

ABSTRACT

From 2017 to 2019, Soekarno Hatta Airport experienced an increase in the number of passengers and aircraft movements. One of the airport areas that is greatly affected by the increase in aircraft movement is the Apron. In this airport area, there is a Parking Stand facility that functions as an aircraft parking lot. If the number of aircraft operating exceeds the airport's capacity, the quality of service provided will decrease. So it is necessary to optimize the Parking Stand service.

The author of this study will determine the highest apron capacity from a variety of parking stand compositions, which are determined by three variables, the number of parking stands, aircraft share population, and average stand occupancy time in specific aircraft groups, all of which can be found in a dataset containing 227526 aircraft parking data records. 2017 to 2019 in Terminal 3 using the Jupyter Notebook software using the Restricted Stand use Strategy.

The calculation of the apron capacity optimization is carried out in 3 calculation scenarios, namely the number of parking stands, the average stand occupancy time and the share population. The average stand occupancy time, one of the three factors that produce the most critical capacity value, may be utilized as the primary reference for conducting optimization. Using the recommendation of the FAA's stand occupancy time of 35-60 minutes, the highest hourly apron capacity was obtained, which was 23,23336 aircraft with optimization carried out on the Garuda airline group.

Keywords : Apron Capacity, Parking Stand, Optimization, Restricted Stand Use Strategy