Abstract

SBU Merpati Maintenance Facility (SBU MMF) is one of division at PT Merpati Nusantara Airlines. The division is a centre for maintaining and repairing the aeroplane. Here, manpower is the main component in maintaining and repairing the aeroplane, as the aeroplane has thousand kinds of part.

Nowadays, the division implements work specialization system, due to many aeroplane should be handled while the manpower capability is limited. The work specialization condition and irregular schedule of receiving parts influence the difficulty in deciding the quantity of manpower needed.

The study was to identify an optimal manpower composition through analyzed the quantity of manpower for certain work load. Method used was direct work measurement, then simulation system was applied to identify the condition of existing system and developing a scenario in improving the system. The simulation system was done by applying ARENA, a computer software.

Result of running the simulation showed that the existing quantity of manpower was optimal, while the improving the manpower capability will increase the average of manpower utility and the average of unit productivity up to 3.36 % and 1.7 % respectively.

Key words : specialization, work load, productivity, simulation.