IIT Bhubaneswar

School of Electrical Sciences

Discipline: Computer Science and Engineering

Course: Computer Organization and Architecture Laboratory

Code: CS3P001 [0-0-3]

Schedule: Monday 10:00AM to 12:30PM

Venue: Computer Architecture and Embedded Systems Laboratory, SES Building

Course Instructor: Debi Prosad Dogra ([dpdogra@iitbbs.ac.in](mailto:dpdogra@iitbbs.ac.in))

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**Week 10 (Date: 27-10-2016): Extra Laboratory**

**Title of the Experiment**: Parallel Communication between Two Processors Using 8255 Interfacing

**Objectives:**

1. Making the hardware interfacing circuit by connecting two 8086 development boards using 26-pin FRC cables through 8255 ports.
2. Writing the Interrupt Service Routine (ISR) for the sender device.
3. Writing the ISR for receiver routine.
4. Making synchronization between the processors using Mode 0 operations of the 8255.
5. Realization of a block of data transfer (one way) from one processor to the other processor.
6. Looking for possible interfacing using Mode 1 of the 8255 PPI device.

**Submission**: Students need to submit the complete circuit diagram of the interfacing circuit and corresponding ISRs and main routines.