How does the time synchronisation utility shipped with Exaquantum work?

The time synchronisation tool shipped on the Exaquantum Software CD (Tools\TimeSynchronizeUtility.exe) configures the Windows Time Service, which is a standard part of all currently supported Microsoft Windows platforms. It does not actually add any new software.

This tool configures the Windows Time Service so that a machine either becomes the time master or a time slave. If used to configure a machine as a time slave then the name of the time master is specified together with a time interval.

The parameters are configured using registry values under HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parametes as follows:

Server
      Type = NoSync

Client
NtpServer = ServerName	Actual name of Time Master
Period = SpecialSkew	Default or time specified in form
Type = NTP	Use Network Time Protocol to synchronise with master

The SpecialSkew option which is the default will check once every 45 minutes until 3 good synchronisation occurs, then once every 8 hours.

For further details of the W32Time parameters go to http://support.microsoft.com/kb/q223184/.

You should not use the Time Synchronisation Utility on machines that are configured as part of a windows domain (see the FAQ "Why can't I synchronise a Domain Exaquantum Server to an OPC Server in a workgroup using the option on the Installation CD" for the reasons for this).