



EMERGENCE OF THE LOCAL REPORTING SERVICE IN THE FORMER CZECHOSLOVAKIA AS AN IMPORTANT PART OF CIVIL AIR DEFENCE

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ABSTRACT: *The article briefly deals with the genesis of the local reporting service as part of civil anti-aircraft protection established in former Czechoslovakia in the mid-1930s. The purpose of this service was, among other aspects, a reaction to the threat of the outbreak of the Second World War and the associated possible use of the then-German air forces in this war, which again began to take shape in the middle of this decade. The preparation of the article is based on a content analysis of contemporary materials (especially magazines, legal standards, professional publications, etc.) devoted to the given issue. The authors conclude that the concept of a local reporting service was viable for its time, corresponded to the possibilities of the state and, at the same time, the maturity of the technical means that could support the activity of this significant service.*

KEYWORDS: *Air Forces. Alarm Service. Civil Air Defence. Local Reporting Service. Warning signs*

INTRODUCTION

The First World War also marked the creation and first use of air forces, and not only on the side of Germany. In the structures of these air forces, whose aircraft (if we leave aside the easily vulnerable balloons or airships) were originally destined for observation and subsequently bombing enemy positions, fighter aircraft began to gain more and more influence. The end of the First World War with the defeat of Germany also resulted (on the basis of the Treaty of Versailles) in the dissolution of the air forces of this country, which consisted not only of aircraft but also of balloons, airships, air and ground personnel, etc. It did not mean, however, that the idea and other steps towards the creation of a new air force completely disappeared later due to the political changes that took place in this country in the interwar period. Thus, in 1935, a new military air force – the Luftwaffe, was created in this country, as a real threat to all neighbouring countries. For that reason, our state also had to react to this situation. Among other things, in addition to many different ways and measures, it responded by laying the foundations and the subsequent creation of a *local reporting service*, which was supposed to operate in parallel with the *state reporting service* and be part of the civil air defence of our state.

The authors of the paper thus try to offer answers to questions related to *the genesis and legal support of the creation of the aforementioned local reporting service, its tasks and organization, and the relationship to the alarm service*, which developed in parallel with the aforementioned local reporting service and was, from today's point of view, essentially behind the warning and notification tasks.

1. THE EMERGENCE OF A LOCAL REPORTING SERVICE

In the mid-1930s, former Czechoslovakia, based on the negative development of the military-political situation in Europe, adopted a number of legal norms of a statutory and sub-statutory nature (laws, government regulations, and directives), which, among other things, laid the foundation for the creation of a *local reporting service*.

Among these legal norms, the following can be included in particular:

- A. *Law No. 82/1935 of April 11, 1935, on protection and defence against air attacks. (Zákon, 1935)*
- B. *Government Regulation No. 199/1935 Coll. of October 18, 1935, issuing some regulations on the procurement of gas masks and on some obligations of municipalities under the Act on Protection and Defence Against Air Attacks. (Vládní nařízení, 1935).*
- C. *Directive CPO-6. Guidelines for the local reporting service. Prague: State Printing Office in Prague, 1938. (Směrnice, 1938)*

Both the mentioned law and the aforementioned government regulation enshrined, among other things, a whole range of services that were supposed to support the field of civil air defence. According to the above-mentioned Act (Zákon, 1935), the municipalities could be ordered, through the relevant

government regulation, to take further steps to protect against air attacks at their own expense, in accordance with the directives (which were to be issued subsequently), including organizing an alarm, fire, medical, and Samaritan police, ensuring the masking of inhabited parts of the village and the extinguishing of lights, ensuring cooperation in the reporting service (state service, secured by the forces and means of the then Czechoslovak Army), implementing the appropriate training of personnel needed to perform tasks in these services or areas, etc. In a similar spirit, the reporting service is also enshrined in the aforementioned regulation (Vládní nařízení, 1935). The individual services (structures, tasks, governing bodies, etc.) were then actually elaborated in the form of respective separate directives in 1935-1938.

In this way, the so-called *local reporting service* was created (see the aforementioned directive), which was supposed to operate in parallel with the state reporting service and thus complement it. The importance of the *local reporting service* increased over the course of a few years, especially after the occupation of our border area in 1938 (after the adoption of the Munich Agreement), when the territory of our state was significantly "narrowed", and thus considerable problems arose for the state reporting service (for example, she lost her voices in the occupied borderlands, etc.). More details, for example, in (Obrana obyvatelstva, 1938). Considerations about the creation of a *local reporting service* and about possible problems associated with its possible functioning appear somewhat earlier – for example (Špičák and Hes, 1934), (Zelinger, 1936a), (Zelinger, 1936b), (Janáč, 1937-1938) etc.

2. TASKS AND ORGANIZATION OF THE LOCAL REPORTING SERVICE

The whole concept of the local reporting service was built mainly on the basis of the mentioned directive (Směrnice, 1938). According to this directive:

The task (goal) of the *local reporting service*, as an integral part of the civil air defence of Czechoslovakia at the time, was primarily supposed to be:

- an observation of the specified space,
- timely detection of enemy aircraft (at night, aircraft were to be detected primarily by hearing),
- tracking of their next flight over our territory and,
- early warning – by sending an appropriate report (on the presence of an aerial intruder and thus on a real threat to our territory, i.e. businesses, authorities, population) to the local civil air defence command at the time.

In addition to municipalities, the *local reporting service* could also be established by important businesses, where mutual close cooperation with the *local reporting service* established by the municipality was assumed.

The structure (bodies) of the local reporting service consisted of:

- commander of the *local reporting service*
- local sounds.

The commander of the local reporting service (appointed by the commander of the local civil anti-aircraft defence) was assumed in municipalities with more than 1,000 inhabitants, in smaller municipalities the commander of the civil anti-aircraft defence managed this service. The task of the commander of the *local reporting service* was, in particular, to:

- manage this service,
- prepare its staff,
- choose a suitable place to place the voice,
- ensure the equipment of voices,
- carry out control activities on voices,
- to ensure cooperation with corporate anti-aircraft protection (in some materials previously referred to as ZPO – corporate anti-aircraft protection) in setting up its *local reporting service*.

An important part of the local public service was also the so-called local public service announcements.

Voices of the local reporting service were made up of voice personnel and voice equipment. If the local radio station had more members, a commander of the local radio station was appointed (the commander of the local radio station or the commander of the local civil air defence).

The equipment (where available) of the local voice included:

- binoculars,
- optical signaling means (flags – determination for the time of day; red flag – reporting of enemy aircraft, white flag – departure of enemy aircraft or cancellation of the previous signal),
- light signaling devices (lamps – intended for night time; red light – same as for a red flag, yellow light – same as for a white flag),
- radio station and field telephone (here especially in important municipalities or municipalities with more than 10,000 inhabitants).

If it was possible in the village, then the main local sound station was established (placed, for example, on a church tower, chimney, or another elevated place in the village) and advanced local sound stations were established beyond the perimeter of the village (to which there was direct visibility from the main local sound station). The main local voice then had a connection with the headquarters of the local civil anti-aircraft protection, to which it transmitted messages from forward local voices.

Currently, warning the population (as well as notifying crisis management authorities or selected legal or entrepreneurial natural persons) in both the Czech Republic and Slovakia is one of the most important tasks of civil protection in both countries. For approximately 85 years, the paging system originally developed has seen many positive changes in connection with technological progress. Not only in terms of the introduction of a unified warning and notification system, consisting of independent radio transmission infrastructures, whose functionality is supported by the necessary software applications but also concerning the gradual replacement of older warning end elements—rotary sirens, newer, electronic warning end elements. These include both electronic sirens and local information systems, both of which, in addition to generating a warning signal, are capable of transmitting pre-prepared warning information or other important messages (e.g., emergency information, i.e., information on organizational, technical, and operational measures to protect life, health, and property of the population). New in the Czech Republic, warning information panels are also included among these electronic warning end elements—optical devices with acoustic signalling that can display a warning and other information in the form of texts, pictograms, or another suitable visual form. (Ministerstvo, 2022). Currently used end warning elements in the Czech Republic - see Figure 1.

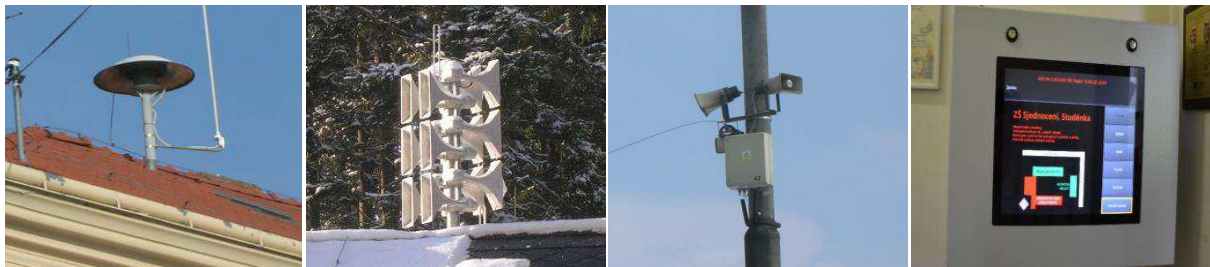


Figure 1 - 4 Currently used end warning elements in the Czech Republic – rotary siren, electronic siren, local information system and information panel (Note: Figure 1 - 3 own), (Náčvik, 2023)

In the Czech Republic, the breakdown service of the infrastructure of the unified warning and notification system is ensured by a cash group, which at the same time checks the function of individual radio networks at the supervisory workplace of the Storage and Repair Facility of the HZS CR Olomouc (see e.g. Figures 5 and 6 – supervisory workplace to ensure operation control radio networks and regional information centres). Troubleshooting of infrastructure elements is then carried out based on the detection of a malfunction at the mentioned workplace or a reported malfunction by individual regions 24 hours a day. The workplace ensures the readiness of one service group for transmitters and one service group for notification centres (Opravy and revize, © 2023).



Figure 5 and 6 Current modern supervisory workplace for ensuring the control of the operation of radio networks and regional notification centres of the unified warning and notification system

The current warning and notification system is still being improved. Its future can be seen, for example, in warning the population and the subsequent transmission of emergency information via mobile phones (public electronic communication networks), enabling connection and communication on selected social networks, or also in the installation of various applications related to the aforementioned issue of warning, informing, or further informing the population. Here, however, the utmost vigilance is needed, so that we do not follow the "German path" in this direction and the bet on the most modern communication technologies does not pay off—see, for example, (ntv, 2021).

3. THE RELATIONSHIP BETWEEN THE REPORTING AND THE ALARM SERVICE

The *reporting service* itself, even though it occupied a prominent position among all other services of the time, had to be logically supplemented by a number of other services that worked in favour of civil air defence at the time, i.e. which:

- their activity was primarily linked to this service in relation to warning and informing businesses, authorities and the population (alarm service, liaison service),
- acted as a preventive measure in the event of an air attack (covering service),
- or they worked mainly within the scope of removing potential damage after an air attack (fire service, Samaritan service, technical assistance, law and order and security, sanitation, etc.).

An irreplaceable place in this system of civil anti-aircraft protection was occupied by the service that immediately followed the *reporting service*, namely the *alarm service* (Směrnice, 1936), which at that time ensured, from today's point of view, so-called warnings and notifications.

The mission of the *reporting service*, which was the basis and condition for the implementation of all measures of defence and protection against air attacks, as stated by Zelinger (1936b), was to "search the airspace for enemy aeroplanes and follow their flight paths. Furthermore, evaluate the obtained observations and based on the result of this evaluation, activate active means of defence and the alarm service". The activity of the *reporting service* for civil purposes then ended at the *reporting service* stations, from where the just mentioned alarm service was responsible for the further dissemination of news about the activities of the enemy air force. The connecting links between the *reporting and alarm services* were the so-called *alarm switchboards*. These switchboards were already occupied by civilian personnel. Their task was to inform important businesses or authorities, relevant cities, and towns about the impending air danger, based on the received messages delivered by the *reporting service*, so that all previously prepared protective and security measures could be activated before the attack began. Less important businesses, authorities, the population, etc., were to be notified by the *local alarm service*, which was organized in each municipality.

To expand the signs that were supposed to warn of a possible air raid (of which there were 3 in total at that time), it was planned to use mainly telephone networks or special signalling devices. The population should have been made aware, especially by sound, or optical devices, or also through special mobile alarm units. The sound devices mainly included sirens, buglers, or bells. Optical devices, e.g. the lowering or raising of agreed flags or the lighting of certain lights were considered, especially where the sound signal could disappear in the noise. The possible expansion of warning signs by trained mobile units (on bicycles, motorcycles or just by "mere" runners, etc.) was also considered. The individual types of signs are summarised in Table 1.

Table 1 Individual types of signs used in the event of an air threat at the end of the 1930s in the former pre-war Czechoslovakia (Směrnice, 1936)

The names of the signs	The content of the posting	Delivery (announcement) of the sign
Preparation	Alertness of the executive units of civil air defence, including at businesses, offices, etc., and their assembly at the designated location, incl. start of implementation of scalding to ensure further operation.	Privately. By telephone or similar links. Could be secured by means of, for example, a bell or a trumpet too. It was to be announced by alternating short and long tones for one minute. This sign could also be secured optically by alternating long and short yellow light again for one minute.
Air alarm	It meant a warning to the entire population or employees of companies, offices, etc.	By public announcement. By fluctuating tone (for electric or manual sirens) or intermittent (for whistles, horns, etc., a two-second tone, interrupted for two seconds). For this sign bells with a specific way of ringing, or optical (light) alarm devices with a red color of light (two seconds of light, one second of interruption) or shrapnel rockets fired from a pistol during the day could be used. The length of this sign was set at three minutes.
End of air alarm	These signs should not have been announced immediately after the threat of an air raid had passed, but only after the consequences of the air attack had been removed.	By public announcement. By continuous long tone (for electric and manual sirens, whistles, horns, etc.). It was also possible to use bells with normal ringing or optical (lighting devices) with the green color (permanent uninterrupted light). The length of this sign was again set at three minutes.

By linking the *public (state and local) service* and the *alarm service*, a suitable foundation was laid in former pre-war Czechoslovakia for solving one of the important areas of civil air defence at the time.

4. APPROACHES TO SOLVING THE REPORTING AND ALARM SERVICE AT THE TIME OF ITS BIRTH AND AT PRESENT

In the almost eighty years since its inception, the civil air defence *alarm service* in particular has undergone an incredible transformation, which was mainly due to technological progress in the field. Some countries are even currently slowly retreating from the use of classic warning end elements as an important part of this service, increasingly focusing on warnings (and also subsequent information) through, for example, social networks connected to various applications in mobile phones, etc. But there is also the possibility of warning and informing by using the DRM (Digital Radio Mondial) standard or the DRM+ standard, incl. possible use of the EWF (Emergency Warning Function) service. The goal of using these standards or the services associated with them, as stated, for example, by the co-authors in the article Transmission of warning messages to the population using terrestrial digital radio, is "... to inform the public about the impending disaster as soon as possible and to provide the public with all relevant information (Wieser and Adamec, 2019).

The *reporting service* of the civil air defence with its intended visual or sound stations lost its importance with the end of the Second World War. The task of detecting possible enemy air attacks became the domain of the military units (armed forces) of the former Czechoslovakia, which increasingly focused on the use of radar detection, the genesis and initial development of which was helped by the aforementioned Second World War.

The alarm service, today we could refer to the warning and notification system (see also above), however, in its decades of existence, it has undergone substantial changes, which have undoubtedly made it one of the most important tools for the protection of the population of both countries within the framework of the Czech and Slovak Republics. Compared to the period of the genesis of the alarm service, which was mainly provided by links, the current warning and notification system relies mainly on digital and radio technologies, where every electrical device of this system (except for electric rotary sirens) is additionally backed up to min. 72 hours of operation.

The fact that the issue of warning is an important area of population protection, not only in the Czech or Slovak Republic, is evidenced by a number of outputs devoted to the given area. E.g. the co-authors in their article Comparison of the flood warning methods in selected European states (Lukáš, Mrázková and Šuar, 2021) emphasize that "The warning itself plays a key role in protecting the population, as it enables a quick and adequate coordinated response to the threat."

The initial signals - signs (see Table 1) have also undergone significant changes within both states. The Czech Republic, in contrast to these primary signals, has only one warning signal - "General warning" – a 140-second fluctuating siren tone (Vyhláška, 2002). Similarly, Slovakia has a "General danger" warning signal – a 2-minute long fluctuating siren tone. Compared to the Czech Republic, Slovakia has also warning signal the warning signal "Danger by water" – a 6-minute long constant tone of sirens, it also has a separate signal "End of danger" – 2-minute long constant tone of sirens without repetitions (Decree, 2006). In the Czech Republic, this separate signal does not exist, only the information "End of warning" is prepared as part of the warning informations (use, of course, only for electronic end elements of the warning). Neither the Czech nor the Slovak Republic currently has a separate warning signal that can be used in a state of war – for example, in relation to an air attack. The currently valid, above-mentioned Slovak legal standard (Vyhláška, 2006) partially deals with this issue, but only in relation to the electronic end elements of the warning – a 2-minute long fluctuating siren tone with the warning information "Caution, air alarm" reproduced three times in a row. The Czech Republic does not mention this issue at all in the aforementioned legal norm (Vyhláška, 2002).

When comparing the above-mentioned valid signals of both countries and the individual signals – signals listed in Table 1, it is highly justified and also logical that the direction (orientation) of these initial signals (in contrast to the present) is only on military threats associated in particular with possible air attacks. With the end of the Cold War, the Czech Republic and Slovakia generally began to orientate themselves primarily towards non-military threats in relation to warning signals. Here it can be stated that in relation to the latest events in Europe and the world (armed conflict in Ukraine, etc.), both countries have a certain debt within their system of warning and notification. The problem in this area can currently also be seen in the case of a long-term power failure (interruption of the supply of electricity) in the failure to back up electric rotary sirens, both in Slovakia and in the Czech Republic, and thus in these cases the dysfunction of these sirens. In the Czech Republic, this type of siren still currently makes up more than half (5,277 units) of all end warning elements (electronic – 4,474 units). On the other hand, in the second half of the 1930s of the last century, in connection with the genesis and initial development of the mentioned alarm service in the former Czechoslovakia, the responsible authorities significantly dealt with the issue of alternative methods of warning. That is in ways that would either replace electric rotary sirens in the event of an interruption in the supply of electricity or replace the function of these sirens where they had not been installed at that time. Closer authors Kyselák, Janošek and Zelenák (2022). At least within the Czech Republic, it can be hoped that a shift and an acceleration in the replacement of electric rotary sirens with electronic warning end elements will occur in the near future based on the conclusions of the inspection action of the Supreme Audit Office of the Czech Republic (NAK, 2023).

CONCLUSION

Especially in the second half of the 1930s, former Czechoslovakia went through difficult times. Due to the negatively evolving military-political situation in Europe, our country had to urgently prepare for a possible armed conflict with Germany, where the use of weapons was constantly increasing, and the rhetoric of combat was increasing. Therefore, our state adopted a number of measures, including in relation to defence and protection against air attacks, which included the creation of a *local reporting service*.

The course of events – the occupation of the borders of our state in 1938 and subsequently the entire country essentially without a fight in 1939 did not allow the *local reporting service* to be properly tested in practice. Even so, it can be concluded that its concept was viable at the time and corresponded to the possibilities of the state and the maturity of the technical means that could support the activity of this not-insignificant service.

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