A TRAINING SYSTEM IMPLEMENTED IN WAR STUDIES UNIVERSITY OF HMS C3IS JASMINE COMMAND SUPPORT SYSTEM IN THE TIME OF THE COVID-19 PANDEMIC

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Abstract: *Modern IT support is a must in Armed Forces in any country that is willing to be able to conduct in other than safe conditions. This article is about the latest implementation that was taken in War Studies Univercity that affect the whole Polish Armed Forces and allows to prepare new kind of commanders – familiar with the Command Support Systems.*

Keywords: *Command Support System, Military Decision Making Process, Training System, NATO, NNEC, NCW*

Introduction

IT systems are common in almost all activities that people conduct on a daily basis. In civilian environment IT is used to every single thing. Imagine that it is not possible to solve any task without the IT system support − from buying the ticket to the bus, ending with the communication with the relatives. The same is becoming in military environment. Nowadays more and more activities are supported by specialized IT systems.

To support the growing importance of IT and ICT in military War Studies University started more than a decade ago cooperation with the most advanced Polish producer – Teldat. That company produce the hardware as well as software solutions dedicated to the military and the national security system. Thank the cooperation there was a possibility of improvement the both sides – from the Teldat side it was the acceleration of improving the system from military side (the technical side was in accordance with the NATO standards), for us – military – it was the possibility to check the latest possible solution in IT Command Support Systems (CSS) implemented in NATO and in the world.

That cooperation was the best at that time – in 2010 we as a University started tests and improvements in CSS made by our Polish company – Teldat.

Creation of the first Laboratory of Command Support Systems in War Studies University

The cooperation with the Teldat was possible because we met together on the battle field during the variety of tests conducted in the real conditions. Their CSS system was as a proposal tested in the worst possible conditions − in the field and with the radio connection. That was the trigger to try to invite the Polish company to conduct the researches to take full advantage of the opportunities for our University and Polish Armed Forces as well as the company Teldat itself.

The cooperation stared with the creation of the first Laboratory of Command Support Systems in Polish Armed Forces

It started in September 2010 and was accomplished in December 2010.

On the fig.1 there is a main entrance to the Laboratory in December 2010.

Fig. 1. Entrance to the first CSS Laboratory in Polish Armed Forces in 2010
Source: Author's picture.

Since the Laboratory opening all the exercises conducted in University was with the C3IS JASMINE support. That gave a lot of experience and research conclusions for the producer.

Figure 2 and 3 shows the laboratory during one of many exercises organized in University since Laboratory creation.

Fig. 2. One of the exercise conducted in Laboratory in January 2011.
Source: Author's picture.

Fig. 3. Second class of the CSS Laboratory and the officers during the exercise
conducted in Laboratory in January 2011.
Source: Author's picture.

Thank to this activity there was possible to create different versions of the system. The basic version in a short time has changed into two and later into three different versions for the operator. It was:

- DSS JASMINE – Dismounted Soldier System JASMINE – dedicated to the soldier level;
- BMS JASMINE – Battlefield Management System JASMINE – dedicated to the vehicle level;
- HMS JASMINE – Headquarter Management System JASMINE – dedicated to the Command posts – from battalion up to the highest level.

And that was only the beginning of the cooperation. Later the company created much more different versions of the system. To mention only some of them we have to count:

- JFSS JASMINE – Joint Fire Support JASMINE – dedicated to the JTAC specialists and to the targeting team;
- HMS Web Portal JASMINE – Headquarter Management System JASMINE – web version of the CSS dedicated to the non-military elements during conducting the Military Decision Making Process (MDMP);
- CMS JASMINE – Crisis Management System – dedicated to the Crisis Management Teams;
- CMS JASMINE Web Portal JASMINE – web version of the CMS JASMINE

Figures 4 and 5 shows the usage of the CMS during the PIERŚCIEŃ-12 exercise in the non-military elements.

Fig. 4. Usage of the CMS during the exercise PIERŚCIEŃ – 12 in June 2012.
Source: Material from the Pierścień – 12 exercise.

Fig. 5. Usage of the CMS during the exercise PIERŚCIEŃ – 12 in June 2012.
You may see the Teldat hardware solution dedicated to the different level of command.
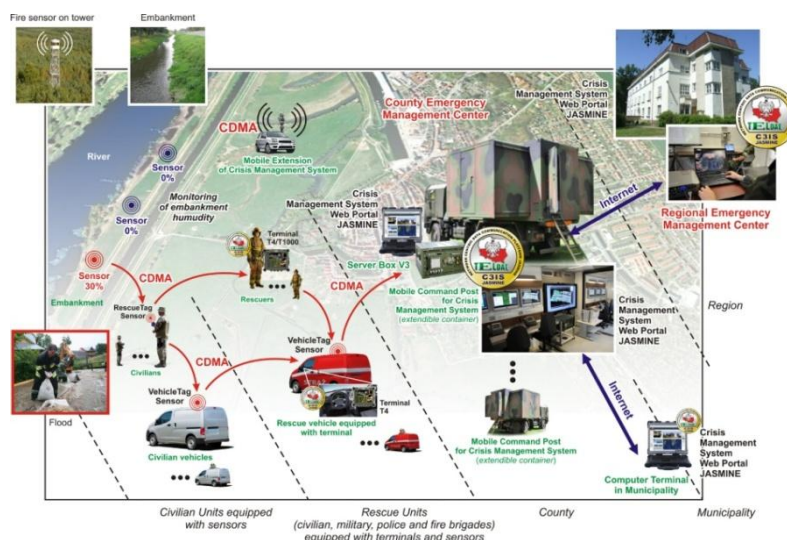*Source: Material from the Pierścień – 12 exercise.*

Fig. 6. Scenario of usage of the CMS during the exercise PIERŚCIEŃ – 12 in June 2012.
Source: Material from the Pierścień – 12 exercise.

Naming the laboratory

Our cooperation between the Teldat and the University take a few years until there was a decision taken to name the Laboratory with the very important person that was willing to implement BMS JAS-MINE system into the Polish Armed Forces – Lieutenant General Tadeusz Jan BUK. The General was one of the commanders that tested with us the system during the exercises in battle field with the troops (soldiers, vehicles and Command Posts). His conclusions were that JASMINE system is the one of the best on the market and Polish Armed Forces are forced to implement it as soon as possible.

Because of the air crush his idea was postponed for many years. We wanted to appreciate his approach to the implementation the latest solutions from IT into the army and proposed to his family to give to the CSS Laboratory his name. The idea was approved and in 2015 there was a ceremony of naming the CSS Laboratory with the name of Lieutenant General Tadeusz Jan BUK. It is visible on the figures 7-9.

Fig. 7. Naming the CSS Laboratory – 2015.
Source: Author's picture.

Fig. 8. The General's son (second on the left) during the naming the CSS Laboratory – 2015.
Source: Materials from the ceremony .

Fig. 9. The General's son (in the center cutting the ribbon for the opening ceremony)
during the naming the CSS Laboratory – 2015.
Source: Materials from the ceremony .

Implementation of C3IS HMS JASMINE

In 2018 there was a decision taken by the Chief of Staff of the Polish Armed Forces HMS JASMINE system was implemented into the Polish Armed Forces as a primary Command Support System. There was a decision that until December 2020 Polish Armed Forces is supposed to be ready to use this system.

As an answer War Studies University prepared extended version of training of HMS C3IS JASMINE. The extension was necessary to implement to speed up with the number of operators trained with this system. Until the new training system all the University students were trained with the HMS C3IS JASMINE system during the education process during the academic year. New training system was dedicated to the whole soldiers from Poland (and also the NATO countries).

New training system was implemented in 2019 and consist of the five level of courses. It is shown on figure 10.

Fig. 10. Training system implemented into the Polish Armed Forces in 2019.
Source: Author's and Teldat materials.

The training system consist a few levels of the knowledge of the HMS C3IS JASMINE system.

- 1st level – BASIC COURSE is dedicated to the operators that do not know anything about the CSS system. It takes 5 working days (ap. 30 hours) and give the knowledge to operate the system;
- 5th 2nd level – ADVANCED COURSE is dedicated to those who accomplished the 1st level course and give the advance knowledge of the system. It is more concentrated on MDMP showing the operator role during each of the phase of the process;
- 3rd level – PREPARATION AND CONDUCT OF THE MILITARY EXERCISE with the HMS C3IS JASMINE system is dedicated to the teams that are responsible to prepare and conduct the military exercise. To accomplish this level candidate must accomplish the 1st and 2nd level of the training;
- 4th level – OPERATIONAL ADMINISTRATOR of HMS C3IS JASMINE system is dedicated to the operators that are responsible for support the Operators on the Command Post with the system running. To accomplish this level it is required to accomplish all previous courses;
- 5th level – INSTRUCTOR of the HMS C3IS JASMINE system is dedicated to the persons that are going to organize in their military units the courses at the first level. Thank to this there will be more instructors and it will be much more popular to get the first level course.

Covid-19 pandemic – solution to the problem

The plan was very good, but the reality as always is more unpredictable than we think it is.

After the implementation of the new training system in the Polish Armed Forces the COVID-19 pandemic has started. We provided plenty of the first level courses since the implementation of the training system. One of the course was even dedicated to the Slovakian officers (for the ANAKONDA-19 exercise). And after the almost all of the course we had to break it. There was a decision taken to stop the course and send all the participants to the original units.

Since then there was a long brake in the trainings.

Pandemic of COVID-19 broke the planes of the courses. Because of that University had to try to find another solution to fulfil the mentioned previously task from the Chief of Staff of the Polish Armed Forces to prepare the Polish Armed Forces to use the HMS C3IS System.

Fig. 11. An answer to the COVID-19 pandemic. Level 6th course
for the instructors of the HMS C3IS JASMINE system.
Source: author and Teldat materials.

The solution was (shown on the figure 11) implementation of very intensive course for the instructors that are planned for the position of the trainer in their military units. The idea was to create a course that will in one time train operator form "zero" to instructor level. That was possible only when we spend 30

working days with 8 hours per day of practical hours spend with the teacher and the HMS C3IS System. That gave the chance to speed up with the training the operators in the Polish Armed Forces to be ready as an Army to use in an appropriate way the CSS system and to be able to take advantage of the opportunity given by the system.

First edition of this course started in May 2021 and ended on 2nd of June. Course was accomplished by 14 new instructors that since then are independent in providing their own courses at level 1.

Figures 12 13 shows the ceremony of the end of the first edition of intensive instructor course.

Fig. 12. An end of first Intensive Instructor's course ceremony – 2nd June 2021.
Col. Robert Ryczkowski (on the left) reports to the acting Rector – Commandant Col. Tadeusz Zieliński)
Source: Teldat materials.

Fig. 13. An end of first Intensive Instructor's course ceremony – 2nd June 2021.
Member of the Teldat Board Robert Pałka is giving to the one of the new instructor the certificate
and the award for the 3rd place of the results during the course.
Source: Teldat materials.

There were provided 4 editions of the 6th level course and almost 70 new instructors are ready to teach within the Polish Armed Forces. This year there will be 2 more editions of this course what may give almost 100 instructors since May 2021. It is incredibly good result taking under consideration the limitations of the pandemic.

The rest of the instructors not involved in intensive course were trying to train as many as possible operators within the Army. The solution was to create "mobility team" and conduct the courses in the

military units – avoiding traveling of many people. Only the trainer was moving from University to the unit and provide the course.

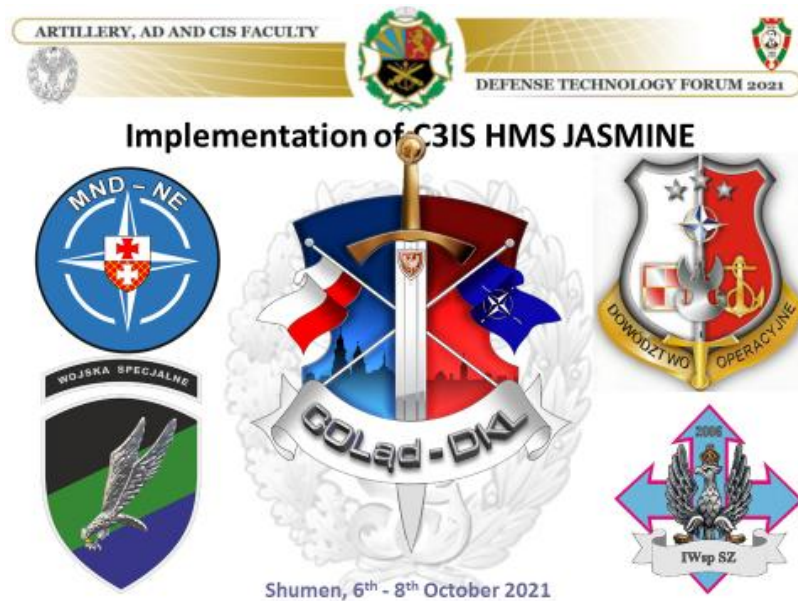Figure 14 shows the latest courses provided by mobile team in 2021.

Fig. 14. The latest Polish military institutions and units that mobile team has provided
the 1st level of HMS C3IS JASMINE system course.
Source: author's own materials.

The additional to the tests activity for the University is the practical usage of the IT systems during the exercises conducted in the field in the real conditions. Our latest activities was concentrated on practical tests of the interoperability between our CSS system – HMS JASMINE and our Weapon Systems – Topaz (an artillery system) and Promień (Chemical system). It is shown on the figure 15-16.

The tests gave positive results and were presented during the 29th International Defence Industry Exhibition MSPO. Figure 17 shows the Polish MOD, Mariusz Błaszczak during the visit to the War Studies University exhibition stand in September 2021.

Fig. 15. Preparation of the systems for the practical tests on the vehicles during the BRAMA-21 exercise in May 2021.
Source: author's own materials.

Fig. 16. Preparation of the HMS JASMINE for the practical tests on the vehicles during the BRAMA-21
exercise in May 2021.
Source: author's own materials.

Fig. 17. War Studies University exhibition stand during the 29th International Defence Industry Exhibition MSPO.
Polish MOD, Mariusz Błaszczak is shaking hand with author.
Source: Teldat materials.

Summary

War Studies University is the highest University in providing the studies and courses for the Polish Armed Forces. To our University comes officers with an experience from units and their knowledge and experience combined with the knowledge of academic teachers and the system producer gives the chance to constantly develop better and better Command Support System – System of Systems.

The cooperation started in 2010 gave a lot of experience to us as a military experts and let us change the approach to the conducting MDMP. From the other side the producer of the system is more and more aware of what should be improved and changed in the HMS C3IS JASMINE system. The most important is to keep the way that we discovered and implement the best practice into the system and into

the Polish Armed Forces, because both are living and changing systems – ICT system form one hand and the military organization on the other.

Nowadays, NATO and the Polish Armed Forces place great emphasis on the development of network-centric capabilities, including the interoperability of ICT solutions used in the Alliance countries. In response to this, the Academy actively conducts practical research on the possibilities and methods of using its military systems, which is included in the results of the conducted experiments. Their results enable the update of the regulations and doctrinal documents. They are also guidelines for determining the further development direction of the foregoing Polish systems. In the following years, further development of the Laboratory is planned in order to include NATO FAS solutions.

The capability of the automated data exchange between Command Support Systems and Weapon Systems provides invaluable benefits in the way of carrying out the MDMP and shortening the time from detecting the enemy to destroying him, which in the current conditions of the 21st century is one of the most important features that determines the success or failure of operations. Hence, our research work focuses on practical experiments with the use of systems and equipment in the Armed Forces of the Republic of Poland, aimed at confirming their ability to exchange data and determining the way of their configuration under various conditions of cooperation. So far, the correct cooperation between HMS C3IS JASMINE and TOPAZ through VHF and HF radio means while moving in vehicles at long distances has been confirmed.

The training system implemented in the Polish Armed Forces as well as practical experiments give the better understanding of the CSS and WS and lead us to the changes in procedures and tactics of the specialists supporting the fighting units. This will short the time form detection of the target to the answer from our side.

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