time zones from the time zone database (see RDB$TIME_ZONES).

Each Date/Time type stores its information in a different combination of the above.

TSQLTimestamp and TSQLTimestampParam internally store date/time information in Firebird format.

Note that a time zone can be represented as either a displacement (in minutes) from GMT, or as a time zone name (e.g. Europe/London). There is a subtle difference in the semantics of the two representations. A displacement accurately reflections the different from GMT. However, it does not identify the actual time zone, nor does it identify whether daylight savings time is in effect. On the other hand, when a time zone name is provided, the time zone database can be used to determine not just the displacement from GMT on any given date, but also whether daylight savings time is in effect.

A displacement is simply the time difference in hours and minutes between the local time given by the time value and GMT. For a timestamp (i.e. which includes the date) there is little to choose between using a displacement and a time zone name. Both can be used to calculate the equivalent in UTC. However, for a “Time with Time Zone” type, the time is devoid of any date information. It is a local time – but on which day?

If your application needs to be able to translate a “Time with Time Zone” from a local time to GMT and there is no context information otherwise available that can be used to determine the time zone, then the time zone should be specified by a time zone name.

Free Pascal and Delphi mostly use the TDateTime type for storing date time information.