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The need for, and the role of automated identification in the Hungarian Defence Forces

PhD thesis

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The successor is the draughting of the scientific problem. First and most important recognized problem, that in Hungarian Defence Forcesthe registrar in systems onto the primary identification of the devices not HETK delivered up central number (HETK - Honvédségi Egységes Termék Kód) the only widespread opportunity, furthermore, that the supplying centres do not publish the article register of the devices belonging to their supply circle, or forms are not used for the claim of the maintenance substance (pleasing exception only the health service). Verifiable, that at the supplying centres' logistic service not only a netted registrar provided central a program is used, at the same time the supplying centres and the data flow is going on a voucher simply between their depositories, the up-to-date of the registers, only on a manual road assured. The supplying centres and between the military organisms only the paper basis voucher flow the in use and in the relation of the logistic services and a financial affair it countersign. The exploration of these problems, the their solution was proposed proposals are shifted onto only one in the course of the years and with this only newer and newer problems are generated.

Appeared obvious for me, that let me examine the place of the product identification and his role in an environment in which the express and accurate information have extraordinary significance. I had to ask the question what kind of prerequisites the application of the product identification system has on the area of the military logistics on the hook of this, how the product identification system may contribute to the optimisation of the military logistic processes.

They were my research aims:

· To reveal the substance flow process and the product identifier the contacts of a system.
· To define the logistic functions of the codification.
· The examination of the contact of the logistic informational system and the logistic resources.
· The logistics is the examination of the functional integration on his area in the mirror of the product identification.
· The forming of the national codification strategy, his content.

From among the military science researches a development research, in which they are the research aims in the interest of his successful fulfilment, was present research, I applied a so research method, than the comparative method, furthermore from among the strange methods the induction and the analysis. I did critical adaptation furthermore document analysis.

Attaining the set research aims in his interest:

- I studied it to the topic related domestic and foreign country literature,
- I made use of accessible electronic academic specialisation substances on the internet,
- I attended different conferences where I obtained experiences in connection with the logistic supplying systems. I made use of my experiences for the shaping of my own system notion,
- I published my research results continuous,
- I consulted the specialists accomplishing a service in HDF depositories and the foreigner travel with experts working on this area on his row,
- I continued talks Canadian and somebody else NATO in a member state's armies maid with colleagues through the web, these I made use of his results at the compilation of my treatise,
- Utilized the topic my theoretical experiences experience was gained on National Defence University Zrínyi Miklós in the course of his education, and my inferences,
- I made use of my experiences experience was gained in my emphasized field officer arrangement,
- I attended scientific conferences and it there delivered utilized.

The first chapter is about Hungarian Defence Forces's distribution system (material) the analysis of his processes, strange in consideration of the development guidelines of the logistic supporting system title carries it. In this chapter under a microscope I bought Hungarian Defence Forces economization procedures, and the branch and for functional regulators' differences him affecting the management of the substance flow processes.

I examined the present codification system in the first chapter likewise (HETK basis) and the informatics support of the material processes. I revealed the more capital guidelines of the development of the logistic supporting system the process orientation, the transparency, in the mirror of the standardisation of the substances and procedures.

My inferences the conclusions were drawn based on the first chapter are the successors.

For some processes of the economization to the claims conforming, his bugdet management requests the supervision of the actual physical substance motions and his regulation maid, reliable, his transparency being based on timely data, the to it owing, it together with antecedent information flow.

The function-oriented task would be necessary to switch from a solution the process-oriented onto a solution. It is necessary to apply it overall the academic specialisation task order onto the army logistics. Currently 1800 or so task order is known, this but it is flexible expandable on Defence Planning System from within. It is necessary to break with that thinking, that the codification treats it as necessary bad one, and it is necessary to recognize that this is device like that in the hand of the leadership finally with the help of which the logistic resources may be optimal.

Finally, it is necessary to say that the road leads to NATO's multinational supply system through the correct codification simply in a last row! Let us think about Host Nation Support simply, onto UN you are any kind common, onto a multinational task which requires a logistical support, everywhere apart from the English the condition of speaking the single language it uniform codified, 100 % the application of products identified with safety!

The most important inference, that to the various military operations can be ordered logistic strengths budget, process-oriented his maintenance and his development presuppose a tall logistic informational system integrated on a degree. The other not less important coming next though it, that for the logistic supporting system currently negligible his operation contact.

It is formulated as the element emphasized in Informatics Strategy for HDF leadership system with a constant character his modernisation, his technological standardisation; the currently independent island the integration of working system components. One of the most important objectives of the program it, that onto the end of the development period it HDF constant news and his informatics networks for the technical standard of the age suitable, onto uniform subsystems under construction and news providing a uniform service, informatics and let him turn into an information protection system. Other his objective is important to create it on the standard of the age standing, the application claims satisfactory leadership and the function of a management informational system.

The branches developed their own electronic record systems in the course of the past years, but these systems are unable to communicate with each other.

In **the second chapter** I wrote about the product identifier from a system, I wrote about his basis to the informatics support of the substance flow processes. Inside it the distribution from the capital processes of logistics: from a substance flow and from the information flow being attached to him functional.

I revealed it here the product identifier the functions of a system the physical processes of the substance flow in his mirror and the product identifier the informational processes of systems.

On a treatise his important part this, since I write here the codification from place, from his role the substance flow processes automated, in his budget management, and the codification strategy national and NATO from forming according to requirements.

According to my not less important opinion the product identifier the technical content of systems, his procedures and his devices, which received place in this chapter likewise.

One of my thesis's apices in my humble opinion the connections of functions of identifier system's with logistic processes, with procedures, this is the part of the second chapter, as well.

Most important inferences the conclusions can be drawn from this chapter according to my opinion that it is necessary to think in an integrated system before everything.

It is necessary to lay it down, that merely, a solution which is suitable for a product identification little, it is necessary to develop the related surfaces with the help of which they are the single logistic functions processes we insure his organization.

It is very good, for example if we can execute a stocktaking quickly with a barcode reading system, but it is much better if this system is in a contact for example the stockpiling, storage (container place) or with the order module, but it trouble, if the financial, can engage in accountancy processes.

With the help of an integrated system pl. the received freight purchasing his fixing the comparison of the items on the supplier register and the freight a barcode may happen to a reading. The process of movement of products automatically will be scanned with barcode sensors, so traceable. As soon as the freight crosses a gate or gets beyond a certain working phase, it RFID system is able to identify the freight, and to fix the event and its time.

This area affecting the operation system of the military technical device in a concrete case that proves to be indispensable one in the future, what beyond the tasks of maintenance it supports of lifecycle task as well.

The peculiarity of the integrated systems, that they on the row of his planning and his introduction the reconsideration of the processes and his less or greater transformation is claimed the mostly. This work can be done only with teams with familiarity with the place and with competence, at which organizational preparedness is possible successful to do.

It Is important for suitable competence to be at the teams' disposal, that let the aims be able to be cleared up, and systems can select the integral from wide choice standing for a provision on his area in the truth which needed, and functions that needed.

Before installing the integrated systems, after the acceptance of the setting plan writing the processes to be integrated down, it is possible to verify the parameter of the module of the given system under short time according to the claims, his modules. The modul(s) his sharp firm's launch finished in teamwork testing, education, and the necessary application aids' completion and after data charging setting off expedient. This labour intensive process demands the intensive collaboration of the team's application participants likewise.

The problems are avoidable switching to the new system on his row if the changes are executed gradually. Because of this advisable, that let us be weighed things up in the course of the introduction on all of them organizational and process change from that viewpoint, that cannot be put off onto the period when the problems around the conversion were averted already.

It seems probable if we contemplate the processes of the logistic modernisation until now ironical that the military leadership with an upper level renounced the application of the modern integrated informatics systems because he did not manage to get yet onto a rest the organizational transformation. According to my opinion this argumentation only they are acceptable to him, who are not able to recognize that he is the device of using the modern informatics systems for the execution of the logistic modernisation and in one his condition.

It is forgotten in the course of the big organizational transformation campaign that developing the logistic organisms is expedient in that manner; as if these integrated informatics systems would exist already.

I wrote it down in one of the subsections, today already not enough aims NATO the overall introduction of a depository number and a codification, more are needed already today, it is necessary to introduce it prompt the GS1 standards suggested by a system and it is necessary to take advantage of the opportunities residing in them.

Unfortunately the Hungarian defensive industry (declared one exists so) did not take notice of those business opportunities, that it in NSN (NATO Stock Number) introduction/they reside in his usage and we admit it the domestic military-logistic society does not have ability to enforce interest in his record-breaking form, since the codification clause of the procurement contracts, Ministry of Economy and Movement did not appear on spring 2007. despite an order is capable of the achievement of his product identification aims.

The **third chapter** from the automatic product identification system model's forming and from his application is about the informatics support of Hungarian Defence Forces' material processes.

I am lecturing here the product identifier from the aim of a system model's formation, from the model's construction, from his functions and from his contacts the a supporter integrated logistic processes in his logistic informational system.

Outstanding part of my thesis is a head and additional processes are typical of the substance flow for my paper (RST) the description of the need of information, his data structure, data collecting, - storage and processing the exploration of his system.

It is a part of the third chapter, as well, the presentation of the possible function of a system the product identifier.

My results are from the third chapter.

Is not sure that himself would have been needed for HDF LGIR (Logistics Information System) into a development to hold, since there are quite a few firms on a sign on the market, who suggest ready solutions. An option it may be that we reject the additional development LGIR conclusion, than opportunity and we are thinking in a ready system. This but the given system begins with his customization always and more time and takes advantage of more money of course.

Since the computerised corporate management systems grew out of the production management software, originally primary the financial-accountancy area, the depository register, the economization, the reporting, and the human resources treatment was covered. On the river of the times the developers increasingly more of the elements of the corporate function you are struggling along to involve, and increasingly more knowledge crowded it already for a corporate resource plan (Enterprise Resource Planning - ERP) the transactions not subsequently, but in the moment of their taking place into a processing system, so it is really real time.

With the ERP systems all taking shape the control shirt, the management all secured an enormous informational base: these systems constitute the companies' informatics basis today with their functions expanding continuous. Nowadays can be related, that the information powers though, but the real power the sharing of the information.

I faced an idea that accomplishing HDF Logistic Supply Centre is with a green field investment in the previous years, with his inclusion of private capital, but without any informatics support, that let him be cheaper. It by way of me wrote down it is proven that this would be a totally unusable investment.

I wrote the functional requirements considered by me important one, which we may make on the automatic identifying system, down.

The examples revealed by me work, the adaptation; a potential correction would be applicable in the army well based on my paper. Potential with a single MINCOM and/or AURA solution adding HDF would get richer by a modern logistic informational system fulfilling all claims, to which moreover easily can be fitted an automatic identifier would be a system.

I have proposed to create a sample depository on HDF LSC base where there are products like that we finished his codification already, here can be tested the automation and it would be possible to draw the conclusions, onto that case when this would come true on a large scale.

Cannot be maintained long, the idea that the depository is modernisation (fusion) goes dead from it, that I bring a depository's administrative tribe to an end, at the same time the depositories physically onto a place without moving on more depots working, I would create a quasi-depository, mainly not computerised without any on-line a contact.

It is the most important inference that the product identification is his engine for the function of the integrated informatics system certainly. From this budding the place of the automatic identification in the logistic chain quasi everywhere demonstrable his role though leading role, and there is no way to avoid it!

It is possible to bring more examples from the international literature naturally when they write about the fact that it is a rapid deployment capability - RDC without an automatic identification ability, that is cannot be imagined.

In our days the MoD Development and Logistic Agency’s leadership resumed LIS (Logistic Information System) with his formation/working party dealing with its research, of which he expects the one that he entrusted with a wide-ranging collection of materials, that the outside workers write down their expectations about the input/output signals.

Summary of Deductions

My exploring were settled in November 2007. July work-room does not capture discussion sounded criticisms after paper's happening correction. Summarily written relating, how logistics specialty information technological upheld void not only the professional, but all of Defence Sphere's any further development's is the flood-gate. KGIR does not exist MoD does not operate, as/MPH

information system's the most important data ministering battery unfortunately, in spite of every expert's struggle, his only partially able mission to comply with, since the join forces with logistics informational system/. Herein must mention, so that MoD integrated KGIR himself, one well operating and without logistics informational system able the defense farming effectiveness and keep their transparency requirements. His important conclusion yet the Bognár’s PhD declared disquisition, how logistics guides over 30 -the so, so that their the farmers influence able effectiveness. Outcome speaks on behalf of that's right himself, LGIR let out KGIR void for a long time already deem and any further developed.

Advancement does not capture principal, one's unavoidable task unitary stand-alone IT programme's wear his ordering the supplier centres, or only centrally codificated does not capture husbandry provision to bid, how (HETK-) having instrument does not team, and the registers this obliging prime identification to utilize.

Problem may not be fed up with answer such IT supporting system his structure and his operating target, which arrest his content husbandry processes manufactory economic ocular juice needle's display follow, national defence is aware of flowing, up to date data to minister „life-cycle” his understanding functional model.

Their producers and must receive logistics informational system through verticals their the consumers logistic appertain all of logistics process. Free to be satisfied does not capture one optical logistics division answer, must strive that, the disztibúciós and may be so that the inverse also does not team logistics processes to switch the system, ergo must materialize full track succession!

In my view budgetary balance may not be his creation, his developing instrument may be defence ability's conservancy and logistics system modernization, this side by side, but the logistics management support modern IT systems.

Updating may assist, rationalizing instruments defence expenses' decline, at least the extant warrant this all together effectiveness's rise, ultimate series' air fleet developing, the interoperability the improvement extra springs, but within deviating utilization (spare) potentials.

Would be of course yet plenty of point of view to supplement this trial, however this perhaps did not give in full spectrum the side number on account of limit. This well reason any further prosecutes however that, how even myself, even other, consume this disquisition the investigative labour and supplements that.

I deem paper's outcome, so that I formulated that fact, so that logistics targets and demands barriers' heeding such wide-ranging approach, which does not strive only the technical, information and professional countryside's' integration, the real process does not comprehend but sews that also, how single logistics chain. Distribution logistics must integrate does not capture his this interest optical-division's countryside more military logistics functions, off must place that that processes and structures, which does not capture you concerned indirect direct mode the military optical-distribution system's pursuit.

One helical we may interpret development-process, erenow we did not buy which division, but the present our turn-on already we are not aware of one former state to join in, that way righteousness must our hammers the arrear, i.e. one superior rate we must follow the development. Therefore I wrote in some vice-chapter that, so that the HETK already may not be enough to create-NSN transparency, already the task is inauguration the GS1 global standards'!

I was thought, so that civilian logistics task must accept the truth optimum quest (chiefly expense optimum = edition reduction), the military logistics goal this, dared our number the target the winning, that however, so that this winning may not happen at all costs, chiefly peace-time. Our task we find yes indeed, how being the smallest expenditure executing logistics upholding mold, this but does not capture do not fancy our days without drastic IT support!

The results of the research

1. I revealed, so that codification system backs up material-flow process, moreover the process tool without him at last 100 % safety, at the same time I formulated, logistics does not capture so that ordering logistics forces fancy without informational system integrated high degree the multiform military procedures expense effective, process-orientated conservancy and his developing.

2. I defined three main, our point's of view-required function, such as
   A. Strategically instrument for optimization of consuming logistics resources,
   B. Quality insurance function,
   C. Procurement's management function.

3. I proved, so that product I summed identification's ante the logistics system functional integration, as well as, what target -like to contain the national codification strategy.

Recommendations:

In point of view my thesis:

1. Accepts of “born” of automatical identification system.
2. Assists to shaping of point of view for resolution bringing.
3. It can as fundament logistics experts, as well as for topic's prospector.
4. Can be used for military upper instruction, academicals basic, subsidiary training, and the logistics guides ‘pre training the teaching materials' coupling.
5. Assists in the future investigative labour.

I suggest this composed my paper's studying, who also are towards that logistics commitment feeling experts, in addition yet decision lay! Assembled and sowed paper my experiences, writing-table I intend my ideas of course not filing drawer, entertain expert amortised but I postulate, as every exploring, actively division to buy by me his realization, whereupon LIS is now re launched exploring link my every chance!

Publication Register:

Publications in Hungarian:

1. NATO codification system Military logistics 1999/4 Budapest. ISSN 1588-4228
2. Logistics mentality's emergence the storage Military logistics 2000/1 Budapest. ISSN 1588-4228
3. Hungarian military codification system's conversion, the front move towards the automation him. Military logistics 2000/4 Budapest. ISSN 1588-4228
4. NATO and Hungarian military codification process and their techniques. Military logistics 2001/2 Budapest. ISSN 1588-4228
5. Product identification's tech ante in the logistic. Military logistics 2001/3 Budapest. ISSN 1588-4228
6. Automatical product does not capture identification's space, his role in the Hungarian Military material his optical system. National Defence University Doktorandum Compiling: Dr. Szilágyi Tivadar Budapest 2002. ISSN 1588-2233
7. Hungarian military codification system's conversion (Internet publication) www.netlap.boo/doctors/does he survey.php?/ID_28
8. Informatics and the automatically product identification in military logistics 2002/1 Budapest. ISSN 1588-4228
9. One Item-One Number (One product (stock) number) licentiate Conference material. Budapest 2001 Liable extraditing: Dr. Szabó Miklós
10. The logistics informational system „Sword and pen" select the Military scientific doktorandus instructional 2002/2 ISBN 963 7037 52 7 Budapest
11. NDU Academical Forum wide cooperation (mutual publication prof. Dr. Báthy Sándor nyá. colonel 50-50-ban) Liable extraditing: Dr. Piószeghy János Budapest 2003/6 http:www.zmne.boo/Forum/03juni/maglite.htm
12. MINCOM logistics answer Military Logistics 2004/4 Budapest. ISSN 1588-4228
13. Canadian answer stock processes' automation the material supply Military Logistics 2005/3 Budapest. ISSN 1588-4228

Publications in English:

1. Automated identification of items in Hungarian armed forces Princess Royal Barracks, Deepcut, Royal Logistic Corps of the British Army – Library (Can not be reached through Internet)
2. The need for, and the role of automated inventory control in the Hungarian Defence Forces supply system - Istituto Superiore Di Stato Maggiore Interforze (ISSMI) Rome Italy – Library PI/47
   http://catalogo.casd.difesa.it/ListDocument.htm?Level=0&title=checked&doctype=checked&ref=checked&comment=checked&author=checked&descriptor=checked&fields=checked&what=berzsenyi

Lectures:

1. Hungarian Military Science Society (HDFTT) logistics expert divisional session 2001. December 12 ZMNE 040-es auditorium NATO kodifikációs system
2. Hungarian Military Science Society (HDFTT) logistics expert divisional session 28th Nov 2002. ZMNE 040 auditorium. „Logistics functions of codification".
3. One Item-One Number (One product one (stock) number) BKNYK auditorium licentiate Conference 2001.
4. Product identification the Hungarian Military DEEPCUT Surrey Royal Logistic Corps MAGLITE Exercise

My professional scientific curriculum vitae:

From August 1985 till July 1990 I was a student of the Kiev Radio Technology Engineering College. After domesticating the degree on his row the Ministry Cultural and Education knew it as a Hungarian degree like a university diploma.

My first officer's arrangement was, on a HDF 54/11 Radio Technology Battalion as a locator engineer. Spreading around the echelon in the course of the years, initially exploiter service chief, later material and technical (logistic) chief, and than I was chief in staff.

I attended in 1998 to National Defence University Zrínyi Miklós I studied general military logistic, which I finished in 2000 with excellent result. I started my publication activity at this time.

After that I applied for a student place to Doctor School at the same University. The school's leadership accepted my application and it was supported from the MoD part as well. The university-leaving certificate I got in December 2003. I published the considerable part of my articles turning up currently under this period and I kept the considerable proportion of my lectures.

From 1 January 2004 I worked at HDF Logistic and Support Command as a staff officer till 2007. We dealt with the long-term plans of the logistics, mostly in this arrangement, we formed higher controls. I got to designation in the same arrangement of mine, NATO in working groups' truth onto participation; I represented HDF through more years in different logistic working groups.

I created working group inside HDF for the teaching of LOGREP (logistic reporting system) I made it through more years.

In 2006 I was designated into NATO's Rapid Reaction Force (NRF) as Staff Officer, whose row I attended in Norway, Steadfast Jaw and Steadfast Jaguar executed on the Cape Verde Islands.

From 1 January 2007 till now I have been working for MoD Development and Logistic Agency Economic Directorate as staff officer (deputy head of economic branch).

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