

ABSTRACT

The operation optimization of terminal departure section of Macedonia Airport of Thessaloniki by a modeling technique supported by simulation software SIMUL8[®] was investigated.

Limited data was acquired during on-site measurements of passengers' flows at airlines' check-in counters, in-person interviews of airport personnel as well as out of documented summary data delivered by the Operations department of the airport.

This field data was compared and combined with data that the literature research revealed, in order to be used as feed input in a SIMUL8[®] simulation model.

This resulted in obtaining a statistical distribution set that best describes the passenger arrivals pattern prior to Scheduled Time of Departure (STD), as well as the service times of staff at terminal service posts, such as check-in counters or security control. Further, a simulation testing was performed as to discover the maximum available traffic capacity that the present terminal installation could handle. This resulted to a quite promising increase of 87% of the more recent high-peak passenger flow quantity recorded in airport terminal.

However, due to high deficiency of data, this result needs to be confirmed by additional and more detailed on-site measurements and further acquisition of relevant airport documented data. These proposals constitute the main body of future research.

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