Theses and Dissertations   1. Thesis and Dissertation Collection, all items

1998-06

Army of the Czech Republic in achieving interoperability with NATO

Mertl, Miroslav.

Monterey, California. Naval Postgraduate School

NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

ARMY OF THE CZECH REPUBLIC IN ACHIEVING INTEROPERABILITY WITH NATO
by
Miroslav Mĕrtl
June 1998

Thesis Advisor: Donald Abenheim
Second Reader: Tjarck G. Roessler

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE June 1998	3. REPORT TYPE AND DATES COVERED Master's Thesis

4. TITLE AND SUBTITLE
WRITING YOUR THESIS WITH MICROSOFT WORD

5. FUNDING NUMBERS

6. AUTHOR(S)
Mĕrtl, Miroslav

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Naval Postgraduate School
Monterey, CA 93943-5000

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES
The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(maximum 200 words)*

The Army of the Czech Republic (ACR) was, until 1991, a part of a highly standardized combined armed forces of the former Warsaw Pact. NATO, at its Madrid Summit in July 1997, invited the Czech Republic to join the Alliance. The ACR is undergoing a fundamental transformation to become interoperable with NATO members' armed forces.

This study focuses on the human factor in alliance interoperability in the belief that new ways of thinking are fundamental to the principles for interoperability among NATO allies. After presenting the development of interoperability in NATO and the standardization process in the former Czechoslovak Army, the thesis treats evaluation of achieving the interoperability between the ACR and NATO. A special attention is given to the Partnership for Peace program and to changes in that part of the Czech legislation, which is connected with defense issues.

Finally, the study presents generalization of steps, which are decisive for achieving the interoperability with the Alliance and which could be utilized by other countries.

14. SUBJECT TERMS
Czech Republic, NATO, Interoperability, Partnership for Peace

15. NUMBER OF PAGES
135

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFI- CATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL

ARMY OF THE CZECH REPUBLIC
IN ACHIEVING INTEROPERABILITY WITH NATO

Miroslav Měrtl
Lieutenant-Colonel, Army of the Czech Republic
Ing., Military Command and Technical College, Martin, 1977
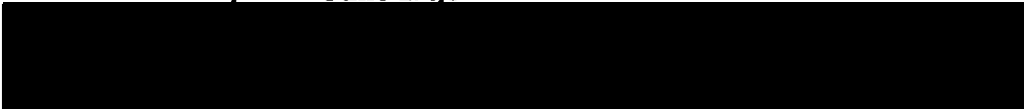
Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE
IN INTERNATIONAL RESOURCE PLANNING AND MANAGEMENT
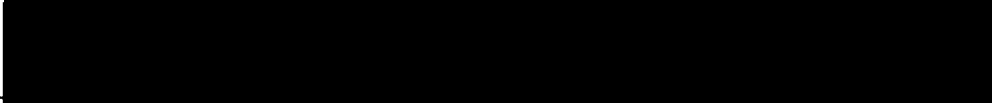
from the

NAVAL POSTGRADUATE SCHOOL
June 1998
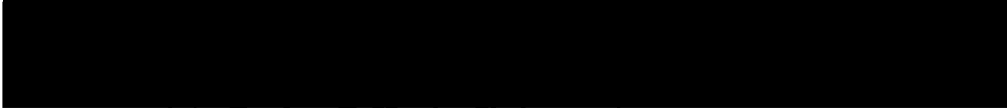
Author: _____
Miroslav Měrtl

Approved by: _____
Donald Abenheim, Thesis Advisor

_____
(Tjarck G. Roessler, Second Reader

_____
Reuben T. Harris, Chairman
Department of Systems Management

iii

ABSTRACT

The Army of the Czech Republic (ACR) was, until 1991, a part of highly standardized combined armed forces of the former Warsaw Pact. NATO, at its Madrid Summit in July 1997, invited the Czech Republic to join the Alliance. The ACR is undergoing a fundamental transformation to become interoperable with NATO members' armed forces.

This study focuses on the human factor in interoperability in the belief that new ways of thinking are fundamental to the principles for interoperability among NATO allies. After presenting the development of interoperability in NATO and the standardization process in the former Czechoslovak Army, the thesis treats evaluation of achieving the interoperability between the ACR and NATO. A special attention is given to the Partnership for Peace program and to changes in that part of the Czech legislation, which is connected with defense issues.

Finally, the study presents generalization of steps, which are decisive in achieving the interoperability with the Alliance and which could be utilized by other countries.

TABLE OF CONTENTS

I.   INTRODUCTION

> All new members will be expected to make every effort to meet NATO interoperability standards, in particular for command, control and communication equipment. New members will have to incorporate NATO standard operational procedures in selected areas....
>
> Study on NATO Enlargement, Article 45

A.   BACKGROUND - A HISTORICAL EVALUATION

The U.S. Joint Chiefs of Staff publication Joint Pub 1-02, Department of Defense

Dictionary of Military and Associated Terms, defines interoperability as:

> ...the ability of systems, units or forces to provide services to and to accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together.
> [Ref. 1:p. 194]

Using this definition, it is obvious that interoperability became an issue already in

former times. History presents examples of alliances in Greece, Rome, China and in

other countries in each of their respective periods. The most famous cases among them

are connected with such names as Alexander the Great, Caesar, Hannibal, Scipio, and

others.

The Roman army introduced a concept of the core of forces and of auxiliary units.

While the core comprised of reliable, well trained, and highly disciplined citizen legions,

non-citizens served under the Roman control in auxiliary units. These auxiliary units

were regularly used as scouts, light infantry, and cavalry. The interoperability issue was

not as complicated as one might think. Operational and tactical procedures were simple

and followed Roman standards; command, control and communication occurred in Latin and the use of trumpets or visual signs of eagle standards. The problem of standardized weapons and logistics was minimal because of level of production in the ancient time.

The medieval period offers cases of multinational coalitions having interoperability problems during Anglo-French wars, during the Crusades, and during wars against Turks. In America, Cortez and Pizarro could not have conquered Mexico and Peru without the wise use of alliances with native tribes.

On the other hand, the sixteenth and seventeenth centuries serve as typical examples of unsuccessful interoperability. The Spanish Army of Flanders (1567 - 1659) was comprised of soldiers from six nations (Spain, Italy, Burgundy, Germany, Britain, and Walloony). In order to reduce antagonism among national contingents, the Hapsburgs maintained each group as a separate administrative unit. This separation was taken to such an extreme that the men from British Isles and from Italy had to serve in their national formations - Englishmen with Englishmen, Scots with Scots, Milanese with Milanese, Napolese with Napolese. Different levels of loyalty to the Crown, multiplied with a hostile environment, showed itself in varying levels of morale during battles. The resulting poor payment, inadequate feeding and lodging combined with other weaknesses created inefficiency within the army.[1] [Ref. 2: p.66]

Napoleonic wars were coalitional, on both sides. While Napoleon was able to deal with the interoperability puzzle in majority of his battles, his counterparts did not

---

[1] However, most of national formations consisted of units that were created by individual noblemen or towns. To achieve success in the battle, those units' interoperability was usually ensured through some kind of the "code of conduct".

fare as well. British, Austrian, Russian, and later Prussian armies faced significant problems coordinating their fighting efforts. It took nearly two decades of joint effort before the allied armies were able to defeat Napoleon at Leipzig and at Waterloo.

A typical example of a lack of interoperability is the Crimean War of the 1850s. The French preferred to take command during ground operations and offered the British control over naval operations with a supreme war council to coordinate both parties. The British insisted on their understanding of cooperation, which included separate national land and naval activities. The result of the insufficient interoperability was a duplication of effort, heavy losses and a prolonged war. [Ref. 2: p.70]

Multinational cooperation in the military field was weak even on the eve of World War I. Both alliance systems, the Triple Entente (Russia, Great Britain, France) and the Triple Alliance (Germany, Austria-Hungary, Italy) were similar in that sense that their interoperability activities consisted of merely formal visits of general staffs. Allies knew each other mostly from parades. Sending observers to military maneuvers and to field exercises was more the exception than the rule. Partners had a very limited knowledge, if any at all, about each other's organization, command structure, doctrine, tactical procedures and logistics. Throughout most of World War I, the Triple Alliance had not established unified command.

At the other side of the front line, the British doctrine still resembled the Crimean pattern. The Battle of the Somme (1916), with strictly given areas of responsibility, was a typical example of this outdated way of military thinking. It was only in 1918 that French Marshall Foch, a head of the newly established Supreme Allied War Council, was

able to achieve a certain level of military unification. Americans, who entered the war in 1917, faced the interoperability issue from the beginning. The majority of their units served under the British or the French command. The reason was that as soon as any U.S. unit arrived in Europe, British and French military leaders immediately utilized the troops to fend of attacking Germans. Therefore, those units gained experience in interoperability more by accident than on purpose.

Standardization in weaponry was created by default as well. Most weapons in the U.S. units were produced in France and Great Britain, some of the weapons, for instance the 75 mm field guns, and light tanks, were exclusively European products. American industry simply was not able to equip U.S. forces on the required level.

Experience from the war was closely examined by all participating armies. However, lessons from interoperability were not considered as important as the mobilization of taxi-drivers in Paris for re-grouping military units. During the next twenty years, interoperability became nearly a forgotten issue.

An initial period of World War II clearly demonstrated a lack of both cooperation and interoperability on both sides. The French collapse in 1940 as well as Axis interoperability problems in the German Army Group South in Russia in 1941-42 confirmed how little both sides learned from the past.

Even when U.S. lend-lease of weapons and equipment established some degree of standardization among Allies, the real interoperability reform was initiated only after the Battle of Kasserine Pass in Tunisia (30 January - 25 February 1943). Randomly mixed

allied units with limited resources stopped Rommel's attack there but casualties were high:

> Lessons learned about interoperability at Kasserine proved invaluable for future operations. National characteristics and animosities surfaced in the heat of crisis. Ignorance of partner organization, assets, technical terminology, and mission goals plagued the cooperative effort. Deficiencies in language, liaison, and administration, as well as logistics and weapons keynoted the North African operation, peaking in the near-disaster at Kasserine. [Ref. 3: p. 1745]

After this battle, the Allies, especially in the Italian campaign, demonstrated a much higher level of interoperability. The main lessons were learned from combined staff work with a special attention to liaison personnel and to multinational logistics. The Allied Italian campaign paved the way for the future success in Normandy and in the final period of the war. The model of interoperability, which was successfully practiced by the Allies during the final period of World War II, became a pillar for cooperation among countries that later unified their strategic effort within NATO.

B.   OBJECTIVES

This thesis will analyze the complexities of developing interoperability between NATO and the Army of the Czech Republic (ACR)[2] since 1991. My argument is that interoperability is becoming the most important issue for new members of NATO and that the human factor plays the fundamental role in this process.

---

[2] An official name of the Czech armed forces is the Army of the Czech Republic (Armáda České republiky) which can be somewhat confusing for a reader whose native language is English. While the Czech term "Army" (armáda) contains all branches and services including Air Force, a term "Ground Forces" is used as an equivalent to the English term "Army."

In the early 1990s, NATO transformed its mission, strategic concept and structure and announced its openness to new members. However, the Czech Republic (until December 31, 1992 a part of Czechoslovakia) was a member of the former Warsaw Treaty Organization (WTO, 1955 – 1991) and for decades was building its armed forces on completely different foundation than NATO members did. In order effectively to cooperate with the Alliance, the ACR has to adapt not only its equipment but also, more importantly, the way of thinking and action of its personnel.

Establishing the civilian democratic control over the military and adopting a new military doctrine is only the first step on the way toward interoperability. Simultaneously, the Czech officers must become familiar with all the complexity of both the staff and combat procedures in NATO, with substantially different system of cooperation within the Alliance than they were used to practice in the past, and they must overcome the language barrier. Not weapons but the Czech men and women in uniforms are the decisive component in the effort of achieving the real interoperability with the Alliance.

Chapter II discusses interoperability in NATO. It offers definitions of basic terms, introduces the most important organizations dealing with standardization within NATO, and examines origin, development and current situation in interoperability and standardization among NATO members.

The situation in the ACR forms the main topic of Chapter III. It treats development of interoperability and standardization in the Czechoslovak People's Army

(CPA) before 1989. After that, changes are investigated in the CPA and, since 1993, in the ACR with respect to the Czech orientation to NATO.

Chapter IV analyzes improvement of interoperability under the Partnership for Peace (PfP) program. After analyzing the objectives of the PfP on interoperability between NATO and Partners, a focus is given on two issues - the Czech cooperation with NATO and the Czech involvement in peacekeeping operations.

Chapter V concerns increased demands on interoperability during the process of joining NATO. First a brief review of the situation in 1996-97 is offered. Second, new Czech basic defense documents - the National Defense Strategy, the Military Strategy, and the Conceptual Outline of the Development of the ACR - are introduced and evaluated from the point of view of the ACR's interoperability with NATO.

The final chapter analyzes the Czech approach to alliance functions and evaluates its strengths and weaknesses. The most important areas affecting the increased interoperability are identified and those parts of the Czech way are presented that have a general value and could be utilized by other countries and what should be avoided.

II.   INTEROPERABILITY IN NATO

This chapter falls into three sections. The first section deals with definitions of basic terms in this inquiry. The second section introduces the central organizations involved in standardization within NATO. Finally, the third section discusses the origin and development of interoperability in NATO.

A.   DEFINITION OF BASIC TERMS

At the beginning of every human activity, it is important to establish a common understanding of basic terms as a necessary prerequisite for action. Sometimes, the meaning of a particular expression can be understood differently in another context.

From a narrow point of view which focuses basically on material resources, it is possible to consider the term "standardization" as a broad expression characterizing the process of cooperation among armed forces. Terms "compatibility," "interoperability," "interchangeability," and "commonality" tend to describe the achieved level of standardization beginning with compatibility at the bottom and ending with commonality as the highest point of the scale.

However, from a more comprehensive standpoint that accounts for the human factor in military organizations, the picture is different. Interoperability becomes more important. The reason is that coalitional interoperability is the highest achievable level of standardization. This limitation is caused by traditional, cultural, linguistic, and other differences among soldiers and civilians. Additionally, for certain groups of the society, interoperability is the highest acceptable level. These groups are connected primarily

with producers of military equipment and they could lose their privileged positions on the market especially in the case of interchangeability and commonality. Leaders in the military industry, more or less supported by their national governments or by groups of governments, are willing to accept only such a level of standardization that poses no threat to their interests, in understandable concern.

Having in mind these narrower and broader aspects, understanding of the basic expressions becomes more complete. Definitions offered here come mainly from the U.S. Department of Defense <u>Dictionary of Military and Associated Terms</u>. The definition is given first and explanation follows.

1.   Standardization

The process by which the Department of Defense achieves the closest practicable cooperation among the Services and Defense agencies for the most efficient use of research, development, and production resources, and agrees to adopt on the broadest possible basis the use of: a. common or compatible operational, administrative, and logistic procedures; b. common or compatible technical procedures and criteria; c. common, compatible, or interchangeable supplies, components, weapons, or equipment; and d. common or compatible tactical doctrine with corresponding organizational compatibility.
[Ref. 1:p. 358]

NATO offers a simpler definition:

The process of developing concepts, doctrines, procedures and designs to achieve and maintain the most effective levels of compatibility, interoperability, interchangeability and commonality in the fields of operations, administrations and materiel. [Ref. 4]

Both definitions are very general and provide a wide basis for understanding the level of standardization. They set up more a direction of effort than degree or level to be

achieved. The outcome is that for increased and more efficient defense capability of the alliance, even a little cooperation is still better than nothing. The hierarchy of standardization is explained in following definitions.

2. Compatibility

Capability of two or more items or components of equipment or material to exist or function in the same system or environment without mutual interference. [Ref. 1:p. 84]

This definition refers to the lowest level of standardization. The goal is not to achieve any level of mutual cooperation but simply to coexist, to enable partners to work without any degradation of their systems. Compatibility becomes important particularly in command, control and communications, in electronic warfare (EW) and in other areas where electronic systems are employed.

3. Interoperability

The ability of systems, units or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together. [Ref. 1:p. 194]

The definition of interoperability stresses the cooperation among forces, their ability to work together and to provide or accept services each from others. Unlike compatibility, interoperability is not limited to technical problems. It also includes doctrine; common tactics, techniques, and procedures; organizational structures; command, control, communication, and intelligence (C3I); and other topics as well.

Doctrinal issues have the highest priority in interoperability. It is necessary to consider their both sides - the primary sense, which defines the objective, and the secondary one, which reflects the procedures necessary to attain the objective. [Ref. 5:p. 22]

To have such interoperability that really works, experts call for identifying those topics for coalitional doctrine that:

> ... may address getting in and getting out of an engagement, and creation of common operational procedures from potentially conflicting doctrine and procedures. Other topics may be guidelines for combined rules of engagement, and development of language work-around and procedures to disperse enemy order of battle and basic intelligence. [Ref. 6:p. 100]

However, even the best doctrine can fail if coalitional forces are not properly trained. Common exercises test the level of interoperability including the validity of the doctrine. Even when exercises cannot completely reflect the real situation, they serve as a feedback to doctrine; enable partners to become familiar each with other, with their equipment and their standards and to find the best ways of cooperation and coordination among them. Finally, common training increases efficiency in a future use of combined forces. The last argument implicates economic and budgetary consequences. In time of limited financial resources, finding the proper ratio of investing either in coalitional training or in new equipment is worthy of thorough study. In current situation, command, control, and communication require a special attention:

> Modern computers and telecommunication technology creates, for military forces, problems of interoperability, which are far more difficult to resolve than in the days before computers. Because of this, command and control systems are central to the issue of achieving interoperability of coalition forces. Interoperability, broadly defined, is the greatest single problem in theater forces. [Ref. 6:p. 115]

Not only hardware is important in achieving interoperability in the command and control system. Organizational culture and differences in the leadership style can raise tremendous problems among partners. For instance, Czechoslovakia had developed its armed forces according to the Soviet pattern for more than four decades. The CPA's command structure, tactics and procedures reflected the Soviet model and they were designed to support a coalitional military strategy, which was crafted by the USSR. The WTO model was based on the Soviet experience from World War II and had been gradually improved in accordance with conclusions that were made from studies of post-war local conflicts and from the development of the military science. The experience from World War II was decisive among these components and, consequently, an emphasize was put on ground operations, heavy armored forces, concentration of both units and fire in the decisive place and in the decisive time, comparably stable combat formations, simple technology and relatively uniform tactics. Importance was put on offensive actions and commanders, their staffs and units were thoroughly prepared and trained in planning and conducting the offense. This offensive bias led to such extreme situation, that when WTO turned its attention toward defense after 1985, the only available model was the Battle of Kursk of 1943.

On the other hand, the NATO model emphasizes on joint air-land operations, mixed combat forces with a higher ratio of logistic units, maneuver, quality and high technology. However, the most important issue is that this pattern gives military leaders, especially on lower levels of command, more freedom in making decisions and supports their individual initiative.

The WTO effort toward simplicity could be recognized not only in tactics but in the staff procedure pattern as well. For instance, during the decision making process and planning the operation, the commander formulated his intent for the future battle or engagement. Leading by this intent, the staff developed the necessary data and prepared the basis for the commander's decision. After that, an operational order and other documents were prepared and delivered to the forces.

The NATO staff procedures are based on a different model. Much more attention is given to the initial phase. Here, several variants of possible actions during the coming engagement are evaluated and all important factors are discussed from point of view of the staff senior members. Each of them points out strengths and weaknesses of each particular variant and, finally, the commander chooses the optimal variant. The following part is routine work, preparation of the operational order and of other documents, their delivery to the subordinated units, and other typical activities of the command and control system.

These and other similar differences in doctrine, tactics and in the leadership style must be fixed in order to achieve interoperability between partners. The only way to overcome those dissimilarities is to interact between partners as often as possible and to learn each from other.

4. **Interchangeability**
A condition which exists when two or more items posses such functional and physical characteristics as to be equivalent in performance and durability, and are capable of being exchanged one for the other without alteration of the items themselves, or of adjoining items, except for adjustment, and without selection for fit and performance. [Ref. 1:p. 191]

This definition is focused on material items again. These items must have such features that they can be used by the other party without decreasing the final outcome. NATO artillery ammunition of 155 mm caliber is a good example. This ammunition, already standardized, can be in most conditions used by all NATO members regardless of country that has this ammunition produced. However, particular parts of it, for instance charges or fuses, in some cases still require to be changed or fixed.

5. **Commonality**
A quality that applies to materiel or systems: a. possessing like and interchangeable characteristics enabling each to be utilized, or operated and maintained, by personnel trained on the others without additional specialized training. b. having interchangeable repair parts and/or components. c. applying to consumable items interchangeably equivalent without adjustment.
[Ref. 1:pp. 80 - 81]

Commonality is the highest level of standardization. Systems and items can be changed without any adjustment. They must not only have identical interface and physical characteristics alike but also their safety and maintenance procedures must be the same as well. Commonality results in improved military effectiveness and in cost savings.

However, as former NATO's Assistant Secretary General John Walsh pointed out, there is another problem. Absolute commonality can lead to market dominance by a single producer. In such a case, a monopolist has no strong motivation to produce efficiently and his market dominance leads to higher prices. Competition is the best way to avoid this situation. [Ref. 7:p. 11]

The hierarchy of standardization, given by those four mentioned levels, is not static. Systems, through their development and upgrading, can enter another level of standardization. In other cases it may be difficult to exactly put a particular system into just one of the presented levels.

B. ORGANIZATIONS FOR STANDARDIZATION IN NATO

Lord Patrick L.H.Ismay, the first Secretary General of NATO, emphasized two limitations to effective cooperation between armed forces in a coalition. These limitations were (a) plurality of types of weapons and equipment and (b) differences in systems of staff work and military doctrine. [Ref. 8:p. 79]

To deal with them, NATO set up the Military Agency for Standardization (MAS) in 1951. The MAS was initially responsible for studying and promoting the standardization in both (a) war materiel and (b) operational and administrative practices. With a development of the NATO organization structure and with a growing experience in cooperation among members, organizations for standardization have developed as well.

However, with all respect given to their results, they were limited in their work and especially in implementing their achievements. This circumstance is given by the fact that NATO is not a supranational organization and has no mandatory powers over national governments. Consequently, all activities resulted in advice and recommendations to national governments that were encouraged to cooperate in order to improve the collective defense capability. [Ref. 9:p. 263]

At present, the most important organizations dealing with standardization in NATO are:

- The Conference of National Armaments Directors (CNAD)

- The Military Agency for Standardization (MAS)

- The NATO Standardization Organization (NSO)

- The NATO Consultation, Command and Control Organization (NC3O)

- The Senior NATO Logistician Conference (SNLC)

The CNAD acts in the materiel area and is involved especially in considering political, economic and technical aspects of the development and procurement of equipment.

The MAS, the oldest organization, concentrates on operational filed, namely on doctrine, tactics, and procedures.[3]

The NSO is responsible for coordinating the activities of allied policies and programs for materiel, technical, and operational standardization.

The NATO Consultation, Command and Control Organization ensures the provision of a NATO-wide cost effective, interoperable and secure Consultation, Command and Control (C3) capability and of their services to users.

The Senior NATO Logistician Conference coordinates logistic planning, common funding of logistic facilities under the NATO Infrastructure Program, and logistic aspects of armaments production and procurement.

---

[3] Relation between CNAD and MAS can be demonstrated on an example from information technology. While CNAD produces "hardware", MAS prepares "software" in the standardization field.

As the CNAD, the MAS and the NSO have the most significant impact on the interoperability issue with respect to the new NATO members, these organization will be described in detail.

Main organizations dealing with standardization are presented in Figure 1:

North
Atlantic
Council

Conference of
National
Armaments
Directors

Military
Committee

NATO
Standardization
Organization

NATO
C3

Senior NATO
Logistician
Conference

— NATO Naval
Armaments Group
— NATO Air Force
Armaments Group
— NATO Army
Armaments Group
— Defense
Research Group
— Tri-Service Group on
Communications and
Electronic Equipment
— NATO Industrial
Advisory Group
— Cadre Groups

Military
Agency for
Standardization

— Naval Board
— Air Force Board
— Army Board

— NATO Committee
for Standardization
— NATO Standardization
Liaison Board
— Office of NATO
Standardization

— NATO C3 Board
— Group of National
Representatives
— NATO C3
Agency
— NATO C3
Subordinate
Structure
— NATO CIS
Operating and
Support
Agency

Figure 1.   Main NATO Organizations Involved in Standardization [After Ref. 46]

1.   The Conference of National Armaments Directors

The Conference of National Armaments Directors (CNAD) was created in 1966 and replaced the former Armaments Committee.

The CNAD offers an opportunity to exchange information on operational concepts, national equipment programs and appropriate technical and certain logistical matters where cooperation can benefit NATO and the nation. [Ref. 9:p. 271] The CNAD encourages member countries to join together in different projects and activities.

The CNAD consists of six main groups and several bodies called Cadre Groups.

The main groups are:

- The NATO Naval Armaments Group (NNAG)

- The NATO Air Force Armaments Group (NAFAG)

- The NATO Army Armaments Group (NAAG)

- The Defense Research Group (DRG)

- The Tri-Service Group on Communications and Electronic Equipment (TSGCEE)

- The NATO Industrial Advisory Group (NIAG)

The Cadre Groups take the responsibility for activities of general interest to all other groups. At present, there are following Cadre Groups:

- The NATO Group on Acquisition Practices

- The Group of National Directors on Codifications

- The Group of National Directors for Quality Assurance

- The Group on Rationalization of Design Principles, Test and Safety Criteria for Explosive Materiels and Explosive Stores

- The Group on Materiel (ACSM)[4] Standardization
[Ref. 9:p. 270]

The primary purpose of the CNAD is to improve cooperation in the development of military equipment. To achieve this goal, three armaments groups (NNAG, NAFAG and NAAG) harmonize national requirements and support the establishment of common

---

[4] Assemblies, components, spare parts and materiel.

projects. The NIAG provides pre-feasibility studies to support the needs of the other main groups. The DRG is responsible for the technology base development, which can be later used for military purposes. Areas of interest of the DRG are wide and include such diverse subjects as speech processing, laser technology, military training, medical experiments, computer simulation and modeling, and trustworthy information systems. [Ref. 12:p. 26]

2. The Military Agency for Standardization

The Military Agency for Standardization (MAS) was established in 1951 as the principal military agency for standardization within NATO. The main difference between the CNAD and the MAS is that while the CNAD looks for "what" to use, the MAS examines "how" to use it.

The purpose of the MAS is to facilitate operational, procedural, and material standardization among member nations to enable NATO forces to operate together in the most effective manner. [Ref. 9:p. 355]

The MAS consists of three boards and various numbers of working parties.[5] The boards reflect three services of armed forces -- the Navy Board, the Air Force Board, and the Army Board. Working parties are organized under their respective Service Boards and they accomplish the analyses and studies and prepare draft standards. Working parties are in many cases organized temporarily and after finishing the task are disbanded. Their final products are NATO standardization agreements for procedures

---

5 Some sources use a term "panels" instead of "parties".

and systems and equipment components. These agreements, known as STANAGs or Allied Publications, are discussed with nations and NATO Commands and, in case of STANAGs, signed and endorsed by some or all of members' ministries of defense. However, because of difficulties in achieving a complete conformity in all aspects of the agreements, STANAGs in many cases allow exceptions to the rule. The final version of the STANAG comprises a questionnaire for users to provide feedback. This feedback gives information of using the STANAGs in a daily practice and it serves for improving the current STANAGs or for creating a new one.

The weakness of the MAS is closely connected with the nature of the Alliance. As standardization is achieved on a voluntary basis, the MAS possess a lower degree of influence than should be desirable. To overcome this weakness, NATO established a new Standardization Organization.

3. The NATO Standardization Organization

On January 18, 1995, The North Atlantic Council (NAC) decided to create the new NATO Standardization Organization (NSO). The main task for the NSO is to improve the coordination of allied policies and programs for materiel, technical, and operational standardization. The NSO does not duplicate effort of other organizations and groups dealing with standardization but provides them with acknowledged and agreed objectives and priorities, giving actually guidance to their programs of work. [Ref. 16:p. 33]

Simultaneously, the NSO supports the Partnership for Peace program by offering proposals toward improved standardization between NATO and Partners[6] and cooperates with civilian standardization organizations.

The NSO consists of three bodies:

- The NATO Committee for Standardization (NCS)

- The NATO Standardization Liaison Board (NSLB)

- The Office of NATO Standardization (ONS)

The NCS is the senior authority on all NATO standardization matters. Its importance is given by the fact that members of the NCS are senior national representatives and that the NCS reports directly to the NAC. Moreover, the NCS is co-chaired by the NATO Assistant Secretary General for Defense Support and by the Director of the International Military Staff, both at three star level. [Ref. 15:p. 124] The NCS meets twice a year in June and November and should provide coordinated advice to the Council.

The NSLB is responsible for internal coordination between NATO Headquarters' staff and representatives of the major NATO commanders, thus covering all parties involved in the standardization field. The NSLB meets once per month or per two months, co-chaired by the Chairman MAS and the Director Armaments Planning Program and Research, both at two star level. The NSLB is a coordinating, harmonizing and not a decision making body.

---

[6] As "Partners" here and in the rest of this thesis are understood those countries which joined the Partnership for Peace program.

The ONS, the only permanent staff element, represents the focal point for NATO standardization within NATO Headquarters and provides staff support to both the bodies mentioned above.

The NAC set up five primary objectives for the NSO:

- Development of the NATO Standardization Program, its updating and monitoring its implementation

- Harmonization of standardization policies, planning and procedures

- Harmonization of applicable standardization matters including those from the Partnership for Peace (PfP) program and North Atlantic Cooperation Council (NACC) programs

- Collaboration on standardization matters with political and military organizations outside NATO

- Collaboration with civil standards organizations
[Ref. 12:p. 34]

These objectives clearly demonstrate how crucial is the problem of standardization in NATO and how important for NATO is to achieve certain level of standardization, preferably interoperability, with partner nations. To accomplish these objectives, NATO can use its experience from its own history.

C.   ORIGIN AND DEVELOPMENT OF INTEROPERABILITY IN NATO

Twelve countries, which signed the North Atlantic Treaty of 4 April 1949, found that their military situation could hardly be described as satisfactory. They had to create such a defensive structure, which would be able to deter any attack against them and in a case of a military aggression be ready for an effective response.

Their effort was oriented basically in three directions: (a) to build an integrated military structure, (b) to equip forces with at least partly standardized materiel, and (c) to train people to work together in a multinational environment. Additionally, all three objectives were mutually connected and influenced each other. Moreover, in many cases it was difficult to distinguish among them. Often, a particular measure could cover more than just one area. For instance, to establish an allied headquarters meant to create its optimal structure, to equip it with such means of control and communications (which are able to confer with multinational forces), and to have a staff using a common language, identical map symbols and the same operational procedures. This interconnection, very common during the process of the NATO development, implies that we must examine the impact of each improvement of interoperability within the Alliance.

In the following, the integrated military structure will be introduced first. After this, a cooperation in the materiel field will be presented and, finally, the human factor will be discussed.

1. Integrated Military Structure

NATO members started to come to the terms to build their integrated military structure after signing the North Atlantic Treaty on April 4, 1949. The North Atlantic Council (NAC) at its first session in Washington on September 17, 1949 decided to establish the Defense Committee that should have its subordinate military body, the Military Committee. This Military Committee was supposed to provide guidance to its

executive organ, the Standing Group. Moreover, five Regional Planning Groups[7] were set up to develop plans for the defense of their respective regions. [Ref. 8:p. 25]

As early as on September 15, 1950 the NAC accepted a concept of "integrated force under a centralized command". [Ref. 8:p. 32] This concept was developed to avoid duplication and overlapping in planning and conducting the allied operations. This moment can be considered as a turning point from cooperation to integration within NATO and it marked beginning of a new quality of military relations among members of the Alliance.

General Dwight Eisenhower, the first Supreme Allied Commander Europe (SACEUR), with his newly appointed staff had the task to learn the NATO members' resources, to decide how to organize both the staff and its working style, how to build the command structure and, most important, how to make an allied team from number of officers from different countries with different military, cultural, religious and social backgrounds. Using the experience from World War II, from the Western Union and from Regional Planning Groups, General Eisenhower with his Supreme Headquarters Allied Powers Europe (SHAPE) assumed operational control over the NATO military organization on April 2, 1951. [Ref. 8:p. 38]

While the staff system was based on the American pattern, the forces were divided into three[8] categories:

---

[7] The Northern European Group, the Western European Group, the Southern European-Western Mediterranean Group, the North Atlantic Ocean Group and the Canadian-United States Group.

- Forces assigned to NATO – those forces that had already been placed under the NATO operational command.

- Forces earmarked for NATO – those forces that were supposed to be placed under the NATO operational command at some future date in peace, or automatically in case of mobilization or war.

- Forces remaining under national control – those forces that were not supposed to be placed under the NATO command.

SACEUR was responsible for organization and for providing standards for both equipping and training of the assigned forces. Moreover, he cooperated with national authorities in preparation of the earmarked forces. Even though logistic support of the forces remained national responsibility, SACEUR coordinated this effort. In time of war, he would be in charge of all operations under his command. [Ref. 8:p. 72]

Regional Planning Groups became the basis for headquarters of allied powers in (a) Northern, (b) Central and (c) Southern Europe and (d) in Mediterranean. In similar pattern as SHAPE, both the Atlantic Command and the Channel Command were created. Establishing of all these three Main NATO Commands, as well as preserving the Regional Planning Group for Canada and the United States, laid down the fundament for command and control of forces within the integrated military structure. This structure, shown in Figure 2, proved itself satisfactory and with some improvements[9] served throughout the Cold War.

---

[8] Actually, at present time, there are two more categories: (a) other forces for NATO, i.e., forces that might come under NATO command once a particular nation decides so and (b) NATO command forces, i.e., forces that are under NATO command already in peacetime.

[9] The most important change was omitting the Channel Command (1965) and establishment of the Standing Naval Force Atlantic (STANAVFORLANT, 1967), the
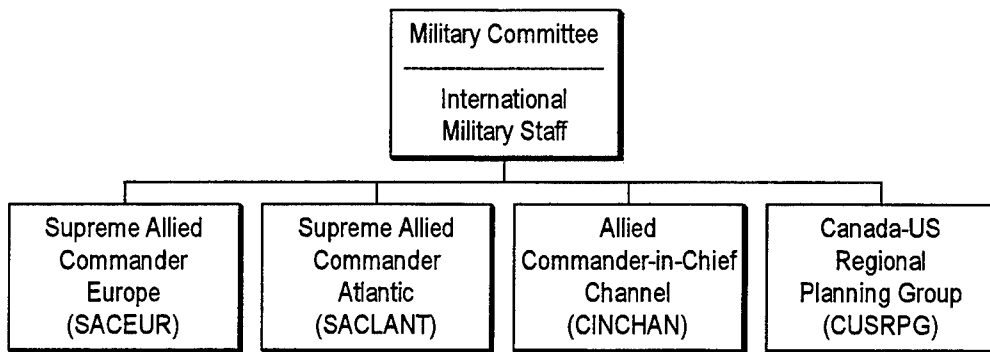
Figure 2. NATO Military Structure, 1951 - 1965 [After Ref. 8:p.69]

The end of the Cold War meant a fundamental review of the NATO strategy. The

new Strategic Concept, adopted by the Alliance in 1991, put emphasis on smaller,

multinational formation with a higher flexibility. In order to deal with new tasks in a new

environment, forces were divided into three groups – immediate reaction forces, rapid

reaction forces and main defense forces. Application of multinationality was among

those facors that led to the implementation of the Combined Joint Task Force (CJTF)

concept and to the development of the European Security and Defense Identity (ESDI)

within the Alliance. This NATO's internal adaptation, as well as the development of the

new command structure[10] in the late 1990s, is becoming a challenging task in the field of

interoperability, especially when taking into account the process of NATO enlargement.

Naval on-call Force in the Mediterranean (NAVOCFORMED, 1969) and inauguration of
Standing Naval Force Channel (STANAVFORCHAN, 1973).

[10] For more information about this topic see Thomas-Durrell Young: Command in
NATO after the Cold War: Alliance, National and Multinational Considerations, Carlisle
Barracks, Pennsylvania: Strategic Studies Institute, U.S. Army War College, 1997.

2. Armaments Cooperation

At the birth of NATO, there were no significant interoperability problems with materiel since much of the equipment used by the Allies was made either in the USA or in the United Kingdom.

The North American contribution to the common defense was invaluable. The United States aid was based on the Mutual Defense Assistance Act of 1949 and on the Mutual Security Act of 1951. By the beginning of April 1954, the value of the military equipment delivered by the USA to its European Allies had reached about $15 billion. [Ref. 8:p. 136] The Canadian Government decided to re-equip its forces with American-type equipment and made available its British-made equipment to other NATO members. This help ensured a relatively high degree of initial standardization in NATO.

In the 1950s, as European industrial capabilities began to recover, countries actively produced and designed their own military equipment. This rebirth of the military industry resulted in a competition among nations for the market and in decreased standardization. NATO, aware of negative consequences of the lower interoperability, launched programs for correlated production of major items of equipment, including aircraft, artillery, vehicles, radar, ships and ammunition. However, even when this production gave useful results, the correlated program concept had weaknesses. Absence of an overall master plan for the equipment of all NATO forces and national protectionism of own industries led to the gradual abandonment of the correlated production concept.

In 1959, a new system was introduced to improve cooperation. The NATO Basic Military Requirements (NBMRs) established basic starting points from which operational characteristics of the military equipment and, consequently, its technical requirements should be derived. Unfortunately, in practice the NBMR approach became too rigid and six years later was abolished in favor of a more flexible system. [Ref. 14:p. 41]

The new system, approved by the Council in May 1966, was based on a decision that cooperative action could start with proposals from any country or from the NATO military authorities. If other countries were interested in this proposal, they formed a group and after making final commitments, they asked for the project to be designated as the NATO project. This approach required changes in the NATO structure and as a result, the Conference of National Armaments Directors (CNAD) was established in 1966.

Cooperation under the CNAD has nothing in common with any centralized planning system. The basis for cooperation lies in the exchange of information and in seeking partners for joint programs. To make this course of action easier for its participants, the CNAD adopted two formalized processes -- the NATO Armaments Planning Review (NAPR) and the Phased Armaments Programming System (PAPS).[11] The NAPR is a review system which, by providing equipment replacement schedules, offers opportunities for cooperation. The PAPS, showing key milestones of a typical weapon system life cycle, encourages cooperation on the basis of operational deficiencies.

---

[11] Formerly the Periodic Armaments Planning System.

Another improvement came with the Conventional Armaments Planning System (CAPS). Under the CAPS, ways are examined how the military needs of the Alliance can be best realized by national programs and what are the cooperation opportunities.

This cooperative approach has proved itself successfully and has been connected with many achievements. The common effort resulted in well-known projects as combat aircraft F-16 and TORNADO, a multiple-launch rocket system (MLRS), a NAVSTAR Global Positioning System (GPS), a NATO Identification System, a NATO Airborne Early Warning and Control System (AWACS), a series of STANAGs comprising the Single Architecture of Technical Common Interoperability Standards (SATCIS), and many others.

In the field of consumer logistics, the main achievements were the NATO Pipeline System, establishment of the NATO Maintenance Supply Services System (NMSSS), NATO ammunition interoperability, and improvement in the medical field. Implementation of the NATO codification system gave a uniform method of supply classification and item identification.

The CNAD has faced new challenges after the collapse of communism in Europe. A new NATO strategy is based on smaller, more flexible and mobile multinational forces. This fact implies far greater standardization of equipment and it requires achieving at least the level of interoperability. David Cooper of the NATO International Staff, who has been for many years associated with NATO armaments cooperation, warned that, "Failure to achieve adequate standardization and interoperability could weaker the credibility of the new strategy." [Ref. 15:p. 32]

In 1993, the North Atlantic Council oriented the work of the CNAD toward four

key areas:

- The harmonization of military requirements on an Alliance-wide basis

- The promotion of essential battlefield interoperability

- The pursuit of cooperative opportunities identified by the CNAD and the promotion of improved transatlantic cooperation

- The development of critical defense technologies, including expanded technology sharing
[Ref. 13:p. 122]

In 1997, the CNAD began to review NATO armaments planning procedures. The

goal is to conduct a wider study of the procedures for Allied armaments cooperation and

to submit it to the Council for its approval in summer 1998.

3. The Human Phenomenon

To have military equipment that is at least compatible, is the first precondition for

the future coalitional effort. However, this is only one side of the equation. People who

are properly trained, who are familiar with common doctrine, who have both the means

and ability to communicate, and who, at least in some situations, possess the necessary

language skills, create the remaining part.

Military theory recognized the significance of the human factor in war thousands

years ago. Beside both the Chinese theoretician Sun Tzu and the Italian politician

Niccolo Machiavelli, the Prussian military theoretician Karl von Clausewitz laid down

foundations for understanding the role of the human in the military system.

Clausewitz's ideas of a military genius who "clearly recognized the realities of the age, and therefore was able to a degree to deliberate himself from their constraints" [Ref. 28:p. 342] offer an ideal of a new kind of a soldier. This new soldier must follow the changes in both the scientific and technological development, implement them into both his doctrine and tactics, take lessons form his own failures and, what is the most difficult in the environment of elderly high ranking military leaders, get rid of outdated military dogmas that are not valid in the changed situation anymore. Clausewitz's differentiation between real leaders and victims of an old system has a deep significance for the military and its impact can be demonstrated on, for instance, the failure of Prussians against Napoleon at Jena (1806) and on more recent examples of the Iraqi failure in the Gulf War (1991) and the Russian incompetency in Chechnya (1994 –95). Clausewitz stressed the linkage between the theory and the practice:

> We repeat again that here, as in all the practical arts, the function of theory
> is to educate the practical man, to train his judgment, rather than to assist
> him directly in the performance of his duties.
> [Ref. 28:p. 359]

This argument of Clausewitz, as well as his recognition that it is unimaginable to lay down valid rules for every possible situation in wars, offers the only real outcome. This outcome is to educate and to train both the future military leaders and soldiers in a creative manner and to give them opportunity for their intellectual development. Only a person who avoids a stereotypical way of thinking, who is open to new ideas and who is able and willing to understand his partners and allies, has a chance to fulfill his mission. In the military alliance, it means that allies, while having a common doctrine and standardized procedures, must be able to use their standards in a flexible manner and not

to hesitate to implement a non-traditional and non-standardized approach if the outcome is promising. The human interoperability is based on this recognition and it directly depends on one's ability to communicate with his counterparts. In a multinational coalition, and above all beyond the level of the technical communication, both the intellectual and language barriers become those of the worst nightmares.

At its birth, NATO decided to choose English and French to be the official Alliance languages. Both languages were supposed to have the same significance and the same place in the coalition. However, with an increased importance of information technology and after the French withdrawal from the NATO integrated military structure in 1966, English unofficially became the primary NATO language.

NATO top representatives recognized very soon that "language interoperability is the key and the base on which any operating sense of cooperation should be built." [Ref. 16:p. 59] The point is that language serves as a way for understanding the other nation, its culture and mentality. In addition, language helps in the understanding of the spirit of its military doctrine and the nature of its behavior in a combat situation. However, language can also be a barrier as technical and military slang can cause endless difficulties in a mutual communication. Not surprisingly, Americans experienced most problems with language. While Europeans commonly studied at least one foreign language in high school and most European allied officers were fluent at least in one of foreign languages, Americans lacked this skill.

NATO officials initiated elaborate language and educational programs to overcome these roadblocks. The US armed forces offer language courses "Headstart"

and "Gateway" for Americans serving overseas. Basically, all European member states consider studying of foreign languages as a mandatory part of the military education. In the Royal Netherlands Army (RNLA) is the language interoperability on such a high level that a call for an artillery fire is given there in English only.[12]

The importance of languages has increased since the new Alliance's Strategic Concept was put forward in 1991. Multinational character of the new force structure creates new, greater challenges for language interoperability.

Establishment of NATO schools and bilateral agreements of military education substantially enhanced interoperability among member armed forces. The NATO Defense College (Rome, Italy), the NATO (SHAPE) School (Oberammergau, Germany), the NATO Communications and Information System (CIS) School (Latina, Italy) are the most important Alliance's learning centers. Concerning bilateral agreements, USA, United Kingdom, Canada, France and Germany have hosted most of NATO military officers studying abroad.

Other tools, which are used to increase interoperability among NATO members, are multinational exercises. These activities have been invaluable means for obtaining experience in allied doctrine; organization; intelligence; command, control and communication; liaison; and in other fundamentals of modern warfare that posses interoperability problems. From "Grand Repulse" in 1953 to "Reforgers" in 1970s and

---

[12] Author's personal experience from a visit of the RNLA Field Artillery School at Epe (the Netherlands) in 1995.

1980s and to "Cooperatives" in 1990s, all these exercises demonstrated the importance of the human factor.

NATO has reached many achievements on its way toward standardization. During that time, it became obvious that interoperability is that level which is accessible and which should serve as the basis for the future cooperation.

With NATO enlargement and NATO transformation, the main effort in interoperability increasing will be very likely oriented toward new NATO members and partners in order to improve their capabilities to cooperate with the "old" members.

Nonetheless, considering economic situation in Central and Eastern European countries during their transition period, investment in military equipment will be limited for most of them. The outcome for NATO is to orient its energy preferably to the field of common interest with partners. The Alliance's Strategic Concept of 1991 offers key features of cooperation which include "...procedures for consultation; common standards and procedures for equipment, training and logistics; joint and combined exercises...."
[Ref. 17: Article 37]

In the early 1990s, when NATO members came into a closer contact with their former adversaries from the earlier WTO, they found that interoperability in WTO was based on different principles and was developed in a different way than that in NATO. The WTO interoperability was not achieved through both the consensus and mutual equality but mostly by decision of the strongest member of the pact, the Soviet Union. The next chapter presents the way of how interoperability had been achieved in the Czechoslovak armed forces during the communist regime in Czechoslovakia and what

were the first Czech steps toward interoperability with NATO after the end of the Cold

War.

III. EVOLUTION OF THE ARMY OF THE CZECH REPUBLIC

This chapter consists of two parts. In the first section, development of the Czechoslovak People's Army (CPA) from 1945 to 1989 will be presented. A main focus here will be the CPA's standardization and interoperability within the former Warsaw Treaty Organization (WTO, 1955 - 1991). The second section will discuss changes in the CPA and, since dissolution of Czechoslovakia on December 31, 1992 in the ACR, with respect to the Czech accession to NATO.

A. HISTORICAL BACKGROUND OF STANDARDIZATION AND INTEROPERABILITY IN THE CPA BEFORE 1989

1. The Period from 1945 to 1955

Czechoslovakia was one of the most valuable Soviet allies, and with the exception of the events circa 1968, one of the most loyal among them. A foundation for the post-war military alliance between Czechoslovakia and the Soviet Union was laid down in the bilateral treaty of friendship and cooperation of December 12, 1943. The way for a broad Soviet influence in the Czechoslovak military was further paved in the government blueprint for the new Czechoslovakia, in the Košice Accord of April 5, 1945.

The Košice program called for complete Czechoslovak cooperation and coordination with the Soviet Army. Moreover, the Soviet Army was accepted as the sole model for development of the Czechoslovak Army. The new armed forces were to be constructed around those Czechoslovak military formations, which were fighting against Nazi Germany on the Eastern front. At the end of World War II, those units numbered

37

approximately 50,000 personnel and consisted of both ground forces (1st army corps) and an air force (1st aviation division). The role of the Czechoslovak units fighting at the Western front (an armored brigade and several fighter and bombing squadrons) was neglected and later their members became victims of purges.

After the Soviet Army's withdrawal from Czechoslovakia by December 1945, Soviet military influence was maintained primarily through 151 Soviet officers who worked as instructors in Czechoslovak military schools and in officer-training programs. [Ref. 18:p. 38]

During the period from 1945 to 1948, the CPA began to incorporate the Soviet model of training and to field Soviet armament. However, at that time the CPA was still equipped with mixed materiel of Soviet, British, and German origin. The officer corps consisted of diverse people with combat experience from both the Eastern and Western fronts as well as pre-war officers. Obviously, the CPA lacked standardization in both the materiel and human aspects and the interoperability even within the CPA was considerably limited.

This situation changed after the Communist Party of Czechoslovakia (CPC) came to power in February 1948. Immediately after the February takeover, the CPC initiated purges in the Army. During the next five years, thousands of officers were dismissed from the service, hundreds of them were sentenced to jail and some of them were executed. The purges destroyed the professional military elite. The CPC general secretary announced in 1949 that, "The entire old officer corps must be replaced by new people". [Ref. 18:p. 63] The Chief of the General Staff stated that the army dismissed

many officers because they demonstrated "resistance - based on hatred of the Soviet Union - to efforts to build the army in the Soviet pattern". [Ref. 18:p. 67]

The new officer corps was built through recruitment of "working-class youth." The education level of the officer corps suffered, but the CPC clearly preferred party loyalty to professionalism. From the long-term perspective, such a situation was unacceptable.

The problem was solved in two ways. First, the system of military education was improved including sending some of Czechoslovak military officers to the Soviet military academies and, second, new Soviet advisers came to establish the training according to the Soviet standards. Intensity of training reached an extremely high level. For instance, all combat formations left their permanent bases for five months each year. From the spring to the fall, regiments were living in tents in military training areas and conducting training.

Not only training was copied, but Soviet symbols and organizations were duplicated as well. Traditional uniforms and insignia were modified to a Soviet pattern and the organization structure of the CPA was similar to the Soviet Army.

In the materiel field, the Košice program called for the closest cooperation in armament development with the Soviet Army. The Czechoslovak defense industry was supposed to be "completely incorporated into Soviet production or abandoned entirely in favor of dependence on the USSR." [Ref. 18:p. 50]

Nevertheless, due to Soviet inability to equip all new allies and because of a long tradition of the domestic defense industry, Czechoslovakia managed to keep some of its

armament production.

While tanks, aircraft and some artillery weapons were imported from the Soviet Union, the domestic industry provided small arms, some artillery systems, signals communication equipment and trucks. Czechoslovak research and development was oriented toward standardization with the Soviet weaponry and offered a large number of effective weapons in the early 1950's. The most famous among them the 85 mm M-51 and 100 mm M-53 anti-tank guns, 130 mm multiple rocket-launcher M-51, 30 mm anti-aircraft gun M-53 and a collection of small arms. Attention given to interoperability with the Soviet Army can be documented by the fact that ammunition for the 85 mm anti-tank gun M-51 was the same as for Soviet towed and self-propelled guns and for the T-34 tank. The Czechoslovak 100 mm anti-tank gun M-53 used the same ammunition as Soviet guns and as the later introduced tank T-54/55. New factories for the defense industry were built and Czechoslovakia began to produce tanks, MiG jet-aircraft and other heavy weapons under Soviet license.

All these political, doctrinal, organizational, and other measures changed the CPA dramatically. In 1955, Czechoslovakia had a relatively strong, well-trained, and modern armed forces, which fulfilled basic requirements for interoperability with the Soviet Army. However, the price was high. The nation had economic problems because of huge investments in military, thousands of former officers were dismissed from the service and many of them were criminalized, and the country became extremely militarized. But the most important change occurred in the public opinion of the CPA.

Czechoslovak society developed a generally negative relation to its army and considered the CPA not to be a defender of national interests but a tool of the communist party and of the Moscow policy makers.

2. The Czechoslovak People's Army and the Warsaw Pact

a. From Warsaw 1955 to Budapest 1969

The creation of the Warsaw Treaty Organization (WTO) in May 1955 did not mean, at least during the first five to six years, any significant break in standardization and interoperability. Since the late 1940s, Czechoslovakia had been included in a network of bilateral treaties between communist countries and the new military organization was controlled from Moscow essentially in the same manner as the former network.

As the CPA became capable to fulfill its mission in the middle of the 1950s, the Soviet advisors were recalled back home. However, some of them were transformed into "Senior Representatives of the Supreme Commander of the Joint Armed Forces of the WTO". These Soviet generals and officers worked as "shadows" to the most important Czechoslovak military authorities beginning with the Minister of Defense and ending at the headquarters of the 1st and 4th Armies until 1989. Besides other duties, representatives of the Supreme Commander were responsible, beside other duties, for introducing new Soviet doctrinal concepts into the CPA and, at the same time, they had wide powers of inspection and supervision of training.[13]

---

[13] Author's personal experience from his military service in the CPA.

A total subordination to the Soviet military was visible everywhere. Organizational structure, tactics, field manuals and standard operational procedures were almost, and in some cases completely, identical to the Soviet original. Both the training and field manuals were translated from the Russian original, and the Czechoslovak Ministry of Defense (MoD) distributed them to forces largely without any significant change. Standardization and unification of training was on such extreme level that, for instance, both the Soviet soldier in Kazakhstan and the Czech soldier at the German border conducted their physical training on the exactly same combat obstacle course and both of them were evaluated according to the same standards regardless of the completely different potential combat actions.

No fundamental deviation in this policy was permitted and a separate national military doctrine was unthinkable. The WTO Joint Command, based in Moscow, consisted mainly of Soviet personnel with only nominal representatives of other member countries. [Ref. 19:p. 51]

However, the new Soviet doctrine after the Cuban missile crisis (1962), emphasizing both nuclear and conventional preparedness, raised some doubt in Czechoslovakia. Czechoslovak military authorities understood that in the case of limited warfare, the Soviet nuclear umbrella would not be reliable. Considering estimated national casualties in the range of unacceptable 60 to 70 per cent in such a limited European war in the middle 1960s, Czechoslovak military leadership called for a more independent military doctrine and for changes in the WTO structure. [Ref. 18:p. 98]

Independent doctrinal thinking and critics about the WTO were among those events that caused the invasion of five Warsaw Pact countries to Czechoslovakia in 1968. However, the Soviets understood that the WTO structure had to be changed in order to avoid future possible crisis and to work more efficiently. As a result, the WTO announced an institutional reform at the meeting in Budapest in March 1969. During the reform, new institutions were created and special emphasis was placed on enhanced interoperability.

The changes, connected with the interoperability issues, included:

- Establishing the Committee of Defense Ministers as the highest body for policy planning

- Creating the Military Council as the agency responsible for planning all training and exercise programs

- Creating the Technical Committee and the Military Scientific Committee to coordinate adoption of new weaponry, research and development

[Ref. 20:p. 221]

Main WTO organizations dealing with standardization are presented in Figure 3.

In the CPA, responsibility for interoperability was divided among deputies of the minister of defense and the General Staff. While the General Staff was responsible mainly for planning and training, the First Deputy Minister of Defense was in charge of research and development within the CPA and cooperated with the WTO Military Scientific Committee and the Deputy Minister of Defense for Armament was linked with the WTO Technical Committee.
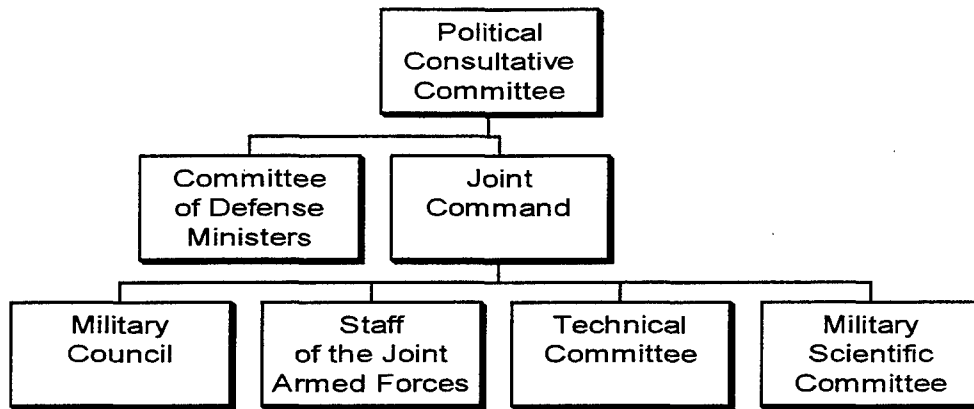
Figure 3. Main WTO Organization Involved in Standardization [From Ref. 47:p. 63]

b.   Cooperation in Armament

Military research and development out of the CPA was conducted by the

Czechoslovak Academy of Science and by other ministries in cooperation with the

Military Industrial Committee of the Council for Mutual Economic Assistance

(COMECON). However, in some respect the COMECON served as a "one-way street."

While the Soviet Union had a direct control over weapons acquisition and technological

innovation in other member countries, it never gave its allies the latest generation of

weapons at the same time as it was equipping its own forces.

Under the COMECON, member countries were specialized in both

research and development and in military production. Czechoslovakia focused on light

aircraft and radar technology. Between 1963 and 1974, the Czechoslovak aircraft

industry produced more than 3,500 L-29 Delfin jet trainers. In the last two decades, more

than 2,500 L-39 Albatros trainers and light combat jets were produced. Both the L-29

and the L-39 became standard trainer jets in the WTO[14] and in more than thirty other countries. In radar technology, the most famous achievement was the unique passive radar TAMARA from the 1980s that is able to detect "stealth" aircraft.

In the field of small arms, Czechoslovakia managed to keep its traditional production and the CPA was the only force within the WTO which were equipped with domestically designed and produced pistols, assault rifles and machine guns. To fulfill interoperability requirements, these small arms used the same ammunition as Soviet weapons.

In the 1960s, Czechoslovakia developed and produced armored personnel carriers (APCs) OT-62 and OT-64. Both of them were interoperable with Soviet-made APCs, as all of them were equipped with the same weapons and radios. In the 1970s, Czechoslovakia began the production of infantry fighting vehicles BMP-1 (and later BMP-2) and tanks T-72. Among other achievements of the Czechoslovak defense industry were production of the 122 mm multiple rocket-launcher model 1970, 152 mm self-propelled howitzer model 1977 and all family of combat and field engineer equipment based on domestic trucks TATRA T-813 and T-815. All of these products were fully interoperable with Soviet, Polish and East German equipment. For instance, it was nothing unusual that during joint exercises, Czechoslovak and Soviet engineer units were building a common pontoon bridge with their respective national equipment.

To summarize, the CPA, due to a high standardization of its equipment, did not have significant problems in interoperability within the WTO. However, the

---

[14] The only exception was Poland, which used its own jet trainer.

problem of aging equipment, which was generally one generation behind the Soviet

Army, emerged in the 1980s. Economic problems and limited defense budget forced the

CPA leadership to concentrate military spending on selected units of both the ground and

air forces.[15]

c. Organization and Training

After 1968, the CPA underwent a large organizational change as a result

of deployment of five Soviet divisions[16] on the Czechoslovak soil. These divisions and

several other Soviet formations were unified into the Central Group of Forces (CGF).

The CPA was once again patterned after the Soviet Army and consisted of

Ground Forces, Air and Air Defense Forces and rear services. The Ground Forces, the

largest and most important part of the CPA, were organized into two military districts.

While the Eastern Military District (EMD) consisted of two tank divisions only and

focused on training, the Western Military District (WMD) was the main combat power.

The WMD included 1st and 4th Armies (four divisions in each) and

directly subordinated formations. The most important units were three tank divisions

(TD), five motorized rifle divisions (MRD), an artillery division (AD), three Scud missile

brigades (SSM bde), two field artillery brigades (FA bde), a surface-air-missile brigade

---

[15] Typical examples were 1st Tank Division (1st Army, Western Military District – WMD), 9th Tank Division (4th Army, WMD), 311th Missile Brigade (WMD) and 11th Fighter Aviation Regiment (3rd Air Defense Division, Air Defense Force).

[16] 10thTank Division (TD, Milovice), 31st TD (Bruntál), 15th Motorized Rifle Division (MRD, Mladá Boleslav), 55th MRD (Vysoké Mýto) and 66th MRD (Zvolen).

(SAM bde) and two anti-tank regiments (ATR). This organization reflected the political

and military changes in Czechoslovakia after 1968 and turned the CPA into a tool that to

realize the WTO goals in cooperation with the CGF. The principal organization of the

WMD is presented in Figure 4.
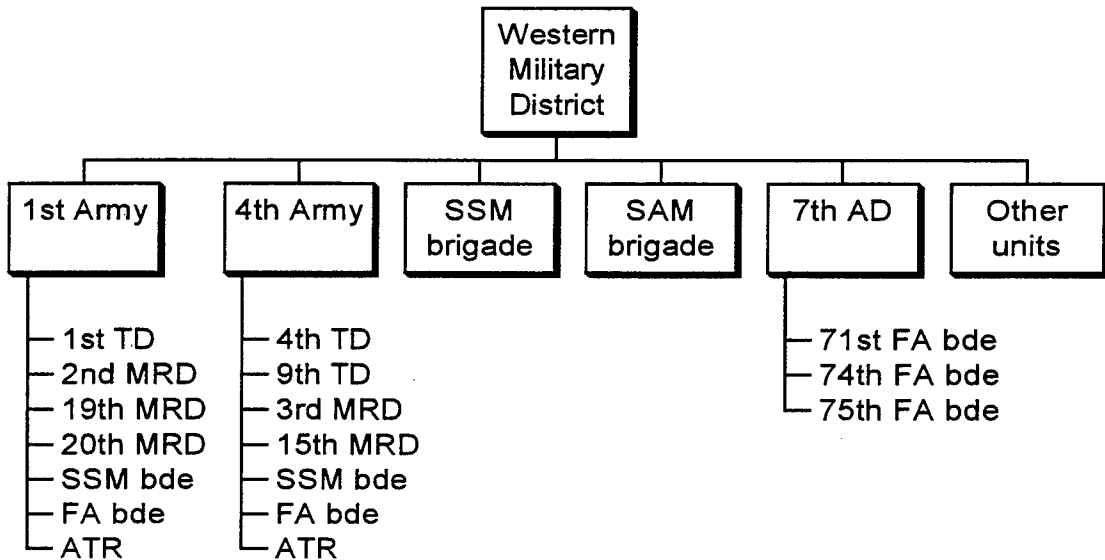
Figure 4. Principal Organization of the Western Military District, 1989

Training in the CPA, like that throughout the WTO, was patterned after

the Soviet model. The system of military education was basically standardized within the

WTO and large number of Czechoslovak officers received their advanced training in

Soviet military schools. Cooperation in this field was not limited to the Soviet Union

only. The Czechoslovaks studied in Poland and East Germany and the Poles, East

Germans and Hungarians studied in Czechoslovakia. This system proved to be very

effective in the down of both cultural and language barriers between respective armed forces.

Russian, the official language of the WTO, was not a significant problem for the CPA. Czechoslovak officers were intensely trained in the Russian language in military schools and mostly were fluent. Even a majority of conscripts were able to understand Russian as this language was mandatory as a second language to be taught in Czechoslovak secondary and high schools. During joint exercises with the CGF, main operational documents at higher levels of Czechoslovak commands (Army, WMD) were frequently developed in Russian.

Joint military exercises became an important tool to increase cooperation among the WTO armed forces and to enhance their mutual interoperability. From the point of view of the CPA, the most important exercises were "Quartet" (1963), "Vltava" (1966), "Brotherhood in Arms" (1970, 1980) and "Shield-72, 79 and 82" (1972, 1979 and 1982 respectively). While these exercises had a multinational background and served to political objectives as well, the CPA turned its main attention toward a closer cooperation with the CGF. The nadir of a mutual military cooperation between the CPA and the CGF occurred in the series of "Družba" exercises. These annually conducted maneuvers demonstrated the enhancing fighting capability of both armies and served as a gateway for introducing new Soviet operational concepts to the CPA.

The CPA in the 1980s became heavy armed forces that were equipped, trained and maintained in the Soviet style. These forces were standardized within the WTO and were highly interoperable with the CGF. However, their reliability in the 1980s became questionable. Political evolution in the Czechoslovak society did not avoid the armed forces, as in November 1989 the CPA did not become a stronghold of the Communist Party. On the contrary, the Czechoslovak military demonstrated, an appropriate level of a "...professional military service ethic in that it did not act on its own to save the communist regime". [Ref. 21:p. 24]

The collapse of the communist regime and the dissolution of the WTO meant that the Czechoslovak Army (CA)[17] ceased any military cooperation with the Soviet Army. As the Czechoslovak leadership began to bring democratic changes to the society, the CA changed as well. These changes will be described in the following section.

B. CHANGES IN THE ARMED FORCES WITH RESPECT TO THE ORIENTATION TO NATO

1. From the Revolution to the Divorce

The Czechoslovak post-November (1989) government performed very actively in pushing the country out from under Soviet strategic influence. Negotiations about the CGF were initiated in January 1990 and all the Soviet military forces withdrew from Czechoslovakia by the end of June 1991. Czechoslovak diplomacy, as well as the

---

[17] The official name of the armed forces was changed from the "Czechoslovak People's Army" to the "Czechoslovak Army" in 1990.

Hungarians and the Poles, worked on the dissolution of the WTO. As a result of their common effort, the WTO military structure was disbanded on April 1, 1991. The political structure of the WTO ceased to exist three months later.

Simultaneously, Czechoslovakia began to develop contacts with NATO. As early as February 1990, Prime Minister Marián Čalfa announced that Czechoslovakia was considering "some cooperation with NATO following its decision to leave the Warsaw Pact by June of 1991". [Ref. 22:p. 60] Since early 1991, Czechoslovak leaders had openly acknowledged that they considered NATO the backbone of the European security and that Czechoslovakia was interested in associating with this organization.

Czechoslovak representatives understood that the CA must be substantially changed from its heavy offensive structure into purely defensive, flexible and highly mobile forces that would be able to cooperate with NATO. Not only the CA itself, but also all the system of command and control of the armed forces had to be changed as well.

However, even though civilian control over military was established and a military reform began in 1990, the Czechoslovak political development in 1991 and 1992 turned everyone's attention in a different direction. As the dissolution of Czechoslovakia into two sovereign states, Czech and Slovak republics, became inevitable after the parliamentary elections in 1992, the main task for the armed forces was to divide units, equipment, supplies and other assets between two new subjects. Consequently, the real effort in cooperation with NATO began after establishing the independent Czech Republic on January 1, 1993.

2.   Setting the Main Direction

The Czech Republic (CR) inherited two thirds of personnel and equipment of the former Czechoslovak Army. On January 1, 1993 the ACR was composed of Ground Forces, an Air Force and Air Defense Forces. The Ground Forces had two tank divisions (1st and 9th TD), three mechanized divisions (2nd, 3rd and 20th MD), one missile regiment, two field artillery brigades, two chemical brigades and other units. The Air Force and Air Defense Forces fielded one mixed aviation corps, two air defense divisions, one aviation training regiment and one aviation transport regiment. In total, the ACR had 102,694 personnel, 2,135 tanks, 2,989 infantry fighting vehicles (IFVs) and armored personnel carriers (APCs), 2,262 artillery systems, 37 attack helicopters and 294 aircraft. These figures were far above limits, which were set up by the Conventional Armed Forces in Europe (CFE) Treaty and its Concluding Act of 1992. According to the Act, the ACR had to reduce its strength to 93,000 personnel, 957 tanks, 1,367 IFVs and APCs, 767 field artillery systems, 50 attack helicopters and 230 aircraft by November 1995. [Ref. 23:p. 40]

Working toward interoperability with NATO, the Czech leadership decided to orient its effort in following areas. First, a system of democratic civil control of military had to be set upon the Western democracies' standard. Second, defense planning had to be changed in order to become more transparent. Third, the ACR had to be reduced in accordance with the CFE Treaty. Fourth, close cooperation with NATO was to be the basis for the ACR transformation in both the human and materiel fields. Finally, it was necessary to have in mind that all changes were severely limited by sharp budgetary

constraints.

Taking into account starting points, goals and constraints, the Czech military leadership worked out the <u>Concept for the ACR Development by 1996</u>. In this and several subsequent documents, the ACR announced its priorities in the field of interoperability with NATO. The most important among them were:

- Doctrine and operational procedures

- Command, control and communications

- Language training

- Air defense and air space management

- Logistic management

From the above mentioned priorities is evident that after initial hesitation as to whether to invest in weapons or in people, the decision was made in favor of the latter. Despite the fact that the shrinking military budget significantly influenced their decision, the Czech officials frequently stressed their opinion that even the most sophisticated weapons without well prepared people would become expensive toys.

The Czech Republic decided to join the program of the Partnership for Peace (PfP) in 1994, to establish the Contact Mission of the ACR at NATO Headquarters in Brussels and to send contact officers to the Partnership Coordination Cell at the Supreme Headquarters of Allied Powers in Europe (SHAPE) in Mons. The main task of these Czech teams was to secure cooperation and coordination during implementation of common activities and exercises. Under the PfP program, the ACR intended to develop interoperability with the NATO members' armed forces especially in purposeful

unification of training and educational procedures. [Ref. 24:p. 13]

As the PfP could not satisfy all Czech needs, the ACR looked for bilateral contacts with its counterparts from NATO countries. Considering those countries' respective importance within NATO, their interest in cooperation with the ACR, geographical and other factors, the Czech military established close contacts with armed forces of the USA, Canada, Germany and the Netherlands. The bilateral cooperation was oriented toward (a) education of Czech officers in Western military schools, (b) enhancement of interoperability of commanders and staffs in international exercises, (c) additional experience in the U.S. and Alliance Planning, Programming and Budgeting System, (d) application of NATO methods in maintenance of weapons and equipment, and (e) exploitation of experience in the personnel management. [Ref. 24:p. 15]

To achieve improved interoperability at the bottom of the military structure of the ACR, the top military officials decided to create a new unit that would act as a core of the ACR in approaching NATO standards. This elite unit, the 4th Rapid Reaction Brigade (RRB), which was supposed to represent the model of the future Czech forces, became operational on July 1, 1994. The 4th RRB received the best available equipment, participated in most common activities with NATO forces and its personnel became the basis of the Czech unit under IFOR and SFOR missions in the former Yugoslavia. Creation and training of the 4th RRB, even at the cost of other Czech military units that suffered due to the lack of funding, proved itself invaluable in gaining experience from contacts with NATO forces and in starting the interoperability effort between the ACR and NATO.

However, serious difficulties impeded this effort. The main problem, besides unprecedented budgetary limitation, remained personnel management. The Czech MoD underestimated the personnel problem and did not take any effective action either to stop the tendency among officers to voluntarily retire in large numbers or to increase recruitment of new officer candidates.

The massive premature retirement of the Czech officers had two main causes. The first of them was connected with large changes in deployment of the ACR and with closing many military bases in the 1990s. Since the late 1940s, the main part of the Czechoslovak armed forces was concentrated in the western part of the country. After 1989, the new democratic government decided to deploy forces more evenly on Czech territory. However, housing for officers and their families was severely limited in new garrisons and neither the Government nor the MoD took any effective measure to find a solution for this inconvenient situation. Understandably, when officers lived separately from their families for a long time without any hope to change this status, their decision to retire and live with their loved ones could hardly surprise anyone.

The second cause of the large retirement was originated in the MoD's inability to prepare new law concerning the status of military personnel and their service in armed forces. Moreover, the Klaus'[18] Cabinet preferred economic issues to military topics and, especially in the early years of its term, obviously did not pay the necessary attention to the ACR. At the same time, the MoD too slowly prepared the Career Path (Kariérní řád) which was supposed (a) to give officers their professional perspective and (b) to set up

---

[18] Václav Klaus was the Prime Minister of the Czech Republic from 1993 to 1997.

the necessary qualifications for each particular position within the ACR. It is no wonder that thousands of officers without an adequately clear idea of their future career decided to leave the ACR.

Relatively low social and living standard of the military increased the attrition of younger officers. As the ACR was not attractive for new officer candidates, the recruitment was poor. The combination of these factors aggravated a generation gap which already existed in the ACR.

The professional personnel, unbalanced in both age and experience, as well as the ACR's inability to attract new officer candidates, became the weakest areas of the Czech military reform.

3. Organizational Changes

The new Czech political representatives considered the democratic civil control of the military as an attribute of the democratic state and as a criterion for admitting the country into NATO. The civil control of the ACR is focused on three basic areas:

- The ACR participation in implementation of the national defense and foreign policy

- The ACR preparedness for the accomplishment of the assigned missions

- Appropriation, efficiency and legality in defense spending
[Ref. 24:p. 57]

The civil control is conducted through the Parliament, the President, and the Government. The Minister of Defense, as a member of the Government who is directly responsible for armed forces, implements the Government's policy into the military.

55

Four Czech Ministers of Defense, who came in office during five years between 1993 and 1998,[19] conducted several reforms in the MoD and in the ACR in order to meet needs of integration into the NATO defense system.

Accountability was delineated between the MoD and the ACR. The MoD, headed by civilians, is concerned with (a) defense policy and legislation, (b) economics, (c) personnel and social policy and (d) foreign relations. The Minister of Defense controls the Chief of the General Staff who is responsible for the ACR. The Deputy Defense Ministers, the Chief of the General Staff and Heads of the MoD Sections are in charge of implementing NATO standards and improving interoperability with the Alliance within their respective areas. Organization of the MoD is presented in Figure 5.
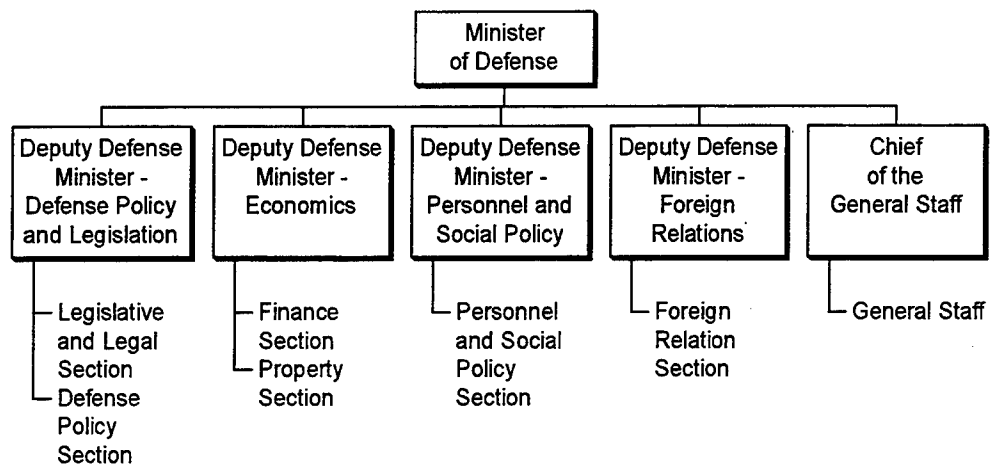
Figure 5. Structure of the Ministry of Defense of the Czech Republic, 1996
[From Ref. 30:p.3]

[19] Antonín Baudyš (1993 – 1994), Vilém Holáň (1994 – 1996), Miloslav Výborný (1996 – 1998), Michal Lobkowitz (1998).

The transformation of the armed forces followed the Concept for the ACR Development by 1996. During the transformation, the divisional level of command was abolished and a brigade organization was implemented. A new, three-stage command system was built to enable flexible and dependable command and control of forces. The three stages included the General Staff (strategic level), corps headquarters (operational level) and brigade and Air Force bases headquarters (tactical level).

The Ground Forces structure was simplified by creating mechanized brigades instead of the former tank and mechanized divisions. A new element, the rapid reaction brigade, was introduced.

In the Air Force and Air Defense Force, air bases, surface-to-air (SAM) brigades and electronic brigades became basic elements of the new structure.

Logistics was completely rebuilt into a new integrated system.

All these changes, accompanied by the reduction of both personnel and equipment in accordance with the CFE Treaty, were completed by the end of 1995. On January 1, 1996 the ACR had 65,000 personnel, 957 tanks, 1,367 IFVs and APCs, 767 artillery systems, 36 attack helicopters and 129 aircraft. This organizational structure, specified in Figure 6, fulfilled basic requirements for interoperability with NATO forces and enabled the ACR to begin the training of commands and units according to new standards based on NATO procedures.

However, this structure underwent another evolution and was changed in 1997. This last change will be discussed in detail in Chapter V. The following chapter will deal with the Czech involvement in the Partnership for Peace and with its significance for the

process of enhancing the ACR's interoperability with NATO.

```
                          ┌─────────────┐
                          │   General   │
                          │    Staff    │
                          └─────────────┘
         ┌───────────────────────┼───────────────────────┐
  ┌─────────────┐        ┌─────────────────┐        ┌─────────────┐
  │   Ground    │        │  Air Force and  │        │  Logistics  │
  │   Forces    │        │Air Defense Force│        └─────────────┘
  └─────────────┘        └─────────────────┘               │
     ┌──────────┐       ┌────────────┐              ┌─────────────┐
┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐  │  Logistics  │
│   1st    │ │   2nd    │ │   3rd    │ │   4th    │  │    Bases    │
│Army Corps│ │Army Corps│ │ Tactical │ │Air Defense│ └─────────────┘
└──────────┘ └──────────┘ │Aviation  │ │  Corps   │
                          │  Corps   │ └──────────┘
                          └──────────┘
```

─ 1st MB	─ 6th MB	─ 32nd TAB	─ 4th FAB
─ 2nd MB	─ 7th MB	─ 33rd HAB	─ 41st SAMB
─ 3rd MB	─ 8th MB	─ 34th AFTB	─ 42nd SAMB
─ 5th MB	─ 2nd FA bde	─ Other	─ 41st EB
─ 1st FA bde	─ Other	Units	─ 42nd EB
─ Other	Units		─ 43rd EB
units			─ Other
			Units
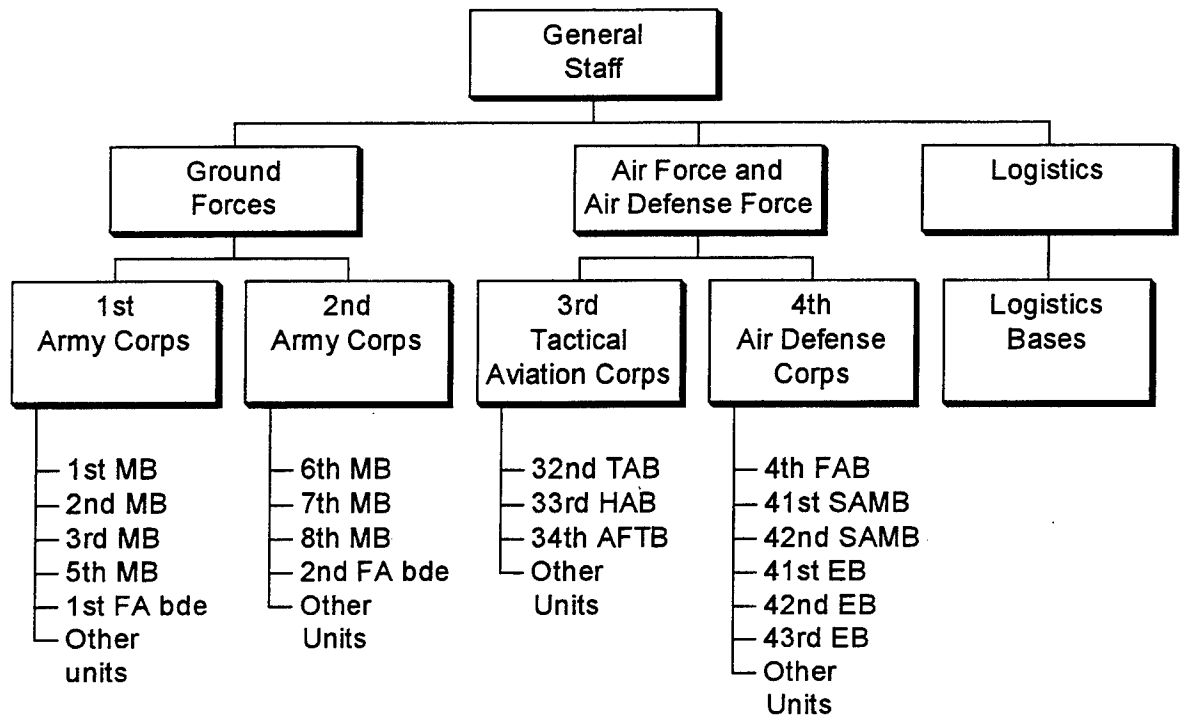
MB............mechanized brigade   TAB.......tactical aviation base
RRB...........rapid reaction brigade   HAB........helicopter aviation base
FA bde........field artillery brigade   AFTB.......Air Force training base
SAMB.........surface-to-air missile brigade   FAB.........fighter aviation base
EB..............electronic brigade

Figure 6.   Structure of the Army of the Czech Republic, 1996 [From Ref. 23:p. 36]

IV.   IMPROVEMENT OF INTEROPERABILITY UNDER THE PARTNERSHIP FOR PEACE PROGRAM

This chapter is composed of three sections. In the first section, the Partnership for Peace (PfP) program will be introduced and a special concentration will be given to the Planning and Review Process. The second section will focus on common activities of the ACR and NATO. The third part will pay attention to the Czech involvement in peacekeeping operations under NATO command.

A.   IMPORTANCE OF THE PfP PROGRAM IN ENHANCING THE ACR's INTEROPERABILITY WITH NATO

1.   Objectives of the Partnership for Peace Program

After the initial political and military contacts with former adversaries from Central and Eastern Europe, NATO established the North Atlantic Cooperation Council (NACC) to promote a positive relationship and cooperation in Europe at the end of 1991. An idea of an open and friendly environment, which would be based on dialogue and cooperation, attracted not only the former WTO members but neutral states as well. Consequently, NACC became a wide forum where NATO offered its help and experience in political, economic, information and scientific issues; in airspace coordination; in civil emergency planning; in defense support field; and in military cooperation. [Ref. 13:pp. 47-48]

While NACC served as a multinational tool that offered the same scope of cooperation to all partners, some countries including the Czech Republic would have evidently preferred a more specific kind of interaction. Thus, a new project, the

Partnership for Peace, was introduced within the framework of NACC at the January 1994 Brussels NATO summit.

The Czech Republic, by signing to the PfP Framework Document on March 10, 1994 agreed with the following PfP objectives:

- Facilitation of transparency in national defense planning and budgeting process

- Ensuring democratic control of defense forces

- Maintenance of the capability and readiness to contribute, subject to constitutional considerations, to operations under the authority of the United Nations and/or the responsibility of the CSCE[20]

- The development of cooperative military relations with NATO, for the purpose of joint planning, training, and exercises in order to strengthen their ability to undertake missions in the fields of peacekeeping, search and rescue, humanitarian operations, and others as may subsequently be agreed

- The development, over the longer term, of forces that are better able to operate with those of the members of the North Atlantic Alliance
[Ref. 13:p. 267]

Handing over the Presentation Document on May 17, 1994 the Czech Republic confirmed its interest in close cooperation with NATO. In this document, the Czechs expressed their intent to actively participate in PfP and they laid a basis for their Individual Partnership Program. They perceived this program as an organic part of the current transformation of the ACR. Deputy Defense Minister Jaromír Novotný described how the Czech armed forces understood PfP:

---

[20] Abbreviation of "Conference on Security and Cooperation in Europe." In December 1994, this name was changed on "Organization for Security and Cooperation in Europe" (OSCE).

We see in PfP a certain 'test of maturity' for potential new NATO members and have taken this very seriously. For us, it not only provides a chance to compare our capabilities with the requirements of membership, but it also represents a program through which we can model our procedures on those used in NATO. Furthermore, PfP enables each country to determine how far and to what depth it wishes to go in its cooperation with NATO.
[Ref. 25:p. 26]

The ACR established both its Contact Mission at NATO Headquarters in Brussels and the Liaison Team attached to the Partnership Coordination Cell (PCC) at Mons (Belgium). While the Contact Mission deals with political and more general military issues, the Liaison Team provides the Czechs view directly to the PCC and closely cooperates in implementing the Individual Partnership Program.

·Under PfP program, the development of the ACR's interoperability with NATO forces initially focused mainly on (a) stepwise unification of training and educational procedures, and (b) transition to the Alliance's system of planning, conducting and evaluating of exercises. The priority in the Czech effort was given to the human factor, to the interoperable thinking. The goal was to implement the NATO rules and procedures as the basis of everyday practice in the ACR.

In May 1996, NATO turned its attention more toward the military aspects of PfP and in the BI-MNC conception defined minimal requirements on interoperability with Partners. According to this conception, interoperability with NATO requires from Partners to have:

- Staff officers trained in accordance with NATO doctrine and procedures. These officers should be ready to work (a) in NATO headquarters, (b) in combined command structures during operations under NATO command and (c) in their respective national armed forces in those positions that are involved in NATO-PfP issues. Moreover, they should be able to integrate units, which are declared for peacekeeping missions, into multinational forces under NATO command.

- Equipment, which is adapted to that of NATO and which is standardized with that of NATO where it is possible.
[Ref. 26]

Considering this new tendency in PfP, both Major NATO Commanders, SACEUR and SACLANT, called for a new definition of interoperability, at least toward the Partners. General Naumann, Chairman of the North Atlantic Military Committee, proposed that the new definition should include:

- Training of personnel and units in NATO doctrine, procedures and practices which are capable of working effectively within NATO or NATO-led organizations on specific operations

- Adapting or procurement such equipment which interfaces with that of NATO

- Selection and training of staff officers in NATO doctrine and procedures, so as to be able to fill staff appointments within NATO or NATO-led headquarters or in national posts dealing with NATO/Partnership matters.
[Ref. 27:p. 17]

To further advance interoperability among NATO and Partners, the alliance introduced the Planning and Review Process.

2.   The Planning and Review Process

By the end of 1994, the emphasis within PfP had shifted to defense planning. For this purpose, the Planning and Review Process (PARP) was introduced in January 1995.

PARP, as an integral part of PfP, is modeled on NATO's own Defense Planning

Process and is available to individual Partners wishing to develop their cooperation with the Alliance in this field. PARP is conducted in a biennial planning cycle. Every two years, participants exchange data on their defense plans and budgets and identify areas in which they would like to improve interoperability between their respective military forces and those of NATO. The Alliance considers the level of each particular Partner's involvement in PARP as an important factor in preparing for their future possible NATO membership. The Study on NATO Enlargement (1995) underlines the importance of PARP for the future NATO members and the necessity for them "to meet certain minimum standards". [Ref. 29:Article 40]

By early 1995, NATO staff produced a draft Planning and Review Assessment for each Partner. These documents, taking into account each particular Partner's needs and wishes, offered sets of proposed interoperability objectives. For the first round of PARP (1995-97), NATO military authorities proposed twenty objectives, covering predominantly the doctrine, equipment and operational procedures. Achieving these objectives was supposed to significantly improve the ability of both NATO and Partners to cooperate, especially in peacekeeping and search and rescue operations.

The Czech MoD, considering both the Study's on NATO Enlargement requirements and the PARP's opportunities, developed its Harmonogram of measures for achieving the interoperability objectives in the ACR in fall 1995. The Czech Republic joined the first round of PARP and decided to participate in twelve objectives. Those objectives were as follows:

1. Commonality of fuel requirements for ground forces including receipt and delivery of liquid fuels

2. Interoperability of communications equipment

3. Language requirements for staff officers

4. Provision of liaison teams

5. Use of NATO communications procedures and terminology

6. Availability of units for PfP operations

7. Ability to mark and record hazardous areas such as minefields and unexploded ordnance

8. NATO land map symbology

9. Adoption of the Universal Transverse Mercator (UTM) Projection and Grid, and the Military Grid Reference System (MGRS)

10. Logistic support

11. Interoperability of air navigation aids

12. Aircraft identification (Friend or Foe System)
[Ref. 26]

By the end of the first round of PARP in fall 1996, the ACR evaluated its results in this program. Not all objectives were fulfilled on the required level and in the required manner. Main factors, causing delays in the ACR's effort, were concentrated in three dimensions. First, instead of focusing on key issues, the work was fragmented in all areas of the MoD's responsibility. Second, a clear and targeted top-down approach was absent in the ACR. Third, lack of resources negatively influenced a more remarkable progress in achieving the interoperability objectives. [Ref. 26]

Lessons from the first round of PARP directly determined the Czech approach to the second cycle. On March 7, 1997 the NATO representatives, headed by the Assistant Secretary General Anthony Cragg, and the Czech MoD delegates evaluated the Czech results in the first round of PARP and discussed the interoperability objectives for the second one. Conclusions from this Prague meeting served as a guide for the Czech Minister of Defense Miloslav Výborný who decided, on March 21, 1997 to assign the concrete ACR's units to participate in the PfP program during the period 1997-98. These units[21] were to be prepared, equipped and trained for their future participation in PfP activities in accordance with NATO requirements. In order to achieve this goal, thirty-one interoperability objectives were set up for the second round of PARP:

1. Command and control organization

2. Command and control process

3. Command and control procedures

4. Command and control system architecture

5. Deployable command and control systems

6. Logistic doctrine and procedures

7. Logistic command and control

---

[21] One of the Ground Forces brigades, one of the Air Force bases, one of the Air Force squadrons, one of the rescue units of the Czech Civil Defense Forces, one of the Humanitarian Aid bases.

8. Logistic reporting

9. Centralized contracting/reimbursement procedures

10. Supply standards and equipment availability – land

11. Medical support

12. Blood and blood donor procedures

13. Fuel standards

14. Fuel handling for land vehicles

15. Self sufficient potable water supply and water installations

16. Cargo handling and transportation

17. Auxiliary electrical power generation systems

18. Land operations

19. Combat support (CS) and combat service support (CSS) units

20. Forward air control

21. Search and rescue operations

22. Ground based air defense

23. Aircraft transponders and air traffic control

24. Availability of units

25. Movement planning

26. Maps and symbologies

27. Marking and reporting of hazardous areas

28. Airfield infrastructure and procedures

29. Air navigation aids

30. Language requirement

31. Weather support
[Ref. 30:p. 16]

The Czech military authorities are deeply committed in achieving these objectives. They believe that especially communication standards, operating procedures and language skills, followed by equipment standards, are fundamental for any joint activity with NATO members' forces. The objectives of the second round of PARP have become top priorities and they serve as the basis for the ACR's development at present and in the near future. PARP obviously has become one of the most effective tools for fulfilling the objectives of PfP in the ACR.

PARP, while a very important and effective instrument, is only a part of all interoperability activities. The ACR's common activities with NATO members form another significant portion in the Czech work on the way toward NATO membership.

B. GATHERING EXPERIENCE FROM COMMON ACTIVITIES WITH NATO MEMBERS

The Czech officials, having in mind the priority of the human factor in achieving the required level of interoperability, have oriented the ACR's activity also toward joint military exercises with NATO members. They believed that direct contacts between soldiers are the best way to understand each other. Simultaneously, they welcomed NATO members' offer concerning the military education and, since 1990, began to send the Czech[22] officers to study military schools in NATO countries. However, there were

---

[22] At that time still Czechoslovak officers.

even other activities helping to transform the ACR into a new kind of forces that should become interoperable with those of NATO. In this order – joint exercises, military education, and the other activities – the next subsection will be presented.

1. Joint Military Exercises

The Czech Republic, as well as other Central and Eastern European countries, was highly interested in starting joint training and exercises as soon as possible. As early as in 1993, the Czech MoD began planning military exercises with the Dutch, British, French and German armed forces. [Ref. 25:p. 25]

The first joint exercise, called "Cross-Country 94", was organized in the Czech Republic in March 1994. Both participants, a Czech airborne platoon and a platoon of the Dutch Marines, conducted training in extreme weather conditions in mountains. A reciprocal exercise was held in the Netherlands in September the same year. These first contacts exposed the main Czech weakness, insufficient language skills, and oriented the Czech military leadership on how t prepare personnel for the next exercise which would be conducted under the PfP program.

The initial PfP exercise, "Cooperative Bridge 94", took place in Poland in September 1994. The Czech soldiers with their counterparts from six NATO and six other Partner countries did training in basic peacekeeping tasks. General George A. Joulwan, a former SACEUR, listed many lessons from this exercise. From the interoperability point of view, the most important among them were that (a) NATO and Partners needed to develop and agree on a common peacekeeping doctrine, (b)

multinational peacekeeping operations required simpler, more understandable rules of engagement than unilateral operations and (c) there was a clear need for extensive language training. [Ref. 31:p. 4]

In order to increase flexibility in their planning and conducting, exercises were divided into two basic groups. The first of them, so-called "NATO/PfP exercises" are those that are directly prepared under NATO command. Their number has raised from three in 1994 to more that ten annually in following years. The exercises were held in both NATO and Partner countries. The second group is called "In the Spirit of PfP exercises". These latter exercises are sponsored by participants and are more closely oriented toward their respective needs.[23]

The role of the Political-Military Steering Committee in Brussels and the Partnership Coordination Cell at Mons to work in such manner that duplications are avoided and the overall program is harmonized.

The ACR became one of the most active participants in both "NATO/PfP" and "In Spirit of PfP" exercises. From 1994 to 1996, the Czech soldiers took part in almost seventy exercises including twenty-two of them that were organized on the Czech territory. [Ref. 30:p. 11] This Czech activity reflected the requirements of the Study on NATO Enlargement concerning training and, by the same token, demonstrated the

_____

[23] Actually, there is a third group of exercises. This group includes common activities of Partners with their counterparts from State National Guard units under the State Partnership Program. This program will be introduced in the last subsection of this section.

ACR's effort to increase its interoperability with NATO forces by using PfP as much as possible.

Since 1997, the Czech striving has shifted from the quantity to the quality. Now, a focus is put on those priorities that are decisive for the future Czech membership in NATO. The most important among them are the preparation of staffs and staff officers including their knowledge of and skills in NATO's staff procedures. For this purpose, the Czech officers study military schools in NATO countries.

2. Education in Western Military Schools

Ironically, the first Czech officers studying in the West were those who originally went to study to the East. Four Czech military students of the former Friedrich Engels' Military Academy (Dresden, German Democratic Republic), after being invited by the Government of the Federal Republic of Germany, transferred to the University of Bundeswehr as early as in October 1990 and graduated after finishing the complete course of four or five years in Hamburg or Munich respectively. [Ref. 32]

NATO members' aid in education of the Czech officers can be divided into two basic groups. The first group consists of education that is provided directly by NATO through the NATO Defense College in Rome (Italy), the NATO School (SHAPE) in Oberammergau (Germany) and the NATO Communication and Information System (CIS) School in Latina (Italy). The second group is composed of courses that NATO members offer to the Czech MoD on a bilateral basis.

In its schools, NATO began to organize special familiarization courses in October 1991. By the end of January 1998, 31 Czech officers had attended courses at the NATO Defense College (NDC) and 87 at the NATO School in Oberammergau. As the NATO CIS School opened its courses later, in 1996, only two Czech officers had participated in the CIS courses by the end of January 1998. [Ref. 32]

All these courses were aimed on such topics as (a) peacekeeping, (b) democratic civil control of the military, (c) NATO, its organization and working methods and (d) various international organizations such the United Nations, the European Union and the Western European Union. [Ref. 33:p. 34] Since 1995, the NDC has started to offer to the Partners their participation in full five-month courses, which are the mainstay of the NDC. One of the first PfP participants, Brigadier-General Rostislav Kotil, became later the First Deputy of the Chief of the General Staff of the ACR.

Under the bilateral contacts, the Czech officers have studied mostly in Germany, the United States, Canada, the Netherlands, Great Britain and France in this order. By the end of January 1998, 857 Czech officers attended these courses and 77 (9 percent) of them studied longer than 10 months there. Germany hosted 191 Czech officers (22 of them for longer courses), the United States 187 (29), Canada 125 (0), the Netherlands 101 (0), Great Britain 52 (12) and France 47 (14). Courses were oriented mostly toward (a) enhancing the language skills (246 participants), (b) familiarizing with the civil-military and international relations (250), (c) command and staff topics (111) and (d) special military subjects (166). [Ref. 32]

The United States' International Military Education and Training (IMET) program can serve as an example of this kind of education. Under IMET, the Czech officers study in the U.S. military schools and the USA send mobile education teams to the Czech Republic. IMET dividends seem to outweigh the U.S. investment. This arguing can be confirmed by the fact that both Chief of the General Staff of the ACR and Commander of the Air Force, Major-General Jiří Šedivý and Major-General Ladislav Klíma respectively, are IMET graduates.

Education of the Czech officers in NATO countries has a substantial impact on enhancing the ACR's interoperability with NATO. The Czechs improve their language skills, become familiar with NATO doctrine, tactics and procedures and, most importantly, begin to understand the spirit of a multinational cooperation within the Alliance.

However, there were problems as well. Lack of officers, who were skilled in Western languages, led to the situation that, especially in the early 1990s, some people were sent to study on the basis of their language skills only. In some cases, their professional performance was not considered as important as it should. After returning back home, these officers were given high positions that were above both their capabilities and the level of their experience. On the other hand, absence of an effective personnel management in the ACR in most of the 1990s created the opposite situation as well. Some of the Western graduates were placed on such positions that either had nothing in common with the subject of their study or that were on surprisingly low levels of command. No wonder that many of those officers decided to retire, especially when

the private sector recognized the value of their education and offered them much higher social and living standard than the ACR did. Again, poor personnel management in the ACR presented the results of its work.

Majority of the Czech officers, who studied in Western countries, continues to serve in the ACR. These people promote the NATO values in the Czech military and become the fundament for the interoperability between the ACR and NATO.

The next subsection introduces other activities that serve to increase the ACR's interoperability.

3. Other Activities

Military cooperation between the ACR and the U.S. armed forces has been positively influenced by the establishment of the U.S. Military Liaison Team at the General Staff of the ACR in the early 1990s. This team, composed of U.S. military personnel, coordinates events of a mutual interest. These activities are covered by the Joint Contact Team Program (JCTP) and they have become a flexible forum for cooperation between the armed forces of both countries. JCTP activities include lectures, familiarization tours, conferences and exchanges of officers. The ACR highly regards the opportunity to visit the U.S. Army formations in Germany and to explore how these units and their staffs are trained. The informal contacts, knowledge and experience gained during these visits have been invaluable to the adaptation of NATO staff procedures in

the ACR.[24]

The active duty U.S. military is not the only component involved in helping the ACR. Under the National Guard-sponsored State Partnership Program, the Czech armed forces established broad ties with the National Guard of Texas (NGT). The state of Texas has been chosen intentionally because it has a special relationship with the Czech Republic. In the nineteenth century, thousands of Czech immigrants settled in Texas. Now their descendants, approximately a million current Texans[25], play an important role in political, economic and social matters in this state. Even some of the NGT officers, like Lieutenant-Colonel Dennis Migl from the Headquarters of the 49th Armored Division, speak fluent Czech. This common heritage of both the Czechs and Texans helps to overcome obstacles in their effort to increase the ACR's interoperability. Cooperation between the ACR and NGT is oriented mostly toward training and joint military exercises in both countries, staff procedures, logistic management, and recruiting.

In the materiel field, budgetary cuts set the limit. The ACR concentrates its effort on cooperation with NATO members on information systems implementation, air defense and airspace management systems, and the upgrade of selected current equipment.

Since the NATO Foreign Ministers meeting at Sintra (Portugal) in May 1997, the Czech Republic has become more involved in the business of the CNAD, the NATO Air

---

[24] Author's personal experience from implementing skills, gained during his stay at the Headquarters of the 1st Armored Division (USA) in Germany in 1995.

[25] Data provided by the Czech Heritage Society, San Antonio, TX in December 1996.

Defense Committee (NADC), the Committee for European Airspace Coordination

(CEAC) and the NATO Consultation, Command and Control Board (NC3B). Norman

Ray, NATO Assistant Secretary General for Defense Support, highly praised this work

and stated that:

> ... this involvement in the day-to-day business of armaments and other
> technical cooperation provides an essential means for partners to achieve
> greater equipment interoperability and compatibility with the Alliance.
> [Ref. 34:p. 27]

Skills and experience that the ACR has gained in cooperation with NATO

members are verified in a real test: peacekeeping operations.

C.   THE CZECH INVOLVEMENT IN PEACEKEEPING AND ITS IMPACT ON THE ACR's INTEROPERABILITY

Czech military personnel have gained considerable experience in peacekeeping

operations since 1989. Czech soldiers have participated in these operations as observers

and, in a case of former Yugoslavia, as a peacekeeping unit. From the perspective of this

research effort, the single most important event was the Czech decision to engage in the

Implementation Force (IFOR) under NATO command in Bosnia. Considering the

significance of this decision in the Czech effort in the field of interoperability, this

section will first discuss the Czech involvement in peacekeeping missions before IFOR

and, second, the IFOR mission and its significance for the ACR.

1.   Activities in Peacekeeping before 1996

The beginning of Czechoslovak participation in peacekeeping goes back to 1954. At that time, the United Nations established the Neutral Nations Supervisory Commission (NNSC) as a tool of control over the Korean War armistice. Participation of Czechoslovak officers in this commission lasted until 1993.

However, a real growth of the Czechoslovak and, later, the Czech activity in the peacekeeping operations has occurred since 1989. So far, Czech military personnel have taken part in twenty missions in Europe, Africa and Asia. All of these missions were formed according to a decision by either the United Nations or the OSCE.

· The most significant among these missions were UNAVEM I and II in Angola, UNTAG in Namibia, UNOSOM in Somalia, both UNGCI and UNSCOM in Iraq, UNOMOZ in Mozambique, UNOMIC in Liberia and several other missions involving the territory of former Soviet and Yugoslav republics. [Ref. 35:p. 2]

In former Yugoslavia, the Czech engagement in peacekeeping operations reached its zenith. The former Czechoslovak Government decided by its Resolution No. 27 of January 16, 1992 to start the preparation of an infantry battalion for the UNPROFOR (United Nations Protection Force) operation in Yugoslavia. In March, the Czechoslovak Federal Assembly approved the assignment of the unit and, by the end of April 1992, the battalion was deployed on the territory of Croatia in the region of the newly named Republic of Serbian Krajina. [Ref. 35:p. 8]

The Czechoslovak battalion operated together with French, Canadian, Jordanian and Kenyan battalions under the Commander of Sector South. After the division of

76

Czechoslovakia on January 1, 1993, a joint Czech and Slovak battalion maintained its work for three additional months.[26] In April 1993, the battalion was handed over to the ACR. During next several months, the number of personnel in the battalion increased from the initial 500 to almost 1,000 troops.

The operation in the former Yugoslavia directly influenced the ACR's transformation. It was for the first time, beside the Czechoslovak participation in the Gulf War of 1991, when the Czech military unit cooperated with NATO members. Familiarization with NATO standards and adaptation to them, where possible, became one of the Czech objectives during this operation.

While professional tasks such as monitoring activity and disarming the persons in the separation zone did not create problems, difficulties appeared in maintaining effective communication. The Czech radio equipment enabled the unit to maintain an operable communication network within the battalion and with the territory of the Czech Republic. However, its capability to cooperate with units of other nations within the sector was limited because of differences in the bandwidth. Another limitation in communication was caused by different national rules of communication in the radio network and by the language barrier. This problem was partially solved by the establishment of the Communication Center of the battalion that provided the link to other UNPROFOR components. On the other hand, the Czechs, due to their Slavic roots, became quickly

---

[26] The fact that both new republics maintained their joint unit, as well as very friendly relations between the Czechs and Slovaks, was unbelievable for the Serbs, Croats and Muslims. According to Lieutenant-Colonel Pavel Přikryl, a former member of the battalion, local citizens could not understand why the Czechs and Slovaks did not fight each other in 1993.

familiar with the Serbo-Croatian language and did not need any interpreters to fulfill their mission. [Ref. 35:p. 16]

The Czech contribution to the UNPROFOR was significant, as over 1 per cent of the ACR was assigned to the mission. This proportion of forces corresponded to that of France and was higher than that of most other participants.

Experience from first tours was utilized at the newly established Peacekeeping Forces Training Base at Český Krumlov (the Czech Republic). Normally, the ACR uses this base not only for its units but for annually organized international courses for junior commanders assigned to the peacekeeping missions there. [Ref. 25:p. 27]

The UNPROFOR mission enabled the ACR to cooperate with NATO member's armed forces, namely the French and Canadians. The Czech officers, while working in UNPROFOR headquarters, became familiar with the working style of their NATO counterparts and with the complexity of the work in the multinational environment. Spirit of consensus, cooperation and mutual respect became characteristic of their working style. Additionally, many Czech officers have maintained this spirit in their work after coming back home to the Czech Republic.

Nevertheless, political and military development in former Yugoslav republics in summer 1995 demonstrated weaknesses of the UNPROFOR mandate. A more powerful instrument was needed to stop killing of innocent people, especially in Bosnia.

2. IFOR and SFOR

After the Croat military offensive in Serbian Krajina in summer 1995 and the Bosnian Serbs hostage taking in reaction to NATO air strikes in November the same year, it became obvious that the UNPROFOR mission was too weak for keeping the peace in Bosnia.

Peace negotiation among the Bosnian Serbs, Croats and Muslims led to the agreement in Dayton (Ohio) on December 14, 1995. The following day, the Security Council agreed to establish the mandate for NATO-led peacekeeping operation and the North Atlantic Council decided to deploy the Implementation Force (IFOR) in Bosnia. This operation, called Joint Endeavor, was supposed to take twelve months and to involve about 60,000 soldiers from NATO Partners and non-PfP countries. [Ref. 36:p. 113]

As negotiations between the Czech Republic and NATO of the Czech involvement in IFOR started in fall 1995, the Czech Parliament approved the ACR's participation in this new mission on December 8, 1995. The Parliament's resolution limited the battalion's strength to 1,000 men and women and agreed that the unit would be under NATO command. Due to Czech constitutional law, which did not permit the mandatory deployment of troops to a mission, the battalion was formed from volunteers only.

For the first time in its history, the ACR gave its unit under NATO command. The Czech 6th Mechanized Battalion became a part of the Canadian brigade, which happened to be a component of the British commanded multinational division in the

sector SouthWest. Nevertheless, some tasks, logistics for instance, had to be solved by the national command. For this purpose, and for the coordination of activities with the Canadians and British, the Commander of the Czech Military Contingent in IFOR (CCMCI) was established. The chain of command is presented in Figure 7.

```
                    ┌─────────────────────┐
                    │       SACEUR        │
                    └─────────────────────┘
                               │
          ┌─────────────────────────┐      ┌──────────────────┐
          │    Commander-in-Chief   │      │ Deputy Commander │
          │      Allied Forces      │──────│     of IFOR      │
          │    Southern Europe      │      └──────────────────┘
          │     (COMAFSOUTH)        │
          └─────────────────────────┘
                       │
          ┌─────────────────────────────────┐
          │        Commander of the         │
          │  Allied Command Europe (ACE)    │
          │      Rapid Reaction Corps       │
          │          (COMARRC)              │
          └─────────────────────────────────┘
       ┌───────────────┬───────────────┬───────────────┐
  ┌──────────┐   ┌──────────────┐   ┌──────────────┐
  │ Multi-   │   │ Multinational│   │ Multinational│
  │ national │   │ Division SW  │   │ Division SE  │
  │Division N│   │    (UK)      │   │   (France)   │
  │  (USA)   │   └──────────────┘   └──────────────┘
  └──────────┘         │
              ┌─────────────────┐
              │  Multinational  │       ┌──────────────────┐
              │     Brigade     │┄┄┄┄┄  │ Commander of the │
              │    (Canada)     │    ┊  │  Czech Military  │
              └─────────────────┘    ┊  │ Contingent in IFOR│
                       │             ┊  │     (CCMCI)      │
              ┌─────────────────┐    ┊  └──────────────────┘
              │  6th Mechanized │    ┊
              │    Battalion    │┄┄┄┄┘
              │ (Czech Republic)│
              └─────────────────┘
```
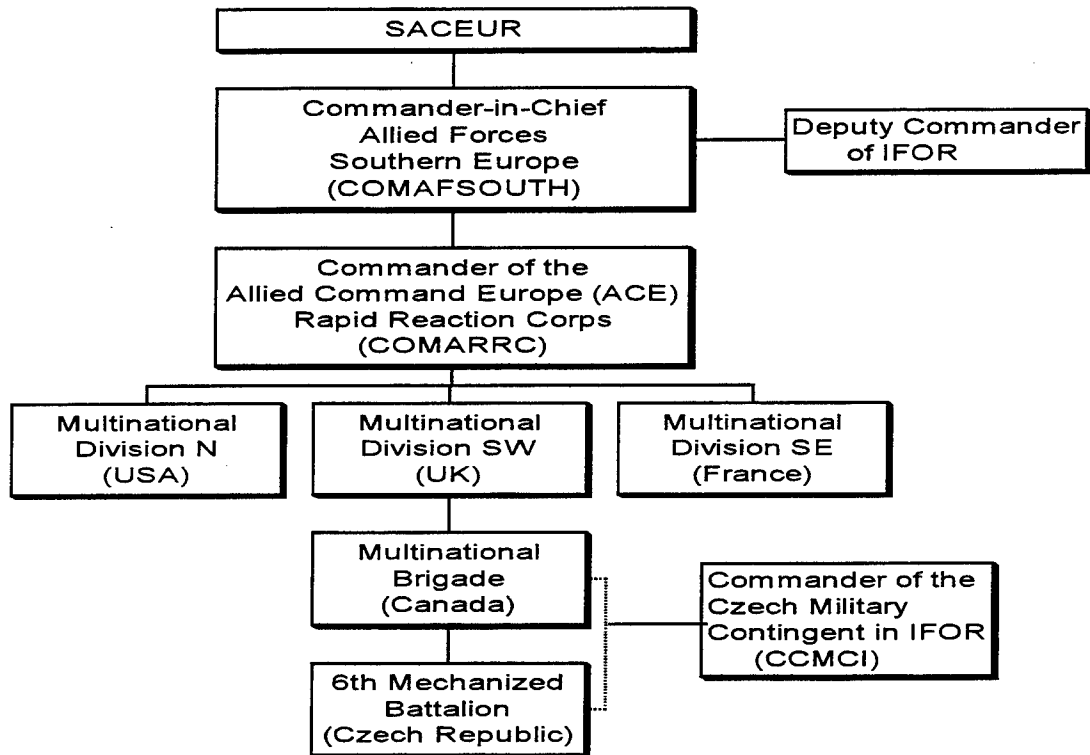
Figure 7. Assignment of the ACR's battalion to IFOR [From Ref. 35:p. 36]

The battalion was composed and equipped so that in case of need it could effectively fulfill a combat mission. It consisted of three mechanized companies, an engineer company, a support company and of some other units. The armament and

equipment involves 22 infantry fighting vehicles, BMP-2 and their reconnaissance version BPzV, 19 armored personnel carriers OT-64, grenade launchers AGS-17, antitank grenade launchers RPG-7, machine-guns and other small arms, 44 jeeps, 163 trucks and other special-purpose vehicles. [Ref. 35:p. 38]

In 1997, the Czech component of the multinational forces, which changed their name from IFOR to SFOR (Stabilization Force) by that time, was reinforced by adding an army aviation detachment with Mi-17 helicopters. Due to the absence of any field artillery in the battalion's organizational structure, a British artillery unit provided fire support. However, standard operational procedures in the Czech field artillery differ significantly from those in NATO. To overcome this obstacle, the Royal Netherlands Army provided special training for ten Czech field artillery officers. These officers later became the core of the Fire Support Group within the battalion.

CCMCI was responsible for cooperation with commanders and staffs of both the British divisional and Canadian brigade headquarters. Work of the Czech liaison teams in these headquarters enabled the ACR to absorb the NATO standards and procedures that would be necessary after the Czech admission to NATO.

Another improvement was achieved in overcoming the language barrier. Courses in English, organized by the ACR itself, as well as with Canadian, American and Dutch help, began to bear fruit. Even more junior commanders at the platoon and company level, who came to IFOR mostly from the 4th RRB, have no difficulty communicating in English. [Ref. 25:p. 28]

During the IFOR and SFOR missions, the ACR gained experience in the field of the equipment's interoperability. The Czech weapons proved themselves as very effective and simple to maintain. The infantry fighting vehicles and namely, the TATRA trucks, are considered by some of the NATO members one of the best.[27] The ACR oriented its effort in the materiel field to such areas that appeared critical for the Czech capability to cooperate with their Canadian and British counterparts. These areas include communications (especially radios), and night vision devices. The Czech defense industry welcomed a new opportunity and, by supplying the battalion with new signal and optical devices, and tested this equipment in difficult conditions before starting its delivery to the ACR.

However, the potential of people is decisive. Major-General Karel Kuba, the former Inspector of Ground Forces of the ACR, considered the impact of the IFOR experience on thinking of the Czech military personnel this way:

> Career officers, warrant officers and non-commissioned officers begin to understand that their participation in the mission is a necessary part of their service career and that the experience gained in the mission has to be reflected in the training of soldiers at home. We observe the principle of maximum possible rotation at individual positions including headquarters. It is namely Canadian Brigade Headquarters where officers gain experience from the methodology of work following NATO standards. [Ref. 35:p. 32]

Jaromír Novotný, the Czech Deputy Defense Minister, stressed also the importance of the human factor in this multinational mission:

---

[27] This argument is based upon the researcher's discussion with a group of Canadian officers, former members of Canadian peacekeeping units in Yugoslavia, at the Canadian Forces Base Borden (Ontario, Canada) in December 1994.

The IFOR operation is a political display of the cooperation between the Czech Republic and NATO ... We have been proving that this is not only possible in theory but also in practice ... The motto "one team, one mission" is certainly appropriate here. The IFOR operation is ... a course in the skills required for cooperating in critical situations when soldiers have to depend on each other regardless of nationality.
[Ref. 25:p. 29]

The Czech involvement in peacekeeping operations, especially in both the NATO-led IFOR and SFOR, became a crucial factor in closer ties to NATO. It helped the ACR's personnel to become familiar with the Alliance's standards, procedures and doctrine and, at the same time, it demonstrated the Czech resolve not to be merely a security consumer but a security contributor as well. Czech active participation in peacekeeping operations significantly influenced, without any doubt, the July 1997 Madrid NATO Summit's decision to invite the Czech Republic to join the Alliance.

PfP, initially considered by the Czech leadership as something marginally desirable, became a successful military program. Nevertheless, the Czech Republic understood the PfP importance in its future membership in NATO and explored its opportunities vigorously.

The Czech MoD and the ACR became familiar with the fundamentals of NATO's defense planning process and established close contacts with the Alliance in many areas of military cooperation. During the process of achieving the minimum level of interoperability, the ACR used PARP as an effective tool to accomplish this goal.

Under PfP program, Czech military officers came into contact with NATO members' headquarters and units and they experienced a different style of military cooperation than that of the former WTO. Experience from the Western military schools

and from joint exercises with NATO members was essential for the Czech military during their involvement in peacekeeping operations, especially in NATO-led IFOR and SFOR.

The ACR has gradually become ready to cooperate, at least in some areas, with the Alliance. However, not just the armed forces but the country will become a NATO member. For this reason, the Czech Republic needs to adapt its law and other documents, and adjust the defense of the country to the new situation. These documents will be introduced in the next chapter.

V.   CHANGES IN DEFENSE LEGISLATION AND THE ACR's INTEROPERABILITY EFFORT

This chapter consists of three sections. The first section presents the Czech legislative background concerning national defense and the most significant governmental action in this field since 1993. The second section introduces two basic documents, the National Defense Strategy (NDS) and the Military Strategy (MS). The last section brings up the implementation of these documents in the Conceptual Outline of the Development of the ACR.

A.   THE DEFENSE LEGISLATION AND THE CZECH GOVERNMENT

The situation in the Czech defense legislation is far from satisfactory. The former Czech Government, headed by the Prime Minister Václav Klaus, focused on economic issues and neglected the defense needs of the country. This situation had lasted since 1993 and has been modified only when the country's basic security goal, joining NATO, became a real priority in 1997. So far, the Czech defense legislation is still based mostly on legislation that, while partially regulated and adapted to the post-Cold War situation, has its origin in the old regime.

The Czech Republic's military defense is based on the civic principle. This principle means that the state guarantees the interests of the prevailing majority of its citizens, and consequently, they share in its military defense. This principle is implemented in the Constitution of the Czech Republic, which further specifies the basis of the country's defense. Single articles of the Constitution identify conditions for

85

V. CHANGES IN DEFENSE LEGISLATION AND THE ACR's INTEROPERABILITY EFFORT

This chapter consists of three sections. The first section presents the Czech legislative background concerning national defense and the most significant governmental action in this field since 1993. The second section introduces two basic documents, the National Defense Strategy (NDS) and the Military Strategy (MS). The last section brings up the implementation of these documents in the Conceptual Outline of the Development of the ACR.

A. THE DEFENSE LEGISLATION AND THE CZECH GOVERNMENT

The situation in the Czech defense legislation is far from satisfactory. The former Czech Government, headed by the Prime Minister Václav Klaus, focused on economic issues and neglected the defense needs of the country. This situation had lasted since 1993 and has been modified only when the country's basic security goal, joining NATO, became a real priority in 1997. So far, the Czech defense legislation is still based mostly on legislation that, while partially regulated and adapted to the post-Cold War situation, has its origin in the old regime.

The Czech Republic's military defense is based on the civic principle. This principle means that the state guarantees the interests of the prevailing majority of its citizens, and consequently, they share in its military defense. This principle is implemented in the Constitution of the Czech Republic, which further specifies the basis of the country's defense. Single articles of the Constitution identify conditions for

declaring war, the position of the President as a commander-in-chief of the armed forces and other basic provisions.

Defense of the Czech Republic is detailed specifically in two Defense Acts. The first is Defense Act 92 of1949, which defines the basic mission, range of tasks, structure and organization of the armed forces and of conscription. The second, Defense Act 40 of 1961, deals with national defense in general, to include economic and social considerations. [Ref. 24:p. 54]

Other defense bills, such as those dealing with the duty status of military personnel (Act 76 of 1959), with military reservations (Act 169 of 1949) and with the health care in the armed forces (Act 32 of 1957), are out-of-date as well. Since these acts and many other generally binding regulations are inconvenient for the future requirements of the defense, the Government must develop new bills to replace them.

The Government took the initiative in the summer of 1993 when it approved the Concept of the Development of the ACR by 1996. This concept was the leading document that oriented the ACR's transformation from the heavy "WTO-style" structure into a defensive force that was based on the brigade system. However, when the former Minister of Defense Vilém Holáň· submitted a new conception for the next period to the Government in 1996, the Government repeatedly refused to adopt this conception. While the official reason for all three refusals was the lack of thoroughness in the document, the general belief among the Czech military was that it was more convenient for the Government to ignore needs of the defense.

By its resolution No. 178 of March 26, 1997, the Government tasked the Minister of Defense to:

> ...go on in realization of gradual fulfillment of all interoperability goals set forth by NATO and necessary for the Czech Republic to be able to become a full-fledged member of this organization emphasizing command, control and communication systems, as well as area of the Air Force and Air Defense, and a higher attention to be paid to English/French language education of ACR service members....
> [Ref. 42:p. 25]

Thus, the Government finally began a serious treatment of defense matters and opened the way for the development of defense legislation that was so desperately needed.

The Czech defense legislation, while it has its roots in the Constitution, follows two parallel lines. The first direction goes through the Parliament and the primary bill is the State Security Act. This Act will be followed by other bills dealing with (a) the defense in general, (b) armed forces and conscription, and (c) with military personnel.

The second line is the domain of the Government. Here, the basis is the NDS, which was approved by the Government on March 26, 1997. The delay in development of this document was caused by the Government's policy from 1993 to 1997 that underestimated the importance of the national defense. The NDS is a cornerstone for development of other necessary documents within the range of the MoD's responsibility. The most important among them are the MS, the Conceptual Outline for the Development of the ACR, the Conception for the Development of the Air Force, the

Strategic Directive for the Defense of the State, the Defense Resources Plan and other

documents dealing with the use of the armed forces in the defense of the country.

[Ref. 39:p. 8]

The turn of the Czech Government's attention toward the defense legislation was

influenced by the progress in the individual dialogue between the Czech Republic and

NATO. This dialogue was conducted from May 1996 to April 1997 and its scope

included not only military topics but other areas as well. [Ref. 40] The involvement of

other ministries and agencies in the dialogue was the turning point that convinced the

Government to start dealing with defense issues more seriously.

The Government, by its Resolution No. 383 of June 25, 1997 concerning the

report on the course and outcome of the individual dialogue between the Czech Republic

and NATO, established the "Government Committee for the Czech Republic's

Integration in NATO." The Government appointed the Prime Minister to serve as the

Chairman of the Committee. Moreover, it enjoined its Ministers and Chairmen of the

State Materiel Reserves Administration and the State Nuclear Security Office to make an

analysis comparing the existing state of defense and propose changes in those areas

where the Czech Republic still fell short of the standards common in the NATO

countries.

Areas of the main concern were as follows: (a) fulfilling the objectives of

interoperability in the armed forces, (b) defense legislation, (c) crisis management and

civil emergency planning, (d) civil infrastructure, (e) resource planing for the defense,

(f) development of the defense industry, and (g) classified data protection. [Ref. 41]

Therefore, the Government's Resolution No. 383 became crucial with respect to the Czech Republic's accession into the Alliance. Establishment of the Government Committee meant a new quality in the Government's approach toward defense matters.

Two documents, which resulted from this new approach, the National Defense Strategy and the Military Strategy, will be introduced in the next section.

B. BASIC DEFENSE DOCUMENTS OF THE CZECH REPUBLIC

Two defense documents are interpreted here. The first is the National Defense Strategy and, the second is the Military Strategy.

1. The National Defense Strategy

The NDS makes a conceptual base for the development of the defense system of the country and for its military strategy. An objective of the NDS is to:

> ... set the principles for a spirited and resolute activity directed to ensuring the security of the state, averting an armed conflict and to the use of its armed forces in the case when the above-mentioned values are endangered by external or internal factors.
> [Ref. 43:p. 1]

Definitions of the objectives and recognition of both external and, internal factors are indicators of a mature military thought process in the Czech policy. Like others in central and eastern Europr, the Czech politicians, had an underdeveloped appreciation of defense matters immediately after 1989. Their ideas from that time, aside from some maladroit involvement in the defense industry and unprofessional management of the

ACR,[29] did not accept the possibility of employing the ACR for internal missions. On one hand, this kind of thinking is understandable after the use of armed forces against own citizens in Czechoslovakia in August 1969.[30] On the other hand, this approach led to the destruction of the former, very effective systems of Civil Defense and of emergency planning. Recognition of both external and internal threats meant that the Czech politicians began to understand the defense system and its complexity.

Consequently, the NDS has to be super-departmental because it is related to the preparation of the state for economic mobilization, the defense of the state territory, and infrastructure development and maintenance. The defense is a responsibility of constitutional bodies of the state, of state and territorial administration, legal entities and of all citizens.

The NDS comprises an introduction, five chapters and a conclusion. The chapters include:

- Bases of National Defense Strategy

- Principles and Main Missions in the Area of Defense

- Forces and Means of Defense, Tasks and Missions of their Institutions

- Resources for Defense

- Defense Planning

---

[29] This kind of defense management was typical for the period 1993-94, when Antonín Baudyš was the Minister of Defense.

[30] The CPA was used for suppression of riots at the first anniversary of the WTO invasion to Czechoslovakia of 1968.

After defining the possible risks and interests, the NDS stresses the importance of the Czech membership in NATO and in its military structure. For this reason, the Czech Republic's effort should be oriented, beside other directions, toward:

> ... strengthening of the ties of alliance and increasing of the level of interoperability with NATO member countries (participation in planning and performing of exercises with the armed forces of NATO and other democratic countries within the program of Partnership for Peace).
> [Ref. 43:p. 3]

The NDS prefers political means of settlement and the prevention of threatening conflicts through the use of force. Therefore, a primary objective of the defense strategy is to ensure the readiness of the country and its armed forces for the defense of national interests. Complementary to this primary objective is the use of diplomacy to prevent possible conflicts or solve them by the use of international law coupled with the help of allies.

As the Czech Republic is a small country,[31] an autonomous, national defense could hardly defeat an aggressor. Rather, like other small European countries,[32] the Czech defense intention is to discourage a possible aggressor by promoting the fact that his losses would be substantially higher than any gained advantages.

The NDS recognizes three levels of threat: (a) the state of emergency, (b) the state of threat of the country and (c) the state of war are promulgated in those cases. In accordance with the State Security Act, a State Security Council is established for the

---

[31] The Czech Republic has 10.3 million citizens and its area is circa 78,000 square kilometers.

[32] A typical example is Switzerland.

period of the state of threat to the country or the state of war. In peacetime and during a state of emergency, the Government will set up a body that is responsible for solving security problems.

For the defense of the country, the following forces and means are available:

- State Control Organizations

- Armed Forces

- State Administration and Self-government Organizations

- System of Economic Mobilization

- Citizens
[Ref. 43:p. 7]

For defense purposes, the NDS defines three groups of resources. First among them is the state of population, which influences the strength and quality of the armed forces personnel. The peacetime strength of the ACR should be maintained within 0.5 to 0.6 per cent of the population and the wartime strength is 5 to 6 times higher.

The second group, materiel resources, is provided by Czech industry. The system of economic mobilization is prepared in advance and state materiel resources are maintained at a prescribed level. The quality and composition of the ACR's materiel supplies will gradually approach NATO standards and the military infrastructure is directed to achieve compatibility with NATO as well.

The third group, financial resources, is covered by the national budget.

The last chapter of the NDS defines defense planning as a summary of activities and relations performed by the state institutions in order

...to specify the needs, objectives and missions of the state defense, procedures and terms of their accomplishment while considering the existing political, military and economic requirements and efficient use of the resources.
[Ref. 43:p. 8]

Considering the development of the NDS and the political environment from 1993 to 1997, the turning point is not in the content or in the spirit of the document but in its mere existence at all.

The NDS forms the foundation for the adoption of laws, conceptions and other documents of all state agencies and institutions in the defense field. Regarding the area of responsibility of the MoD, the Military Strategy is the primary document.

2.   The Military Strategy

The Military Strategy (MS) of the Czech Republic declares principles associated with ensuring national and international security. It specifies theoretical and practical background connected with the preparation of the country and its armed forces for war or for other crisis situations requiring use of the armed forces. The MS determines the build-up, preparation and use of the armed forces with respect to their compatibility with the armed forces of designated allies.

The point of departure for the preparation of national defense is the identification of security risks. While the present security situation in Europe is characterized by a decreased threat of a global conflict, regional political and economic instability is rising. Local conflicts, having their roots in this instability, could either directly or indirectly

threaten the Czech Republic. The security risks could arise into threats of military, non-military and mixed character.

The military threats include a possible direct military aggression and its consequent expressions against the Czech Republic. Such aggression could be caused by an unstable strategic environment, by threatening the Czech border, or by fulfilling commitments to allies.

Non-military threats are associated with mass migration of foreign populations on Czech territory, industrial and materiel disasters, organized crime, drug abuse, violent riots and economic collapse.

Mixed threats represent a combination of simultaneously acting military and non-military threats with unexpected scope, characteristics, and changes. [Ref. 44:p. 3]

The main tool for the military defense of the country is the ACR, which relies on the conscription system. The MS recognizes "citizens-in-uniforms" to be a stabilizing element of the society. This new idea, which most likely was inspired by a positive experience from the German Bundeswehr and from armed forces of other democratic countries, is in a sharp contrast with the former WTO principle of the working class-determined soldier and his hatred bourgeois enemies. The citizens-in-uniform represent a new approach in the Czech military and they are the core of the human dimension of interoperability with armed forces of NATO members.

The MS determines the organizational structure of the ACR which consists of:

- Command and Control Echelons
- Ground Forces

- Air Force

- Logistics

- Military Intelligence

- Military Medical Service

- Military Police
[Ref. 44:p. 6]

The Command and Control Bodies include command, control, communications, computers and intelligence (C4I) systems; structure; functions and processes providing a dependable capability of working in all conditions and in real time. These bodies must be fully interoperable with those of NATO and, at the same time, they must keep their ability of total functional independence. The development of the interoperable C4I system is the top priority in the ACR at the present time.

The Ground Forces are divided into Land Forces and Territorial Defense Forces. While the Land Forces are the decisive power for the defense of the country, the Territorial Forces' tasks are more associated with the territory, which they oversee already during peacetime.

The Air Force consists of (a) Command, Control and Intelligence Systems, (b) Military Aviation, and, (c) Air Defense Missile Troops. The Air Force is tasked to defend the air space of the Czech Republic and to support combat operations of the Ground Forces.

Logistics is divided into (a) troop, (b) operational and (c) central subsystems that provide the combat service for the ACR.

The Military Intelligence, the Military Medical Service and the Military Police provide service for the ACR in their respective areas of responsibility.

In accordance with its similarity to the armed forces of NATO member countries, the ACR is divided into immediate reaction forces, rapid reaction forces and main defense forces.[33] This apportion of the ACR is more evidence of the Czech effort to achieve interoperability with NATO.

The MS further develops, from a narrower military point of view, the NDS statements of both preparation and use of the ACR for the country defense. A focus is given to the ACR's ability to cooperate with NATO members' armed forces and, concurrently, to the active Czech involvement in UN peacekeeping and humanitarian operations and in the PfP program.

Development of the MS and its adoption by the Government paved the way for the necessary changes in the ACR after the Madrid (July 1997) invitation to the Czech Republic to join NATO. Changes in the ACR, which have to be completed in order to increase its interoperability in 1997, were laid down in the Conceptual Outline of the Development of the Armed Forces.

---

[33] This force structure is identical with The Alliance's New Strategic Concept of 1991, Article 47.

C. CONCEPTUAL OUTLINE OF THE DEVELOPMENT OF THE ARMED FORCES OF THE CZECH REPUBLIC

The objective of the <u>Conceptual Outline of the Development of the Armed Forces of the Czech Republic</u> (CODAFCR) is to provide a set of specific measures to make the ACR capable of fulfilling all of its tasks in accordance with both the NDS and the MS. By the same token, the ACR must to be able to cooperate fully with NATO members' armed forces no later than 1999.

The following aspects were taken into account for formulating the CODAFCR:

- The current state of the ACR

- Threats with respect to which the ACR must be capable of efficient actions

- Ability to efficiently cooperate with NATO as a whole and with its members' armed forces

- Ability to participate in peacekeeping operations

- Economic capabilities of the Czech Republic
[Ref. 39:p. 4]

Considering these starting points, the Government decided to earmark forces for NATO not later than by 1999. These forces are built as modular units complying with applicable NATO standards, capable of operating under NATO command and maintaining efficient operational collaboration with armed forces of other NATO nations assigned to collective defense.

Until joining NATO, the Czech Republic will earmark two brigades and two helicopter sections for this purpose. As soon as the country becomes a NATO member, the earmarked units will include one immediate reaction brigade, one squadron of multiple purpose supersonic aircraft and one squadron of helicopters. The ability of the

ACR to increase the size of its earmarked forces will match the security situation and NATO requirements.

Not only the ACR itself but the Czech territory as well has to be ready for coalitional defense including the ability of the country to receive and deploy NATO forces. This ability includes preparation of the road network, air routes and corridors, communication lines, logistic support and other elements of the infrastructure.

To make sure that the defense of the country can indeed be reinforced by NATO units, the following measures are regarded as priorities and will be implemented by the year 2000:

- Introduction of standard operational and logistic procedures with priority given to higher levels of command, which will communicate with NATO commands

- Introduction of NATO joint air procedures and interoperable IFF systems

- Establishment of an interoperable air traffic control system

- Adoption of NATO standards applying to the treatment and handling of aircraft on the ground

- Interoperability of aircraft navigational systems

- Implementation of infrastructure-development programs and capital investment projects to accommodate related logistic and operational requirements

  [Ref. 39:p. 4]

The CODAFCR underlines the importance of interoperability objectives accepted by the ACR under PARP. Special attention will be paid to the implementation of NATO standards, standard operational procedures and terminology in the area of command, control and communication, including adequate technical support and the setting up

liaison teams. Major emphasis will be placed on improving language skills of the Czech military personnel. Staff and operational procedures will be implemented at all levels of command of the ACR and units will be trained in accordance with NATO doctrine. All of these measures demonstrate that the Czech military leadership understands the value of the human factor as a decisive element in the interoperability effort.

Considering new ACR's tasks after the Madrid Summit of 1997 and a contradiction between military needs and economic capabilities of the country, the CODAFCR articulates changes in the ACR's structure. The major changes are as follows:

- From an operational point of view, the ACR would be divided into immediate reaction, rapid reaction and main defense forces

- At the operational level of command, two army corps headquarters should be canceled and replaced by the Land Forces Headquarters and the Territorial Defense Forces Headquarters. The existing Tactical Aviation Corps and the Air Defense Corps should be united into a single Air Force

- As to the Land Forces, the existing number of brigades should be reduced and immediate reaction and rapid reaction forces established. Other units of the main defense forces should be transformed into training bases

- As to the Territorial Defense Forces, the existing number of brigades should be reduced and their mobility and combat value improved

- As to the Air Force, combat units should be fleshed out near to their war-time strength and the command, control and intelligence systems should be restructured and reduced in terms of manpower

- As to the Logistics, it should be downsized and, where it is worthwhile, outsourced to civilian contractors under favorable terms and conditions

- The ACR should be provided with better equipment that would be compatible with that of NATO members' armed forces

[Ref. 39:p. 4]

A new structure of the ACR is presented in Figure 8.

Figure 8 organizational chart:

General Staff
- Land Forces
  - Immediate Reaction Forces
    - 4th RRB
  - Rapid Reaction Forces
    - 3rd MB
    - 7th MB
    - 6th MRLB
    - 1st SB
    - 11th MIEWB
  - Main Defense Forces
    - 3rd TMoB
    - 6th TMoB
    - 1st TMoB (FA)
    - 1st TMoB (E)
    - 1st TMoB (CH)
    - 1st TMoB (AD)
    - 12th TMoB (MIEW)
- Territorial Defense Forces
  - Territorial Defense Headquarters
    - 21st TDH
    - 22nd TDH
    - 23rd TDH
    - 24th TDH
    - 25th TDH
    - 26th TDH
    - 27th TDH
  - Mobilization Bases
    - 1st TMoB
    - 1st MoB
    - 2nd MoB
    - 3rd MoB
    - 4th MoB
- Air Force
  - Aviation Bases
    - 4th TAB
    - 32nd TAB
    - 33rd HAB
    - 34th AFTB
    - 6th TrAB
  - SAM Brigades and Regiments
    - 41st SAMB
    - 42nd SAMB
    - 43rd SAMR
    - 44th SAMR
    - 45th SAMR
    - 46th SAMR
  - Electronic Brigades
    - 41st EB
    - 42nd EB
- Logistics
  - Storage and Supply Units
  - Transportation Units
  - Repair and Maintenance Units
  - Material Support Facilities
- Other Services

RRB..............................rapid reaction brigade
MB..............................mechanized brigade
MRLB...........................multiple rocket-launcher brigade
SB...............................signal brigade
MIEWB.........................military intelligence and electronic warfare brigade
TmoB...........................training and mobilization base
TmoB (FA).....................field artillery TMB
TmoB (E).......................corps of engineers TMB
TmoB (CH).....................chemical units TMB
TmoB (MIEW)..................military intelligence and electronic warfare TMB
TDH............................territorial defense headquarters
MoB............................mobilization base
TAB............................tactical aviation base
HAB............................helicopter aviation base
AFTB..........................Air Force training base
TrAB...........................transportation aviation base
SAMB..........................surface-to-air missile brigade
SAMR..........................surface-to-air regiment
EB..............................electronic brigade

Figure 8. Organization of the ACR, 1998 [After Ref. 45]

The essential operational change, which brings the ACR closer to its NATO counterparts, consists in building up the immediate reaction and rapid reaction forces. By the same token, this fact makes evident the weaknesses of the Czech military transformation effort from the early and middle 1990s. For instance, while NATO decided to establish the immediate reaction, rapid reaction and main defense forces as early as in 1991, the Czech Republic did it only in 1997. Moreover, when the Czech 4th Rapid Reaction Brigade was established in 1994 (three years after the Alliance's Strategic Concept was adopted), it was obvious that this unit would be a part of the immediate reaction forces in the future. Nevertheless, this *immediate* reaction unit

received the name of *rapid* reaction brigade, which absolutely confuses the essence and purpose of this brigade.

The process of the ACR's changes is influenced by finding the right relation between the defense needs and economic capabilities of the country. Factual expression of this relation is the MoD budget. Major priorities in the 1998 MoD budget are expenditure related to achieving the interoperability objectives. Shifts in priorities toward them is especially remarkable when comparing budget allocation in 1997 and 1998, as it is presented in Table 1.

Year	1997 (In Million CZK)	1998 (In Million CZK)
Total MoD Expenditure	30,213.7	36,877.1
Military Expenditure	26,055.5	32,724.4
Investment Expenditure a) Total	5,506.2	6,915.8
b) In Support of Interoperability Objectives	10.5	1,483.7
Non-Investment Expenditure a) Total	24,707.5	29,961.3
b) In Support of Interoperability Objectives	201.9	439.2

Table 1. The MoD Budget Allocation with Respect to Interoperability Objectives in 1997 and 1998 [Ref. 42:p. 25]

The legislative effort in 1997, even though consequent defense bills still must complete it, was an important step toward the Czech membership in NATO. The Parliament adopted fundamental defense bills and the Government approved other documents within the range of its responsibility. The MoD and the General Staff of the

ACR changed their structure in order to become more flexible in new conditions. The ACR was transformed in accordance with the NATO's strategic concept. Interoperability objectives became top priorities in the every-day life of the Czech armed forces as far as their achievements have had a decisive impact on the ACR's future performance in NATO.

The ACR goes on in a way that no other country has yet matched. This way of transformation from communist to democratically controlled armed forces and from the WTO to NATO membership presents both achievements and shortcomings. Both the positive and negative experiences will be summarized and evaluated in the last chapter.

VI. CONCLUSION

This chapter summarizes the baseline that put the ACR on the road toward interoperability with NATO. Then an evaluation will be made regarding the main steps taken by the Czech leadership with respect to this baseline. Finally, a generalization is made concerning which parts of the Czech approach could be utilized by other countries who are attempting to join NATO.

A.   THE EVOLUTION OF THE CZECH EFFORT IN INTEROPERABILITY

Interoperability, meaning how armed forces in a coalition fight alongside one another in an effective manner, has long been an important factor in military theory and practice. Since the end of World War II, two approaches to interoperability dominated in Europe. Each coalition, either NATO or WTO used its own way to standardize their respective military doctrines, procedures, training, equipment and infrastructure among its allies. The main difference between each coalition was their understanding of the interoperability issues and putting these issues into effect.

Since NATO is based upon such democratic principals as equality and consent, its members have been achieving the current level of interoperability by using democratic means and by sharing the same opportunities in this process.

WTO, on the contrary, was based on its strongest member's decisions and other participants had little or only rare chances to influence the leading power. Moreover,

military professionalism and effective allocation of resources were often neglected because of ideological reasons.

The perception of the role that the human factor plays in military organizations is crucial for understanding the complexity of the interoperability puzzle. With all due respect to equipment standardization and its importance in any military coalition, only a highly motivated and trained soldier, who is familiar with his allies' doctrine and who is able to communicate with his counterparts, is the decisive factor for accomplishing given goals. The validity of this argument will become even more evident in the future, mainly because of the multinational concept of peacekeeping and of other similar operations that will invariably involve European armed forces.

Transformation of the ACR from forces, which were highly standardized with other members of the former WTO, into forces capable to operate under NATO command, is a complicated process. The presentation of definitions, organizations, origin and development of interoperability in NATO and, on the other hand, introduction of the development of the Czechoslovak armed forces standardization in WTO clearly demonstrate both the difficulty and length of the way which the ACR has to go in order to become a NATO member.

The Czech effort has been constrained by several factors. The first years after the collapse of the former regime were influenced by domestic political problems leading to the dissolution of Czechoslovakia on December 31, 1992. Consequently, interoperability became a point of interest only when all problems with the division of the former

Czechoslovak Army between two new countries, Czech and Slovak republics, were solved.

The next factor was the ACR's offensive organizational structure. Transformation of the Czech armed forces into defensive and more flexible forces was the only option to effectively cooperate with the Alliance.

The military "software" had to be changed as well. Not only doctrinal issues, but the system of command and control needed to reflect the new orientation of the country. Needless to say, these changes must be accompanied, if not preceded, with a shift in the defense legislation.

The language barrier was another considerable problem. To overcome this difficulty meant to get access to education in NATO members' military schools, to direct contacts with armed forces of democratic countries and to increase Czech involvement in common activities with the Alliance.

Another issue was a shrinking military budget. A lack of funds negatively influenced the level of equipment upgrade. Also, equipment maintenance suffered and the fielding of new equipment which would be compatible or interoperable with materiel used in NATO was nearly impossible. Moreover, the limited budget reduced training as well and made the Czech military leadership look for the most efficient way to lay down foundations of its armed forces' capability in order to cooperate with NATO counterparts.

The ACR choose its priorities in the interoperability field and focused particularly on changing the way of thinking and doing by the military personnel. These priorities are (a) doctrine and operational procedures, (b) command, control and communications, (c) language training, (d) air defense and air space management and (e) logistic management. The ACR used the PfP program, offered by NATO, as an excellent opportunity for achieving its goals.

B. STRENGTHS AND WEAKNESSES OF THE CZECH APPROACH

This section evaluates the main steps taken by the Czech leadership during the process of achieving interoperability between the ACR and NATO. These steps are divided into several groups and are presented here in the following order: (1) political and legislative measures, (2) organizational changes, (3) education and training, (4) peacekeeping activities and (5) equipment and infrastructure.

1. Political and Legislative Measures

The Czech political leadership declared joining NATO to be one of its priorities in the country's foreign policy. To achieve this goal, democratic civil control of armed forces was set up and civil-military relations began to develop according to the Euro-Atlantic democratic standards. Defense planning, after introducing PPBS, became more transparent. The Czech Republic established regular diplomatic liaison with NATO, became member of NACC and actively participates in the PfP program.

However, from 1993 to 1997, the Government did not show much interest in defense matters on the domestic playground. Defense legislation is still based on old Acts from the communist regime. It took the threat of not joining NATO before the former Klaus' Government began preparing new defense bills and other documents related to defense.

This "defense schizophrenia" between foreign and domestic military policies on one hand accelerated the Czech accession to NATO. On the other hand, it did not strengthen the position of the ACR in Czech society and impeded the interoperability effort.

2. Organizational Changes

Organizational changes were necessary for the ACR's transformation into modern forces capable of operating with its counterparts under NATO command. The decision to establish the 4th Rapid Reaction Brigade in 1994 as a unit, which would act as the center of gravity in the interoperability effort[34] in the ACR, became crucial for the Czech ability to participate in common activities with NATO members. This unit, trained according to the NATO standards as much as possible, paved the way toward interoperability for other formations of the ACR.

The establishment of immediate reaction forces, rapid reaction forces and main defense forces culminated into a decisive point in achieving organizational

---

[34] A similar idea was later, in September 1995, presented in the Study on NATO Enlargement, Article 77.

standardization with NATO. However, a question remains as to why the development of such a structure did not happen earlier than in 1997, especially considering the fact that the Alliance's Strategic Concept formulated such force structure as early as 1991.

Several rounds of organizational transformations, which the ACR had to undergo from 1990 to 1997, cost the Czech armed forces many resources and much energy. Moreover, limited training during these processes caused a decreased level of the ACR's combat capabilities. All of these factors, which were multiplied by poor personnel management, negatively influenced the motivation of a significant number of career soldiers, forcing many to leave the armed forces.

Organizational changes, if they had been performed more consciously and oriented directly to the final objective, would have saved time, resources and energy for better results in the interoperability effort.

3.   Education and Training

The Czech Republic welcomed and used an opportunity to send its officers to study military schools in NATO member countries. Interactions between the Czech officers and their counterparts from NATO help to break the cultural, language and professional barriers. Graduates from Western military schools occupy important positions in the ACR at the present time and they directly influence and control the future development of interoperability of the Czech armed forces.

Familiarization of the Czech officers with NATO doctrine, operational and staff procedures, logistic and materiél requirements as well as with other standards enabled them to implement these norms in the ACR.

While the program of military education has been successful and substantially improved the ACR's interoperability with NATO, its effectiveness was lowered by two factors. First, the lack of officers with appropriate language skills negatively influenced, at least in the early 1990s, the possibility of selecting the best candidates for studying in NATO countries. Second, a system of best utilization of the skills the officers acquired was not as effective as it could be as some of these officers got assignments that had little in common with the subject of their study.

Training, especially common activities with NATO members' armed forces, had a great impact on increasing the ACR's interoperability. The Czech military leadership used the opportunity to train its military units in joint exercises under PfP as much as possible. Those exercises, beside their many positive aspects, revealed several substantial deficiencies of the ACR in comparison with its NATO counterparts. The most significant among them were the language barrier and the absence of well prepared and respected non-commissioned officers in the chain of command.

Joint training had two basic weaknesses. First, it was oriented primarily toward peacekeeping only and did not provide any room for typical military tasks. Second, only mechanized and airborne units participated in joint exercises from the Czech side. This exclusivity meant that while infantry officers gradually acquired some experience with interoperability issues, their colleagues from artillery, engineers and other branches

lacked this opportunity. If only the scope of the joint training were not artificially narrowed, results in the interoperability field could be more impressive.

Nevertheless, considering the impact of education and training on the ACR's interoperability effort, it is safe to say that this area has been decisive for the human aspect of interoperability. Furthermore, since the human factor directly influences all other areas during the process of approaching the NATO standards, its importance cannot be overestimated.

4. Peacekeeping Activities

Participation of the Czech military unit in peacekeeping operations in former Yugoslavia, namely in the IFOR and SFOR missions, was welcomed by the Czech military leadership as an opportunity not only to support peace in Europe but to increase ties between the ACR and NATO.

By sending the battalion under NATO command to Bosnia and rotating most of its personnel every six months, the Czech MoD and the General Staff of the ACR reached several objectives. First, the ACR acquired experience from daily cooperation with NATO members, in this case the Canadians and British. Second, the six-month rotation of personnel enabled the ACR to involve tactically an increased number of its officers and soldiers regardless of their original military branch. In this way, peacekeeping missions outweighed the "infantry exclusivity" from common exercises. Finally, experience from missions signaled where the priorities would be in future equipment investments.

Another important factor of these missions was the familiarization of the ACR with NATO tactics associated with missions other than peacekeeping. For instance, time could be spent on solving the problem of fire support and its coordination between the Czech mechanized and British field artillery units.

Cooperation between the CCMCI and his group and both the Canadian and British headquarters has yielded the experience for the ACR in using liaison teams in a multinational force structure under NATO command. The last lesson is significant especially for those Czech units that will be earmarked for NATO after joining this organization.

The main limitation to better results is caused by established legislation. According to the Czech current law, only volunteers can participate in missions abroad. This fact excluded the possibility to send organic battalion staffs to the missions and to make particular units responsible for their respective tours. Such a pattern, which is typical for the Canadians and for other NATO members, would have been more effective in enhancing the interoperability of whole units or at least their staffs.

5. Equipment and Infrastructure

Since the military budget was severely limited throughout the 1990s, the ACR had few investment options. Moreover, the PPBS and its results opened many eyes in the MoD and many dreams hit the ground.

Initial contacts with NATO, experience from peacekeeping and participation in PARP oriented the ACR on its way toward standardization with NATO in both

113

equipment and infrastructure. There are two basic directions in this field. The first direction concentrates on the command and control of forces and includes information technology and signal communications that would be interoperable with those fielded in NATO members' armed forces. The second direction focuses on the air defense and comprises interoperable air navigation and IFF systems, commonality of fuel and the airfield infrastructure.

Even when the <u>Conceptual Outline for the Development of the ACR</u> proposes other projects as well, poor results coming from the Czech economy in 1996 and 1997 will probably cause the elimination of several plans. However, orientation toward both the C4I and air defense systems seems to be a right choice as these areas are decisive for the ACR's capability to cooperate with NATO.

The main problems, which cause delays in the fielding of new systems, are connected with activities of many lobbying groups involved in the defense business, and with juridical mistakes, which the MoD made in several offers for bids.

In general, the ACR is undergoing an impressive change and gradually becomes interoperable with armed forces of NATO members. The process toward interoperability with the Alliance is still in the beginning. The Czech leadership made important steps in this regard and succeeded in many areas. The best evidence supporting this argument is the fact that the Czech Republic was invited to join NATO by the Heads of States and Governments of the Alliance at their Madrid Summit in July 1997.

On its way toward interoperability with NATO the ACR reached the best results in peacekeeping activities, in education and training and in changing its organizational

structure. However, problems impeded this effort. Those difficulties were caused especially by the Government's negligence of the ACR in the early and middle 1990s, by poor personnel management performed by the MoD and, finally, by the budgetary constraints.

C.   LESSONS FOR OTHERS

Considering all Czech strengths and weaknesses in their interoperability effort, it is possible to offer a certain generalization of their experience. Lessons learned from the ACR can make the process of interoperability easier in the armed forces of other Central and Eastern European countries on their way to joining NATO.

To act effectively and avoid many problems, these countries should:

- have a clear objective – to join NATO – and act for this objective in all spheres of the country's life and not in armed forces only;

- give clear political guidance to the armed forces and adopt such changes in the legislature that support the interoperability effort;

- focus on the human factor from his or her professional aspect (effective personnel management, language training, education, personal contacts with NATO counterparts) and secure his or her social and living standards in order to keep the best people in the armed forces;

- set up such force structure that would be in line with NATO requirements and, at the same time, that would provide room for forces modernization and for their training without demands on extensive increasing of the military budget;

- select one or a few units that would become the center of gravity in the interoperability effort and later, after having some experience, enlarge the interoperability activities on the remaining forces;

- join as many activities under the PfP program as possible, beginning with military education and ending with participation in peacekeeping operations;

- select those interoperability objectives under PARP that are the most important for each particular country and implement them consistently;

- find priorities in adapting the equipment to NATO standards and put stress on command, control and communication systems, at least in the initial phase.

The ACR, despite some initial shortcomings, follows the right track on its way toward interoperability with NATO. The main problems remain in the legislature and in resource management, especially in the personnel field. Solving these issues should accelerate the process of achieving interoperability between the ACR and NATO.

GLOSSARY

ACR	Army of the Czech Republic
ACSM	Assemblies, Components, Spare Parts and Materiel
AD	Artillery Division
AFTB	Air Force Training Base
APC	Armored Personnel Carrier
ATR	Anti-tank Regiment
AWACS	Airborne Early Warning and Control System
CA	Czechoslovak Army
CAPS	Conventional Armaments Planning System
CCMCI	Commander of the Czech Military Contingent in IFOR
CEAC	Committee for European Airspace Coordination
CFE	Conventional Armed Forces in Europe
CGF	Central Group of Forces
CINCHAN	Commander-in-Chief Channel
CIS	Communications and Information Systems
CJTF	Combined Joint Task Force
CNAD	Conference of National Armaments Directors
CODAFCR	Conceptual Outline of the Development of the Armed Forces of the Czech Republic
COMECON	Council for Mutual Economic Assistance
CPA	Czechoslovak People's Army
CPC	Communist Party of Czechoslovakia
CR	Czech Republic
CS	Combat Support
CSCE	Conference on Security and Cooperation in Europe
CSS	Combat Service Support
CUSRPG	Canada-US Regional Planning Group
C3I	Command, Control, Communications and Intelligence
C4I	Command, Control, Communications, Computers and Intelligence
DRG	Defense Research Group
EB	Electronic Brigade
EMD	Eastern Military District
ESDI	European Security and Defense Identity
EW	Electronic Warfare
FA	Field Artillery
FAB	Fighter Aviation Base
GPS	Global Positioning System
HAB	Helicopter Aviation Base
IFF	Identification Friend or Foe
IFV	Infantry Fighting Vehicle

IFOR	Implementation Force
JCTP	Joint Contact Team Program
MAS	Military Agency for Standardization
MB	Mechanized Brigade
MGRS	Military Grid Reference System
MIEWB	Military Intelligence and Electronic Warfare Brigade
MLRS	Multiple Launch Rocket System
MoD	Ministry of Defense
MRLB	Multiple Rocket Launcher Brigade
MRD	Motorized Rifle Division
MS	Military Strategy
NAAG	NATO Army Armaments Group
NAC	North Atlantic Council
NACC	North Atlantic Cooperation Council
NADC	NATO Air Defense Committee
NAFAG	NATO Air Force Armaments Group
NAPR	NATO Armaments Planning Review
NATO	North Atlantic Treaty Organization
NAVOCFORMED	Naval on-call Force in the Mediterranean
NBMRs	NATO Basic Military Requirements
NCS	NATO Committee for Standardization
NC3B	NATO Consultation, Command and Control Board
NC3O	NATO Consultation, Command and Control Organization
NDC	NATO Defense College
NDS	National Defense Strategy
NGT	National Guard of Texas
NIAG	NATO Industrial Advisory Group
NMSSS	NATO Maintenance Supply Services System
NNAG	NATO Naval Armaments Group
NSLB	NATO Standardization Liaison Board
NSO	NATO Standardization Organization
ONS	Office of NATO Standardization
OSCE	Organization for Security and Cooperation in Europe
PAPS	Phased Armaments Programming System
PAPS	Periodic Armaments Planning System
PARP	Planning and Review Process
PCC	Partnership Coordination Cell
PfP	Partnership for Peace
RNLA	Royal Netherlands Army
RRB	Rapid Reaction Brigade
SACEUR	Supreme Allied Commander Europe
SACLANT	Supreme Allied Commander Atlantic
SAM	Surface-to-Air Missile
SAMB	Surface-to-Air Missile Brigade

SAMR	Surface-to-Air Missile Regiment
SATCIS	Single Architecture of Technical Common Interoperability Standards
SB	Signal Brigade
SFOR	Stabilization Force
SHAPE	Supreme Headquarters Allied Powers Europe
SNLC	Senior NATO Logistician Conference
SSM	Surface-to-Surface Missile
STANAG	Standardization Agreement
STANAVFORCHAN	Standing Naval Force Channel
STANAVFORLANT	Standing Naval Force Atlantic
TAB	Tactical Aviation Base
TD	Tank Division
TDH	Territorial Defense Headquarters
TMoB	Training and Mobilization Base
TrAB	Transportation Aviation Base
TSGCEE	Tri-Service Group on Communications and Electronic Equipment
UNPROFOR	United Nations Protection Force
UTM	Universal Transverse Mercarter
WMD	Western Military District
WTO	Warsaw Treaty Organization

LIST OF REFERENCES

1. Joint Chiefs of Staff, *Joint Pub 1-02. Department of Defense Dictionary of Military and Associated Terms.* Washington, D.C.:1994.

2. Cooling, Benjamin F., Hixson, John A., "Interoperability of Allied Forces in Europe: Some Historical Peacetime Realities," *Military Review,* August 1978.

3. *Encyclopedia of the American Military,* New York: Charles Scribner's Sons, 1994.

4. Internet, http://www.dtic.mil/doctrine/jel/doddict/natoterm/s/00722.html

5. Carrington, James H., *Command, Control, Compromise: Values and Objectives for the Military Manager,* Annapolis, Maryland: Naval Institute Press, 1973.

6. Maurer, Martha, *Coalition Command and Control,* Washington, D.C.: National Defense University, 1976.

7. Walsh, John B., "Initiative in Standardization/Interoperability," *NATO Review,* no. 5, October 1978.

8. Lord Ismay, Patrick H. L., *NATO. The First Five Years 1949 – 1954,* Paris, 1955.

9. *The North Atlantic Treaty Organization. Facts and Figures,* Brussels: NATO Information Service, 1989.

10. Cornell, Alexander H., 'Collaboration in Weapons and Equipment," *NATO Review,* no. 5, October 1980.

11. Gardner, Keith L., 'Technology Development in NATO," *NATO Review,* no. 1, February 1993.

12. Ferrari, Giovani Battista, "NATO's New Standardization Organization Tachles an Erstwhile Goal," *NATO Review,* no. 3, May 1995.

13. *NATO Handbook,* Brussels: NATO Office of Information and Press, October 1995.

14. Woodcock, Michael J., "NATO Standardization," *Military Review,* October 1975.

15. Cooper, David A.R., "Allied Arms Cooperation: Need for a Transatlantic Political Strategy," *NATO Review,* no. 5, October 1991.

16. Blanchard, George S., "Language Interoperability," *Military Review,* no. 10, October 1978.

17. *The Alliance's New Strategic Concept,* Rome: North Atlantic Council, November 1991.

18. Rice, Condoleezza, *The Soviet Union and the Czechoslovak Army, 1948 – 1983,* Princeton, New Jersey: Princeton University Press, 1984.

19. Clawson, Robert W., Kaplan, Lawrence S., *The Warsaw Pact: Political Purpose and Military Means,* Wilmington, Delaware: Scholarly Resources Inc., 1982.

20. Simon, Jeffrey, *NATO – Warsaw Pact. Force Mobilization,* Washington, D.C., National Defense University Press, 1988.

21. Szanya, Thomas, S., *The Military in a Postcommunist Czechoslovakia,* Santa Monica, California: RAND, 1992.

22. Michta, Andrew, A., *East Central Europe after the Warsaw Pact,* Westport, Connecticut: Greenwood Press, 1992.

23. *Armádní ročenka 1995,* Prague: Ministry of Defense of the Czech Republic, April 1996.

24. *White Paper on Defense of the Czech Republic,* Prague: Ministry of Defense of the Czech Republic, 1995.

25. Novotný, Jaromír, "From PfP to IFOR – the Czech Experience," *NATO Review,* no. 4, July 1996.

26. Information provided by COL Jaroslav Hudec, Ministry of Defense of the Czech Republic, during his working visit to the Pentagon, July 15,1997.

27. Naumann, Klaus, "From Cooperation to Interoperability," *NATO Review,* no. 4, July 1996.

28. Paret, Peter, *Clausewitz and the State,* Princeton, New Jersey: Princeton University Press, 1995.

29. *Study on NATO Enlargement,* Brussels: North Atlantic Council, September 1995.

30. *Pohotově o armádě,* Prague: Ministry of Defense of the Czech Republic, 1997.

31. Joulwan, George A., "NATO's Military Contribution to Partnership for Peace: The Progress and the Challenge," *NATO Review*, no. 2, March 1995.

32. Information provided by MAJ Roman Oujezdský, Ministry of Defense of the Czech Republic, January 26, 1998.

33. Evraire, Richard J., "The NATO Defense College and Partnership for Peace," *NATO Review*, no. 2, 1996.

34. Ray, Norman, "Taking Partnership to a New Level in NATO's Defense Support Community," *NATO Review*, no. 1, Spring 1998.

35. *Serving for Peace*, Prague: Ministry of Defense of the Czech Republic, 1996.

36. De Wijk, Rob, *NATO on the Brink of the New Millennium*, London: Brassey's, 1997.

37. Gazdík, Jan, "Vojáci věří, že improvizace v armádě končí," *Mladá Fronta DNES*, March 26, 1997.

38. *Programové prohlášení vlády České republiky*, Prague, July 23, 1996.

39. *A-Report*, Prague: Ministry of Defense of the Czech Republic, AVIS, no. 9, 1997.

40. Internet, http://www.vlada.cz/rady/nato/crnato/usili/dialog.asc.htm

41. Internet, http://www.vlada.cz/rady/nato/cinnost/usneseni/usnes1.asc.htm

42. *Budget – Facts and Trends '98*, Prague: Ministry of Defense of the Czech Republic, AVIS, 1998.

43. *National Defense Strategy of the Czech Republic*, Prague: Ministry of Defense of the Czech Republic, 1997.

44. *Military Strategy of the Czech Republic*, 1st Draft, Prague: Ministry of Defense of the Czech Republic, 1997.

45. Internet, http://www.army.cz/gf/mainpv.htm

46. Information provided by COL C.L.Brantz, Office of NATO Standardization, NATO Headquarters, Brussels, January 23, 1998.

47. Simon, Jeffrey, *Warsaw Pact Forces Problems of Command and Control*, Boulder, Colorado: Westview Press, 1985.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center...2
   8725 John J. Kingman Rd., STE 0944
   Ft. Belvoir, VA   22060-6218

2. Dudley Knox Library...2
   Naval Postgraduate School
   411 Dyer Rd.
   Monterey, CA   93943-5101

3. Professor Donald Abenheim...2
   Code NS/AH
   Naval Postgraduate School
   Monterey, CA   93943-5101

4. Colonel Tjarck G. Roessler...1
   Code NS/RT
   Naval Postgraduate School
   Monterey, CA   93943-5101

5. Ms. Vanessa Murray...1
   Director, Legislation and Programs Policy Office
   Defense Security Assistance Agency
   Crystal Gateway North, Suite 303
   1111 Jefferson Davis Highway
   Arlington, VA   22202-4306

6. Mrs. Rita Verry...1
   SATR Program Manager
   Navy International Programs Office
   Crystal Gateway North, Room 701
   Arlington, VA   22202-1000

7. Mr. Clarence H. Juhl...1
   Deputy Defense Advisor
   U.S. Mission to NATO
   APO AE 09724