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Assessment of Business Aviation OCCs' Capacity Issues

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Abstract

Flying used to be a phenomenon of big airliners. It is now an ever-growing reality to see air carriers operating small aircraft too. Business jets are today frequent visitors to worldwide airspaces and airports. By gradual upgrades of the equipment (both aircraft and infrastructure) the character of business aviation changes significantly its nature. From the perspective of flight preparation and flight planning these flights range between the most complicated ones. In the business aviation community little attention is often paid to the importance of dimensioning their operation control centers (OCC). This paper shows typical capacity issues and available solutions to help optimize the OCCs capacity setup.

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Keywords: operations, business aviation, OCC, capacity, dispatcher

1. Introduction

Business aviation comes along the development of civil aviation from its very beginning. It has been growing steadily and now reaches an important role in the lives of companies and countries' economies all around the world. The understanding of Business Aviation is essential. Unfortunately, different levels of it can be seen across the industry. OCC are critical units in structures of operators. They are usually proportionally structured to the size of the company. Within big companies a high degree of subdivision to smaller units specialising in a certain area may be seen. On the other hand, business aviation operators tend to have a lower degree of specialisation and their tasks

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are more variable and challenging. According to Helmut Lehr [1] this is due to non-presence of specialised supporting units such as customer or fuel departments. To run an OCC, it is essential for the operator to get well aware of procedures in separate countries, airports and also get to know the operated aircraft into detail. This requires a lot of learning time. Correctly setup processes and adequate authorities across the department are vital. Unfortunately, it is not rare that operators run highly risky OCC departments with inexperienced personnel whose decisions may put their operating crew, aircraft or even whole companies involved in flight operations in danger. The result of a research performed by Andreas Cordes [2] shows that 85% of operators with less than 10 aircraft units in their fleet do not require licensed personnel to perform OCC duties and only 48% of operators operating between 11 and 25 aircraft actually do [2]. This is a clear sign of lacking understanding of the OCC importance across the industry. Capacity dimensioning is another important task. If the OCC is under-dimensioned, the dispatchers will be exposed to overload. They will almost certainly commit errors or not finish their jobs satisfactorily and on time. In the opposite case, the dispatchers will have a lot time without any activity and will lose the ability to perform duties. They will consequently commit errors as well. There are already general solutions in place used to solve capacity issues. Probably the most common ones are national working time limits regulations. They limit the number of hours spent in work and prescribe a rest between two consequent work shifts. Unfortunately, they are very simple and often one step behind the current state of the industry. This is where more detailed approaches are necessary.

This paper deals with analysis of OCC critical activities and has for aim to find out if their effects can be reduced by application of tailored capacity planning principles.

2. Business Aviation Operations

Business Aviation division may be considered according to aircraft size, capacity or range, regularity of service, passengers' status or legal status. For the purposes of this article "on the demand operations of aircraft in VIP configuration with increased comfort and extra on board services" definition [3] will be used. Business aviation forms a specific part of Air Transportation comprising every category of aircraft ranging from small turbo-props to heavy jets. The aircraft range criterion is also becoming less important in definition of what is Business Aviation as long-haul biz-jets are in regular use with endurance reaching 13 hours and more. The community of operators ranges from the very small ones with one or two aircraft to large fleets. Some of the passengers use this kind of transportation for business, others for leisure. Business Aviation flights are operated in lower numbers because they are solely based on demand. There may be more frequent destinations; however, the character of Business Aviation is predominantly random. Unlike airlines operations characterized by a timetable, the operation of Business Aviation does not have a regular character. The typical traffic peaks as we know them from regular operations are not so extreme. Evenly distributed times of operations can be seen. The typical character of operation is point-to-point with a great deal of positioning flights. This is the opposite of airlines where very few positioning flights are made throughout the year and their operation is mostly of a hub-and-spoke character. The coverage depends on the range of fleet but is generally not limited to certain geographical areas [3]. Business Aviation brings to its users flexibility with schedule changes and cancellations and allows the option to operate to smaller airports where no scheduled services are operated.

2.1. Business Aviation OCCs

The OCC concept must respect the individual specifics of the operator. All OCCs have one common goal, effective information distribution before the flight, during the flight and after the flight. The three phases are also called, pre-flight, in-flight and post-flight phase. Unfortunately, the practice shows that, especially within smaller operators, the post-flight phase does not get enough attention or is not performed at all. The reason to this is, by authors' experience, an insufficient understanding of the post-flight analysis importance for operations safety. The flow of information is both, internal-within the company, and external with other companies (providers) and authorities. OCCs do not only perform flight planning tasks, as is often thought. They also carry out a variety of administrative and supporting tasks. The support and quick action of OCCs can save a lot of money and time to