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Reorganization of Soviet Ground Forces in East Germany

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Reorganization of Soviet Ground Forces in East Germany

Key Judgments

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Since 1980 the Soviets have been reorganizing their ground forces in East Germany to give them a more balanced combined-arms capability. An equipment expansion and modernization program—designed partly to supplement the reorganization—is further enhancing the overall combat capability of the ground forces in East Germany. Although similar reorganization is under way throughout the Soviet Ground Forces, it is most advanced in the Group of Soviet Forces, Germany (GSFG)—already the most powerful grouping of Soviet ground forces

The restructuring and modernization are designed to enhance the capability of Soviet forces to overrun NATO's forward defenses in Central Europe and maintain the momentum of offensive operations. The changes demonstrate the Soviets' belief that the tank cannot operate alone in ground force combat operations. The Soviets view continued progress in the development of combined-arms formations—with integrated tanks, self-propelled artillery, mechanized troops, and helicopters—as necessary to protect the tank's dominance in battlefield operations. The reorganization gives regimental and divisional commanders organizations that are better suited to operate against ground-based defenses saturated with antitank weapons, carry out semiautonomous operations, execute flank maneuvers, and exploit unexpected opportunities for rapid advance

The reorganization is occurring in regiment, division, army, and front units. Its primary features include:

- Relocation and resubordination of divisions.
- Expansion of divisional motorized rifle units.
- The addition of an infantry battalion and an artillery battalion to the tank regiments in tank divisions and the addition of an artillery battalion to the tank regiments in motorized rifle divisions.
- Expansion of divisional reconnaissance battalions.
- Expansion of divisional independent helicopter detachments into direct-support squadrons.
- Expansion of army and front artillery units.

The modernization of equipment accompanying this reorganization includes:

- Conversion to self-propelled artillery in regiment, division, army, and front units.
- Conversion to new infantry combat vehicles and armored personnel carriers in motorized rifle units.
- Assignment of nuclear-capable artillery to army and front artillery units.
- Assignment of a new multiple rocket launcher (MRL) to the front MRL brigade

The completion of the reorganization depends partly on the introduction rate of new equipment—especially self-propelled artillery. The lack of adequate new equipment for assignment to the GSFG probably has been a constraining factor on the full implementation of the reorganization. We project, nevertheless, that the program should be completed by the end of this decade

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Reorganization of Soviet Ground Forces in East Germany

Background

Reorganization of the Soviet Ground Forces. Since the end of World War II, the Soviet Ground Forces have been reorganized several times to accommodate changes in tactical doctrine, threat perceptions, and weapons developments. All military planners must reconcile traditional ground force offensive tactical concepts with changing battlefield environments and resource constraints. The Soviet Ground Forces, nevertheless, have evolved with a consistent emphasis on rapid offensive operations by large armored formations.

The tank has retained its dominance in the Soviet Ground Forces over the past several decades of force restructuring. The recent appearance of their latest model tanks indicates that the Soviets maintain their commitment to tank warfare and that their offensive doctrine will continue to be based on the rapid maneuver of large tank forces.[1]

A primary objective of the current reorganization is to create combined-arms regiments—composed of tanks, motorized infantry, and artillery—designed to break through enemy defenses and maintain high rates of advance without the use of nuclear weapons. Reorganization thus consists of changes in the numbers and assignment of artillery and motorized infantry in Soviet maneuver regiments

[redacted] in late 1977 when organizational testing was begun in two experimental divisions in the Soviet Union—a motorized rifle division (MRD) in the Far East Military District (MD) and a tank division (TD) in the Carpathian MD. The attempt was apparently made to blend the two types of divisions into a standardized, balanced combined-arms division that would have three uniform tank regiments (each with artillery and infantry battalions) but not the usual separate infantry regiment.

By 1979, however, [redacted] motorized rifle regiment (MRR) had reappeared with each of these two experimental divisions, while the tank regiments (TRs) retained the infantry and artillery they had acquired. This development suggested that the Soviets had rejected the notion of a uniformly balanced combined-arms division and had shifted restructuring from the division to the regiment. As a result, the maneuver regiments within a division retained their original distinction—some had more tanks and others more infantry—but all had a combination of artillery, infantry, and armor.

[redacted] since 1980, the restructuring of the Far East MD MRD and the Carpathian MD TD has served as a model for the current reorganization of GSFG divisions. Since 1981 [redacted] reorganization has become more extensive, affecting combat units at army and front levels.

Role of the Group of Soviet Forces, Germany. The Group of Soviet Forces, Germany has been maintained since World War II as the most powerful force grouping in the Soviet Ground Forces. Historically, the GSFG has modernized more quickly and completed reorganization programs before other Soviet force groupings.

[1] Latest tanks are the T-80, an improved T-72, and the T-64B—an improved T-64A with antitank guided missile (ATGM) capability.

Figure 1
Warsaw Pact Ground Force Campaign in the Western TMO

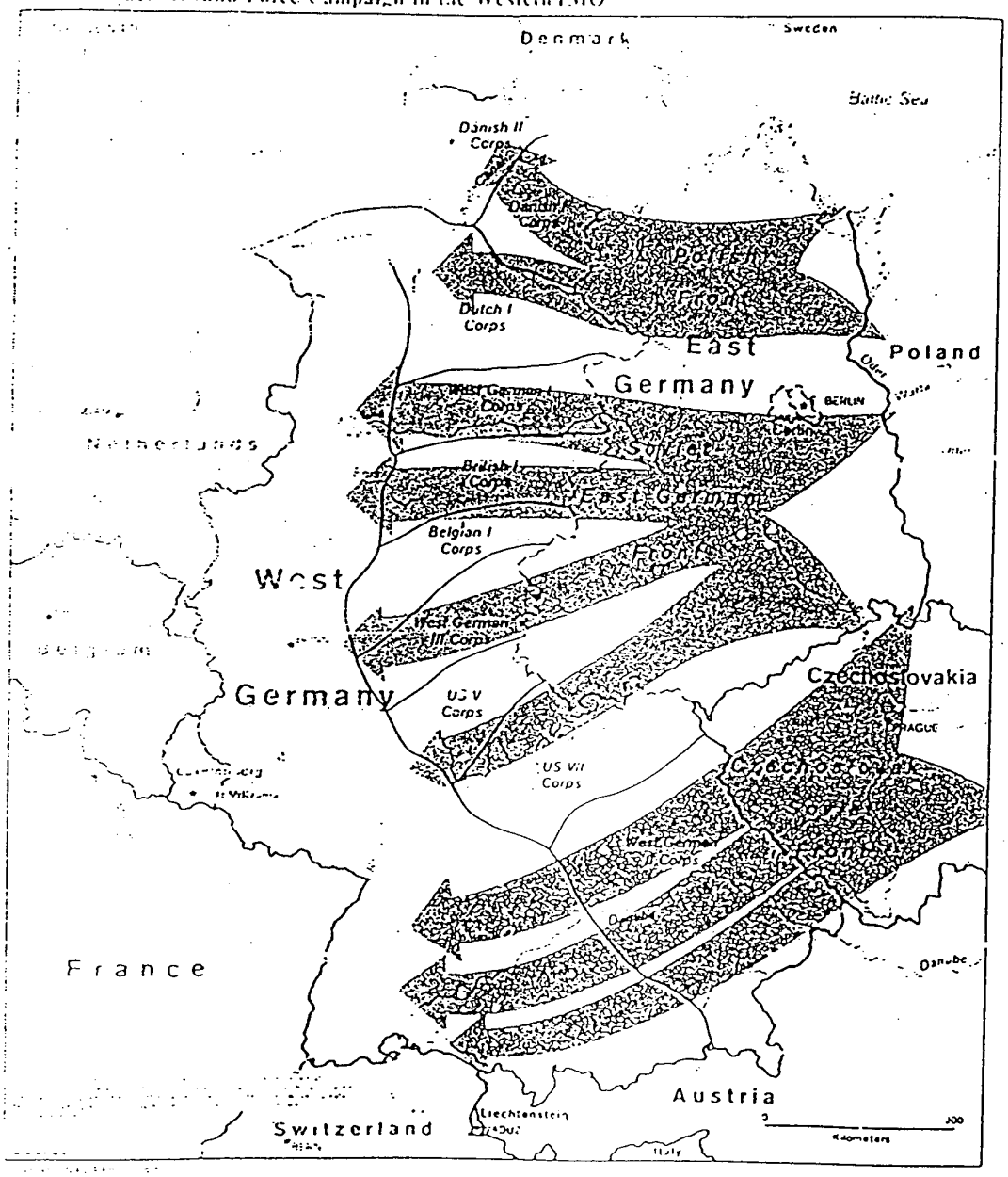
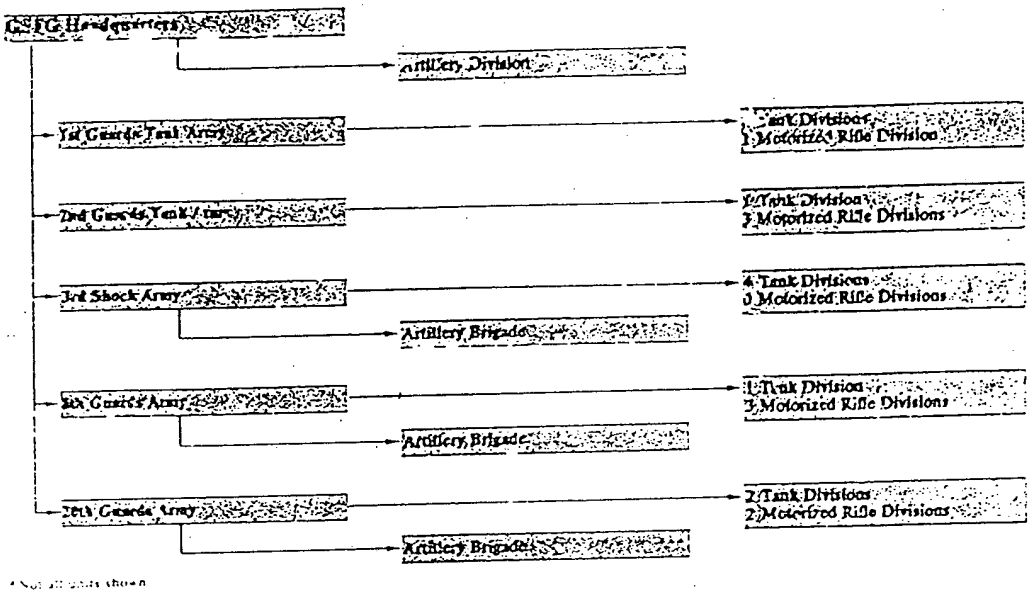


Figure 2
Current Organization of the Group of Soviet Forces, Germany (GSFG)*



* Not all units shown

The GSFG is almost a front in being and is considerably stronger than any other potential front or military district.[1] It would be the major force component in the wartime Soviet–East German front that probably would also include the two Soviet divisions stationed in Poland and at least six East German ground force divisions. This front probably would constitute the largest concentration of forces arrayed against NATO and would carry out the Warsaw Pact's main effort in Central Europe (figure 1).

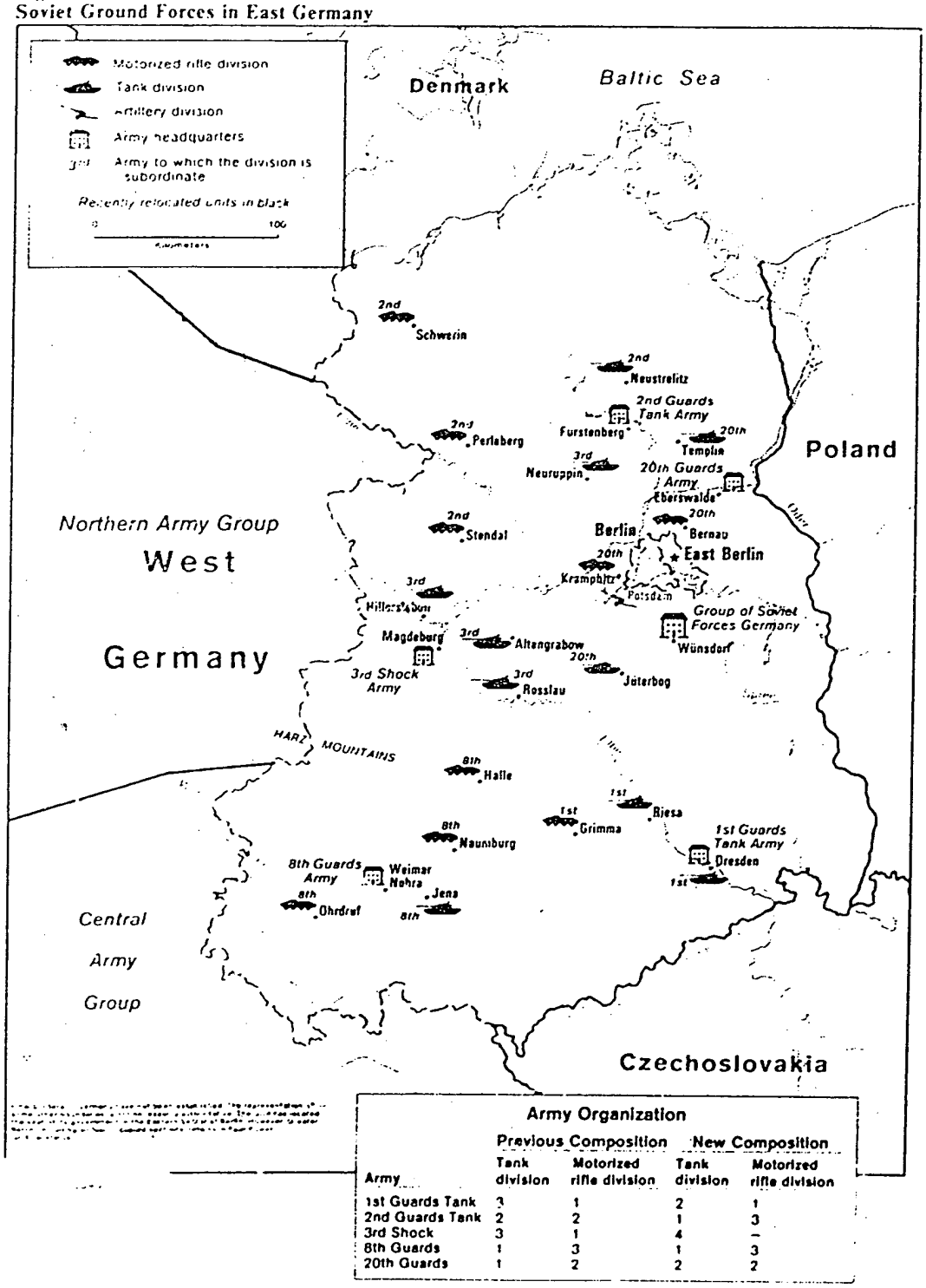
Ten tank divisions and nine motorized rifle divisions are currently subordinate to the five armies in the GSFG (figure 2). These totals reflect the conversion in the 20th Guards Army of the 14th Guards MRD to the 32nd Guards TD in 1982 and the withdrawal of the 6th Guards TD of the 1st Guards Tank Army in 1980 to the western USSR. Also stationed in East Germany are a front artillery division, at least three army artillery brigades, five army ground attack helicopter regiments, as well as numerous other ground force combat and support units

[1] A front is a joint forces command, roughly analogous to the US Army group, consisting of ground and air forces, combat support elements, and, sometimes, naval forces. Although front command and control elements exist in peacetime, fronts are formally activated as commands only in wartime

Resubordination of GSFG Divisions

[redacted] since early 1983 some of the ground force divisions in the GSFG are being resubordinated among armies. The resubordination currently affects five of the 19 divisions in the GSFG and all five GSFG armies. The major changes caused by the resubordination include: the 3rd Shock Army has gained a TD and lost an

Figure 3
Soviet Ground Forces in East Germany



Army Organization

Army	Previous Composition: Tank division	Previous Composition: Motorized rifle division	New Composition: Tank division	New Composition: Motorized rifle division
1st Guards Tank	3	1	2	1
2nd Guards Tank	2	2	1	3
3rd Shock	3	1	4	–
8th Guards	1	3	1	3
20th Guards	1	2	2	2

MRD, thus becoming an all-tank division army; the 2nd Guards Tank Army (GTA) has lost a TD and picked up an MRD so it consists of one TD and three MRDs; the 20th Guards Army (GA) has gained a TD, thus becoming a balanced army with two TDs and two MRDs; and the 1st GTA has lost a TD so it consists of two TDs and one MRD. The 8th GA has traded MRDs with the 1st GTA so it still is composed of one TD and three MRDs. (See figure 3 for the current geographic alignment of each of the five armies.)

While we cannot determine at this point the final composition of the GSFG based on this resubordination, such changes historically have coincided with changes in combat unit organization. In the mid-1950s and again in the mid-1960s, the divisions in the GSFG were realigned in order to better prepare their peacetime organization to meet changing wartime requirements. In both instances, the realignment was preceded by a major reorganization of GSFG's combat units similar to the changes that have been occurring in GSFG ground forces since 1980. (

At least two GSFG divisions—the 10th GTD subordinate to the 3rd Shock Army and the 35th MRD subordinate to the 20th Guards Army—are in the process of relocating to new garrison locations. [ ] The relocation of divisions probably is related to the larger realignment of Soviet armies in East Germany. The movement of the 10th GTD from the Berlin area to the central sector of the inner-German border, for example, is part of the forward concentration of the 3rd Shock Army (figure 3). We believe that additional relocations are likely and unit moves may continue for some time.

General Features of the GSFG Reorganization

The Regiment and Division. The reorganization of the GSFG ground forces is an ongoing process, and we cannot now confidently identify all of its features. While we have identified certain organizational changes, we have observed other alterations only in isolated instances or we have inferred their presence from fragmentary evidence. Thus, we can only estimate—at least in part—what the full dimensions of the current reorganization program will be.

The principal features of the GSFG divisional reorganization program are as follows (figures 4 and 5):

- Restructuring and expansion of infantry combat vehicle (BMP)-equipped motorized rifle battalions (MRBs) from 31 to 43 BMPs.
- Restructuring and expansion of armored personnel carrier (BTR)-equipped MRBs from 40 to 50 BTRs.
- Expansion of mortar batteries in MRBs from six to eight tubes.
- Probable reduction in the number of MRBs in the motorized rifle regiment (MRR) attached to a TD from the standard three battalions to two.
- Probable reduction in the number of tanks in the tank battalion attached to the MRR in a TD from 40 to 31.
- Expansion of the motorized rifle company subordinate to tank regiments of TDs to battalion strength.
- Addition of an artillery battalion to tank regiments subordinate to both motorized rifle and tank divisions.
- Upgrading and standardization of artillery pieces in divisional artillery battalions—152-mm tubes—and artillery battalions attached to maneuver regiments—122-mm tubes.
- Expansion of divisional and regimental artillery battalions from 18 to 24 tubes.
- Subordination of the previously independent multiple rocket launcher (MRL) battalion to the divisional artillery regiment.
- Possible expansion of MRL battalions in divisional artillery regiments from 18 to 24 launchers.
- Addition of tanks, infantry combat vehicles, and armored personnel carriers to the divisional reconnaissance battalion.
- Expansion of divisional independent helicopter detachments into direct-support squadrons.

Some elements of restructuring have been identified in all 19 GSFG divisions. While we expect at least some of the primary features of the reorganization to

* For a more detailed description of GSFG divisional reorganization, see appendix A.

Figure 4
Principal Changes Resulting From the Reorganization and Modernization of a GSFG Tank Division[a]

GSFG Tank Division, 1983		
3 Tank Regiments (TRs)		
	Tank Regiment:	
	3 Tank Battalions (TBs)	
	Motorized Rifle Battalion (MRB)	Motorized rifle company in each TR expanded to a 43 infantry combat vehicle (BMP) battalion.
	Artillery Battalion	Towed artillery battalion added to each TR.
		Self-propelled (SP) artillery replaced towed artillery in TR artillery battalion.
Motorized Rifle Regiment (MRR)	2 Motorized Rifle Battalions (MRBs)	Third MRB in MRR disestablished.
		Each BMP-equipped MRB expanded to 43 BMPs.
	Tank Battalion (TB)	TB reduced to 31 tanks.
	Artillery Battalion	SP artillery replaced towed artillery in MRR artillery battalion.
Artillery Regiment		Multiple rocket launcher battalion made subordinate to artillery regiment.
		122-mm towed howitzers replaced by 152-mm SP howitzers.
		SP artillery battalion expanded to 24 tubes.
Reconnaissance Battalion		Tanks, BMPs, and armored personnel carriers (BTRs) added to reconnaissance battalion.
Helicopter Squadron		Helicopter detachment upgraded to squadron with 10 to 12 more helicopters.

[a] [illegible]

Figure 5
Principal Changes Resulting From the Reorganization and Modernization of a GSFG Motorized Rifle Division*

GSFG Motorized Rifle Division, 1983		
3 Motorized Rifle Regiments (MRRs)		
	Motorized Rifle Regiment	
	3 Motorized Rifle Battalions (MRBs)	Infantry combat vehicle (BMP)-equipped MRB expanded to 43 BMPs.
		Armored personnel carrier (BTR)-equipped MRB expanded to 50 BTRs.
	Tank Battalion (TB)	
	Artillery Battalion	Self-propelled (SP) artillery replaced towed artillery in artillery battalion BMP-equipped MRR.
Tank Regiment (TR)	3 Tank Battalions (TBs)	
	Artillery Battalion	Towed artillery battalion added to TR.
		SP artillery replaced towed artillery in TR artillery battalion.
Artillery Regiment		Multiple rocket launcher battalion made subordinate to artillery regiment.
		122-mm towed howitzers replaced by 152-mm SP howitzers.
		SP artillery battalion expanded to 24 tubes.
Reconnaissance Battalion		Tanks, BMPs, and BTRs added to reconnaissance battalion.
Helicopter Squadron		Helicopter detachment upgraded to squadron with 10 to 12 more helicopters.

*Only affected units shown

be implemented throughout Soviet Ground Forces. [redacted] the GSFG probably will be the first force grouping to complete the program and thus will retain its lead in force augmentation and modernity.

A program of equipment modernization in GSFG divisions also has been identified. [redacted] It consists of:

- Continued fielding of self-propelled artillery in divisional artillery regiments and artillery battalions attached to maneuver regiments.
- Initial introduction of BMP-2 (M-1981) infantry combat vehicles.
- Continued fielding of BTR-70 armored personnel carriers.

The Army and Front. In mid-1981 [redacted] reorganization would be extended to GSFG army and front artillery units. All existing army artillery brigades and the front artillery division now show some elements of restructuring and modernization.[1] The basic components of this reorganization are (figures 6 and 7):

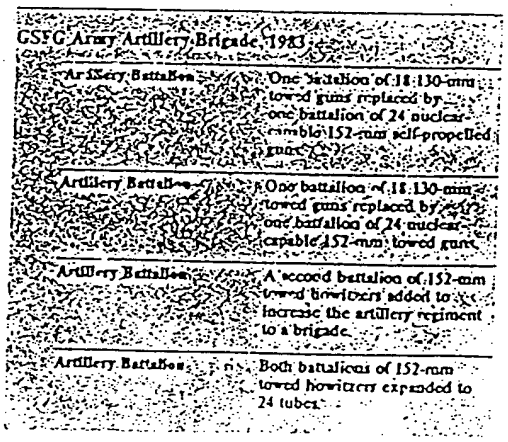
- Increasing the number of artillery pieces in army and front artillery battalions from 18 to 24.
- Upgrading army artillery regiments to brigades by the addition of a fourth battalion.
- Upgrading and standardizing army and front artillery battalions with 152-mm weapons.
- Possibly creating artillery brigades subordinate to the two tank armies in the GSFG.
- Possibly creating an independent front heavy artillery brigade.
- Increasing the number of Scud tactical missile transporter-erector-launchers (TELs) in two of the three front Scud brigades from 18 to 27 and disestablishing the third brigade.

A steady but gradual modernization of equipment in GSFG army and front units also has been under way for several years. This upgrading of equipment [redacted] and consists of:

- Fielding additional self-propelled artillery in army and front units.

[1] For a more detailed description of GSFG nondivisional reorganization, see appendix B.

Figure 6
Principal Changes Resulting From the Reorganization and Modernization of a GSFG Army Artillery Brigade*



*Only affected units shown.

- Initial deployment of nuclear-capable artillery with army and front units.
- Reequipping the front MRL brigade with BM-27 MRLs.

Implications

By reorganizing their ground forces in East Germany, the Soviets are attempting to ensure that their troops will be able to carry out the kinds of offensive operations required to overcome defensive zones and to sustain subsequent exploitation operations. Contemporary Soviet military writings have identified several problems associated with these objectives: penetrating a defense saturated with antitank weapons, organizing the delivery of nuclear and conventional fire support, and maintaining the swiftness of advances to a considerable depth in the enemy's rear.

Figure 7
Principal Changes Resulting From the Reorganization and Modernization of the GSFG Front Artillery Division*

GSFG Front Artillery Division, 1983

Artillery Brigade	Three battalions of 152-mm self-propelled (SP) howitzers expanded to 24 tubes each.
	The fourth battalion of 152-mm SP howitzers disestablished.
Artillery Brigade	A brigade of 130-mm towed guns replaced by a brigade of nuclear-capable 152-mm SP guns.
Artillery Brigade	Four battalions of 152-mm towed howitzers expanded to 24 tubes each.
Multiple Rocket Launcher Brigade (MRL)	A brigade of 122-mm BM-21 MRLs replaced by a brigade of 220-mm BM-27 MRLs.

*Only affected units shown

Soviet authors also have stated that offensive operations would be preceded by an intense concentration of preparatory artillery fire, possibly including nuclear weapons. After this is completed, swift advances by tank forces accompanied by self-propelled artillery and motorized rifle units would be accomplished in breaching and outflanking enemy positions

The tank is the chief vehicle of mobile firepower and thus the centerpiece of the Soviet offensive. Chief of the General Staff Marshal N. V. Ogarkov, however, as well as many other Soviet authors, has specifically expressed concern about the proliferation and capabilities of new antitank systems that seriously threaten the tank, despite its greater protection and agility. NATO has invested a considerable effort in its antitank programs. In 1982 it planned to introduce 1,400 heavy and medium antitank guided missiles (ATGMs)—a 60-percent increase over existing holdings—together with 2,500 light (hand-held) weapons and 400 other antiarmor weapons.

A trend exists in combat organization to improve tank-dominated offensive operations, according to Soviet writers, by developing combined-arms divisions and regiments with integrated tanks, self-propelled artillery, and motorized troops. The combined-arms regiment, Soviet writers indicate, can quickly attack defensive targets with a variety of weapons, rapidly maneuver, quickly change from one combat action to another, and maintain continuous fire at the enemy—thus sustaining the continuity and swiftness of offensive operations.

The reorganization program is designed to provide a better balance of armor, artillery, and infantry in divisions—particularly tank divisions—to enhance the combined-arms capability of Soviet forces. For the Soviets, the tank remains the decisive ground force weapon on the conventional battlefield, but their military writings indicate they now believe the tank cannot achieve its full potential unless integrated into a combined-arms team that is balanced for the mission, enemy force, and terrain. The restructuring and modernization programs provide the regimental and divisional commanders greater ability to adapt independently to different combat situations, execute flank maneuvers around enemy defenses, and reduce the delay associated with coordinating artillery fire and advances.

The tank regiment, with its own supporting infantry and artillery assets, could operate with a greater degree of autonomy if necessary. This would be essential in a fast-moving combat operation where units could be isolated quickly by zones of destruction and where they might find unexpected opportunities for rapid advance. With a self-contained unit, the commander would have the flexibility to decide on a course of action without first asking for assistance from higher authority

Artillery. The Soviets have apparently decided to field a fully self-propelled (SP) artillery force in the GSFG because of their perception of the changing battlefield

environment and evolving weapons technology. The large number of towed artillery weapons in the GSFG would provide the quantity of guns necessary to mass artillery for the preparatory barrages to precede attacks against prepared defenses—as called for in Soviet doctrine. But the towed guns' relative lack of mobility and greater vulnerability and emplacement times—particularly when compared with SP artillery—would limit their capability to accompany and support rapidly advancing tank and mechanized columns.

SP artillery would fulfill the requirement of keeping pace with advancing units to suppress antitank defenses as well as provide fire support against targets of opportunity. Compared with towed models, SP artillery could set up, fire, and move on much more quickly, thus offering an improved ability to bombard enemy positions while avoiding enemy counterbattery fire. In addition, most SP artillery models—including weapons fielded in maneuver divisions—would provide the crew with protection against antipersonnel munitions and some protection in a battlefield situation where there is a nuclear-biological-chemical environment.

SP regiment artillery acting in an assault role could follow advancing tanks closely during the offensive's breakthrough when antitank weapons would be most dense. Artillery advancing with the tank forces would be particularly effective in suppressing antitank weapons that had a range equal to or superior to that of tanks.

If advancing Soviet forces were to penetrate an enemy's defenses beyond the range of the preparatory bombardment, artillery fire on call could be directed more quickly against ad hoc targets with regimental artillery. Fire from accompanying SP artillery could continue to be shifted quickly to specific targets that posed an immediate threat to the advance—especially strongpoints and antitank weapons. Tanks would not be required to remain stationary—which would make them particularly vulnerable—for fire suppression to be fully completed, holding back while the artillery finished its neutralization of enemy defenses.

The placing of 122-mm SP artillery pieces in a regimental support role and 152-mm SP artillery tubes in a divisional support role would assist the Soviets in integrating fire and maneuver plans. The 122-mm and 152-mm artillery combination would provide the deployment depth and lateral dispersion required to permit striking targets close to the enemy's forward defenses as well as those farther back.

The allocation of 152-mm artillery guns to army and front units and the creation of an independent front heavy artillery brigade would enhance the Soviets' ability to provide area and counterbattery fire support for maneuver units as they fight deeper in the enemy's rear area. Artillery guns have a much greater range than howitzers—the M-1981 has a 27-km range rather than the 17-km range of the M-1973—and assigning guns at army and front levels would provide commanders with an especially deep fire capability. This support would be designed to disrupt an enemy's use of reserves for counterattacks as well as to destroy prepared defensive positions to expedite the momentum of the offensive.

By changing to an eight-tube battery/24-tube battalion, the Soviets would increase the amount of concentrated fire they could deliver and would improve the target coverage—especially during the important first salvo.* According to Soviet standards, at least one-third of an artillery battalion should be advancing or repositioning at any one time. Constant movement, however, would degrade a battalion's fire and thus increase the amount of time required to neutralize strongpoints. The increased number of artillery tubes would permit battalions to deliver a prescribed number of rounds on target more quickly, thus enabling the unit to move frequently to avoid enemy counterbattery fire.

The assignment of nuclear-capable artillery to army and front units probably is designed to increase nuclear targeting flexibility and would enhance the

* The term "tube" is used to refer both to artillery guns and howitzers.

front and army commanders' abilities to assist the operations of engaged units with nuclear fire support. The assessed accuracy, yield, and response time of the nuclear artillery rounds—when compared with other nuclear support systems deployed in the GSFG—would allow nuclear fire support to be used faster and in closer proximity to maneuvering troops.

In addition, nuclear artillery would significantly complicate an enemy's targeting problems. Regardless of the number of units that eventually might have nuclear rounds and be trained for such missions, enemy commanders would have to consider them all nuclear threats.

Mechanized Infantry. The Soviets have written that mechanized infantry would play a critical role in breaching integrated antitank defenses. Infantry with infantry combat vehicles (BMPs) would attack antitank defenses that could not be effectively targeted by artillery or long-range tank fire. According to Soviet doctrine, assaulting infantry—using terrain and smoke to mask its advance during the preparatory barrage—would try to position itself to neutralize antitank strongpoints not destroyed by the preparatory barrage.

Mounted infantry in BMPs and acting in company and battalion strength would then accompany the fast-moving tanks in wide-ranging attacks. The BMPs could maneuver as the forward element of the tank column or on the flanks of the column for reconnaissance and protection from enfilading enemy fire. In addition, while supported by machinegun or automatic cannon fire from the BMP, infantry could dismount to attack antitank defenses that were not accessible to armored vehicles.

Helicopters. The program to upgrade the independent helicopter detachment to a direct-support squadron in GSFG divisions is an essential element of efforts to reestablish army aviation and to develop the "vertical dimension of modern ground combat" that has been the subject of numerous articles in Soviet military journals. The direct-support squadron improves a division's combat capability by giving it a hitherto lacking element of organic aerial fire support and airmobility.

Attack helicopters add mobile firepower to the combat reconnaissance elements, thereby aiding the early detection and destruction of enemy armor and antitank forces.

Equipment. The reorganization of the GSFG requires significant increases in the number of BMPs and—to an even greater extent—SP artillery weapons. The addition of an expanded 43-BMP battalion to each tank regiment will require approximately 1,700 more BMPs. The expansion of MRR battalions from 31 to 43 BMPs creates a need for about 700 additional BMPs. This increase may be offset somewhat if it is confirmed that MRRs in TDs have been reduced to two battalions. This structure may be temporary, however, and the third battalion could be reconstituted and equipped with the BMP-2 when it becomes available in adequate numbers.

The SP artillery requirement for TDs and MRDs in the GSFG will be approximately 3,200 pieces, if we assume that:

- SP artillery battalions are assigned to all TRs and MRRs.
- TD and MRD artillery regiments have three battalions of SP artillery.
- Tubes in all regimental and divisional artillery batteries increase from six to eight.

The GSFG was assigned approximately 1,100 SP artillery pieces in artillery regiments and maneuver regiments in 1982. Currently, therefore, a shortfall of about 2,100 SP artillery pieces exists in GSFG regimental and divisional artillery (table 1).

In terms of numerical increases, the augmentation of artillery holdings in the tank division is most dramatic. The number of howitzers in a TD will grow from 54 to 108 when a battalion of artillery is added to each of the three subordinate tank regiments and when the subordinate artillery regiment has three howitzer battalions. When a TD adopts the eight-tube battery/24-tube battalion structure, the artillery holdings will increase to 168 pieces—a 200-percent

Table 1
GSFG: Complete Conversion to SP Artillery [a]

Unit	Required	On Hand Yearend 1982	Shortfall
Divisional	3,200	1,100	2,100
Nondivisional	600	160	440
Nondivisional [b]	800		640

[a] Numbers are approximate.
[b] Including the creation of two additional army artillery brigades and an independent front heavy artillery brigade

Table 2
Artillery Tubes Added to GSFG Because of Reorganization [a]

Unit	Tubes
Divisional	1,500
Nondivisional	200
Nondivisional [b]	450

[a] Numbers are approximate.
[b] Including the creation of two additional army artillery brigades and an independent front heavy artillery brigade.

overall expansion in tube artillery over the previous organization. The number of howitzers in MRDs will grow by 55 percent (108 tubes to 168 tubes) through the assignment of an artillery battalion to the subordinate tank regiment and the expansion of all battalions to the 24-tube structure.

The nondivisional artillery requirement for the GSFG because of the restructuring will be 600 pieces, if we assume that:

- Army artillery brigades and front artillery division become completely self-propelled.
- Tubes in nondivisional artillery batteries increase from six to eight.
- Front artillery brigades contain four battalions.

If artillery brigades subordinate to the two tank armies and an independent front heavy artillery brigade are established, then the nondivisional artillery requirement will rise to 800 SP pieces. The recent introduction of a new towed artillery piece into the GSFG, however, indicates that towed artillery will remain in nondivisional artillery units at least for the foreseeable future. There were approximately 160 nondivisional SP artillery tubes in the GSFG in 1982. Currently, therefore, a shortfall of about 440 or 640 SP artillery pieces, depending on the artillery requirement, exists in the nondivisional inventory (table 1).

The artillery holdings in army artillery brigades have grown over 75 percent through the adoption of an eight-tube battery structure and the addition of a fourth battalion of tubes. The assets in each of the tube artillery brigades assigned to the front artillery division have grown 33 percent through the adoption of eight-tube batteries in a four-battalion structure.

The completion of the current reorganization program in the GSFG depends partly on the introduction rate of new equipment—especially SP artillery. The lack of adequate new equipment for assignment to the GSFG probably has been a constraining factor on the full implementation of the reorganization. We project that the reorganization program in the GSFG should be completed by the end of this decade.[9]

Overall, the organizational changes that have been noted and those that have been projected will cause the number of artillery tubes assigned to the GSFG to grow by approximately 1,700 pieces. If two additional army artillery brigades and an independent front heavy artillery brigade are formed, nearly 2,000 artillery pieces will be added to the GSFG, doubling the number before reorganization began (table 2).

In terms of equipment numbers and tactical considerations, the improvements resulting from reorganization and weapons modernization are substantial. The expansion and upgrading of artillery, more infantry in

9. This estimate

tank units, additional helicopters in divisional squadrons, and increases in infantry combat weapons—these additions all enhance a GSFG unit's ability to operate against ground-based, antitank-saturated defenses. GSFG combined-arms formations have an improved speed of action, range of weapons, and mobility of maneuver that the Soviets believe is required to overrun NATO's forward defenses in Europe and maintain the momentum of subsequent offensive operations.

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Appendix A

Restructuring Within Divisions

The principal changes of the GSFG divisional reorganization program [redacted] are illustrated in figures 8 and 9.

Motorized Rifle Battalions in Motorized Rifle Regiments and Tank Regiments

[redacted] BMP-equipped motorized rifle battalions (MRBs) in the GSFG have been augmented to contain 43 infantry combat vehicles (BMPs) instead of the previous 31 (figure 10). The number of BMPs in each of the three subordinate motorized rifle companies was increased from 10 to 12, apparently to carry a machinegun platoon that has been added to each company. In addition, a grenade launcher platoon and an air defense platoon—each with three BMPs—have been added at the battalion level. One BMP remains attached to the battalion headquarters (figure 11).

Soviet documentary evidence shows that the number of BTR-60 armored personnel carriers in the MRBs of one motorized rifle regiment (MRR) in the GSFG has increased from 40 to 50 since 1980 [redacted] (figure 10). As with BMP-equipped units, the inclusion of additional weapons at company and battalion levels is designed to increase battalion firepower (figure 11).

Soviet documentary evidence [redacted] indicate that the mortar batteries assigned to motorized rifle battalions in the GSFG are being expanded from six to eight 120-mm (M-1943) mortars (figure 12). This increase began in 1979 and is now widespread in the GSFG, although we cannot determine if it is complete. Increased mortar battery strength is part of the effort to augment battalion firepower and parallels the augmentation of artillery batteries from six to eight tubes.

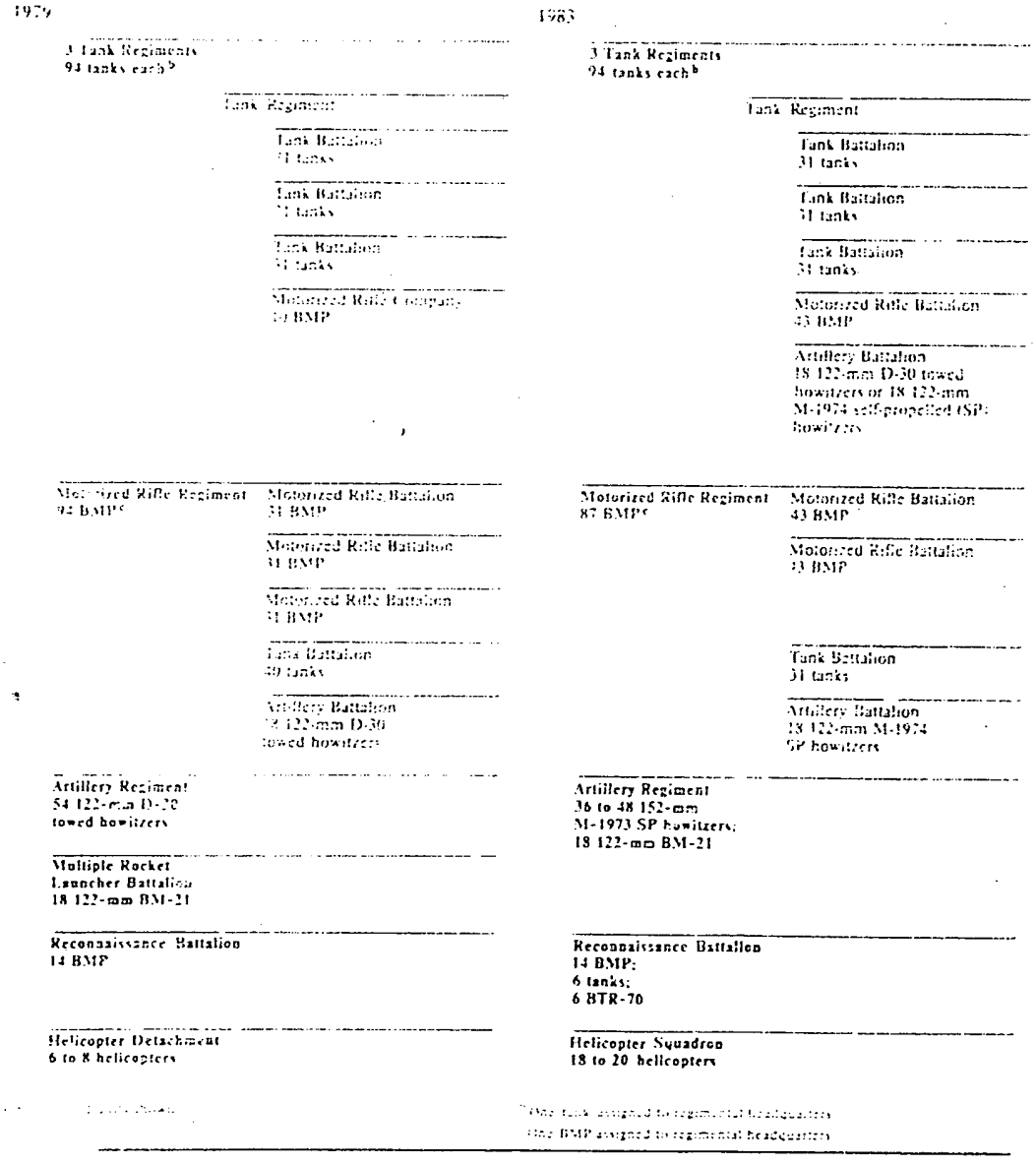
Motorized Rifle Regiments in Tank Divisions

[redacted] The subordinate MRR in one GSFG tank division (TD) has been organized into two instead of three battalions each with 43 BMPs. This two-battalion structure cannot be confirmed in any other TD in the GSFG, although [redacted] it may be present in almost [redacted] TDs stationed inside the Soviet Union. We cannot determine if these MRRs will return to a typical configuration through the addition of a third MRB or if the Soviets have adopted a structure of two expanded battalions for those MRRs assigned to TDs.

The probable reduction in the number of battalions in MRRs subordinate to TDs may be explained by other changes occurring within the TD. Each tank regiment (TR) in a TD has been augmented by an infantry battalion, which may have lessened the TR's reliance on the MRR for infantry support, permitting the MRR to be reduced in size. It is also possible that manning limitations have compelled the Soviets to form TR infantry battalions at the expense of one infantry battalion in the TD's MRR.

[redacted] two TDs in the GSFG indicates that the number of tanks in the MRR's tank battalion (TB) has decreased from 40 to 31, reverting back to the number before a 1974 reorganization [redacted] it cannot be confirmed if this reduction has been instituted in other TDs in the GSFG, although we believe it has.

Figure 8
Principal Changes in GSFG Tank Division, 1979–83[a]

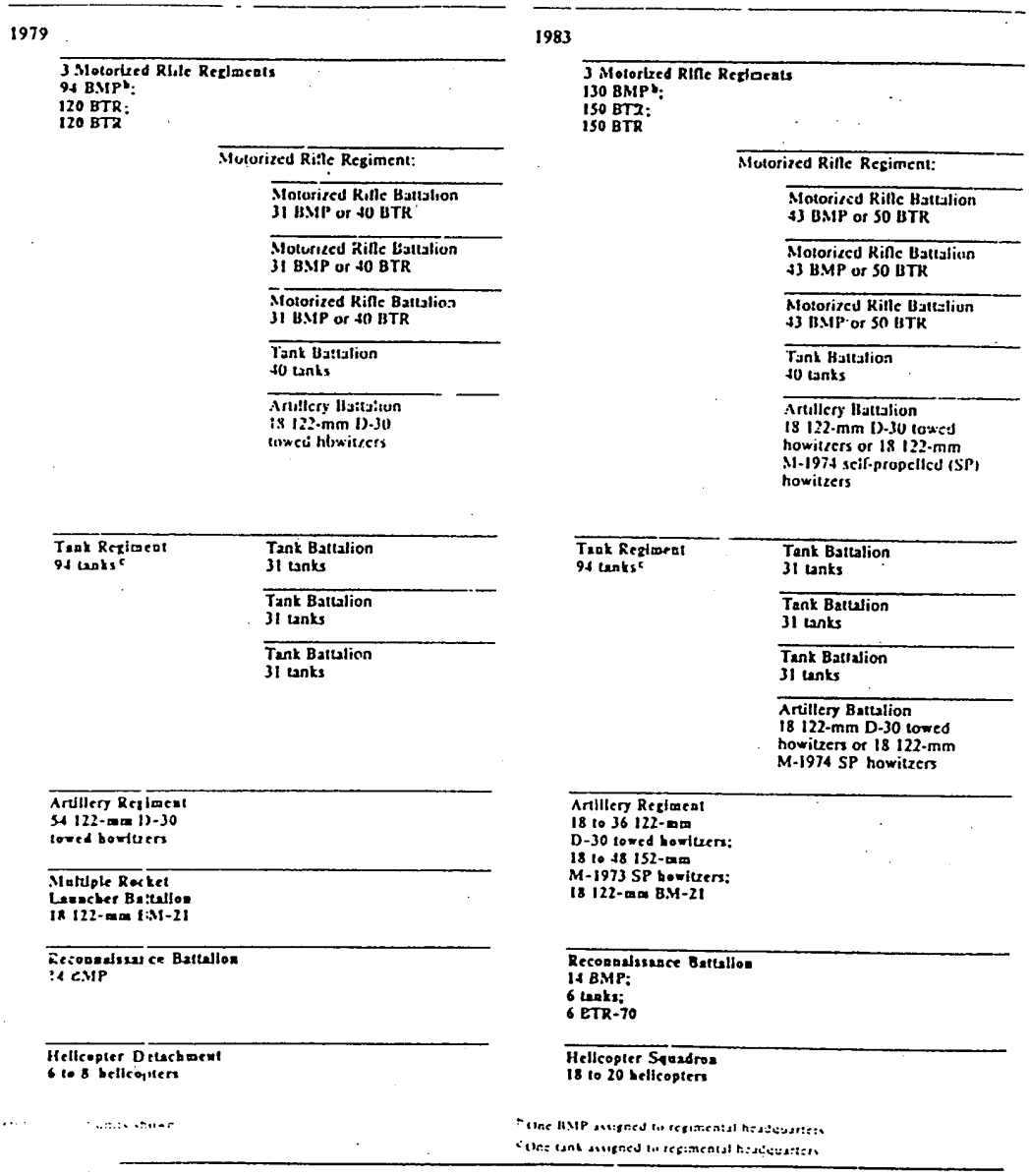


[a] [illegible]

[b] One tank assigned to regimental headquarters

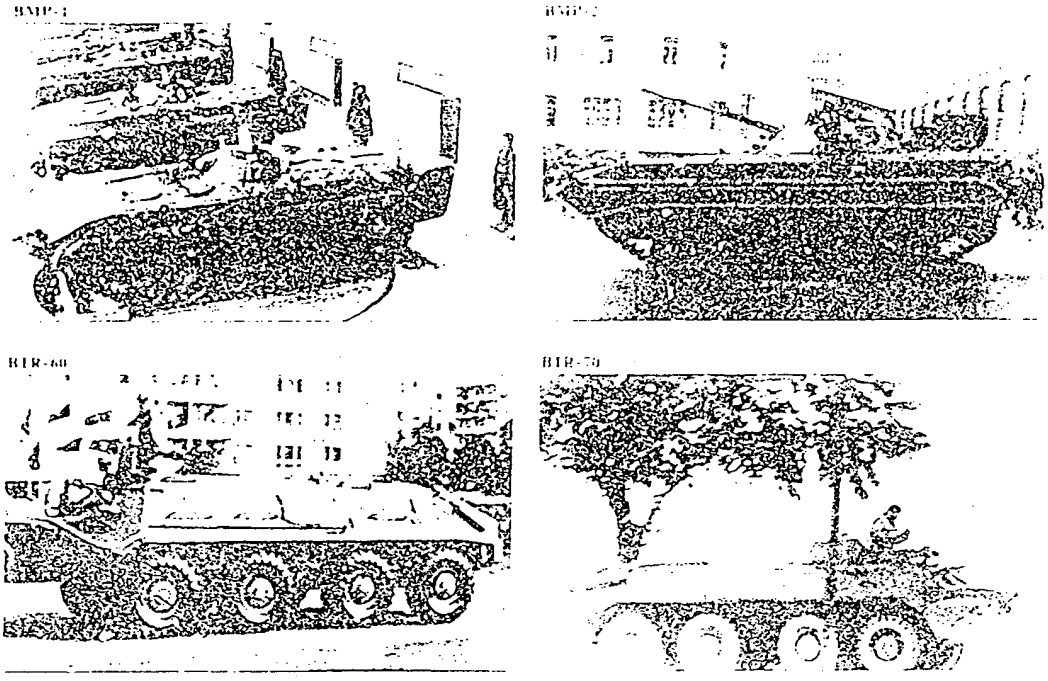
[c] One BMP assigned to regimental headquarters

Figure 9
Principal Changes in a GSFG Motorized Rifle Division, 1979–83[a]



[b] One BMP assigned to regimental headquarters
[c] One tank assigned to regimental headquarters

Figure 10
Infantry Combat Vehicles (BMPs) and Armored Personnel Carriers (BTRs)



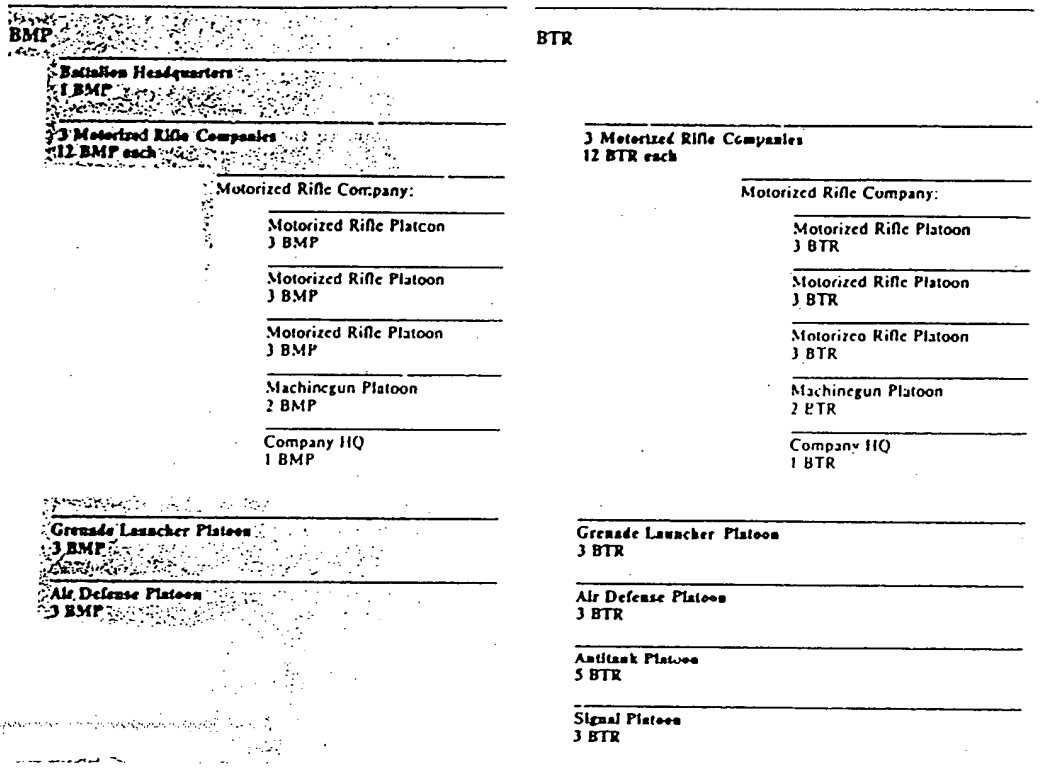
The reduced number of tanks in these battalions may be attributed to the increased firepower in MRBs. This reduction also may be intended to standardize the battalion structure in TDs. Tank battalions in TRs have 31 tanks each, and divisional command and control may be simplified by having the same structure in the TB assigned to the MRR in a TD. It is also possible that manning limitations may have compelled the Soviets to reduce the MRR to compensate for increases in the overall organization of the TD.

Equipment

BMP-2 (M-1981) Infantry Combat Vehicle. The BMP-2 (M-1981) infantry combat vehicle was first identified in the GSFG in late 1981, and it has been observed [redacted] at least six GSFG divisions (figure 10). The BMP-2 has what is probably a 30-mm automatic cannon in place of the 73-mm gun found on the BMP-1. The fire-control optics on the BMP-2 are an improvement over those found on the older BMP, and the AT-5/SPANDREL antitank guided missile (ATGM) probably has replaced the AT-3/SAGGER giving greater range, velocity, and penetration capability against enemy tanks.[3]

[3] BMP-2 variants featuring different armaments also may be assigned to the GSFG.

Figure 11
Augmented GSFG Infantry Combat Vehicle (BMP) and Armored Personnel Carrier (BTR) Motorized Rifle Battalions*

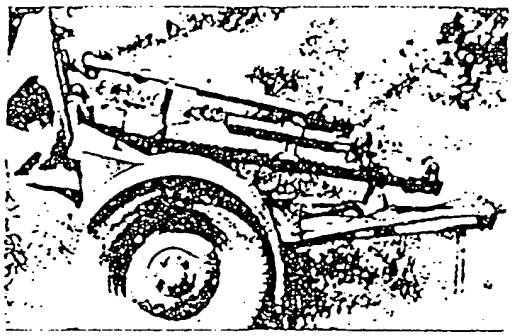


*Only affected units shown

The gun on the BMP-2 has less armor penetration capability than that on the BMP-1, but its greater range will improve suppressive fire against most antitank defenses. The firepower of the BMP-2 will supplement the shorter range capability of the BMP-1, and we believe that all MRRs in the GSFG will contain battalions with both BMPs.

BTR-70 Armored Personnel Carrier. The BTR-70 armored personnel carrier was first observed in the GSFG [redacted] in 1980, but its assignment to Soviet forces in East Germany has been gradual (figure 10). [redacted] indicate that most GSFG divisions currently have a small number of BTR-70s. A modified BTR-70 that

Figure 12
120-mm M-1943 Mortar



mounts an AGS-17 grenade launcher in place of the standard 14.5-mm machinegun also has been seen in the GSFG.

Although the tracked BMP has greater cross-country mobility and survivability, the BTR-70 has inherent advantages as a wheeled vehicle: cheap, fast on roads, fuel efficient, reliable, easy to maintain, quiet, and possessing greater road trafficability. In the GSFG to date, however, the BTR-70 has been confined to specialized roles in reconnaissance, command and control, and signals missions. One motorized rifle division (MRD) in the GSFG [redacted] has received BTR-70s for assignment to two of its MRRs. We do not know at this point, however, if the BTR-70 will replace the BTR-60 in all the GSFG MRRs or be retained for specialized duties.

Self-Propelled Artillery. Another major modernization program occurring in MRRs is the introduction of SP artillery. All GSFG MRRs initially were equipped in the mid-1970s with 122-mm D-30 towed howitzers (figure 13). The artillery battery of six tubes was upgraded to a battalion of 18 tubes at that time to increase organic fire support for the MRR commander. Since then, at least 19 of the 37 MRRs in the GSFG have converted their towed D-30s to 122-mm M-1974 SP howitzers (figure 14). All MRRs in TDs and one MRR in each MRD (that is, all BMP-equipped MRRs) now are equipped with SP artillery. [redacted] Currently, an insufficient number of M-1974 SP howitzers is available to fulfill organizational requirements, but we believe that all MRRs in the GSFG probably will convert to SP artillery as the system becomes more widely available.

Increased Artillery and Firepower. [redacted] an artillery battalion in one MRR of a GSFG motorized rifle division consists of 24 artillery pieces—six more than the typical configuration of 18. This increase probably was accomplished by raising the number of artillery pieces in each of the battalion's three batteries from six to eight. An artillery battalion subordinate to an MRR in another MRD has been observed in a training area possessing more than 18 tubes. Although evidence that artillery units subordinate to maneuver regiments will adopt the expanded battalion structure remains fragmentary, we believe that this is part of the overall reorganization of the Soviet Ground Forces

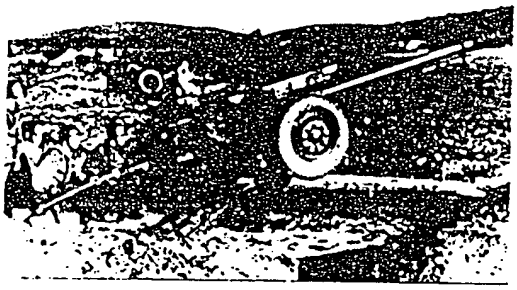
All reorganized MRRs have increased firepower through the inclusion of additional weapon systems at company and battalion levels. Because of the eight mortars rather than six, as well as the additional grenade launcher, air defense and antitank weapons, the organic direct and indirect fire support available to the MRB commander has increased significantly. Organic fire at company and battalion levels is further enhanced by the deployment of the BMP-2 and at the regimental level by the introduction of organic SP artillery in a 24-tube configuration.

Tank Regiments

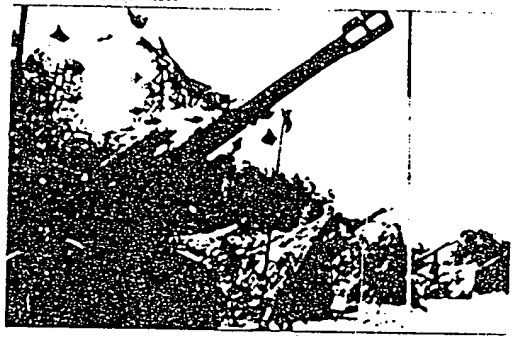
[redacted] that motorized rifle and field artillery elements are being added to Soviet tank regiments. Infantry battalions are being assigned in the GSFG to the TRs of TDs that previously had only an infantry company with 10 BMPs. Some of these battalions are equipped with 43 BMPs; we believe that all such units will adopt the expanded battalion structure.

Figure 13
Towed Artillery

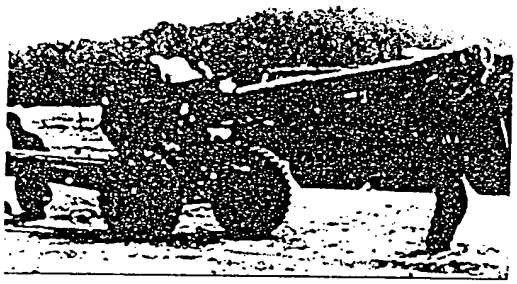
122-mm D-30 Howitzer



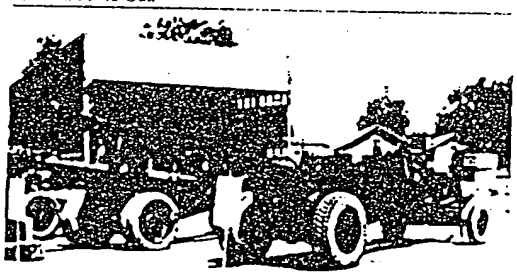
152-mm D-1 Howitzer



152-mm D-20 Howitzer



130-mm M-46 Gun



152-mm M-1976 Gun

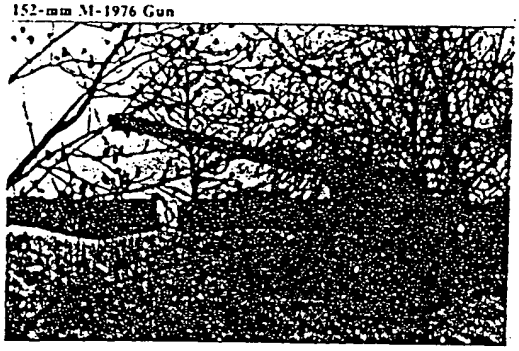
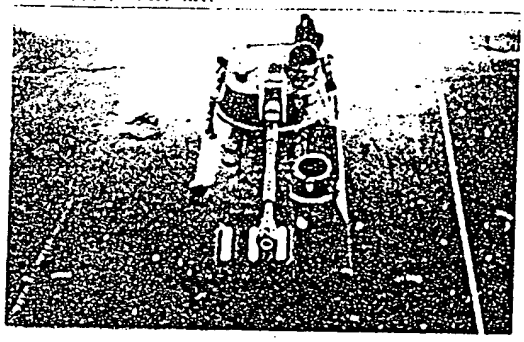
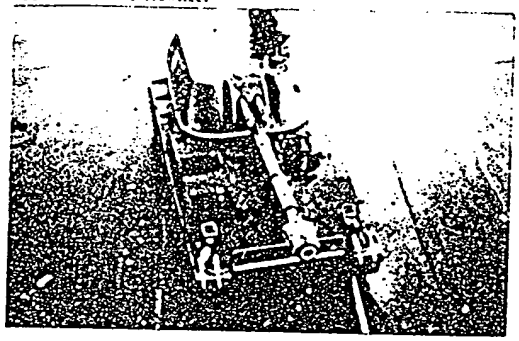


Figure 14
Self-Propelled Artillery

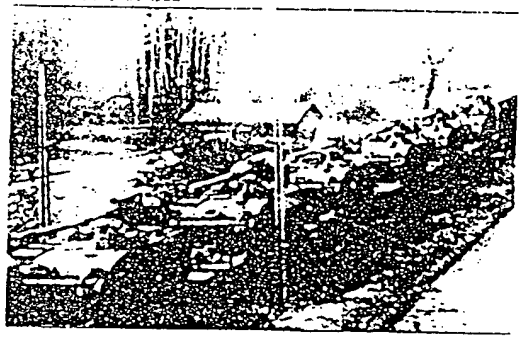
122-mm M-1974 Howitzer



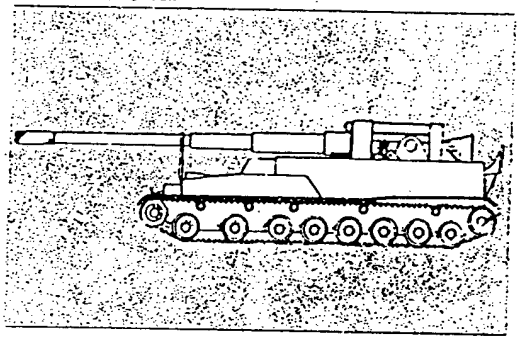
152-mm M-1973 Howitzer



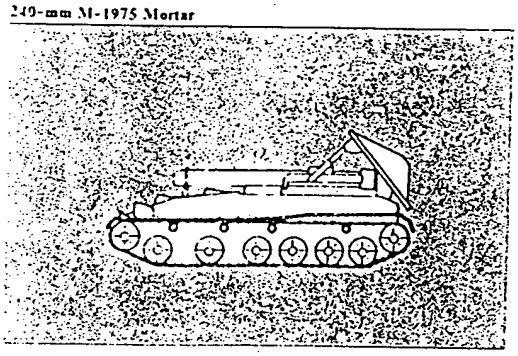
152-mm M-1981 Gun



203-mm M-1975 Gun

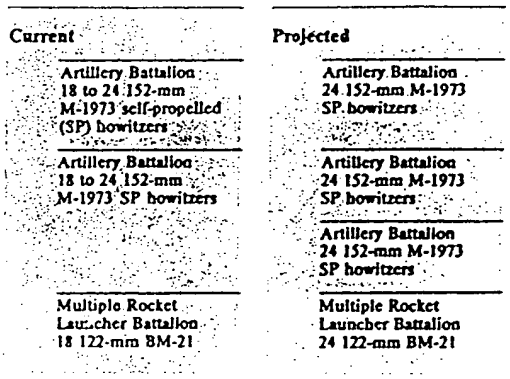


240-mm M-1975 Mortar



Another major feature of the divisional restructuring is that an artillery battalion is being added to the TRs in both TDs and MRDs. Initially, TRs were observed with D-30 towed howitzers, apparently transferred from divisional artillery regiments. The D-30s gradually are being replaced by M-1974 SP howitzers. As of mid-1983, 22 of the 39 GSFG tank regiments had up to a battalion of D-30s while the other 17 had up to a battalion of M-1974 SP howitzers. At least one of the three TRs in each TD has received the M-1974. The single TR in each of the nine MRDs originally received the D-30, but at least six of them subsequently have been issued the M-1974. We believe that all TRs probably will convert to SP artillery as the system becomes available.

Figure 15
Current and Projected Artillery Regiment Structure of a GSFG Tank Division*



*Only affected units shown

The restructured artillery regiment in the TD now consists of two 152-mm M-1973 howitzer battalions and one MRL battalion. All 10 Soviet TDs in the GSFG have adopted this structure. We believe that the artillery regiments in these TDs probably will reacquire a third battalion of tube artillery—as they had before the restructuring—and that the third battalion will be self-propelled (figure 15). The expected, slow rate of introduction of SP artillery will make such an augmentation gradual. Alternatively, it is possible that the third battalion will not be reconstituted due to manning limitations in order to compensate for increases in the overall organization of the TD.

Artillery regiments in seven MRDs in the GSFG now consist of one 152-mm SP M-1973 howitzer battalion, two 122-mm towed D-30 howitzer battalions, and one MRL battalion. As noted, two MRDs have acquired a second battalion of the M-1973 artillery to replace a D-30 battalion. We believe that M-1973 howitzers eventually will replace the remaining D-30s if the observed trend continues (figure 16).

Figure 16
Current and Projected Artillery Regiment Structure of a GSFG Motorized Rifle Division*

Current	Projected
Artillery Battalion 18 to 24 152-mm M-1973 self-propelled (SP) howitzers	Artillery Battalion 24 152-mm M-1973 SP howitzers
Artillery Battalion 18 122-mm D-30 towed howitzers	Artillery Battalion 24 152-mm M-1973 SP howitzers
Artillery Battalion 18 122-mm D-30 towed howitzers	Artillery Battalion 24 152-mm M-1973 SP howitzers
Multiple Rocket Launcher Battalion 18 122-mm BM-21	Multiple Rocket Launcher Battalion 24 122-mm BM-21

*Tank attached units not shown

At this point, we have not seen any evidence of three battalions of 152-mm artillery in any artillery regiments in the GSFG. One division in the USSR—the 120th Guards MRD, a showcase unit in the Belorussian MD—already has three battalions of M-1973 SP howitzers. The removal of 152-mm towed artillery pieces from the GSFG suggests that artillery regiments will remain in their current organization until 152-mm SP pieces are assigned to them. The limited availability of new SP artillery pieces, however, will make such a conversion gradual.

The organizational trend we have observed in the GSFG indicates that the 152-mm SP howitzer is becoming the division-level weapon in Soviet forces. The 122-mm SP howitzer is to be used to directly support maneuver regiments.

[redacted] one GSFG MRD indicates that its artillery regiment probably has been upgraded to an eight-tube battery/24-tube battalion structure. [redacted] two other GSFG divisions—both TDs—reveals that their artillery regiments are training with the eight-tube battery structure. This is the first unambiguous evidence that Soviet divisional artillery regiments are in the process of upgrading to the 24-tube battalion structure as part of the overall reorganization. We believe that all GSFG divisional artillery regiments probably will convert to this structure in the future.

Evidence of a 24-tube structure in GSFG regimental and divisional artillery battalions has been detected only in units equipped with SP pieces; we do not know if the Soviets also are augmenting towed artillery battalions. The lack of evidence of restructuring in towed regimental and divisional artillery regiments suggests that the augmentation of battalion holdings will await the conversion to SP artillery.

We have observed the increase to 24-tube battalions [redacted] in nondivisional artillery units since 1981 and have expected its adoption in regiments and divisions. The Soviets probably would like a battery/battalion structure common to regimental, divisional, and nondivisional units because it would make artillery training and tactics compatible for all forces.

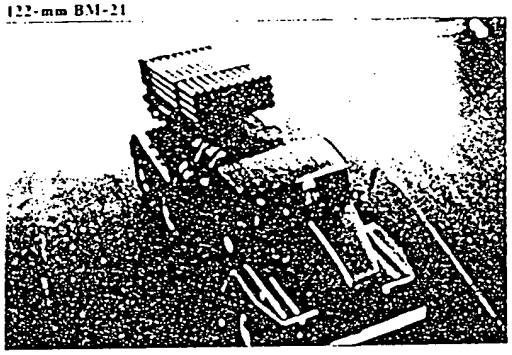
[redacted] 122-mm BM-21 MRL battalions in division artillery regiments also may be increasing from 18 to 24 launchers (figure 17) [redacted] because tube artillery assets are being expanded, we believe it likely that rocket launcher assets also will be increased because they are now an integral part of the artillery regiment.

Reconnaissance Battalions

The reconnaissance battalion assigned to GSFG MRDs and TDs has been upgraded through the addition of new tanks, infantry combat vehicles, and armored personnel carriers [redacted] the upgrade initially consisted of the replacement of

Figure 17
Multiple Rocket Launchers

122-mm BM-21



220-mm BM-27

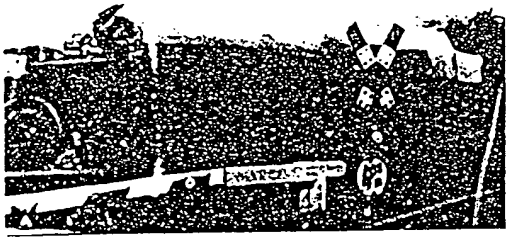
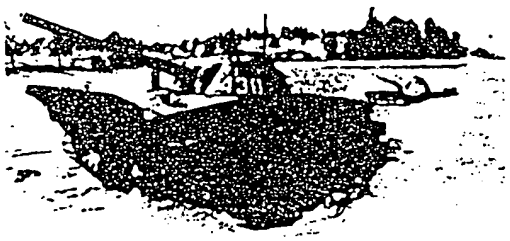


Figure 18
PT-76 Tank



PT-76 light tanks with up to 14 BMPs (figure 18). Since 1980, [redacted] up to six medium tanks and up to six BTR-70 armored personnel carriers have been added to these units

The divisional reconnaissance battalion operates up to 50 kilometers forward of advancing units supplemented, if necessary, by mechanized infantry and armor elements from the maneuver regiments. The newly acquired BMPs and tanks provide the battalion with an improved capability to engage enemy screening forces without dependence on borrowed divisional assets for immediate support. We have been unable to determine at this point the exact role of the BTR-70 in the reconnaissance battalion's mission.

Helicopter Units

In the mid-1970s, the Intelligence Community identified independent helicopter detachments—usually consisting of six helicopters—as organic elements of Soviet ground force divisions. In the late 1970s, the Soviets added attack and assault transport helicopters raising the total to 18 to 20 helicopters and converting the detachment into a direct-support squadron. Such squadrons' inventories are not standardized, however, and variations in the number and type of helicopters abound.

In the GSFG [redacted] at least 12 divisions have had their detachments upgraded to squadrons through the addition of new helicopters. We believe that all GSFG divisions will have organic direct-support squadrons by the end of 1983

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Appendix B

Restructuring Within Army and Front Units

The principal changes of the GSFG nondivisional reorganization program t[redacted] illustrated in figures 19 and 20.

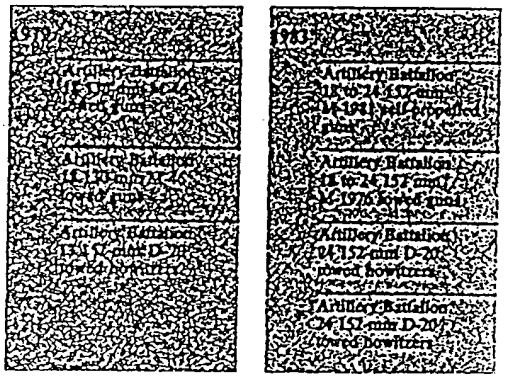
Army Artillery

In mid-1981 evidence [redacted] indicated that the reorganization of artillery units in the GSFG extended to army and front formations. The artillery regiments subordinate to the 3rd Shock Army, 8th Guards Army, and 20th Guards Army have increased to brigades with the addition of a fourth battalion of artillery. [redacted] suggests that artillery brigades may be established in the two tank armies as well.

The conversion from regiment to brigade was completed [redacted] by the end of 1981. With the addition of a second 152-mm D-20 towed howitzer battalion, each brigade consisted of two D-20 battalions and two 130-mm M-46 towed gun battalions (figure 13). [redacted] also revealed that the number of artillery pieces in the batteries of the artillery battalions within the brigades had been increased from six tubes per battery to eight, raising the total number of artillery pieces in each of the battalions from 18 to 24. The overall number of artillery pieces in army artillery units has expanded from 54 to 96—an increase of over 75 percent.

[redacted] all three army artillery brigades acquired a battalion of 152-mm M-1981 SP guns in 1982 to replace one 130-mm M-46 towed battalion (figure 14). This marked the initial introduction of SP artillery in a GSFG army formation. [redacted] indicates that the M-1981 gun is nuclear capable. This represents the first known assignment of nuclear-capable artillery to Soviet units outside the USSR. (s[redacted]

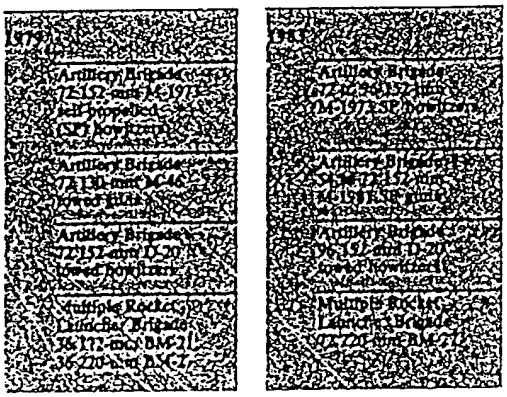
Figure 19
Principal Changes in a GSFG Army Artillery Formation, 1979–83*



*Only affected units shown

A group of M-1981 SP guns [redacted] in the 1st Guards Tank Army (GTA) area at an installation that has no obvious connection with an already existing artillery unit. Neither GSFG tank army has had an army artillery brigade since the 1950s, and we cannot confirm if this deployment of the M-1981 constitutes the formation of such a unit subordinate to the 1st GTA. We believe, however, the chances are better than even that the Soviets are creating an artillery brigade for both tank armies, although there is no evidence to suggest that such a unit currently is forming in the 2nd GTA. If both tank armies should be assigned artillery brigades, then we expect that these brigades would have the same organization and equipment as the existing army artillery formations

Figure 20
Principal Changes in the GSFG Front Artillery Division, 1979–83[a]



[a] Only affected units shown

We cannot clearly determine the current structure of the M-1981 battalion at army level. [redacted] M-1981 units in army artillery brigades have utilized a four-gun battery configuration, suggesting a 12-gun battalion structure like those in independent front heavy artillery brigades inside the Soviet Union.

[redacted] battalion had 22 M-1981 guns in its inventory, suggesting an expanded 24-gun battalion structure. The M-1981 was observed [redacted] one army artillery brigade parked in a grouping of 19, also suggesting a 24-gun battalion structure. We believe that all army M-1981 battalions will adopt the 24-gun battalion structure as additional M-1981s become available.

In late 1982, nuclear-capable 152-mm M-1976 towed guns were observed [redacted] the GSFG—the first sighting of these weapons in Eastern Europe (figure 13). The M-1976, although towed, is assessed to be essentially equivalent to the M-1981 gun, both having similar tubes, muzzle brakes, and breeches; the cannons probably differ only as is necessary for them to be mounted on separate chassis because the M-1976 is towed and the M-1981 is SP. Both guns also fire the same family of ammunition, which probably includes improved conventional munitions, chemical and nuclear rounds, as well as conventional ammunition.

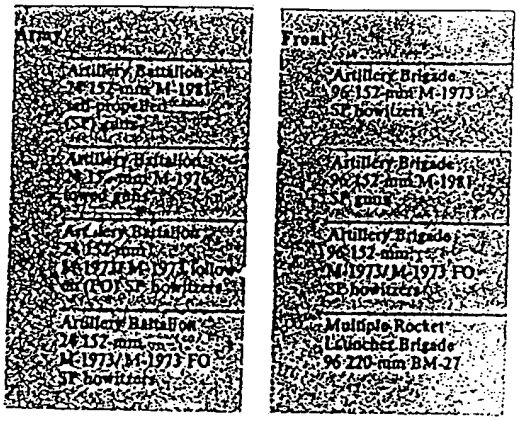
[redacted]

The M-1976 guns, [redacted] were placed in a six-gun battery configuration, suggesting an 18-gun battalion structure. The shipment of M-1976 guns [redacted] consisted of 24 guns, indicating an expanded battalion structure. We believe that all army M-1976 battalions ultimately will have the 24-gun structure as additional M-1976s become available.

The assignment of the M-1976 gun to army artillery brigades indicates that these units are being re-equipped with a mixture of M-1981 and M-1976 guns in place of the M-46. We believe the M-1976 gun is replacing the second battalion of M-46 guns in the army artillery brigades. Like the M-1981, the M-1976 has been used as a replacement for the M-46 in nondivisional artillery units in the USSR.

Currently, the army artillery brigades probably consist of one battalion of the 152-mm M-1981 gun, one battalion of the 152-mm M-1976 gun, and two battalions of the 152-mm D-20 towed howitzer. This composition indicates that the 152-mm artillery tube will be the standard caliber in army artillery formations.

Figure 21
Projected Structure of the GSFG Army and Front Artillery Formations*



*Only affected units shown

Because the Soviets added a battalion of towed howitzers to each army artillery unit and replaced a battalion of towed M-46s with a battalion of towed M-1976s, the conversion of nondivisional artillery to SP models probably will be gradual. We project that the D-20 battalions eventually will be replaced by 152-mm SP howitzers—perhaps the M-1973 howitzer or a follow-on version (figure 21). While we believe that the Soviets would like to make the GSFG a completely self-propelled artillery force, the expected slow delivery rate of SP pieces coupled with the considerable size of the GSFG artillery inventory may compel the Soviets to maintain at least a partially towed force for the foreseeable future.

Although towed artillery lacks the inherent mobility of SP systems, it is cheaper to produce and easier to maintain—the last an extremely important factor in combat operations. Deployment of the M-1976, for example, will significantly enhance tactical fire support by providing accurate low yield nuclear fires in ground force operations. (

Front Artillery

The front 34th Guards Artillery Division (GAD), GSFG, also has been reorganized and modernized, although each of the four subordinate artillery brigades has undergone a different restructuring process. [ ] the division has acquired new SP artillery and MRLs, upgraded with 152-mm caliber artillery pieces, and it has adopted the expanded battalion structure.

One brigade subordinate to the 34th GAD is equipped completely with 152-mm M-1973 SP howitzers and has adopted the 24-tube battalion structure. The battalion restructuring was accomplished [ ] by disbanding the fourth battalion in the brigade and reassigning six of its 18 tubes to each of the other three battalions. There has been no net increase at the present time in numbers of tubes.

The expansion of battalions through a redistribution of artillery pieces within the brigade may have been necessitated by the lack of available M-1973 howitzers for assignment to nondivisional units because of the continuing Soviet emphasis on assigning the M-1973 to divisional artillery regiments. M-1973s may not have been available for assignment to the 34th GAD to expand the battalion structure. [ ] [ ] however, suggests that the fourth battalion may soon be reconstituted. If the fourth battalion is reestablished—as is projected—the number of artillery pieces in this brigade will grow from 72 to 96 tubes, a 33-percent increase.

In 1981 a second cannon brigade subordinate to the 34th GAD replaced [ ] [ ] two battalions of the 130-mm M-46 towed gun with two battalions of the 152-mm M-1981 SP gun. This constituted the first assignment of the M-1981 gun to the GSFG. In 1982, [ ] [ ] one and probably both of the remaining M-46 battalions were removed from this brigade, while training activity in 1983 indicates that a third

battalion of the M-1981s has been added to the unit. There is no evidence to indicate that a fourth battalion of M-1981s has been assigned to the brigade, although we project this will occur. [redacted]

There is no evidence to indicate that the M-1981 units at front level have adapted the expanded battalion structure. [redacted] The front M-1981 battalions have a 12- or 18-tube configuration. We believe that the M-1981 battalions will adopt the 24-gun battalion structure—as they probably will at army level. The expected gradual introduction rate of the M-1981 may delay the conversion to the expanded battalion structure as well as the reconstitution of the fourth battalion.

The third cannon brigade subordinate to the 34th GAD is the one GSFG artillery brigade equipped only with towed artillery—152-mm D-20s. [redacted] indicates that this brigade has adopted the eight-tube battery and has maintained its four-battalion structure. The expansion of artillery pieces probably has resulted from the assignment of additional D-20s rather than redistribution of existing assets as was done in the brigade equipped with M-1973s. We project that this brigade will be reequipped in the future with SP howitzers, probably the M-1973 howitzer or a follow-on version (figure 21).

[redacted] The multiple rocket launcher brigade in the 34th GAD completed its conversion to 220-mm BM-27 MRLs in 1982, replacing the 122-mm BM-21 MRLs (figure 17). This brigade is one of two MRL brigades in the Soviet Ground Forces to be equipped totally with BM-27s. The 16-tube BM-27 has a maximum range of at least 40 kilometers compared to the 40-tube BM-21's range of 20.5 km. The BM-27 has an improved conventional munitions capability including scatterable antitank mines.

Independent Front Heavy Artillery Brigade

In late 1982 the nuclear-capable 203-mm M-1975 SP gun was identified [redacted] in the GSFG—the first indication of its deployment in Eastern Europe (figure 14). The M-1975 guns were located in an area [redacted] suggests a four-gun battery configuration, typical for the M-1975. We cannot yet determine the unit assignment of the M-1975 guns. Inside the Soviet Union, they have been fielded along with the 240-mm M-1975 SP mortar in independent front heavy artillery brigades (two 12-tube battalions of each) (figure 14). There is no evidence, however, that the 240-mm mortar is in the GSFG. Alternatively, the M-1975 SP unit also could be subordinate to the 34th GAD, but the assignment of this piece to an artillery division would be unprecedented and thus less likely.

The appearance of nuclear-capable artillery systems in the GSFG probably reflects the Soviets' decision to give army and front commanders nuclear delivery systems that, because of their yield and accuracy, can be used much closer to Soviet troops. The Soviets are making a concentrated effort to reduce NATO's advantage in nuclear tube artillery

Figure 22
Scud-B Missile

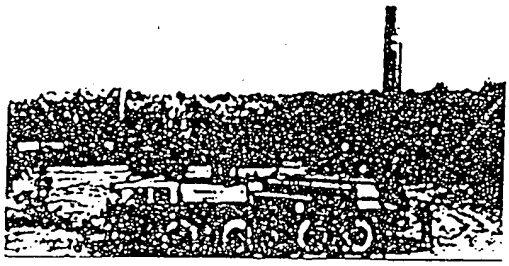
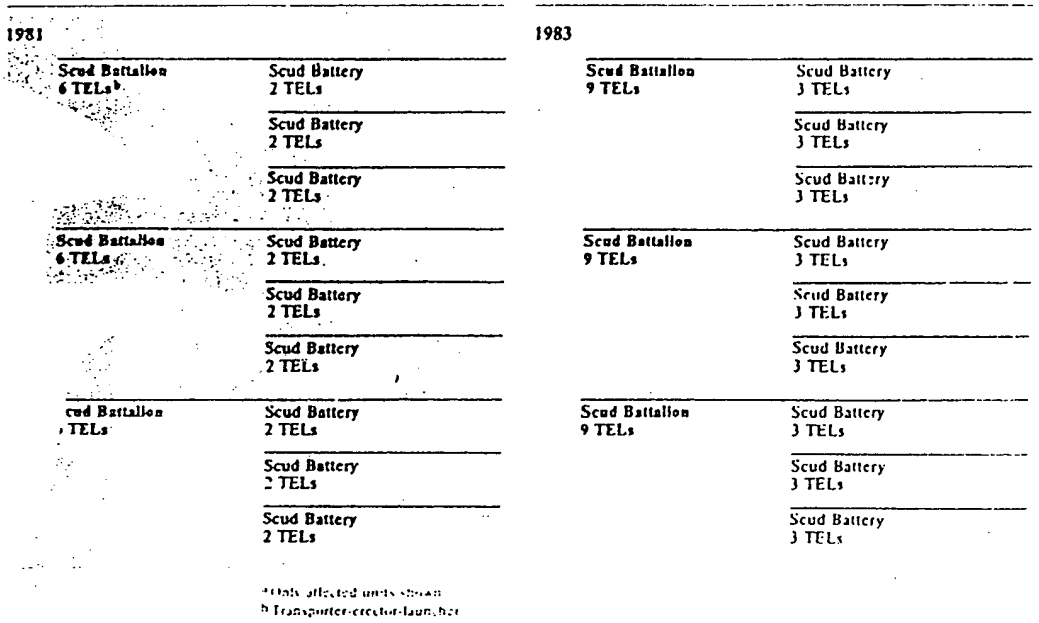


Figure 23
Reorganization of the GSFG Front Scud Brigades, 1981–83[a]



[a] Units affected unit shown
[b] Transporter-erector-launcher

Front Missiles

The front GSFG Scud tactical surface-to-surface missile brigades also have been reorganized, although this restructuring consists of a redistribution of existing launchers as opposed to an expansion of assets (figure 22). In late 1981, it appeared that two of the three existing front brigades were training with an expanded battalion structure of 27 transporter-erector-launchers (TELs) instead of the known battalion structure of 18 TELs. By early 1982, [redacted] adopted the expanded structure.

This reorganization probably was achieved by transferring the 18 TELs from the third brigade and assigning nine to each of the other two brigades, thereby creating three-TEL batteries instead of the previous two-TEL battery configuration (figure 23). There has been no overall increase in Scud launchers in the GSFG as a result of this reorganization. [redacted]