

## IENG301 LABORATORY 5

**Experiment:** Analysis –Application of Charts and Diagrams for Method Study  
**Simultaneous Motion Cycle Chart**

- Objectives:**
1. To study an existing process or a job: recording all the tasks or events that occur during their performance with the help of Simultaneous Motion Cycle Chart.
  2. To analyze the process: suggestions for the improved method.
  3. To suggest the proposed method of doing the job or process: recording the tasks or events of the method with the help of Simultaneous Motion Cycle Chart.
  4. To compare between the existing and the proposed methods: productivity improvement.

**Preliminary Information:**

*Simultaneous Motion Cycle Chart* can be thought as the extension of the Left Hand-Right Hand Chart, through taking photograph identified by the therbligs required for LHS or RHS and record the time for each therblig. Simo chart is simply a graphic picture of the motions on paper.

While constructing a Simo Chart, you will also need to observe and record basic motions or therbligs. Therefore therbligs are listed below:

|                              |               |                |               |                |                             |                           |                           |                    |
|------------------------------|---------------|----------------|---------------|----------------|-----------------------------|---------------------------|---------------------------|--------------------|
| <b>Effective Therbligs</b>   | RE-<br>Reach  | M-<br>Move     | G-<br>Grasp   | RL-<br>Release | PP-<br>Preposition          | U-<br>Use                 | A-<br>Assembly            | DA-<br>Disassembly |
| <b>Ineffective Therbligs</b> | SE-<br>Select | P-<br>Position | I-<br>Inspect | PL-<br>Plan    | UD-<br>Unavoidable<br>delay | AD-<br>Avoidable<br>delay | R-<br>Rest to<br>overcome | H-<br>Hold         |

**Experiment:**

Assume that present method for filling the pin board is as follows:

1. Transport Empty: Reach for pin
2. Select: Select one pin among those in box. The eyes aid the hand in searching for a particular pin. This searching and then spotting or finding a particular pin is called select.
3. Grasp: Close thumb and fingers around the pin selected.
4. Transport Loaded: Carry pin from tray to hole in board into which it will be inserted.
5. Position: Pin is lined up directly over the hole in the board into which it is to be inserted.
6. Assemble: Insert pin into hole in board.
7. Release Load: Open fingers – let go of pin.