Zrínyi Miklós National Defence University

An Author's resume of the doctorial (PhD) thesis work

By

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APPLICATION OF AIR TRANSPORT AND HELICOPTER SUB UNITS OF THE HUNGARIAN DEFENCE FORCES WITHIN NATO

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In this changed world, especially after the terrorist acts of Septemebr 11th 2001, there is a different approach to terrorism and the other general criminal acts associated with it, furthermore the same applies to the rapidly growing drug consumption and dealing, nevertheless proliferation, illegal migration, smuggling still mean a constant threat. In our globalized world because of dynamically growing industries the chance of industrial catastrophies has increased and dealing with the consequences of natural disasters due to global climate changes became a repetitive task.

Today's armies – this applies to most of the NATO members – can not look at these happening as outsiders. The army – and this is exampled by the Hungarian Defence Forces' activities during floods and other catastrophies - is the most organised force that is able to provide instant and effective assistance to the population. However conventional army application, maintenance and practice has changed, others say became obsolete. Military endavours of recent decades proved that these changes had begun. During the Gulf Wars and the campaign against Yugoslavia the initial mass application of the air force became general – according to the principles of Douhet – and only after the favouring conditions had thus been provided came the flinging of the ground forces as a regular force[1], but – in Yougoslavia – with a new peace creating task, and – in the Afghan War – as specialized battle groups.

Each land operation had the common feature of increased dynamism which is increasingly characterised by a high degree of maneuverability, quick reaction, striking the enemy at it's weakest point, cutting off transportation routes and blocking economically important objects. This results in the requirement of the application of *partly air lifted maneuvering forces*. The activities of highly maneuverable land and air forces supported by tactical helicopters and tactical air forces come into the foreground. The full striking capability of the air force takes part in the task. However the existence and application of army aviation capability is vital for the realisation of these operational principles[2]. Multitask helicopters and tactical transport aircraft are incorporated in the army aviation capability. In my dissertation I wish to examine

[1] Giulio Douhet (1869-1939) Italian general, military scientist, who published his ideas on the application of the air force based on WWI experiences in his work entitled „Aerial Superiority". Douhet wanted to make the enemy unable to continue the fighting due to the losses in lives, damages in the infrastructure and protests of dissatisfaction by the public. In this case ground forces would „only" have an invader role. One of the most important principles of modern warfare is the minimzing of collateral damage.

[2] Army aviation (Армейская Авиация) appeared during the '60s of the last century in the modern armies as an independent force. Later it became part of land forces representing the special abilities of giving direct air support to the troops. (Army aviators are aviation units subordinated to ground forces. Their role is the direct support of the troops, their airlift, aerial reconnaissance and couriering. Today when this capability exists and the terminology is used, arm „independence" appears in a different organizational form. In Great Britain and The Netherlands all helicopters of the different branches are gathered under a Helicopter Command.

NATO concepts, applicational concepts furthermore the status, necessity and future tasks of Hungarian airlift capacity.

Drafting the scientific problem

Based on my chosen topic the following corelated scientific problems can be revealed by which I will examine the following questions:

- are the air transport and helicopter capabilities of the Hungarian Defence Forces in their current status able to fulfill their functional tasks, can they meet their operational requirements due to the military reforms and transformations made since the change regime
- does the existing air transport and helicopter capability represent an adequate force for the provision of home defence and the requirements of our allied obligations
- is it necessary to develop the air transport and helicopter capability due to its tasks, operational requirements and its current status in the mean time demonstrating possible methods of development

In my opinion the formulated scientific problems can only be examined and treated in correlations thus resulting in well based answers for professional questions. Based on these my hypotheses are the following:

- the personnel of the tactical air transport and helicopter sub units of the Hungarian Defence Forces possess the necessary theoretical and professional knowledge required for allied application
- the current level of helicopter capability means only the basis of being used in an allied, multinational environment. Knowing the exact task requires further preparation and training followed by succesfull examination, thus allowing operational application.
- the current status and value of the air transport and helicopter capability of the Hungarian Defence Forces, the current status of similar forces of members of the Alliance, the principles of combat application and the practical experiences of ongoing operations and based on the real needs of the theatres of war the directions of development in technics, preparation and training of personnel can be drawn and future requirements can be formulated.

To verify my hypotheses I selected the following research objectives:

- giving a brief overview and summary about the conclusions of Hungarian military science, the development of the Hungarian Defence Forces from the past decades up to these days. Including the examination and analysis of the status of the air transport and

helicopter capability of the Hungarian Defence Forces, the requirements of adequacy as regards home defence and allied application

- evaluating the current status of the air transport and helicopter capability of the Hungarian Defence Forces, possible usages as regards home defence and allied application
- by analyzing the current status of tactical air transport and helicopter forces defining the factors and arguments which prove and support the necessity of development
- - revealing the possible direction of development

Methods of research

During the research of my subject I have incorporated the following methods: I have executed extended data collection, I have studied the existing printed, electronic material and publications both Hungarian and international.

I have studied international material related to this subject, NATO principles, doctrines and other allied documents as well. Besides organizing, analysing and evaluating the information provided I have applied observation and the processing of the data gathered by experience and practice. Out of the general research methods I have used analysis, synthesis, induction, deduction and out of the special methods of military science I have used the historical comparative method.

I have supplemented my theoretical research methods with my experiences gained on Hungarian and international exercises – Cooperative Chance ’96, Dynamic Mix 2000, Cooperative Key ’01, Cooperative Search and Rescue ’04, Lángoló Domb ’05, Cooperative Key ’05, Long Fall ’06, Logical Decision ’07 - , my professional visits to NATO countries, my experiences on conferences, and the results of the processing of these I have incorporated by the dialectic unity of induction and deduction thus reaching my research objectives.

I have regularly published my researches and took the given remarks into consideration for my further work.

I have consulted in this subject with experts of the Hungarian Defence Forces, the Zrínyi Miklós National Defence University, the Air Force Department of the Hungarian Military Science Society, the Air Force on a regular basis and received information, opinions, and suggestions, all of which largely contributed to the formulation of my dissertation.

During my research I have studied confidential information and documents, however I only used that portion which are available for the public.

I have finished my basic and supplementary research in december 2010.

Summary of the chapters of the research.

In the introductory chapter I briefly analysed the current security political status of our days, the impact of safety environment on the military, especially with the joining of the Republic of Hungary to the NATO. I have explained the relevantness of the chosen topic, furthermore I have formulated the scientific problem for which I have aimed to give an answer. Besides these I introduced the methods of research.

1. Our place within NATO

The Republic of Hungary has taken a great journey since the change of regime in 1989-90. Out of a socialist based society and economy a civic democracy has emerged. The basis of all this was a radical change of the economy and the setting up of a democratic society. The re-forming of the military had the same basis. The Hungarian Defence Forces grew out of a mass army which is ability based, possesses organizational elements capable of reacting to the new security political challenges and suits NATO obligations.

The air force has a decisive part int he defensive system of NATO. The resources and capabilities offered by the members of the Alliance make the independent and cooperative usage of the air force possible. The forming of the forces and capabilities are done by the accepted doctrines of NATO and these capabilities furthermore the preparedness can be monitored effectively by NATO leading structures. During peace time the uniform aerial defence of the members is guaranteed by NATINADS. On operational areas the nature of the operations and the opposing forces (threat) define the composition of the air force.

The Air Force of the Hungarian Defence Forces takes its part of the common defending tasks from the beginning of the joining since it is an integral part of the aerial defence system of NATO. The Operational Centre of the Joint Force Command of the Hungarian Defence Forces and the aerial defence preparedness service based at Kecskemét fulfill their tasks subjected to NATO CAOC-5 as regards aerial defence. The preparation and order of task execution of the Hungarian Air Force happens in the spirit of the Hungarian Air Force doctrine which relies on the NATO air force doctrine.

As the Republic of Hungary became a full member of NATO the conditions for the future securitiy of the country have been created. However membership comes with obligations, since protection is collective the establishment of this protection is done by the contribution of the members proportional to their economic power and their population. The Hungarian Defence Forces are present with their specialized capabilities and designated forces at different operational areas where the interest and securitiy of the alliance has to be

guaranteed. Soldiers of the Hungarian Defence Forces serve at NATO commands, take part in the works of different commanding and professional organizations and by giving suggestions they also take part in the continuous reforming of the organization thus protecting Hungarian national interests.

All this is in accordance with the process by which in the past years the Hungarian Defence Forces has carried out more complex and valuable tasks. At the same time with the development of our undertakings the level of risks and the endangerment of our troops has increased. By taking part in internetional misions the acceptance of the Hungarian Defence Forces and the recognization of Hungarian soldiers has increased. Seeing the accomplishments our allied partners commend about Hungarian soldiers and the Hungarian Defence Forces.[3]

2. Tasks and possibilities of air transport sub units

The basic and primary task of the Hungarian Defence Forces is the protection of the country, after that comes the similarly important duty of fulfilling NATO obligations. Today the Hungarian Defence Forces posts about 1000 people to different missions in different parts of the world in NATO-EU-UN peace operations. Almost half of this contingent is posted on the Balkans, the proximity of which is decisive for the security of Hungary. We take part in the NATO led ISAF mission in Afghanistan with considerable forces. These two decisive operational areas, - the nearby Balkans and the several thousand kilometres far Afghanistan – mean a serious task as regards the stationing, supplying and changing of the troops.

The distance of the operational areas and the necessary short time factor justifies the application of aerial transport. The Hungarian Defence Forces possess certain air transport capacity which actually can only provide our basic needs. This existing capability is suitable to serve the operational area of the Balkans when it comes to the conditioning, changeing of the troops in small groups and transporting supplies in smaller quantities. Based on their technical abilities the operated AN-26 transport aircraft are capable of fulfilling tactical tasks. To the Afghanistan area besides our limited flight time on the C-17s of the Heavy Airlift Wing, we only have acces by the usage of allied airlifting and rented aircraft.

Taking this into consideration the possession of suitable transport aircraft for our own airlifts would be practical. In my opinion these aircraft should be divided into two tactical categories, that is six smaller capacity tactical transport aircraft and four aircraft belonging to

[3] Szenes Zoltán – Tálas Péter: Ten Years in NATO, ZrínyiPublishing, Budapest, 2009.; p77.

the upper segment of tactical transportation, which when needed is able to execute strategical size airlift under a reasonable timespan. Thus we would possess transport aircraft for the partial changeing of the troops, transport of material and most important, when dealing with unexpected situations is required. The same strategic transport capacity could be offered for lease to other nations. That would mean that the training, preparation and upkeeping of the skills of the aircrews could be realised by the continuous fulfilling of tactical tasks, furthermore running expenses could be considerably decreased.

Thus we would be in possession of an own transport capacity for unexpected situations. The readiness of the air crews, besides the continuous training, should be kept up by attending allied exercises and useing ground based training devices. The latter greatly increases the safety and the routine of the air crews when carrying out flight missions. This could be provided by leasing time on ground based training devices or acquiring an own device. An own device means continuous availability and the possibility of the leasing of free capacities. Besides the protection of the country the HDF takes part in different missions with considerable forces. The task execution and security of our troops must be provided by the reasonable application of available tools and the acquisition of new ones.

3. Tasks and possibilities of helicopter sub units

The usage of helicopters in Hungary dates back to 1953 when the first MI-4 helicopters were acquired. During the past decades the helicopter capability has gone through spectacular however controversial progress. This progress can be mainly seen in the training and the preparedness of the crews. Starting off from daytime VMC missions we have reached, as demonstrated during the unfortunate „red sludge” catastrophe, that air crews are able to carry out rescue missions by night with the usage of NVGs.

The primary objective of the Hungarian Defence Forces is the assuring of territorial sovereignty of the country. Based on this task system the examination of the technical composition of the helicopter capability is necessary. It can be proved on the basis of the previously introduced tactical account that not even in the case of a total readiness of the operated helicopters are they enough to fulfill their basic tasks.

The protection of the Republic of Hungary, furthermore the fulfilling of tasks due to obligations towards the alliance and tu ensure the necessary training and preparation 28 combat, 20 medium transport and 30 light helicopters are needed. In case this multifunction helicopter platform drafted by me existed, altogether 24-28 medium multitask helicopter would be needed besides the 30 multitask light helicopters. With the light helicopter

capability, which is non-existent at the moment, basic helicopter pilot training would be realised on a long term as well. Within government confines, on a military base, with instructors and set up standards, the helicopter pilot need of the police, the air ambulance furthermore a reserve helicopter pilot number would be provided. The aerial search and rescue service could be extended as well since with the application of light helicopters the military aerial services could be attached to the civil aerial ambulance system.

Besides the protection of the country the helicopter capability has appeared in operational areas as well. Members of the Air Mentoring Team (AMT MI-24), functioning within ISAF operations, have been instructing the MI-24 air crews and technicians of the Afghan air force for over a year now. Besides, in the year 2011 the training of MI-17 air crews and technicians has begun on a similar basis. Following this two plus one MI-17 heliopters will be deployed for two years to Afghanistan. The training of the Hungarian air crews and technicians for these tasks had finished proving their high level of preparedness.

In order for the tasks to be exquisitely and succesfully realised the timely refurbishment of the helicopter fleet is indispensable. By the British-French helicopter initiative the refurbishment of the MI-17s is being planned, thus those could be kept in service until 2018. At the same time the acquisition of medium transport helicopters must be started in order to keep up the continuous helicopter capability. As regards the combat helicopters the refurbishment of those can not be postponed any further. After that the combat helicopters could be kept in service until 2026. The solution has to be sought for the acquisition of light helicopters because that capacity could partly replace the absence of those 10 medium transport helicopters the acquisition of which is being delayed since 2006. The restoration of light helicopter capability in the Hungarian Defence Forces could be the solution for the problem of the previously mentioned pilot training and SAR possibility.

The protection, upkeeping and improvement of the helicopter capability is necessary in order for the Hungarian Defence Forces to be able to fulfill the objectives awaiting for it because besides the basic functions and allied obligations this is the capability that can be applied during problems in the civilian sphere, dealing with catastrophies and their consequences.

The results of my research will be summarized as follows

In my dissertation I have given an **overview** of the development, place and role of the army aviation capability of the Hungarian forces within todays Hungarian Defence Forces and the protection system of NATO. Along with this I have **summarized** the historical path which

characterizes todays army aviation capability **(tactical transport aircraft and helicopters)**, I have **drafted** the changes I found necessary to be followed for the upkeeping of the army aviation capability. I have **examined** and **analysed** the system of applicational principles on the basis of national and NATO regulators and doctrines, furthermore the organizational structures based on these, the humane and techical status of the capability. I have **written down** and **evaluated** the current status of the capability, I have **composed** the next steps I found necessary to be taken, the needs and possibilities of development. Without these humane and technical improvements the capability will cease to exist. I have **shown** those possibilities as well by which the capability could contribute to the financing of its own existence. I have also **enlighted** those new challanges which due to the changed global security political status and the resulting change in military applicational principles are effecting the preparation and training within the Hungarian Defence Forces and demand reformation in order to be reliable allies.

New scientific findings:

As the result of my dissertation I have reached the following academic objectives:

1. I have **proved** the *raison d'étre* of the aerial transport and helicopter sub units in the Hungarian Defence Forces, the professional necessity besides the defending roles for the realisation of the task system resulting from our allied obligations. I have **proved** that since our joining to NATO, despite the decrease in helicopter quantity the helicopter capability became suitable for functioning within an allied operational environment and cooperating with international forces. I have **pointed out** that the tactical air transport and helicopter sub units of the Hungarian Defence Forces today possess the ability by which they are fit for the requirements of home defence furthermore they possess that professional, theoretical and practical knowledge whith which they are able to fulfill the requirements giving the basis for allied application.
2. I have **revealed and organized** the expected war and peacetime military tasks of the air transport and helicopter capability. I have **proved** the future necessity of the development of the air transport and helicopter capability with special focus on the lack of capabilities in home defending roles and the increased missionary task system of the Hungarian Defence Forces. I have **defined** the practical directions for development. I have **pointed out** that the existing level of helicopter capability means only the basis for application within multinational forces. After knowing the exact objective further development and succesfull training is needed for operational application.

3. I have **proved** that for our missionary undertakings the air transport capability of the Hungarian Defence Forces does not possess the necessary humane and technical resources. I have **shown** that future army and capability development is fundamentally influenced by the fact that the importance of the composition, quality and preparedness status of the forces will be increased. The importance of capabilities like the ability to quickly adapt to the endangerment status of the forces and the flexible changeing of preparedness status proportional to the level a threat will be increased.

I have **pointed out** that based on the present status of the air transport and helicopter capability of the Hungarian Defence Forces furthermore the status of similar capability of other memebers of the Alliance, the principles of tactical application, the practical experiences of ongoing operations and the real demands of operational areas, future requirements, directions for technical development of the tactical transport aircraft and helicopters and directions for the training of personnel could be composed.

Proposals, annexes

In my opinion the material of this dissertation can be used for instructing in the subjects of usage of the air force in war and non-war times at the Zrínyi Miklós National Defence University.

The introduction of modern, everyday NATO army aviation application and support task systems and structures might help in the formation and reinforcement of joint force thinking and view.

The results of my research and my proposals contributed to the reformation of the army aviation capability of the Hungarian Defence Forces until 2020-2025, thus we could possess a force suitable in every sense for home defence and for fulfilling our allied obligations. Thus I recommend this dissertation to those colleagues who work at the fields of tactical application and army planning.

Further suggestions for research

In my opinion the analysis of the army aviation capability has a lot of potential which needs further research for the sake of effective preparation, training and tactical application.

I find the completion of an other analysis important, which would basically deal with the further training of the existing tactical air transport crews, the possibilities of effective application, with special focus on application on operational areas beyond tactical application and in climates different from Europe.

The training of air cadets seems to be solved by the NFTC program, however it would be practical to examine if this solution is effective enough for the needs of the Hungarian Defence Forces, is the selection of the cadets and their integration into the Hungarian training structure effective.

I have specially touched upon one of the most important roles of helicopters in my dissertation, that is search and rescue. This task system is very complex, it would be necessary to examine possible joining points of home air ambulance services and the military search and rescue service for the sake of optimizing operations.

The principles of army applications had already changed a lot, the new challanges need to be dealt with by the available tools, methods of training and new regulations need to be created for the new applications. When combat helicopters appeared their main role was the overcoming of ground targets. Today, due to mass helicopter usage the topic of helicopter versus helicopter air combat emerged and became real.

This is an exciting new topic, the revealing of which has already begun and should be incorporated in the training system of helicopter pilots.

During my military carreer I had the opportunity to do my college and university studies abroad. As a young helicopter pilot and later in different levels of commanding assignments my every day work was defined by aerial tactical training. During these times – disregarding the „natural" professional affections – I had the sense that my profession, army aviation is not being treated at its value, its being pushed into the background. I have been looking for the means to be able to do more against this. During the General Staff Course I have realized that with the help of military science I might be able to bring people's attention to *do it better, do it different, more needs to be done*. I would express my thanks to my consultant for his indefatigable and enduring help, to my professors, my teachers, my colleagues, my friends and last but not least to my family for their patient support.

My publications in the theme of the dissertation:

Study papers, articles:

1. The main task and joint employment of Hungarian Air Force. AARMS 2008. Volume 7 Issuie 4.
2. A merevszárnyú légi szállítás felértékelődő képessége. Repüléstudományi Közlemények, 2003 XV. évf. 35. szám
3. Természeti katasztrófák következményeinek felszámolása (Árvízvédelem a Tisza mentén). Repüléstudományi Közlemények, 2006 XVIII. évf. 38. szám

4. A Magyar Honvédség helikopterei alkalmazási lehetőségei balkáni hadműveleti területen. Hadmérnök 2007. június
5. A helikopterek és szállító repülők – adalékok a légi szállítás alternatíváihoz, alkalmazási lehetőségeihez és elveihez. Új Honvédségi Szemle 2007. november
6. A helikopter alegységek feladatai, lehetőségei. Nemzetvédelmi Egyetemi Közlemények 2007/3. szám
7. Helikopterek alkalmazása a terrorizmus elleni harcban. Hadtudományi Szemle 2008. 1. évf. 3. szám On-line kiadvány
8. A magyar katonai szállítórepülés jelene, lehetséges jövője a Magyar Honvédség nemzetközi szerepvállalásának tükrében. Sereg Szemle 2009/2. szám
9. Szállítórepülők alkalmazásának aktuális kérdései a Magyar Honvédség missziós feladat rendszerében. Repüléstudományi Közlemények 2009/2. szám On-line kiadvány

Scientific lectures held in the field of the theme of my dissertation:

1. Helikopterek alkalmazhatósága, a légi kutató-mentő képesség technikai felszerelése és a fejlődés irányai. ZMNE RMI Szolnok Repüléstudományi konferencia. 2003. április 4.
2. A helikopterek katonai alkalmazásának lehetőségei és a katonai alkalmazás valósága Magyarországon. ZMNE RMI Szolnok Repüléstudományi konferencia. 2005. április 15.
3. A MI-24 harci helikopter hosszú távú alkalmazása a 2236/2003. (X. 1.) Kormányhatározatban a Magyar Honvédség számára megfogalmazott feladatok tükrében (Társszerzői arány: 50%). ZMNE RMI Szolnok Repüléstudományi konferencia. 2005. április 15.
4. MI-8/MI-17 szállító helikopterek alkalmazása a Magyar Légierőben (Társszerzői arány: 50%). ZMNE RMI Szolnok Repüléstudományi konferencia. 2005. április 15.
5. Harci helikopterek alkalmazása a légtér védelmében. ZMNE RMI Szolnok Repüléstudományi konferencia. 2006. április 15.
6. Az első magyar óceánrepülés emlékére. MTESZ Szolnok. 2006. november 9.
7. Helikopterek alkalmazása a Balkánon. ZMNE RMI Szolnok Repüléstudományi konferencia. 2007. április 20.
8. Helikopterek alkalmazása a terrorizmus elleni harcban. ZMNE. 2007. november 20.
9. Repülő és helikopter erők alkalmazásának időszerű kérdései. ZMNE RMI Szolnok Repüléstudományi konferencia. 2008. április 21.

10. MH Légierő alaprendeltetése, fő feladati és összhaderőnemi alkalmazása. ZMNE KLHTK. 2008. május 19.
11. Légierő alkalmazása hadműveleti területen, terror csoportok felszámolására. ZMNE KLHTK. 2008. november 13.

Other

A szállító repülő és szállító helikopter alegységek alkalmazási lehetőségei a NATO szövetségi rendszerben (Szakdolgozat). ZMNE EKK KSZ 888. 2002.

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2004. 04. 15. – 2006. Commander of 86. Szolnok Helicopter Regiment;

2003. 12. 01. – 2004. 08. 31. Comissioned commander of 89. Szolnok Combined Airlift Regiment;

2000. – 2003. 11. 30. Deputy commander of 89. Szolnok Combined Airlift Regiment;

1999. – 2000. Comissioned deputy commander of 89. Szolnok Combined Airlift Regiment;

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1984. – 1987. Deputy commander of 2nd helicopter squadron of 1936. Combined Airlift Regiment.;

1983. – 1984. Deputy commander of 2nd helicopter squadron of 6690. Medium Transport Helicopter Regiment.;

1981. – 1983. Pilot in chief of 2nd helicopter squadron of 6690. Medium Transport Helicopter Regiment;

1977. – 1981. Copilot of 2nd helicopter squadron of 6690. Medium Helicopter Transport Regiment.

Education

PhD study of Miklós Zrínyi Defence University, Budapest.

2001. – 2002. War College of Miklós Zrínyi Defence University, Budapest.

1987. – 1990. Gagarin Air Force University, Monyinó.

1975. – 1977. Air Force Academy, Frunze.

1974. – 1975. György Kilián Air Force Academy, Szolnok.

1970. – 1974. Precision-engineering Secondary School, Szolnok.

1962. – 1970. Tallinn-district Elementary School, Szolnok.

Courses

2000. English language course, Kanada, St. Jean;

1999. USAFE' squadron commander' course Ramstein, Németország;

1995. NATO Staff Officer' course Rijswijk, Hollandia;

1993. English Basic Language course, György Kilián Air Force Academy;

1992. Basic software course, Szolnok.

Foreign languages:

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English – advanced category „C", STANAG 3.3.3.3.

Decorations:

Ministerial decorations;

Knight Cross of Hungarian Republic 2007;

„Silver Memorial Medal" of Szolnok City 2007;

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János Hunyadi Award 2010;

„Silver Pelican Award" for Szolnok City 2010.

Budapest, 29. 08. 2011.

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