

Abstract

Many devices (in particular white goods or brown goods) in a household may contain a clock. Some systems allow to connect all these devices and the related clocks to a common bus or network. The commands for controlling the clocks are in general limited to reading or writing a given time or to broadcasting the time of a given clock to one dedicated device or to the entire system or to a part of the system. In such known systems it is not specified in which manner a clock should react if it receives the time broadcast by another clock. It is possible to initialise all clocks to a given time but due to tolerances in the different clocks, so achieved synchronisation will not be maintained. Regular broadcasting by a special device 'master clock' has the disadvantage of introducing one device with different capabilities. In case there are several master clocks, conflicts may occur and the advantages of a high precision clock will fade away if a lower precision master clock overrides it.

One solution is, that only the clock with the highest precision broadcasts its time to the system, but whenever it fails the next lower precision clock takes over the broadcasting automatically. The broadcast periods are defined as factorial periods of a preselected time period.

Another possibility is, that all devices will broadcast the time with an equal period but with a different phase and only if no broadcast was received in the preceding time period.

Fig. 1

This Sheet Has Been Replaced

