## **Author's Guide**

# I. Description of the academic question

The technological convergence in the fields of telecommunication and information technology is the product of recent development of human civilization, the technical achievements, beneficiary effects and negative results affect our everyday life, while our communication habits are changing from the youngest generation to the oldest.

For hundreds of years, government is one of the most specific elements of state existence, at the same time it is integrated into the society, in this way it is affected by the various achievements of the development of civilization, its activity is influence just like the single members of the society are affected. Due to the accelerated development of the electronic world, communications systems and information technology, governments are facing a new challenge, since the methods of exchanging data are so wide ranging, that the increase in the speed and volume of accessing information resulted a communication "boom".

The pushing force consists of multinational telecommunication and information technology companies operating in the global market and through the products bought it also contains the private- and civil sector, that is the individual persons all over the world; as through the developed communication and data processing systems, means and processes these can enforce indirectly the modernization of governmental activities, its changing into a supplier type one, taking into consideration, that the governments of the individual states became potential economic competitors. In the circumstances of the strict competition for the provision of abundance it is essential that the national government authorities improve their own communication facilities and the communication with the society, through which prosperity could be assisted.

A key to the development of abilities is a well organised and controlled government communication system, which is set up according to different the different practices and traditions by countries. Entering the European Union means at the same time, that Hungary has to co-operate in the programs aiming the improvement of the communication facilities of administration too, for which the field and statues of government telecommunication have to be surveyed and elaborated scholarly

Hungarian governmental telecommunication has traditions coming from the middle of the last century, however, there are only a few publications in this topic, which are available – especially before 1990. The exact mapping of development processes and its operational mechanism, furthermore developing the effects on the environment are quite difficult for the lack of resource documents, there are still a lot of unknown gaps in its history. Practically, the topic can be considered "terra incognita", that is entirely undeveloped, therefore the execution of the first survey was a very interesting academic and professional task.

### II. Project aims

1. to process horizontally the history of Hungarian governmental communication, to determine and describe the main phases of development;

- 2. to analyse and evaluate the communication systems and capabilities of the organisations participating in the governmental communication process during the individual phases. To present a complex view of the legal, technical environment and the development tendencies in a certain period.
- 3. finally, to study in a nutshell the possibility and necessity of the integration of governmental communication, to give theoretic basis, organizational and control recommendation for the setting up of an integrated communication system.

# III. Subject, scope, method and basis of research

### 1. Subjects of my research:

- Features, progress of the development phases;
- Legal environment determining the communication infrastructure of Hungary, its effect on governmental telecommunication;
- Features of the closed-purpose, mainly army and government communication systems and that of the systems connected to them;
- the necessity, methodology of integration.

### 2. Topics out of the scope of my research:

- Detailed analysis of the factors and technical features of the communication systems studied;
- actual economic influence of integration, its human resources demands;

## 3. Fields of research upon working out the project:

- Legal requirements determining governmental communication;
- Improvement trend of public and closed-purpose communication systems;
- the effect of convergence on the improvements of communication and information systems;
- conditions, alternatives of the development of a uniform system.

#### 4. The method of project elaboration

- I have studied and processed the available archive materials and the related academic studies, candidate, PhD and university doctorate essays;
- I have analysed and systematized the legal background of public and closed-purpose communication systems connected to government telecommunication;
- When studying the history of improvement I have deduced partial facts concerning the composition and features of government telecommunication systems of the certain periods;
- Based on the digested facts, partial conclusion and the discovered relations I
  have specified the development stages of government telecommunication, I
  have also confirmed the necessity of integration and gave theoretic
  recommendation for the method of setting up a uniform system.

#### 5. Main base of research:

- Archive documents available in the Archives of the Ministry of the Interior, in the archives of the Telecommunication Service of the Ministry of the Interior;
- Regulations, doctorate, PhD and university studies, research books, publications, articles found in the academic, information and document library of Zrínyi Miklós National Defence University;
- descriptions, regulations received from the Ministry of Defence, MH HVK Communication and Information Group Directorate (Army Planning Main Group Directorate), the Ministry of the Interior, the Hungarian Police Headquarters and the National Border-Guards Headquarters;
- materials of international and national professional conference lectures organised by Zrínyi Miklós National Defence University;
- international (EU, NATO) and national electronic data bases, electronic archives (CD-s, floppy discs);
- academic publications available on Internet

# IV. Summary of the examinations executed

1. Governmental Decree No. 3343/1967. was the first document, which prescribed the development of a system supplying governmental communication demands. The system set up actually has only partly served the governmental communication function between August 1967 and 31 December 1989 (Phase I), as the safety requirements system used consequently in connection with "governmental communication" has continuously impeded the extension of those using communication services.

In spite of the fact, that before 1990 the imports in Hungary were under strict control and limitation concerning modern Western technologies, both the army and provost communication systems furthermore the communication networks of the Hungarian Post underwent various communication network quality development progresses, due to the state safety limits beside low capacity government communication system, systems under the control of other organisations took also part in the technical actualization of governmental communication, in addition to the defence, home affairs, traffic and post portfolio.

This combined, multi-party solution was mainly explained by limited infrastructural facilities, however, it did not curtail the interests in governmental communication, as these remained enforceable for the dominance of state property and centralised state control practice given. In addition to the application of this method, between 1967 and 1989 each Government in duty considered important, that the development and control of technical and organisational structures serving state communication demands were handled by the government.

On the basis of the above it can be stated, that between 1967 and 1989 government telecommunication was not served by individual government communication system in Hungary. The demands of governmental organisations were supplied by the communication systems of various state administration and state authorities jointly, beside strong state co-ordination, where this model could be also considered an individual government system.

2. In the second phase, between 1 January 1990 – 8 January 2004 the Government still not dropped the possibility of controlling government telecommunication, therefore the systems ensuring government communication were intended to be kept. The new legal regulation made possible increasing the number of closed-purpose telecommunication networks, thus individual development progresses could be started, taking into consideration sector interests.

There were more organisations taking part in the realisation of government telecommunication on the state side than before, to which effort public companies also joined. Due to the changes in the economic structure, major part of the Hungarian communication infrastructure was privatised, resulting that the possibility of executing interests connected to government telecommunication was pushed into the background due to the marked conditions not liberalised, which fact was not compensated by the independence of state infrastructure ensured by legal regulations either.

The development concepts for the "replacement" of privatised participants were not realised because of the expected significant cost effects, however, the approach changed from the middle of the decade, as centralisation was aimed to impede prolific individual systems, on the other hand not only state infrastructure was intended to be used during the integration.

Electronic governance and the servicing state concept in the fields of government telecommunication intensified centralisation efforts and a professional central authority was also set up in the Prime Minister's Office. By the end of the second phase two large suppliers' centres the EKG (Integrated Governmental Main Network) and the EDR (Integrated Digital Radio-system) were established beside the existing closed-purpose networks.

It can be accounted for the definite effect of convergence, that during the organisation of its services the EKG (Integrated Governmental Main Network) emphasized remote and quick accessing of information, while the connection and co-operation (traditional telecommunication) between persons and organisations was only the second point of view.

Between 1 January 1990 and 8 January 2004 government telecommunication was still not supplied by an individually organised communication in Hungary. Demands were supplied by the communication systems of various state administration organisations and by the participants of the telecommunications market under liberalisation, beside state supervision and strengthening coordination state activity. Main feature of the period is that the entire Hungarian communication infrastructure undergoes modernisation, in parallel with which there is centralisation progress in the fields of government telecommunication.

3. The third phase in the development of governmental communication (from 9 January 2004) is still in progress.

In the third - *present* – phase of the history of development the conditions are given for the setting up of an integrated governmental communication system according to the earlier strategic ideas, which would effectively assist governmental work and strengthen its service feature.

The realisation of common and national programs, the suppression of parallel development efforts can be ensured through strong central control in the hands of one network manager. The number of closed-purpose telecommunication networks can be also optimised through integration, which was earlier described as a strategic concept.

The organisation of the integrated government communication systems shall be executed as controlled from the top, in more stages, during which the integration of systems will be executed at first in an administrative, organisational way. The setting up of a new system cannot be planned, rational integration of the existing components shall be executed instead.

Upon the development of integration the position in the governmental system of the persons in charge for operation and maintenance, furthermore the governmental position, status of organisations established for ensuring information exchange between the different organisations and systems have to be specified in detail, and then further tasks concerning technical compatibility and co-operation, and of the operation of virtual networks shall be exactly specified.

#### V. Conclusions

In the essay I have tried to prepare the academic analysis of a topic, concerning which there are only a few resources to research both in quantity and quality, and which seems to be entirely undeveloped at present. The only points of reference were legal codes and external regulations.

In my essay I have analysed the earlier and the present status of Hungarian government telecommunication in three chapters. After giving the basic definitions to the topic I have described the organisations taking part in governmental telecommunication between August 1967 - 31 December 1989, I have introduced the main characteristics of their systems and the connection between them. I have established the lack of an integrated system, in parallel I have also presented the wide possibilities of governmental control of that period.

In Chapter Two, analysing the period between 1 January 1990 and 8 January 2004 I have reviewed and analysed the general effects of convergence on telecommunication and information technology, coming to conclusions concerning the expectable direction of national development. Taking into consideration the basic changes in legal circumstances and the effects of convergence I have examined in progress the complex organisational and technological development features of market characters participating in government telecommunication, which I extended to the relevant closed-purpose telecommunication networks as well

I have discovered and elaborated for this period those concepts, which could be connected to the development of government telecommunication. At the same time I specified and described those main procedures, which basically impeded or could assist the setting up of the integrated system. I have certified, that at the end of the examined period the influence of the technological progress could assist the development of an integrated system also preferred by the Government.

In Chapter Three I have specified the phases of development. Based on the confirmed integration processes I have developed and introduced the applied organisational and controlling routines of the communication systems presently relevant to government telecommunication, and the technological platforms. Based on Chapter Two I have specified the common expectations and programs for the setting up of electronic government due to our entering the Union. Confirming the necessity of the development of an integrated government communication system, furthermore the existence of beneficial legal-technical surrounding assisting integration, I have determined a possible legal base for the realisation, and recommended theoretic organisational and controlling routine in connection with the integrated communication system.

# VI. Recent academic achievements

- 1. I was the first to elaborate applying academic methods the history, determinant progress and participants of Hungarian governmental telecommunication between 1967-2004.
  - Based on wide range analysis I have defined, that the history of Hungarian government telecommunication can be basically split into three separate phases;
- 2. I have confirmed, that based on the present closed-purpose telecommunication systems, by optimising the number of them a rational integration of communication systems participating in government telecommunication can be achieved and through this the integrated government communication system can be effectively established.
  - I have recommended a form for the realisation of integration. I have elaborated the multistage solution of integration, in which I have fixed, that the integrated government communication system shall be set up centralised, basically controlled from the top; at first with administrative organisational procedures, later through the expedient combinations of the elements of the communication systems;
- 3. A part of my observations and my results published based on the academic elaboration of the project was integrated into the regulation system of the Ministry of the Interior.

# VII. Recommendation for further use of the essay

- 1. literature for further studies in this topic;
- 2. for the undergoing centralisation efforts in the communication systems of the home affairs sector;
- 3. using the study as recommended literature in the basic education of special studies at Zrínyi Miklós National Defence University.