PERFORMANCE OF THE KEKB TIMING SYSTEM

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The KEKB accelerator commissioning has been started on December 19998. The timing system provides various timing signals to 26 local stations and experimental hall. The hardware is classified into three categories, namely, 1)software trigger system for synchronizing software on different IOC, 2)hardwire triggers used mainly for beam abort, 3)precise triggers and reference clock for providing the beam timing. The KEKB accelerator control system employed multi-CPU and EPICS. The synchronization between IOCs is essential for the precise control and measurement. The software trigger system provides synchronization pulse as the 16bits code which consists of following VME modules, transmitter module, distributor module and receiver modules. The hardwire trigger collects and distributes the fast pulse between the center control room and the local control room. The precise triggers and reference clock is distributed by using phase stabilize optical fibers and optical link system. The stability including temperature change is less than 30ps.This paper describes the performance and the work done on the stability improvement of the reference clock by using feed-back system of the optical link.