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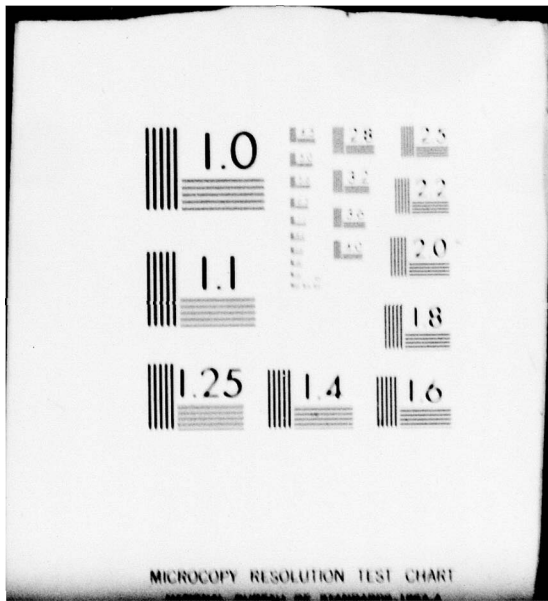
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Report 1105-01-79-CR

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Improvement of NATO Reserves

By:

Irving Heymont

Prepared For:

Office, Assistant Secretary of Defense
(Program Analysis and Evaluation)
Washington, D.C. 20301

October 1979

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Contract No. MDA 903-79-C-0371
Contract Expiration Date: 31 October 1979

Title: Improvement of NATO Reserves

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AB

SUMMARY

OBJECTIVE

The purposes of the study are to determine:

- If adoption of the Netherlands RIM* system by Belgium and West Germany will improve the effectiveness of the Reserve systems of those countries.
- The implications associated with adoption of the RIM system by Belgium, West Germany, and possibly other NATO countries.

APPROACH

Improved effectiveness is defined in this study as increased operational utility and responsiveness as compared to current Reserve units. Operational utility is considered to be roles in assisting in countering Soviet type offensives. Characteristics of such offensives are:

- Massive use of tank and mechanized infantry units and maintenance of the momentum of the attack.
- Breakthrough operations.

Requirements in countering such an offensive are:

- Within brigades, cross-reinforced tank and mechanized units of at least battalion size and armed with modern long-range antitank weapons.
- Large mobile combined arms reserves for defense in depth and counterattack or counteroffensive.

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*The Dutch acronym for Rechstreks Instromend Mobilizabele eenheden loosely translated as direct intake of mobilizable (reserve) units.

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THE RIM SYSTEM

The RIM system is unique to the Netherlands Army. It was developed to reduce the impact of problems generated by reductions in the size of the Active force and financial resources. The basic goal of the system is to provide a number of reserve units with the training and equipment so they can be rapidly and readily integrated on mobilization with the peacetime understructured active force divisions and brigades and employed without further training or reequipping.

In the RIM system, conscripts under an active force cadre are organized into companies as part of an active service battalion. These companies remain together during their 14 months of active service. Upon completion of this service, the company is retained as a reserve unit (less the active force cadre) and assigned to a reserve battalion composed of RIM companies. At this point, the active force battalion activates a new company and the cycle is repeated as shown in Figure 1.

Upon mobilization, a new active force cadre, from sources that become available at that time, is assigned to the RIM company. The RIM company is disbanded 34 months after initial activation with training being conducted only during the 14 months of active service. Upon disbandment, the personnel are reassigned to a general pool and subsequently to conventional reserve units. The only companies involved in the RIM system are the line companies of some tank, mechanized infantry, artillery, and engineer battalions. The headquarters and combat support companies of these battalions are not under the system except for certain platoons.

The salient characteristics and assumptions of the Netherlands RIM system are:

- *Training is confined to the 14 months of active service of the 34-month life cycle of the RIM company. Reserve RIM battalions and companies, with rare exceptions, do not assemble for training. It is implicitly assumed that a*

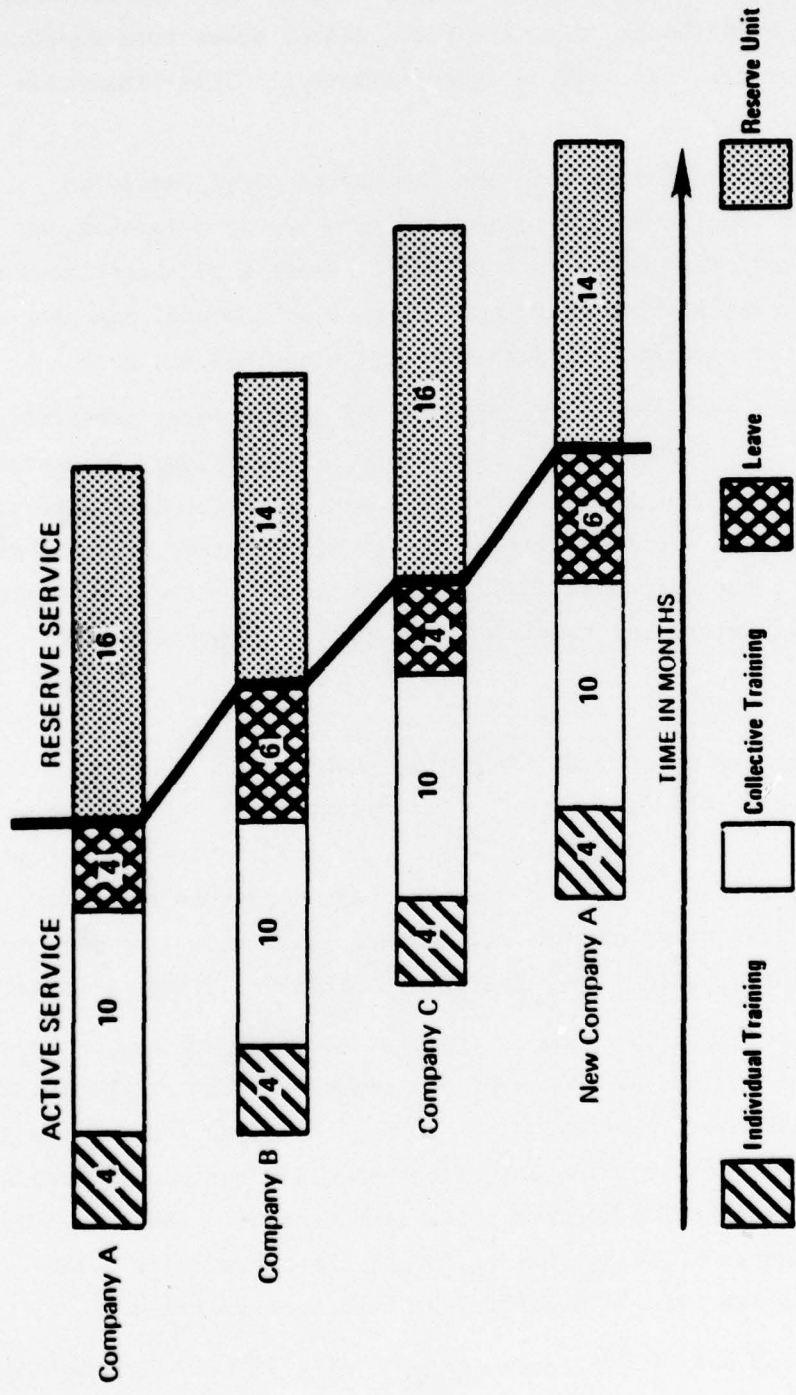


Figure 1. - Flow of RIM Companies through Active and Reserve Service

RIM reserve company can retain unit cohesion and collective proficiency for up to 20 months without any refresher training even though an active force cadre, drawn from available resources, is inserted on mobilization. This assumption is untested.

- *Reserve RIM battalions are assumed to be effective on mobilization despite a regular turnover of companies and a lack of training in the field. Reserve RIM battalions do not assemble for training. Every 4 or 6 months one company in the battalion is disbanded and a new one assigned.*
- *A decrease in the effectiveness of active force battalions producing RIM units is acceptable in peacetime. In peacetime the line companies of each participating active force battalion are at different levels of training, with one of the three companies inadequately trained (only up to 4 months of training) and requiring replacement on mobilization.*

CONCLUSIONS

- *There are no grounds for confidence that the RIM system enhances the capability of Netherlands Army reserve units to counter an armored offensive. The RIM system is concerned only with training and does not per se produce additional reserve units, upgrade weapons and equipment, increase speed of mobilization, or raise the readiness of stored equipment.*
- *The possibility of achieving increased proficiency of selected reserve units is bought at the price of reduced effectiveness of the participating active force battalions. Under the RIM system, active force battalions involved must await completion of mobilization to have three line companies that have completed basic individual training. Even then, all three companies will be at different levels of training.*
- *The RIM system has value only in these limited circumstances:*
 - active force brigades must be understructured in peacetime for economy and other reasons

- the reduced effectiveness of the active combat forces involved in the RIM system is acceptable because of the economy achieved and other reasons
- there is sufficient equipment available to organize and equip RIM reserve units exactly as their active force counterparts
- *The RIM system is not applicable to the FRG Field Army because there are no reserve counterparts to the combat battalions and companies. Further, any degradation to the effectiveness of the first line combat battalions of the country in closest proximity to the Warsaw Pact countries is unacceptable.*
- *The application of the RIM system to the active forces of the FRG Territorial Army (six Home Defense Groups) is undesirable. The RIM system would reduce the combat effectiveness of those battalions maintained in peacetime at full strength and would require the use of two training systems and an induction schedule and unit production program at variance from that used throughout the Army.*
- *The RIM system is not applicable to the Belgian Army because the period of conscript service is too short* to develop the unit cohesion and proficiency envisaged under the RIM system. Further, there are marked differences between the active force and reserve brigades in organization and equipment.*
- *The major constraint in the improvement of NATO reserves to assist in countering an armored offensive is not the lack of personnel with initial training but rather:*

* Conscripts assigned to units stationed in Germany serve only 8 months while others serve 10 months.

- *Lack of equipment to either enlarge the reserve force structure to absorb the available trained reservists or to upgrade reserve and active force units with modern equipment. This is a fiscal problem and also impacts on war reserve stocks to sustain both active and reserve units in combat.*

- *Inadequate refresher training for reserve units. No refresher training for reserve units or training at intervals that vary from once in 18 months to once in 6 years is inadequate for an acceptable level of effectiveness. More frequent training presents fiscal and possibly social problems.*

The Netherlands RIM system does not reduce these major constraints.

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The report was reviewed by BG James M. Wroth, BG Victor W. Hobson, Colonel Thomas W. Doepfner, and Colonel Joseph E. Muckerman, all US Army, Retired, and Dr. Philip H. Lowry. Their comments were helpful.

The conclusions in this report are solely the responsibility of the author.

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SECTION 1
INTRODUCTION

OBJECTIVE

The purposes of the study are to determine:

- If adoption of the Netherlands RIM system by Belgium and West Germany will improve the effectiveness of the Reserve systems of those countries.
- The implications associated with adoption of the RIM system by Belgium, West Germany, and possibly other NATO countries.

APPROACH

Improved effectiveness is broadly defined, for the purpose of this study, as increased operational utility and responsiveness on mobilization as compared to current Reserve units and formations. Operational utility is considered to be roles in countering armored offensives in conjunction with active units and formations.

THE THREAT

An assessment of the operational utility of a unit in assisting in countering a Soviet type offensive must consider the nature of the expected threat.

The Soviet Army is organized, equipped, and trained for armored warfare with emphasis on maintaining the momentum of the attack. Soviet doctrine for the offense calls for the concentration of forces, in a main effort, of up to six divisions echeloned in depth on a 10 to 12 kilometer front. For example, the attack could involve three successive echelons of two divisions each. This would put 20 to 25 battalions and up to 600 tanks in the first echelon. Whenever possible, opposition is overrun and destroyed. Units that cannot be overcome immediately by the advance forces are to be bypassed and engaged by the follow-up forces-- the second echelon of the division or larger formations. The aggressive advance is considered the best means of obtaining flank security and,

consequently, large flank guard forces are not used. Lavish use is made of indirect and direct fire artillery to mass suppressive fires. The goal of the offensive is to break through the combat forces and penetrate deep into the rear to disrupt command and control facilities and logistical support elements in order to destroy any further potential for effective resistance.

The basic building block in countering a Soviet-type armored offensive is the well trained cross-reinforced tank or mechanized infantry company equipped with effective long-range antitank weapons and operating as part of a battalion-size task force. Both companies have a combined arms capability when supported by field artillery and air defense artillery and can move independently on the battlefield. If companies are to move independently from position to position within the overall battalion or larger formation defense, cross reinforcement of tanks and mechanized infantry is essential. Units of company-size or smaller, acting independently of at least a battalion-size task force, may be capable of harassing elements of Soviet forces on the offensive but have no significant utility in countering such offensives either by blocking or attacking on the flanks.

At a higher level, the requirements for countering Soviet-type armored offensives are large mobile combined arms reserves for defense in depth and for counterattacks and counteroffensives to attack the enemy rear to destroy or capture command and control facilities and combat service support.

SECTION 2
THE RIM SYSTEM

RATIONALE

The RIM system is unique to the Netherlands Army. The system came into being in 1964-1965 as the solution to the problems created by reductions in both the size of the active force and financial resources. The reduction in force size was absorbed by placing some battalions (tank, mechanized infantry, artillery, and engineer) in a reserve status. The basic goal of the RIM system is to provide these reserve units with the training and equipment so they can be readily integrated on mobilization with the peacetime understructured active force divisions and brigades and employed without further training or reequipping.

The RIM system rests on the following premises:

- Companies and platoons composed of conscripts that trained together during 14 months of active service can be transferred as units into a reserve status and *retain proficiency for 20 months without any refresher training* (such companies are known as RIM units when in the reserve unit status).
- *A reserve battalion composed of RIM companies can be combat effective without assembling for training in peacetime and with one company being disbanded and a new one assigned every 4 or 6 months.*
- The equipment stored for each RIM unit will be the same types with which the unit trained during active service and can be issued and be operational within about 24 hours.
- *A reduction in the effectiveness on mobilization of the active force battalions that produce RIM battalions is acceptable because of manpower and financial constraints.*

RIM CYCLE

In the RIM system, conscripts are organized into companies, under an active force cadre, and remain together for all of their active service except for the initial training of some personnel as reserve officers, junior noncommissioned officers, and specialists. Upon completion of the 14 months of active service for conscripts, the company, less the active force cadre, is retained intact as a reserve unit and is subsequently assigned to a reserve battalion consisting of other RIM line companies.

The flow of RIM companies is shown in Figure 1. The entire life cycle of a RIM company is 34 months. All RIM companies are part of active force battalions during the first 14 months and the "short leave" period of the life cycle and are included in the active strength of the Netherlands Army.

Each active force battalion participating in the RIM system activates a company every 4 or 6 months. With this activation, a company of the battalion completes its active service and is placed on "short leave." In this manner, trained personnel of a company are available on mobilization to replace the company that is in the basic individual phase of training. Concurrently, another company completes "short leave" and is assigned to a reserve RIM battalion to replace a company completing the 34 months of its life cycle.

In the above cycle, every third activation of a company is at an interval of 6 months and the others at 4 months. The collective training period is 10 months and the Netherlands Army does not accept the lowering of effectiveness that would result if two of the three line companies were in the basic individual training phase at the same time. Consequently, some RIM companies are on short leave for 4 months and are assigned to a RIM battalion for 16 months and others are on short leave for 6 months and assigned to a RIM battalion for 14 months.*

* This complicated activation schedule resulted from the reduction of conscript service from 16 months in 1974 and consequent decrease in collective training to 10 months from the previous 12 months.

In theory, the life cycle of reserve RIM companies could be extended beyond 34 months, perhaps with some refresher training at that point. In such a situation, an active force battalion could produce more than one reserve RIM battalion. However, such an extension would require purchasing additional sets of battalion equipment like that of the active force battalion and war reserve stocks to sustain the additional battalions on mobilization. Other problems would also be encountered in the need for more active force cadres and in the personnel losses (normal attrition) within the reserve units.

The major characteristics of RIM companies and battalions are discussed in the paragraphs that follow.

TYPES OF RIM UNITS

With minor exceptions, the units organized under the RIM concept are currently limited to line companies of five tank, four mechanized infantry, and four artillery battalions plus a few engineer and reconnaissance units. The headquarters companies of these battalions are not under the RIM system but conscript personnel of these companies are assigned to comparable positions in a RIM battalion headquarters company on completion of their active service training. The exceptions referred to above are some of the platoons (e.g., mortar) of the combat support company of the tank and mechanized infantry battalions.

The Netherlands Army does not consider combat service support units suitable for application of the RIM system because such units are more dependent on individual rather than collective skills for effectiveness. Further, such units cannot effectively provide support in peacetime if their subunits and personnel are always at significant different levels of training, as is the case with battalions in the RIM system.

PERSONNEL

Cadre

There is an active force cadre with the RIM company during the entire active service phase of the life cycle with one minor exception. In tank and engineer RIM companies, the active force cadre does not join the company until completion of basic training as explained later.

The active force cadre for a RIM company consists of the company commander, executive officer, first sergeant, platoon sergeants, and maintenance sergeant. When the company goes on "short leave," the cadre is reassigned to the newly activated company or is otherwise assigned within the active force. Upon mobilization, a new active force cadre joins the RIM company. This cadre has had no prior service with the company and is predesignated from occupants of positions not essential on mobilization.

The Netherlands Army has found difficulty in providing qualified active force personnel to fill all the cadre positions in RIM companies on mobilization. As a result, about half of the cadre positions are to be filled on mobilization with predesignated reservists.

Attrition

RIM companies suffer personnel attrition of about 5% a year. By the end of the 34-month life cycle, according to Netherlands Army personnel, the unit cohesion and collective proficiency attained during the active service period would be lost because of the number of fillers that would be required and the lack of refresher training.

Upon disbandment of a RIM company, the personnel are initially transferred to a general pool for up to 2 years. Subsequently, they are assigned to a conventional reserve unit of a similar type for 6 years. Such units are recalled for 3 weeks of refresher training once every 6 years.

TRAINING

As explained below, *the training of a RIM company is confined to the 14-month active service period of its 34-month life cycle.*

Active Service Period

The active service period training is divided into 4 months for basic individual and 10 months for collective training.

The basic training for mechanized infantry companies and artillery batteries is conducted by the active force cadre augmented during this period by a training team of four noncommissioned officers furnished by the parent battalion. The basic training for tank and engineer companies is conducted at specialized training centers without the participation of the active force cadre.

The collective training of the companies is conducted by the active force cadre under the supervision of the parent battalion. This training is generally sequential starting with the squad, crew, section, etc., and progressing to higher levels. The Netherlands Army considers 10 months as the minimum in peacetime to produce a combat effective company and that only two trained line companies are needed for acceptable battalion-level training.

Short Leave Period

No refresher training is conducted during this period. However, an annual mobilization exercise, called "Donderslag," is held to test the mobilization procedures to bring several active force and reserve units to a wartime footing. This mobilization exercise lasts only 3 days. Some active force battalions involved in the RIM system may participate in this mobilization exercise and in such cases their "short leave" personnel participate in the exercise.

Reserve Unit Period

During this period, reserve RIM battalions and companies are not assembled for refresher training. This is one of the economies underlying the RIM system. However, the commanders of the active force battalions producing reserve RIM battalions are authorized to assemble the key predesignated active force and reserve members of the "sister" reserve RIM battalion once a year for a command post exercise or other instruction. This training assembly is authorized for only 2 or 3 days.

The Netherlands Army proposes to conduct a brigade level mobilization exercise involving an entire RIM battalion once every 4 years to test mobilization procedures. One such exercise, as part of a corps maneuver, was held in 1978 and involved a 2-week field exercise for one RIM battalion. This exercise was inconclusive because about 30% of the RIM battalion total strength including about 50% of the key personnel requested and were granted excuses from participation and active service personnel and reservists from other sources were substituted. Initially, the equipment of the reserve RIM battalion was found to be in better condition than that of the active service battalions. However, the equipment deteriorated rapidly because of the lack of skill of the reservists in performing first and second echelon maintenance. Reports on the tactical performance of the RIM battalion have not been released.

During the reserve unit period, there is some refresher training for individuals on a voluntary basis. Normally, only individuals seeking promotion or other advancement volunteer. Many in this category are reported to be school teachers.

EQUIPMENT

The equipment for reserve RIM companies, unlike that for many conventional reserve units, is not used in the peacetime training base or obtained from civilian sources on mobilization. The equipment for

reserve RIM units is stored by company in 57 different sites. The equipment is maintained in a high state of readiness and configured for rapid outloading with basic loads of ammunition, fuel, and other supplies. Maintenance standards are high and closely adhered to. The maintenance is performed generally by civil service employees who are not members of the unit.

The equipment of the reserve RIM units is periodically exchanged with that of active service units to achieve an average usage.

EVALUATION OF THE RIM SYSTEM

Unique Features

A Rim type system has only one unique feature. This feature is the potential for carryover into reserve service of the cohesion and training proficiency attained while in the active service by retaining the company virtually intact. These qualities are important to achievement of combat effectiveness by reserve companies employed without post-mobilization training. However, it is unknown, in fact doubtful, if the Netherlands RIM companies do retain unit cohesion and training proficiency and if reserve RIM battalions can be combat effective without some post-mobilization training.

Reserve RIM battalions do not train as battalions and RIM companies do not receive any training during the last 20 months of their 34-month life cycle. There are no known data on the rate of loss in collective training proficiency (forgetting curve) over time. However, it is known that the loss of proficiency in individual military skills* over time is significant and it is certainly equally true for collective training

*In one US Army experiment, it was found that after initial qualification with the rifle, proficiency dropped rapidly. At the end of 24 months, 57% of the test group failed to qualify or barely qualified by only one or two points.

proficiency. Although the analogy is crude, one can speculate on the effectiveness of a football team 20 months after any player was last in a game.

Another factor affecting the retention of unit proficiency under the Netherlands RIM system is the insertion on mobilization of an active force cadre that never trained with the company. In small units such as a company, the relation of the company commander, platoon sergeants, and key NCOs to the members of the unit is a key element in unit cohesion and collective proficiency. The introduction of an unknown company commander and key NCOs during the trauma of mobilization and entry into combat is an unsettling factor that detracts from unit effectiveness. This same situation applies, but to a lesser degree, in regard to the relations of an unknown battalion commander and staff to the company commanders. Returning to the crude analogy of the football team that has not played for 20 months, the introduction of a strange backfield certainly does not assist in the retention of previous teamwork. A RIM battalion probably needs 3 to 4 weeks of intensive training to achieve an adequate level of effectiveness.

Other factors pertaining to operational utility and responsiveness such as readiness level of equipment, speed in mobilization, and use of active force cadres in key positions are not unique to the RIM type system.

High level of readiness of equipment for reserve units can be achieved in many ways and is a function of the resources expended for that purpose in peacetime and not on how conscripts are organized for active duty training and subsequent reserve service. The speed at which a reserve unit can mobilize is a function of many factors that are independent of a RIM system. Examples of such factors are distances of personnel to unit assembly points, viability of mobilization plans, and ready availability of transportation to move personnel to unit assembly areas and for further movement of units to operational areas. The use of active force cadres in reserve units on mobilization is a common feature in almost all armies except in the United States. In most cases, these active force cadres are used at the battalion and higher levels of command.

Conclusions

As practiced by the Netherlands Army, the RIM system suffers from the following major defects:

- *Active force divisions and some brigades are dependent on mobilization and complete reserve battalions to reach war-time strength.*
- *Active force battalions that produce RIM units almost always have one maneuver company that is not combat effective (less than 4 months active service) and the other two maneuver companies at different levels of training.*
- *Reserve RIM battalions do not assemble in peacetime for training.*
- *The headquarters and combat support companies of the reserve RIM battalions are composed of personnel that have not served or trained together.*
- *It is assumed that RIM type reserve companies can be combat effective for 20 months without any refresher training and with unknown key officers and noncommissioned officers inserted on mobilization.*

In sum, the RIM-type system does not provide any increased capability to counter an armored offensive. It only provides one form of training of conscripts to prepare them for reserve service. Whether this preparation contributes to increased unit cohesion and collective training proficiency on mobilization is undetermined and doubtful. This uncertain potential is gained at a reduction in the combat effectiveness of the active force battalions involved in the RIM system.

GENERAL APPLICABILITY

The RIM concept is one method to maintain a certain level of force structure in the face of dwindling defense resources. It can be employed only by countries that have reserve units that are exact active

force counterparts in organization and equipment. The exact similarity in organization and equipment permits RIM-type reserve units to be readily incorporated into the active formation. The qualities of unit cohesion and collective proficiency, *if retained*, assist in maintaining the overall combat effectiveness of the active force formation *after* mobilization is completed. However, the price paid is reduced combat effectiveness and the delay in the availability of fully structured active force divisions until mobilization is completed.

Other than as described above, the RIM concept has little or no merit. If the equipment available to a RIM unit during the reserve unit phase differs from that used during active service, then the RIM company must reorganize and retrain upon entry into the reserve unit phase. In such a case, the value of the RIM concept (economy and proficiency) is diminished and possibly even lost. In a theoretical RIM-type model which includes refresher training during the reserve unit phase, the decrease in value depends on the extent of refresher training. The Israeli Army has successfully reorganized and retrained its reserve units on new equipment. However, the Israeli system incurs the financial and social costs associated with the recall of reserve units to active duty for 30 to 45 consecutive days annually. In the US Army reserve system, the demands on the time of reservists, and associated costs, are equal to or greater than any other NATO country.* Yet, it is US Army experience that the reequipment or reorganization of a reserve company reduces the effectiveness of the company for 1 to 3 years, depending on the nature and extent of the change. US Army reserve units have also encountered significant difficulties in retraining personnel on equipment different from that on which trained during the initial active duty for training.

* US Army reserve units train for the equivalent of about 38 days a year divided into a 2-week encampment and the equivalent of 12 weekend training periods at monthly intervals.

In theory, the RIM concept could be used by countries with volunteer reserve systems. However, the period of initial active duty for training in the major countries with volunteer reserve systems, the US, UK, and Canada, is too short to develop the unit cohesion and collection training proficiency that is the unique feature of the RIM concept. The US has the longest period (3 to 10 months) of the countries mentioned for the initial active duty for training of volunteer reservists and this period is devoted exclusively to individual skill training. In the Canadian and British volunteer reserve systems, *all* training is conducted in a civilian status on weekends and evenings or at annual encampments of 2 weeks' duration. Increasing the period of initial active duty for volunteer reservists long enough to develop company level unit cohesion and collective training proficiency would probably increase the current recruiting difficulties of the countries with volunteer reserve systems.

SECTION 3

APPLICABILITY OF THE RIM SYSTEM TO THE FEDERAL REPUBLIC OF GERMANY (FRG) ARMY

FRG ARMY

The FRG Army is basically a conscript/reservist force. About 48% of the active force is composed of conscripts. The total number of Army reservists with mobilization assignments to units is about 600,000.

Conscripts are inducted every 3 months to serve on active duty for 15 months. The first 3 months are devoted to basic and individual skill training given in a training company that may be part of a tactical unit. The statutory military obligation is to age 32 for enlisted men, to age 45 for noncommissioned officers, and to age 60 for officers. However, as younger reservists become available, the older are transferred to a general pool of reservists without a specific assignment until their statutory military obligation has been satisfied. In 1978, the average age of FRG Army reservists with unit assignments was:

| | |
|----------|------|
| EM | 24.7 |
| NCOs | 30.5 |
| Officers | 32.6 |

Components

The two major components of the FRG Army are the Field Army and the Territorial Army. The Field Army consists of first echelon combat troops committed to NATO. The Territorial Army consists of second echelon combat troops and combat service support and security units all under national control.

Reserve System

FRG Army reserve units are, for the most part, assigned to the Territorial Army. The few reserve units assigned to the Field Army are not maneuver units. The reserve units are generally equipment holding units (EHUs) that are completely inactive except when mobilized or ordered to active duty for training or mobilization exercises. Unlike

the United States, there is no inactive duty training for reserve units except on an unpaid voluntary basis. EHUs are provided with a 10% personnel overstrength above wartime authorization to compensate for "no shows" on mobilization. Active service personnel are predesignated to fill key command and specialist positions in the EHUs at battalion and higher levels and are drawn from organizations and activities that cease operations upon mobilization. At the reserve company level, a full-time NCO maintains the unit records. The key officer and NCO personnel in the reserve companies are long-time reservists who remain with the unit usually for more than 6 years.

All of the reserve units are equipped with wartime authorized levels of equipment, except for those items to be requisitioned from the civilian economy. These items normally consist of construction equipment and general purpose vehicles. Unit equipment is stored in mobilization points (Mobstuetzpunkte) and is maintained by civilian maintenance personnel.

In theory, reserve units assemble for training once each 18 months for about 10 to 14 days. Officers and noncommissioned officers serve the full 14 days while the lower ranks are integrated in the last half of the training period, which usually culminates in a field training exercise. The number of reservists recalled for refresher training each year is based on allocations of training man-days. In general, the particular corps holding the triennial corps field exercise receives priority. In the recall of individual reservists for training, priority is given to the training of NCOs and potential NCOs. Dedicated reservists who volunteer for refresher training consume a considerable amount of the available man-days.

In the recall of reserve units for training, the trend is to give priority to those units that support combat forces within the corps and with the lowest priority to rear area security units. In effect, the "closer to the front" the more likely for recall for refresher training

and the greater the frequency. The general goal is to recall reserve units for training at least once every 18 months.

FRG Army reservists are assigned either to the Standby Reserve, reserve units, or the general pool. The Standby Reserve consists of conscripts and extended service personnel released from active service within the preceding 12 months. These individuals have specific mobilization assignments to fill vacancies in the Field Army and Territorial Army units. Assignments are based on age, skills, and distance from home to the unit, with assignment to the unit where active service was performed being preferred consistent with the other criteria. This manpower pool can be mobilized on the order of the Minister of Defense. Members of this pool are usually assigned to reserve units on completion of Standby service. In 1977-78, several thousand Standby Reservists were recalled for training and for testing the Structure IV mobilization reorganization concepts discussed later. The FRG plans to recall most Standby Reservists at least once for training in their mobilization assignment.

THE FIELD ARMY

The FRG Army is currently in the process of reorganization into what is called Structure IV. Under this reorganization, the Field Army will consist of 12 divisions, with a total of 36 brigades (17 armored, 16 armored infantry, 3 airborne) at the NATO readiness classification of A1.

A major thrust in this reorganization is the larger number of tactical command and control units and smaller tactical units within the brigade. For example, the wartime brigade will consist of four maneuver battalions, each with three maneuver companies; the tank company is reduced to a strength of 13 tanks.

The armored and armored infantry brigades will remain the basic independent combined arms unit containing organic artillery and combat

service support. Each armored and armored infantry brigade will consist of four maneuver battalions. In peacetime, one of these battalions will consist only of a battalion headquarters cadre. The other battalions will be at full structure strength with four maneuver companies. However, one of these maneuver companies (Einsatz/Ausbildung) in peacetime may be used for the basic training of recruits comparable to the US Army pre-World War II recruit schools. It is expected that within the division or brigade there will be some specialization of training among these training companies.

Upon mobilization the brigades reorganize. The reorganization for an armored brigade is shown in Figure 2. The cadre battalion headquarters and support company receives augmentation personnel from the like companies of the other three battalions. Each of the three full battalions transfers a maneuver company to the cadre battalion creating the wartime organization of maneuver battalions with three maneuver companies and one battalion being mixed tank and mechanized infantry. In those battalions with a company devoted to recruit training, the trainees are replaced by recalled individuals of the Standby Reserve. The transfer of companies among the battalions was designed to avoid degrading the combat effectiveness of a first-line brigade by the addition of a complete reserve battalion.

THE TERRITORIAL ARMY

In the Structure IV reorganization, the combat and security units are significantly increased and raised in effectiveness in terms of manning and level of armament. The significant units are listed below and their organization is shown in Figures 3, 4, and 5.

| <u>Unit</u> | <u>Number</u> | <u>Peacetime manning</u> |
|--|---------------|--------------------------|
| Home defense group (HeimatschutzKommando) | 6 | 4 at 65% 2 at 52% |
| Heavy home defense regiment (Schweres Heimatschutzregiment) | 6 | All reserve |
| Motorized infantry regiment (Heimatschutzregiment) | 15 | All reserve |
| Separate motorized infantry company (Heimatschutzkompanie) | 150 | All reserve |
| Security platoon (Sicherungszug) | 300 | All reserve |

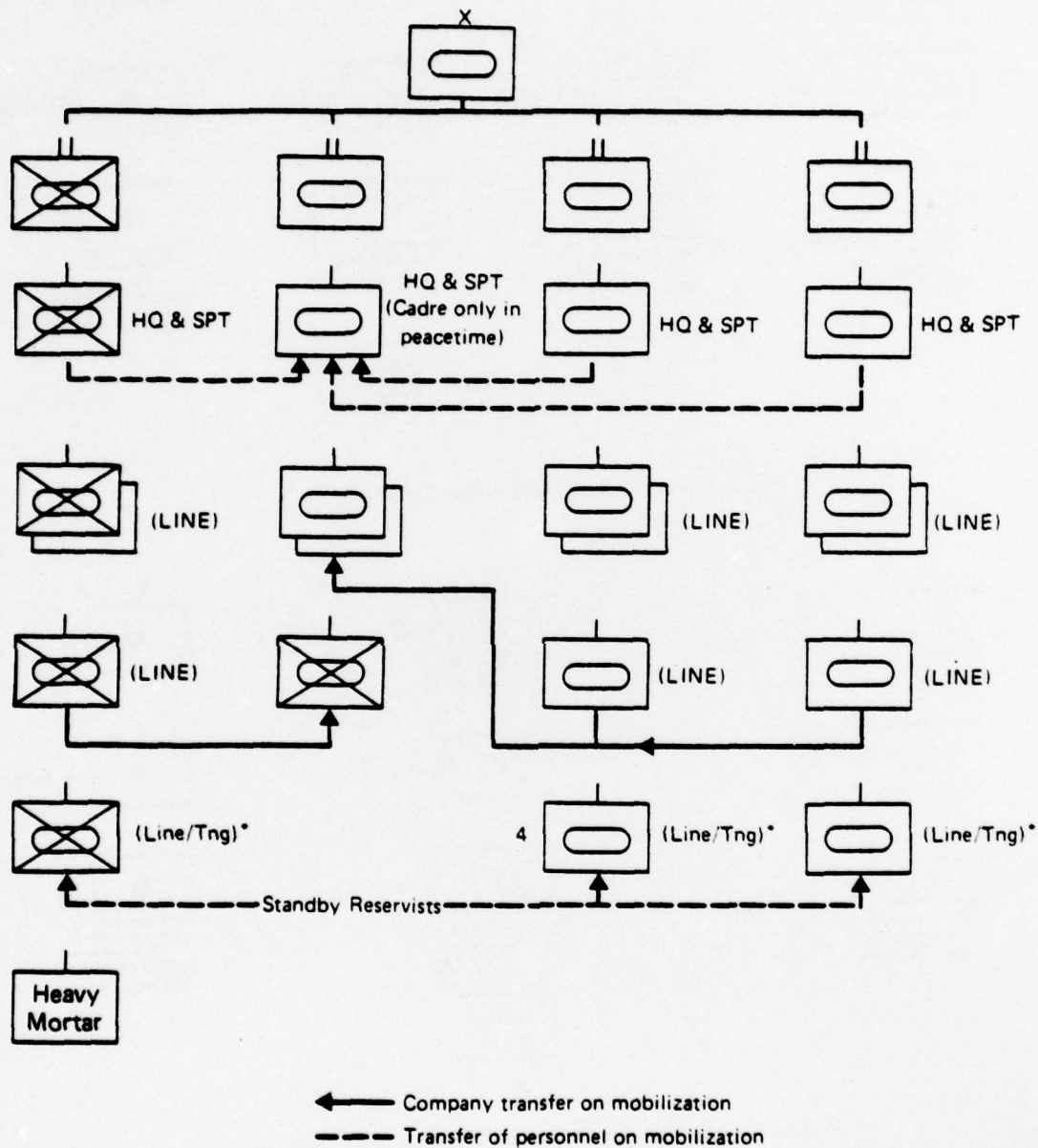


Figure 2. Wartime Reorganization of the Maneuver Units of an Armored Brigade

*Every battalion does not necessarily devote one company to recruit training

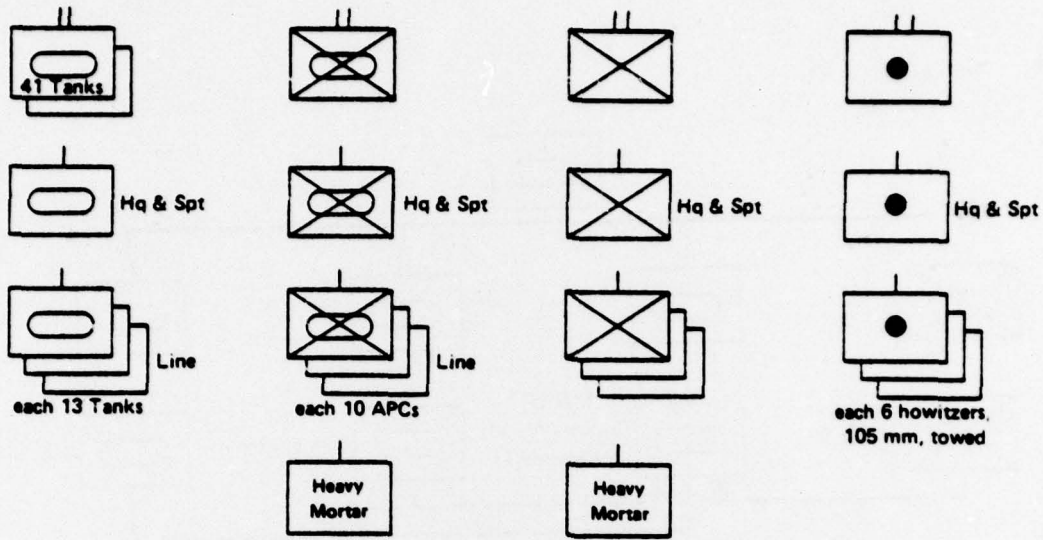


Figure 3. - Major Units of the Home Defense Group

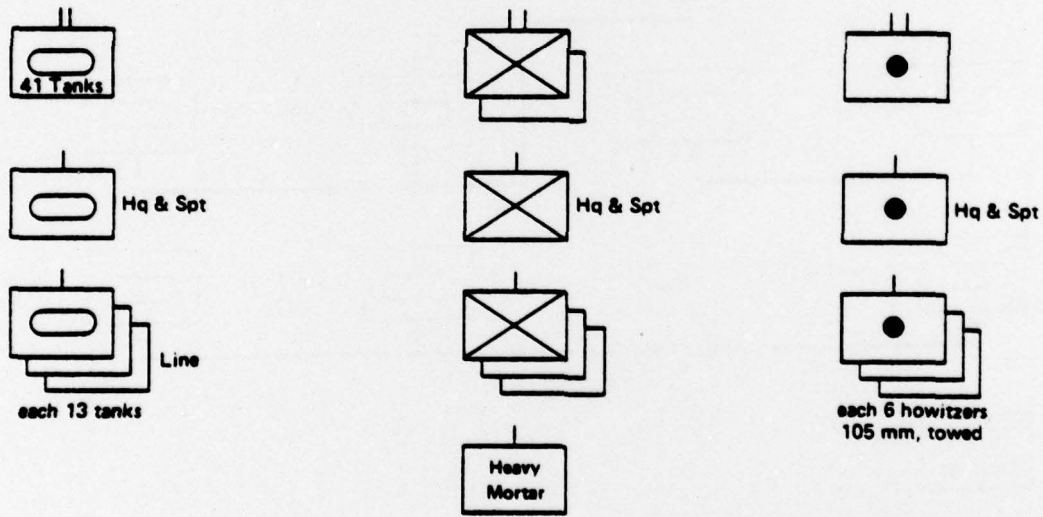


Figure 4. - Major Units of the Heavy Home Defense Regiment.

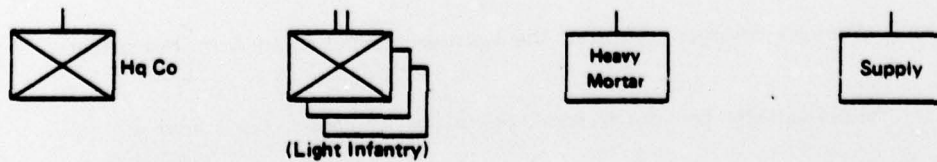


Figure 5. - Major Units of the Motorized Infantry Regiment

The Home Defense Group and Heavy Home Defense Regiment are combined arms units with organic tanks and artillery and are comparable to brigades. In peacetime, they differ primarily in level of manning and types of equipment. For example, the Home Defense Groups are to be equipped with upgraded M48 tanks and the Heavy Home Defense Regiments with M48A2 tanks. In time, as the Field Army is reequipped with Leopard II tanks and other modern equipment, the Home Defense Groups and Heavy Home Defense Regiments can be expected to be upgraded with the early model Leopard I tanks and other equipment items that will be made available. Upon mobilization, the Home Defense Groups are to be brought to full strength with Standby Reservists and reserve units. The planned peacetime organization of the Home Defense Groups are manned at 65% and 52%, as shown in Figure 6.

The motorized infantry regiments are light units designed for area security missions in the rear. The separate infantry companies and security platoons are designed for protection of predesignated installations and vulnerable targets. The security platoons, unlike the separate infantry companies, do not have transportation until mobilization when they are to be equipped with vehicles requisitioned from civilian sources.

The reorganization of the combat and security forces of the Territorial Army enhances the FRG capability to provide defense in depth against an armored offensive. It provides 12 combined arms brigades, with 6 being at a relatively high degree of readiness. These combined arms brigades, even though lacking the most modern equipment, possess a respectable combat capability and can be considered a form of reserve for the Field Army. The reorganization also provides 15 motorized infantry regiments that are organized and equipped for rear area defense missions against lightly armed forces. These regiments lack the long-range antitank weapons, armor, and armor protection required for effectiveness against an armored offensive. At the best, they might assist in countering such an offensive by providing reconnaissance on the flanks of armored-type brigades and divisions.

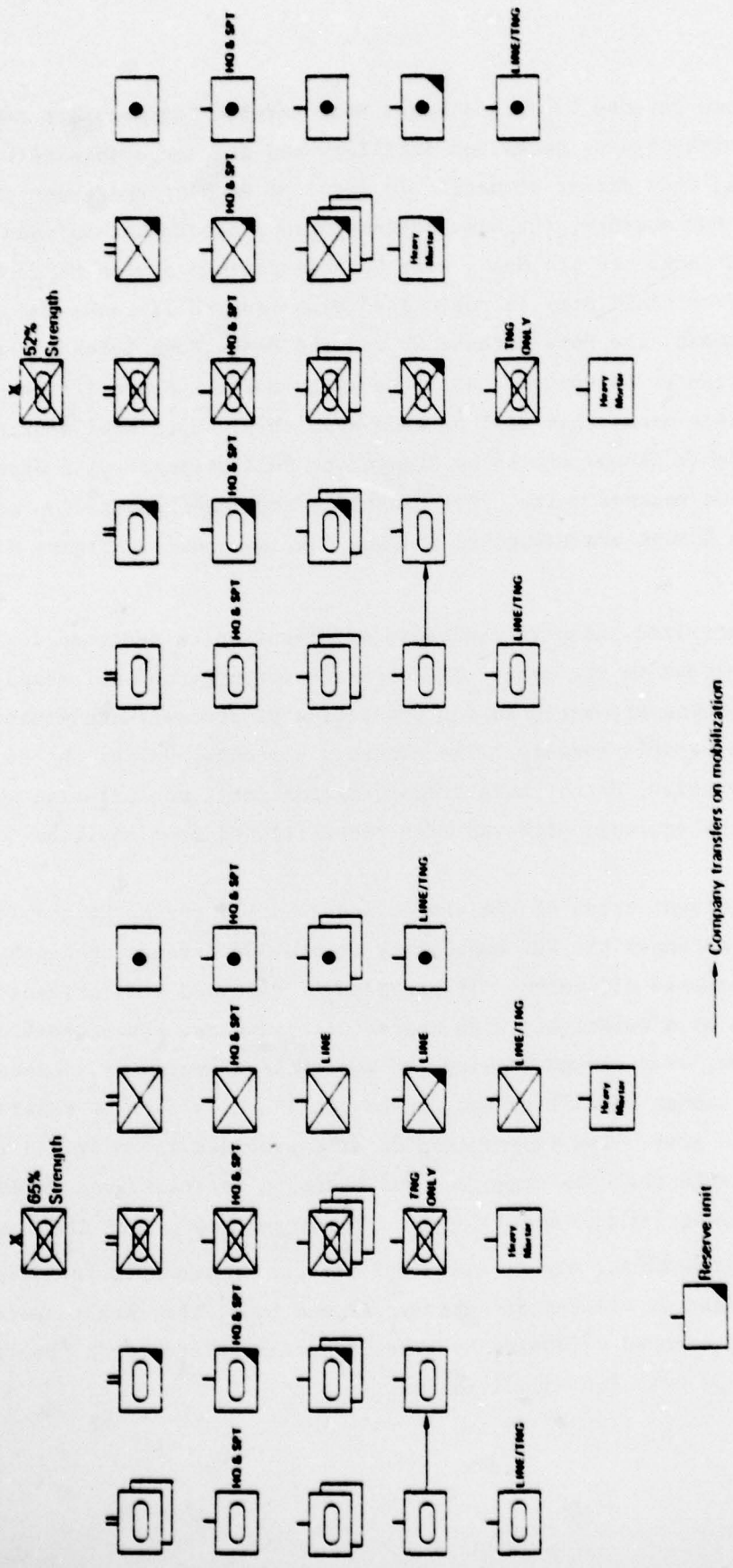


Figure 6. Possible Home Defense Group Organization

APPLICABILITY OF THE RIM SYSTEM TO THE FIELD ARMY

Within the Field Army, the RIM concept could be applied in the following ways:

- Use one or more brigades for production of additional reserve battalions organized and equipped like the Field Army battalions.
- In each brigade, organize one battalion under the RIM concept to maintain one reserve RIM type battalion that is assigned to the brigade.

Additional RIM Reserve Battalions

The use of one or more active force brigades to produce additional RIM type reserve battalions need not follow the Netherlands system exactly. Unlike the Netherlands system, the companies of these battalions could have a reserve unit existence of greater than 18 months, with unit refresher training at intervals of 18 months or less. However, the potential increase in cohesion and proficiency at the company level in reserve battalions would be purchased at a price as follows:

- For each additional reserve RIM battalion produced, a set of equipment like the active force battalion would have to be purchased as well as war reserves to sustain the additional battalions in combat.
- Each active force battalion involved would have to be reorganized under the RIM concept. This reduces the combat effectiveness of the battalion at any given time because one maneuver company would have less than 3 to 6 months of active service and the other two would be at different training levels.
- Problems in the command and control and combat service support for separate reserve RIM battalions equipped like active force battalions would have to be solved. The Field

Army Structure IV brigades are not organized to control and support more than four maneuver battalions effectively in wartime.*

The reduction in combat effectiveness of the active force battalions is too high a price to pay for the potential but uncertain retention of cohesion and collective proficiency in reserve companies, even if funds were available for the necessary sets of battalion equipment. The first NATO country to face a Soviet armored offensive is the FRG. Any reduction in the capability of FRG forces, particularly the active forces, to counter such a threat is highly undesirable.

If funds are made available for the purchase of additional modern equipment for combat battalions beyond that now programmed, it would be better to upgrade the equipment of the active, even if understrength, six Home Defense Groups. In this manner, equipment would also become available to upgrade the Heavy Home Defense Regiments and possibly even some of the motorized infantry regiments. Alternatively, the number of Heavy Home Defense Regiments might be increased. The constraint on increasing the number and quality of FRG Army reserve units is not trained personnel but rather funds for equipment and for refresher training of additional reserve units and individual reservists.

Brigade Reserve Battalion

Under this possible application of the RIM concept, one of the three fully structured active battalions would reorganize under the RIM concept with three line companies. The other two fully structured active battalions would have to be reduced to three line companies in peacetime with one of the three companies in some battalions devoted to recruit training. This is necessary because a battalion with four line companies in wartime is a violation of a basic principle underlying the Structure IV reorganization.

*This is also the case for the Home Defense Groups.

Using the Netherlands model life cycle, the active service battalion could produce and maintain a reserve battalion 39 months from the start of the application, assuming a new company is activated every 3 or 6 months to ensure that there are at least three line companies and no more within the battalion at any one time. This complicates the induction and training production cycle. The Structure IV peacetime battalion cadre could be retained for the reserve battalion. Additional sets of battalion equipment would not be required. The cadres for the reserve companies on mobilization could be obtained primarily from within the brigade.

The apparent advantage of this application of the RIM concept, as compared to the Structure IV concept (see Figure 3), is production of a reserve RIM battalion for the brigade's fourth battalion from one active force battalion rather than one composed of active force companies released from the other battalions of the brigade and the elimination of the need of battalions to form a company from Standby Reservists if they have a line company devoted to recruit training.

The disadvantages of this application of the RIM concept are:

- Two different training systems would be in use within the brigade.
- The battalion of the brigade organized under the RIM concept would be at reduced combat effectiveness for the reasons previously described.
- The number of trained line companies in brigades available in an emergency before mobilization is completed may be reduced by as much as one third.
- One battalion of the brigade on mobilization would be composed of reservists with two of its three companies having been out of the active service for 12 months or more.

The disadvantages of this concept outweigh the apparent advantage. As indicated earlier, any reduction in the combat effectiveness of the

brigades of the FRG Army is highly undesirable in view of the threat and its proximity to the FRG. Two radically different training systems within a brigade lead to complexity and training management problems. Further, the Structure IV model provides each of the *four* maneuver battalions with a minimum of two (of three) active force companies with internal cohesion and collective proficiency. The remaining companies are composed of Standby Reservists who have been in the active service within the last 12 months, can report rapidly because of their residence within about 2 hours travel to the unit, and are programmed for refresher training in their mobilization assignment.

APPLICABILITY TO THE TERRITORIAL ARMY

The Home Defense Group is the only type of combat unit within the Territorial Army to which the RIM concept might apply. The other types of Territorial Army combat and security units have no active army counterparts. If the active duty strength for combat units of the FRG Army were to be increased, it would be best, in view of the threat, to create additional maneuver brigades or to increase the manning levels of the Home Defense Groups rather than create counterparts for existing reserve units.

From Figure 6, it is apparent that the only reasonable candidate for application of the RIM system would be the full strength tank battalion to produce a RIM reserve tank battalion to replace the conventional reserve tank battalion. Such an application is considered undesirable for generally the same reasons previously described for use of the RIM system to produce a fourth battalion in a Field Army brigade.

SECTION 4
APPLICABILITY OF THE RIM SYSTEM
TO THE BELGIAN ARMY

BELGIAN ARMY

The Belgian Army is somewhat less of a conscript force than the FRG Army but still relies heavily upon conscripts, reserve units, and individual reservists. About 36% of the active force is composed of conscripts and the number of Army reservists with mobilization assignments to units is about 50,000.

Conscripts are inducted generally every 2 months. The input is governed by the requirements to keep active force units at authorized strength and the training base at capacity. Conscripts assigned to units stationed in Germany serve on active duty for 8 months and all other conscripts serve 10 months. The Belgians plan to reduce compulsory military service in the near future to 6 months and to rely more on volunteers. The minimum enlistment period for volunteers is 2 years. The statutory military obligation is 8 years or to age 35 for enlisted men. Some enlisted personnel with critical skills and reserve officers incur an obligation of 15 years.

Components

The two major components of the Belgian Army are the I Corps and the Forces of the Interior. I Corps is NATO-committed and contains almost all the combat forces of the Belgian Army. The Forces of the Interior consists of combat service support, a paracommando unit, and territorial defense units under national command.

Reserve System

Upon completion of active service, conscripts and volunteers are given mobilization assignments to either active force units, reserve units, or to a general manpower pool because the reserve force structure is not adequate to accommodate all the available reservists. Active force units in peacetime are not maintained at full strength and require individual reservists to attain wartime authorized strengths.

Most Belgian Army reserve combat units are assigned to the I Corps on mobilization. In peacetime, reserve units are completely inactive except when mobilized or ordered to active duty for training or mobilization exercises. In many respects, including equipment maintenance, these reserve units resemble the FRG equipment-holding units (EHUs). They are provided with a personnel overstrength above wartime authorizations to compensate for no shows. Active force personnel are predesignated to fill key command and specialist positions in the reserve units and are drawn from organizations and activities that cease operations upon mobilization.

The number of Belgian Army reserve units is limited by the availability of equipment. It is the national policy not to organize any reserve units that cannot be properly equipped.

Training

During the preinduction testing and screening, individuals are predesignated for training in either technical or common skills and are given an assignment to the unit they will join after initial training.

Upon induction, those designated for common skills and for assignment to units stationed in Belgium are sent to one of two training centers for 2 months of basic training. The two training centers are identical and differ only in the language of instruction (Flemish and French). At the training center, a concerted effort is made to keep together individuals who will join the same unit. Further MOS training (e.g., mortar gunners, etc.) is conducted within the unit after completion of the basic training at the training center. Basic training in common skills for those assigned to units in Germany is conducted within the units.

Individuals preselected for technical training receive both basic and technical training at a technical training center for 2 or more months, depending on the specialty. At these centers every effort is made to start technical training concurrently with basic training.

Reserve units are usually recalled for training once every 2 years. Most individuals in reserve units are recalled only once and then transferred to a general pool. Exemptions from recall for training are fairly liberal and the authority for such exemptions is delegated down to battalion commanders. Individuals may volunteer to remain in a reserve unit even after having been recalled once for training. Reserve battalion commanders may also designate individuals to be retained in their units.

Funds are allotted to allow reserve unit commanders to assemble active force cadre members and key reservists for training each year. Depending on budget allocations, the allotment may permit up to 10-15 days of training each year.

Most of those assigned to the reserve general manpower pool are not recalled for training. A few with unusual skills may be recalled for a maximum of twice within 6 years and for no more than 30 days at a time. The statutory authority for training of reservists authorizes recall of enlisted men for a total of 66 days and noncommissioned officers for a total of 74 days during the period of military obligation after completion of conscript service. Reserve officers may be recalled for training for as much as 30 days a year. The actual recalls, as described above, are far below the statutory maximums.

I CORPS

The active force elements of the Belgian Army I Corps consist of two mechanized infantry divisions (1st and 16th) with a total of four brigades (three mechanized infantry and one armored) and supporting troops. The armored brigade has four maneuver battalions, two tank and two mechanized infantry. The mechanized infantry brigade has three maneuver battalions, one tank and two mechanized infantry. Not all mechanized infantry battalions are the same. There are two types that differ in organization, strength, and the type of armored personnel carrier (French AMX or US M75^{*}).

^{*}To be replaced in the near future with a modern type.

The reserve unit components of the I Corps consist of two brigades and supporting troops. One brigade (10th) is mechanized infantry and the other (12th) is motorized infantry. Much of the equipment in the reserve brigades is obsolescent. The organization and equipment of the 10th Mechanized Infantry Brigade are different from the two active force mechanized infantry brigades.

FORCES OF THE INTERIOR

The major active force combat type units in the Forces of the Interior are a paracommando regiment and two understrength light infantry battalions designed for rear area security. The major reserve combat elements consist of a paracommando battalion, several separate paracommando companies, several light armored cavalry units, and several local guard units.

APPLICABILITY OF THE RIM SYSTEM TO THE I CORPS

Within I Corps, the RIM concept could be applied by using one or more brigades for production of additional battalions for assignment on mobilization either to the two active force divisions or to the reserve 10th mechanized infantry brigade. The other reserve brigade, the 12th, has no active army counterpart.

The application of the RIM system as described above is not considered advisable for the following reasons:

- *The Belgian Army is currently highly dependent on conscripts* and the term of conscript service (8 to 10 months) is inadequate to develop the unit cohesion and collective proficiency that is the advantage of the RIM concept. If conscript service is reduced further, then the RIM concept is even more inadvisable.*
- *The combat readiness of the participating active force battalions would be reduced as explained in the previous section in the discussion of the RIM application to the FRG Field Army.*

*The Belgian Army plans to move to a professional force that is not highly dependent on conscripts. However, this is a long-range objective.

- *The active force battalions do not have exact reserve counterparts. Funds would be required to purchase additional sets of equipment or some battalions of the active force would have to be reequipped with the obsolescent equipment in the reserve brigade. If funds for additional sets of equipment are to be made available, they might be best used to expedite the modernization of the equipment of the two active force divisions.*

APPLICABILITY OF THE RIM SYSTEM TO THE FORCES OF THE INTERIOR

Within the Forces of the Interior, the RIM concept could be applied to the paracommando regiment.

The two understrength light infantry battalions have no reserve counterparts. Further, they have virtually no utility in assisting in countering an armored offensive because they lack armor and effective antitank weapons.

The application of the RIM system to the paracommando regiment is not considered advisable for the following reasons:

- *Combat readiness of the participating active force battalions would be reduced, as previously explained. These units consist primarily of volunteers serving at least 2 years and are considered to be the best trained and the most ready combat units.*
- *These units are specialised light infantry units with little or no effectiveness in assisting in countering an armored offensive.*
- *The number of paracommando reserve units is insignificant.*

APPENDIX A
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The principal sources used in the preparation of this report are listed below.

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