

**MILITARY PROJECT „ORNIT“ - THE WAY OF ORNITHOLOGICAL
DATA SPREADING INSIDE THE CZECH ARMED FORCES (CAF)**

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Abstract

The risk of aircraft collisions with birds during military air traffic seems to be incomparable with the civil aviation. With regard to this fact all airbases of the Czech Armed Forces (CAF) have applied from eighties of the last century both active and passive measures to prevent this danger and for this purpose they have built special military facilities – so called “stations of airbase’s biological protection” (SABPs).

Considering the fact that active measures are very limited by whether natural conditions or legal barriers, inside the CAF has been built in 1998 special military project called “ORNIT”. This project uses various sources to collect necessary data that are consequently converted to the shape of database files. All these electronic data are distributed among the CAF airbases and as the final result we get graphical and text information of the ornithological situation that serve to early warnings of military pilots.

This presentation describes the whole system of data spreading inside the CAF.

Key words: military and civil aviation, Czech Armed Forces (CAF), military project ORNIT, data spreading, station of airbase’s biological protection (SABP)

1. Introduction

A fact, that the risk of military aircraft collisions with birds is essentially higher than the same risk in the civil aviation, results from two basic conditions:

- different character of military flights (it means e.g. low altitude flights, high velocity, aerial manoeuvre stunts);
- different construction of aircraft (it means that military aircraft have mostly one, maximally two engines and they are more vulnerable).

These are the reasons why at airbases of the Czech Armed Forces (CAF) are organised protective measures to prevent collisions with birds.

2. Data spreading inside the CAF

2.1. Situation at the CAF airbases

These protective measures are taken under recommendation of ICAO-ANNEX 14 and on the base of the CAF internal regulations. Ornithological provision of flights is controlled and coordinated by the Veterinary Service of the CAF Air Forces Command and practical operations and activities are provided by members of military veterinary service at individual airbases. For this purpose inside the structure of every CAF airbase has been built special detached unit – so called “Station of Airbase’s Biological Protection” (SABP). The workgroup of every SABP is composed of one military veterinarian (officer - the chief of SABP), two falconers (civil employees) and ancillary personnel (conscripts).

Effective active measures, that can prevent an occurrence and flyways of birds at airbases and in adjacent areas, collide with the very strict legal protection of free living birds and at the same time there are in the Czech Republic insufficient laws and regulations that would process mentioned active measures. Therefore all active measures are used only in the closest surroundings of runways and on the top of that only under various exceptions from state authorities of nature protection. It means that passive measures of airbases’ protection gain a new importance in regard to the prevention of air accidents. Passive measures are at CAF airbases based at a continual ornithological survey, at a precise knowledge of the ornithological situation of local airspace and last but not least at a perfect system of data spreading.

2.2. Collecting of ornithological data

And this was the main reason when in 1998 special military project called “ORNIT” began to be installed at all CAF airbases. The basic task of this system is to create a fluent run of real ornithological data among all CAF airbases. In addition, to have just complete and true information, we use civil ornithological maps of the Czech Republic which were acquired in the years 1999 and 2000 from the specialised ornithological workplace attached to the Czech College of Agriculture. These universal maps were created as a result of survey of civil ornithologists associated in the Czech Ornithological Association (Czech partner of the Birdlife International). This association centralises and elaborates survey results of its members and gives foundation for issuing of these information in the shape of phenological maps which are created either as seasonal (spring, summer, autumn or winter) or monthly ornithological prognosis. Besides, all maps are divided in accord with individual bird species. It is mostly concerned with following species: common rook (nesting-places, winter habitats, seasonal and daily migration), water-fowl (nesting-places and seasonal migration), black-headed gull, pigeon, starling, swallow, martin, birds of prey, storks, lapwing and night birds.

Mentioned universal information complete SABP falconers with their own survey and this way they create an integrated summary of ornithological situation at the territory of the Czech Republic. The transfer of ornithological data among individual airbases happens via internal military computer network in the shape of database files of program "GRAMIS" which is a military software used in military aviation for air space management (GRAMIS - an abbreviation for Graphical Map Information System). GRAMIS allows extracting phenological maps (selectively by individual bird species and with commentary) from database files.

2.3. System of data spreading

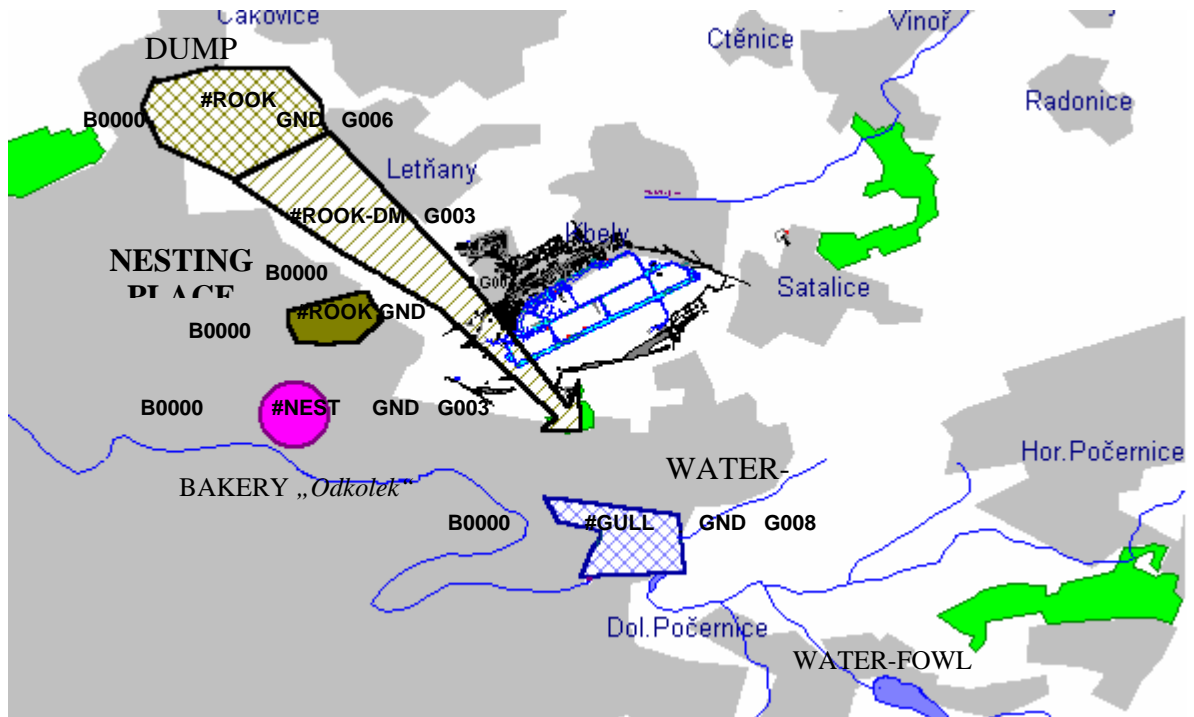
The basic elements of the ORNIT project are SABPs at individual CAF airbases. Each of them has a necessary hardware (notebooks or PCs) and software (GRAMIS). At least once a week (but usually more frequently) each SABP falconer elaborates "Prognosis of ornithological situation for airbase and adjacent areas" [see *Annex*] in the shape of two files: database file GRAMIS and text file WORD. These files in electronic shape he delivers to the operator of the CAF Flight Information Service (FIS) that provides distribution of information to the other airbases and at the same time devolves analogical prognosis from other airbases on the falconer. This way all SABPs acquire an integrated picture of ornithological situation within all military aviation areas of interest that they can use to inform pilots at preflight briefings. Besides all pilots can obtain these information at any time at the FIS workplace. In the course of the whole process of data spreading we take advantage of similarity with the meteorological system to choice appropriate methods and procedures. On the top of the ORNIT project it is the CAF Air Traffic Control (ATC) that distributes at the beginning of each season and each month universal maps and information. Then it coordinates all output data designed for early warnings of military pilots, for air space management and for preventive measures.

3. Summary

The final product of the ORNIT project is an electronic map of ornithological situation that is available at the FIS workplaces at every CAF airbase. From this map then pilots obtain not only air route and meteorological forecast, but at the same time the picture of all areas with high concentration of birds, including the information of species, amount, altitudes and flyways.

**Ornithological Prognosis
SABP – Praha-Kbely Airbase**

Valid from October 10, 2001 to October 15, 2001



Airbase area:

Increased occurrence of birds of prey at the reserve grassy zone up to G0200 (kestrels and buzzards hunting rodents). Starlings – movement in the grassy areas of airbase and its surroundings prior to departure to the south – flocks of 70-1500 birds, altitude GND-G0500. When cutting grassy areas, there is an expectation of a short-term occurrence of pigeons (150-250 birds) in surroundings of the runway.
An evening passage of rooks across the threshold No. 24 from 7.30 p.m. to 8.10 p.m., altitude of 75-150 meters !!!

Adjacent areas:

Increased activity of pigeons during bringing up process, more extensive occurrence of birds in surroundings of nesting places – pigeons (bakery „Odkolek“), rooks (building estate Klicov). The density of birds is bigger than previous period.

Dangerous areas:

1. Dumps: Uholicky, Dablice, Dolni Chabry - (gull, rook, pigeon);
2. Bakery „Odkolek“ - (pigeon);
3. Water areas: Vltava and Labe rivers, fishponds Kyjsky and Horejsi, reservoir Hostivar (gull, lapwing);
4. Plowed, mowed or seeded fields including all areas connected with agricultural activities, more extensive concentration of birds (100-450).

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(Elaborated by: O.Z. Wagner Petr.)

