

Russia's Developing Tank-Support Combat Vehicle Concept

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"An analysis of the military political situation testifies that in the current stage of the developing threats arising from military conflicts, it is significant that, in the conduct of land battle, tanks still will play one of the major roles as the main strike force of the ground troops. The Russian 'special military operation' in Ukraine, as well as the large quantity of tanks in the armed forces of many other countries in the world, supports this conclusion."¹

During an offensive, tanks are the primary means for destruction of the defending enemy, capturing important positions and important boundaries on the forward edge of the battle area, and capturing other areas and objects throughout the depth of the defense. In combined-arms combat, tanks have traditionally worked closely with mounted infantry and their *boyeva mashina pekhoty* (BMP; Russian infantry fighting vehicle) or the *bronetransportyor* (BTR; Russian armored personnel carriers) to protect tanks from anti-tank guided missiles (ATGMs).

Unfortunately, the BMPs have less armor than the tanks they support and hence are vulnerable to weaker munitions. In urban areas, motorized rifle troops are often dismounted, significantly decreasing the speed that combined-arms formations advance, inviting heavier casualties.

Due to the increasing prevalence and lethality of ATGMs, the Russians have been keenly interested in finding other ways of increasing the survivability of tanks without relying exclusively on motorized rifle formations, which are increasingly more difficult to man due to Russian demographic issues. As previously discussed in previous issues of **ARMOR**, the Russians have opted for the *boyevaya mashina podderzhki tankov* (BMPT; tank-support combat vehicle "Terminator") to fill this niche.²

BMPTs' first combat: Syria, Ukraine

The BMPT first saw combat in Syria in 2017, where details of its performance were sparse, but were reported to not only be successful but also more efficient at supporting tank operations than BMPs and BTRs.³ Russian Deputy Defense Minister Yuriy Borisov said the BMPTs' success in Syria was the impetus for Russia's decision to procure the system for the Russian ground forces. The BMPT completed state trials later that year and the go-ahead was given for serial production.⁴ BMPTs first appeared in the Russian ground forces in 2018, but the first BMPT company, in 90th Tank Division, was not reported until 2021.⁵

The early days of Russia's 2022 invasion of Ukraine, characterized by much urban warfare, would appear to have been the ideal conditions for the BMPT's employment, yet the system did not see combat in the conflict until May 2022, when the first reports and videos of the BMPT began to surface.⁶

According to *RIA Novosti* (a Russian state-owned domestic-news agency), the BMPT is performing well and is working with tank platoons to destroy Ukrainian fighting positions, armored vehicles and ATGMs. The battlefield in Ukraine is providing an opportunity to develop BMPT tactics and integrate its use in the combined-arms concept.⁷ This success is reportedly due to the BMPT's offensive and defensive capabilities.

Regarding offensive capabilities, the BMPT has a better field of fire and visual range than tanks, increasing the crew's situational awareness. It also has a multi-channel weapon system that can quickly lock its weapons on targets and simultaneously fire at four to five targets.

RIA Novosti quoted an "informed source" who stated, "All this increases the effectiveness of tank units, especially when operating in a city where enemy infantry with anti-tank weapons can fire from unexpected angles, including from above. The BMPT has



Figure 1. Tank-support combat vehicle (BMPT). (Photo copyright Vitaly Kuzmin. Licensed under a Creative Commons Attribution-NonCommercial-International License No Derivatives 4.0.)

time to respond to these threats and suppress them, including the fire of dual 30mm cannons that penetrate the walls of houses.”⁸

Regarding defensive capabilities, a major Russian concern before the start of the “special military operation” was the Ukrainian acquisition of North Atlantic Treaty Organization (NATO) anti-tank weapons such as the United States’ Javelin ATGM and the United Kingdom’s Next-Generation Light Anti-Tank Weapon (NLAW) ATGM. According to *RIA Novosti*, another “informed source” stated that the BMPT could withstand Javelin and other Western ATGMs: “The experience of military operations shows that the BMPT ‘Terminator,’ due to its increased protection, can withstand the hit of the Javelin anti-tank system as well as other NATO-made anti-tank systems and grenade launchers. After these attacks, the BMPTs needed minor repairs in the field, so combat capability could fully be restored.”⁹

Despite Russian pronouncements about the effectiveness of the Russian military and equipment during the “special military operation” – which are notoriously unreliable and in many cases are demonstrably false – the Russians’ continued discussion of the BMPT concept suggests that the Russians perceive the BMPT’s performance favorably.¹⁰

BMPT and Russian force design

In the past, discussion of the BMPT’s organizational structure in the Russian ground forces revolved around three options: a single BMPT in a tank platoon, a BMPT platoon in a tank company or a BMPT company in a tank battalion. It appeared that Russia was planning to adopt the last option, although in regular practice the BMPT platoons in the BMPT company would be attached to tank companies, or individual BMPTs would be attached to tank platoons. But in the September edition of *Armeisky Sbornik*, a Russian armor expert posits that BMPT battalions should be fielded in each tank regiment, and presumably each tank brigade.¹¹

If Russian military theorists are discussing “upsizing” BMPT units from company to battalion level, it lends credence to the idea that the BMPT concept and performance are perceived to be sound. Although there may now be discussion of BMPT battalions instead of just BMPT companies, it is important to note that



Figure 3. A United Kingdom Soldier launches an NLAW. (United Kingdom Ministry of Defence photo licensed under the Open Government Licence version 1.0)

Russian force planning still envisions an approximately 1:3 ratio (one BMPT per three tanks) as ideal. Instead of one BMPT company supporting a tank battalion, the current schema envisions one BMPT battalion supporting three tank battalions, with BMPT companies, BMPT platoons and individual BMPTs being attached to tank battalions, tank companies and tank platoons, respectively.

Since all tank units will almost certainly not have BMPT support, the “upsizing” of BMPT formations suggests the BMPT will be fielded in greater numbers than initially anticipated. It is also important to keep in mind that the use of BMPTs does not mean the Russians intend to abandon the use of combined-arms units in favor of tanks and BMPTs. Rather, tank and motorized rifle units will still provide mutual support, but the way this support will be organized will differ due to the capabilities that the BMPT provides to the combined-arms formation. The implementation of this new system is still in its infancy, but Russian tacticians are planning for it, as will be described.

Possibilities for BMPT employment

Traditionally during an offensive, a tank battalion is usually reinforced with one or sometimes two motorized rifle companies. Generally, the tanks form the first echelon, with the second echelon consisting of BMPs/BTRs, followed by their dismounts standing off at 200 meters or moving from covered position to covered position. But



Figure 2. U.S. Soldiers fire an FGM-148 Javelin. (U.S. Army photo)

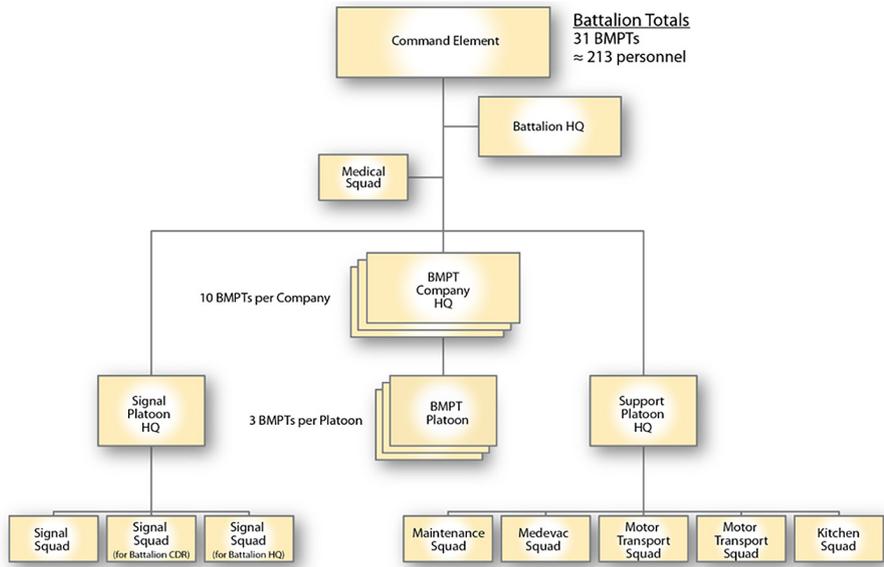


Figure 4. BMPT battalion. (U.S. Army graphic by Dr. Charles K. Bartles)

BMPTs, when present, can be in the first or second echelons of a combined-arms reserve, remain directly subordinate to the battalion commander, and in urban operations can be part of the assault group. BMPTs will permit the more lightly armed and armored BMPs and BTRs to still provide support but stay farther behind the line of contact.

When acting as part of first-, second- or third-echelon battalions, the BMPT conducts fire support and destroys the enemy, focusing on enemy antitank systems. In a combined-arms reserve, the BMPT will repel enemy counterattacks, defend flanks and deal with unforeseen contingencies. When directly subordinated to a battalion commander, BMPTs destroy enemy personnel,

means of fire, armored vehicles and tanks; support the actions of the first and second echelons (when they are engaged in battle); and cover the flanks.

The current opinion of Russian tacticians is that BMPTs are generally most effective when employed in the same echelon as tanks. In this scheme of maneuver, BMPTs can provide close-fire support for tanks by effectively destroying enemy antitank weapons both at the forefront and throughout the depth of the enemy's defense. The decision about the exact nature of BMPT employment depends on variables relating to the combat mission; intent of the senior commander; and composition, state and position of the enemy.

Variation 1. In this variant, a BMPT is placed at equal intervals (1:3) between the tanks of the formation, with the BMPT platoon commander situated next to the tank-platoon leader. This scheme of maneuver will be most beneficial in situations when the enemy is in a hasty and/or unprepared defense.

Variation 2. During an offensive in special conditions (urban terrain, mountains, forest, desert, etc.), it is important to prevent the enemy from suddenly flanking attacking battalion and the seams between companies. Therefore the combat formation of the companies (platoons) will be oblique from right/left, and a robust reconnaissance will be conducted in the directions from which the enemy could possibly approach. The second echelon (reserve) will maintain constant readiness to thwart any potential enemy attack. In this scheme of maneuver, BMPTs are placed on the flanks of the attacking tank companies, with the position of the platoons oblique from left to right (or right to left).

Variation 3. In situations where the enemy has a prepared defense with dense antitank fires and engineer obstacles, a breakthrough zone must be established. The battalion commander (if not the higher commander) will determine the direction for this concentration of effort. In this scheme of maneuver, the BMPTs are placed on the direction of concentrated effort.

Variation 4. For the successful development of an offensive, the timely introduction of the second echelon

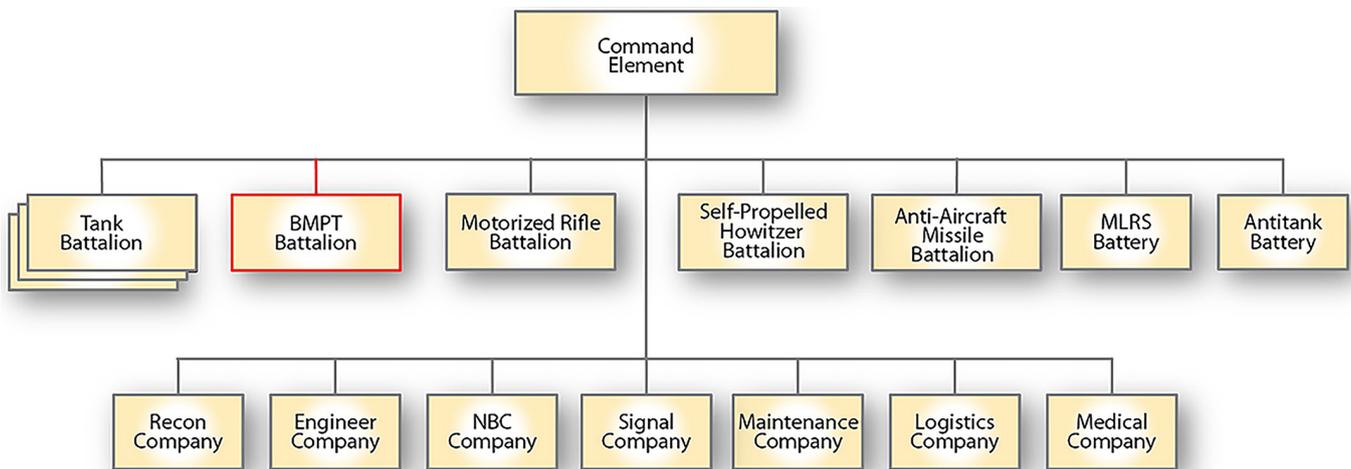


Figure 5. Tank regiment (with BMPT battalion). (U.S. Army graphic by Dr. Charles K. Bartles)

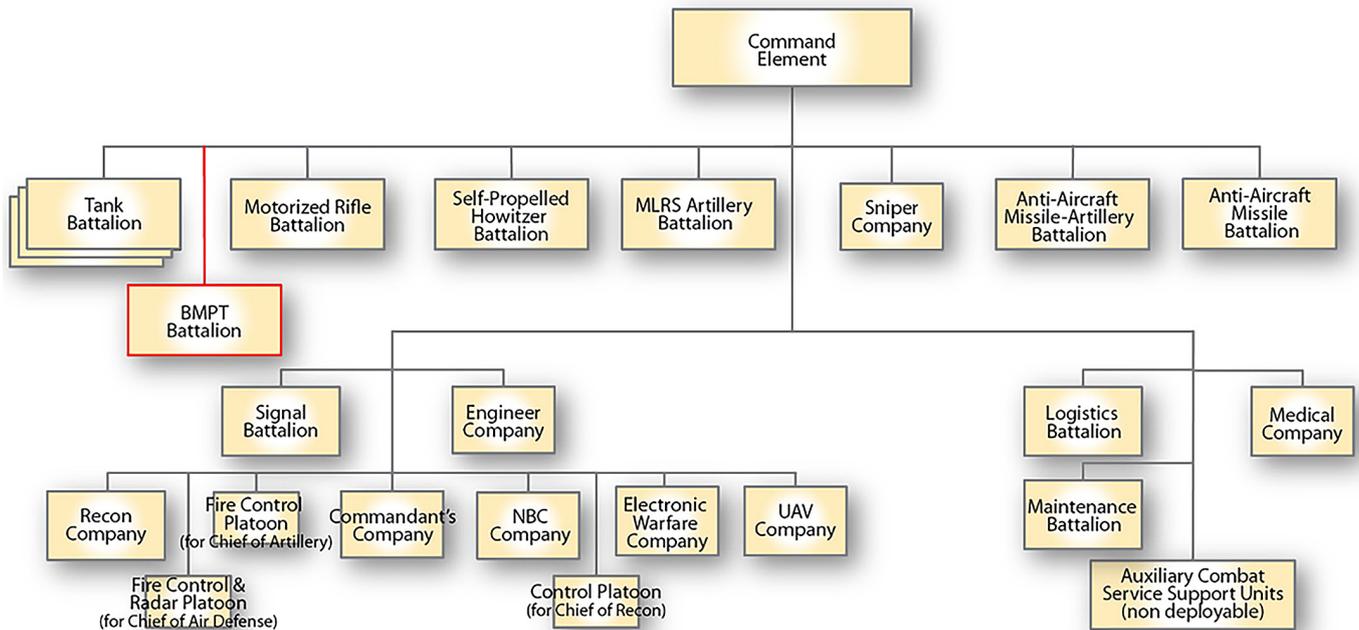


Figure 6. Tank brigade (with BMPT battalion). (U.S. Army graphic by Dr. Charles K. Bartles)

(combined-arms reserve) into battle is important. When the second echelon of the battalion is introduced into battle, it is advisable to place the BMPT on its flanks to provide covering fires for the tank company conducting the assault and to protect it from possible enemy counterattacks.

If the second echelon is committed to combat, one of the tank companies of the first echelon is withdrawn from combat. Then the BMPTs supporting it can be retasked to support the new tank company being introduced to battle.

In any case, the placement of the BMPTs in the combat formation of the battalion is determined by the battalion commander. In some cases, the battalion commander may not attach the BMPTs to the first-echelon companies but instead leave them in his reserve to deal with unforeseen

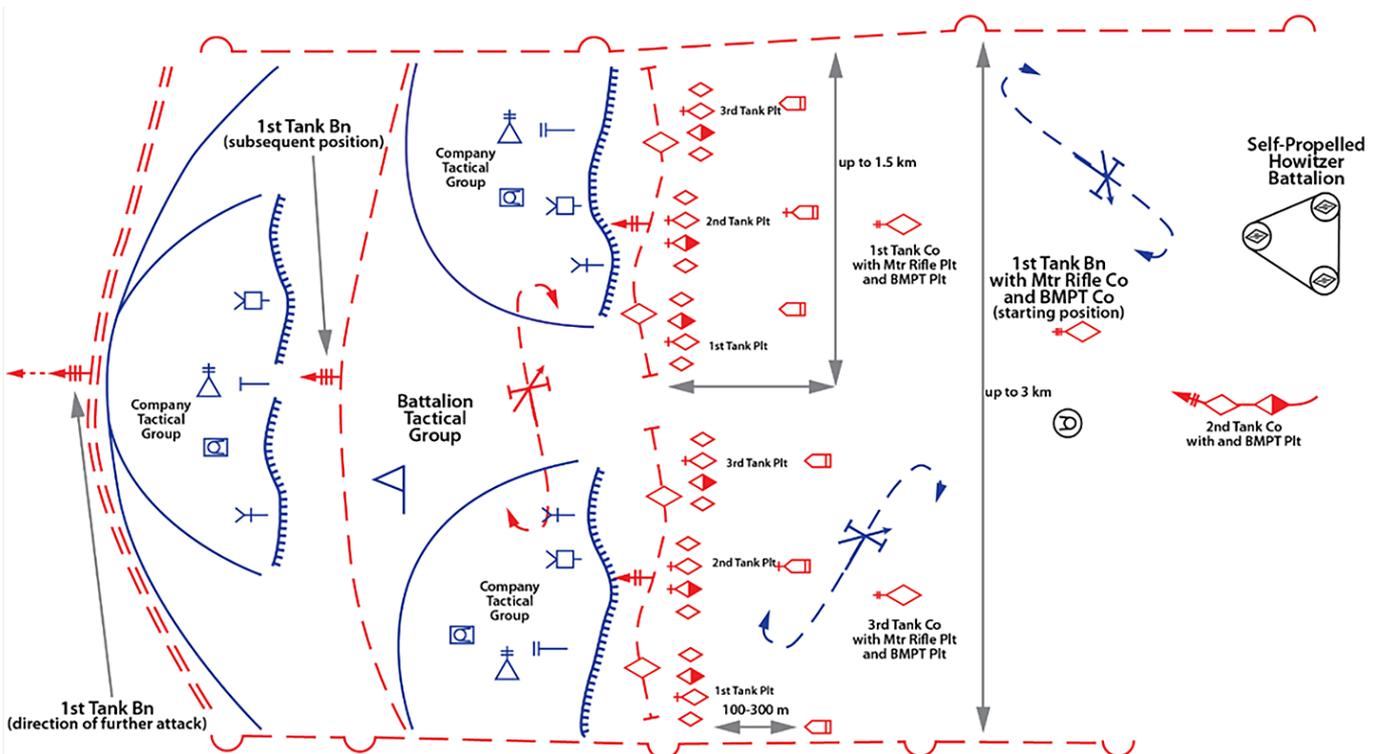


Figure 7. Combat formation of tank companies each reinforced with motorized rifle platoon and BMPT platoon. The platoons are positioned in line (BMPTs are placed evenly between the tanks). (U.S. Army graphic by Dr. Charles K. Bartles)

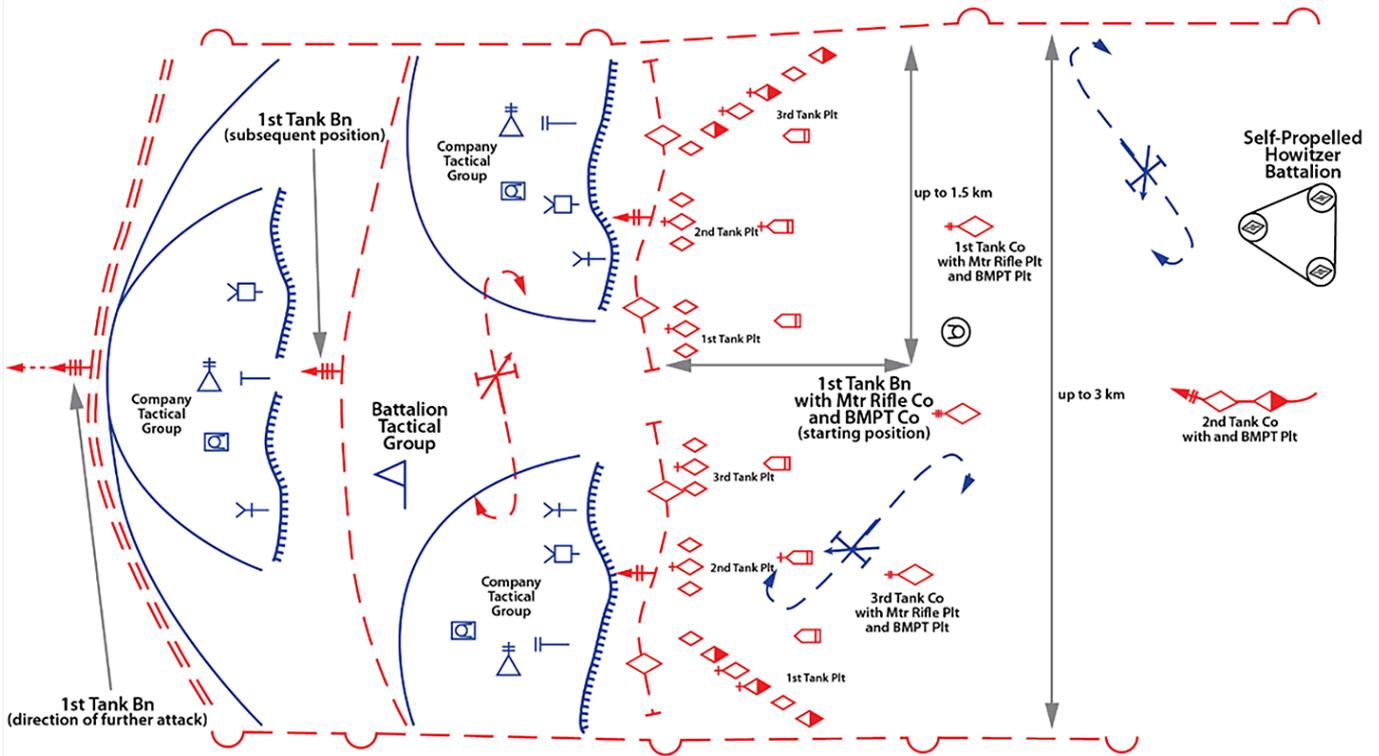


Figure 8. Combat formation of tank companies, each reinforced with motorized rifle platoon and BMPT platoon. The BMPT platoons are positioned oblique from right/left. (U.S. Army graphic by Dr. Charles K. Bartles)

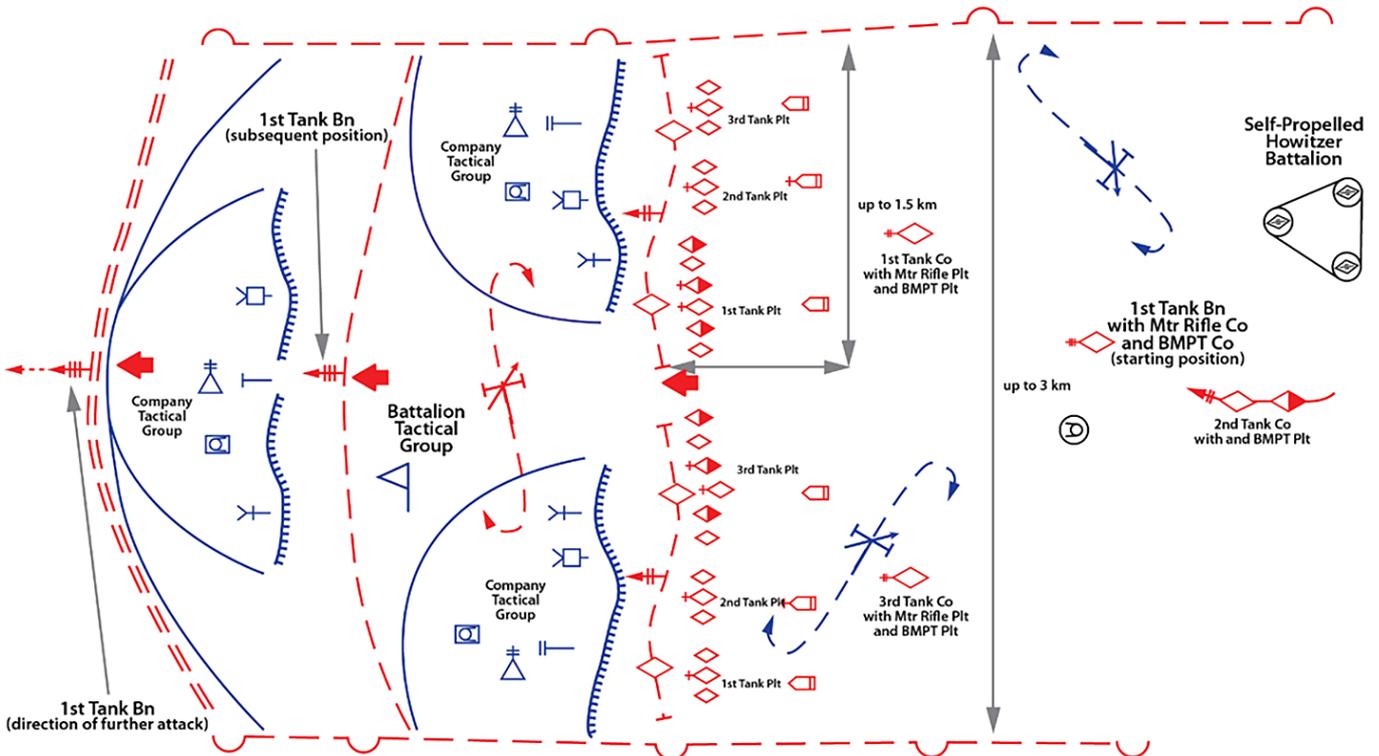


Figure 9. Combat formation of tank companies, each reinforced with motorized rifle platoon and BMPT platoon. The position of the platoons is in line (BMPTs are placed on the direction of concentration of the main effort). (U.S. Army graphic by Dr. Charles K. Bartles)

contingencies. This is done primarily to repel possible enemy counterattacks. These BMPTs will move with the

second echelon of the battalion to either reinforce the second echelon as it enters battle or else perform some

other combat mission. Based on Russian's initially heavy tank losses in Ukraine, many in the West

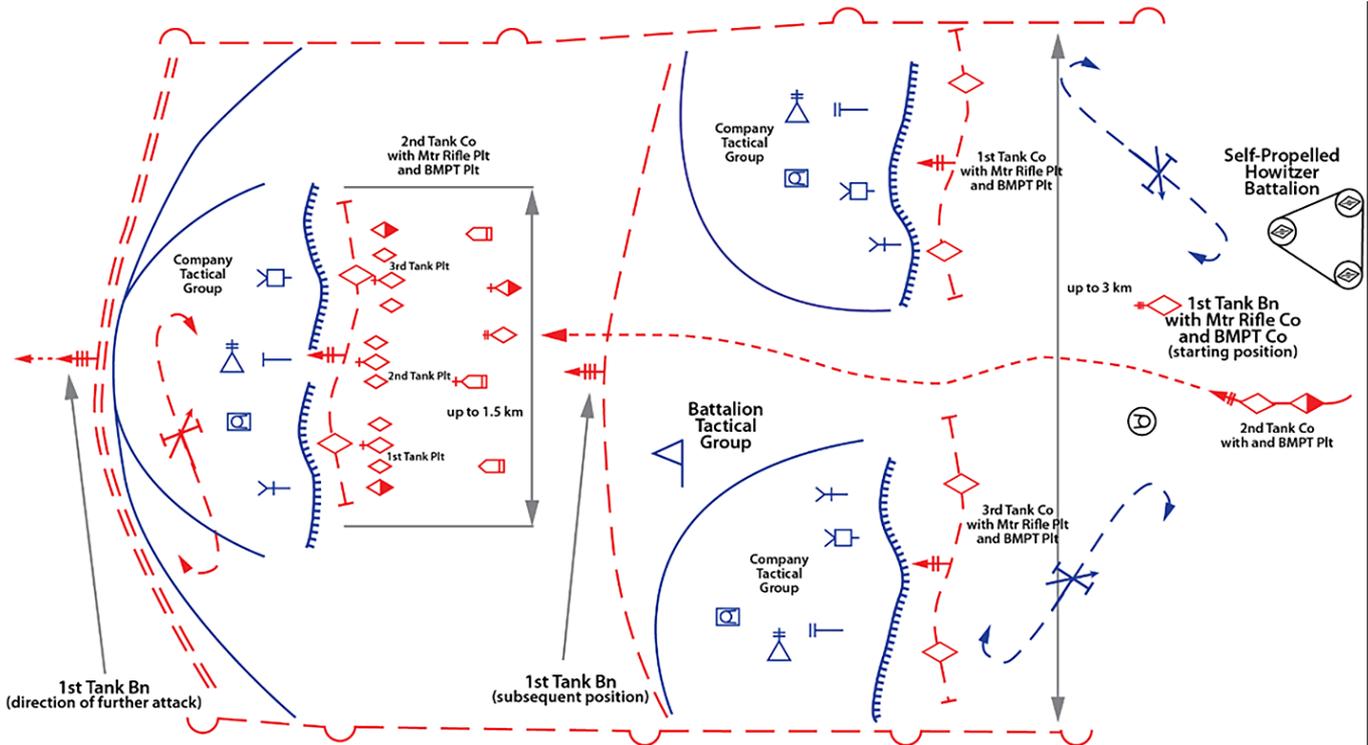


Figure 10. BMPT platoon in the second echelon (BMPTs on company flanks). (U.S. Army graphic by Dr. Charles K. Bartles)

BMPT	BMPT Platoon Commander	Tank	Tank Platoon Commander	Tank Company Commander	Tank Battalion Commander
Infantry Fighting Vehicle	Mtr Rifle Platoon Commander	Mortar Battery	Recon UAV	Mortar Platoon (Enemy)	Battalion HQ (Enemy)
Company HQ (Enemy)	Antitank Guided Missile (Enemy)	Recon UAV (Enemy)	Light Machinegun (Enemy)	Heavy Machinegun (Enemy)	Light Antitank Weapon (Enemy)

Figure 11. Legend of Russian symbols for Figures 7-10. (U.S. Army graphic by Dr. Charles K. Bartles)

have concluded that the tank is obsolete. Later combat in Ukraine showed that tanks are still a vital and decisive weapons system that play a critical role in modern combat.¹² However, it is also clear that tanks need immediate support against air and ATGM attack.

It is apparent that Russian military theorists have concluded that the BMPT concept is viable and merits

further development based on the system's combat experience in Syria and Ukraine. But Russian military theorists seem convinced that BMPTs will significantly increase the combat capabilities of a tank battalion, especially in urban areas where tanks have traditionally had difficulties. BMPTs can reportedly ensure the completion of combat missions in a shorter time and to a greater depth/width than tank

formations acting without BMPT support.

The BMPT has been under consideration and development since the days when the Soviet Army and Warsaw Pact confronted NATO. The BMPT was designed not only for urban areas but also for the large, open areas of Russia where a noncontiguous (fragmented) battlefield with open flanks would be the norm, and maneuver and firepower would dominate the fight.

The "special military operation" in Ukraine is not that battlefield. The Ukrainian forces outnumber the Russians, the lines are contiguous, and firepower has a decided edge over maneuver. Two artillery armies with a common history, geography and way of war are battling for a decision that is anything but quick. The BMPT has arrived late to the fight and in small numbers.

Some lessons appear to be developing from that conflict. Reliable reconnaissance, communications and precision fires are crucial. Towed artillery appears to be a thing of the past. System support and maintenance need a lot of work. Firepower enables maneuver, but firepower is not strictly the

provenance of the artillery. The BMPT provides a tank unit with significant firepower in conjunction with the artillery and enhanced mounted infantry. The BMPT will probably be a larger component of Russian tank units following the current conflict.

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Notes

¹ M. Yurshin, A. Hazarenko and A. Chogovadze, "Тесное Сопровождение [Close Support]," *Armeisky Sbornik*, September 2022.

² Lester W. Grau, "Preserving Shock Action: A New Approach to Armored Maneuver Warfare?," *ARMOR*, September-October 2006, <https://apps.dtic.mil/sti/pdfs/ADA456423.pdf>; Lester W. Grau and Charles K. Bartles, "A New System Preserves Armor Dominance of the Future Battlefield: The BMPT Terminator," *ARMOR*, June 2015, <https://community.armor.org/wg/tradoc-g2/fmsom/fmsomonographs/>; Lester W. Grau and Charles K. Bartles, "Enhancing Russian Tank Survivability: Tank-Support Combat Vehicle Entering Tank Battalions," *ARMOR*, Summer 2022, pdf_65050.pdf (dvidshub.net).

³ M. Yurshin, A. Hazarenko and A. Chogovadze, "Живучесть Танков: Применение боевых машин поддержки танков в современных условиях [Tank Survivability: Employment of Tank Support Combat Vehicles under current conditions]," *Armeisky Sbornik*, September 2021.

⁴ Anton Lavrov and Aleksey Ramm, "Они еще вернутся: «Терминаторам» дали год испытаний: Решение о серийной закупке боевых машин поддержки танков будет принято после всесторонней обкатки [They'll Be Back: Terminators Get a Year for Testing. A Decision on Serial Procurement of Tank-Support Combat Vehicles Will Be Taken After Comprehensive Trials]," *Izvestiya*, Feb.

15, 2021, <https://iz.ru/1124767/anton-lavrov-aleksei-ramm/oni-eshche-vernut-sia-terminatoram-dali-god-ispytaniy>.

⁵ "Первую в ВС РФ штатную роту БМПТ 'Терминатор' ввели в состав дивизии на Урале" [The first full-time company of BMPT 'Terminators' in the armed forces of the Russian Federation was introduced into a division in the Urals]," *TASS*, Nov. 30, 2021, <https://tass.ru/armiya-i-opk/13074661>.

⁶ Sergey Ptichkin, "ВС РФ впервые применили в ходе спецоперации БМПТ 'Терминатор' [The armed forces of the Russian Federation used the BMPT 'Terminator' for the first time during the special operation]," *Rossiyskaya Gazeta*, the official newspaper of the Russian Federation published by the Russian government, May 18, 2022, <https://rg.ru/2022/05/18/vs-rf-vpervye-primenili-v-hode-specoperacii-bmpt-terminator.html>.

⁷ "В спецоперации на Украине задействовали 'Терминаторов' ['Terminators' were involved in a special operation in Ukraine]," *Radio Sputnik*, May 18, 2022, <https://radiosputnik.ria.ru/20220518/terminator-1789151283.html>.

⁸ "Источник: 'Терминаторы' показали высокую боевую устойчивость на Украине [Source: 'Terminators' showed high combat effectiveness in Ukraine]," *RIA Novosti*, July 22, 2022, <https://ria.ru/20220722/terminatory-1804166241.html>.

⁹ "Российские 'Терминаторы' выдерживают попадание 'Джавелина', заявил источник [Russian Terminators can withstand Javelin hit, sources say]," *RIA Novosti*, Aug. 31, 2022, <https://ria.ru/20220831/bmpt-1813306805.html>.

¹⁰ Since the BMPT has about the same amount of firepower as two motorized rifle platoons and there is interest in having the system support dismounted infantry, there has been some discussion of rebranding the system as a "fire-support combat vehicle," but as of now the name of record for the system is still "tank-support combat vehicle."

¹¹ M. Yurshin, A. Hazarenko and A. Chogovadze, "Тесное Сопровождение [Close Support]."

¹² Jeff Shogol, "Tank warfare is still relevant, even if the Russians suck at it – Russia's horrific tank losses in Ukraine are not the death knell of tank warfare," *Task and Purpose*, Sept. 23, 2022, https://taskandpurpose.com/news/tank-warfare-russia-ukraine-future/?utm_source=sailthru&utm_medium=email&utm_campaign=mil-ebb.

ACRONYM QUICK-SCAN

ATGM – anti-tank guided missile
BMP – *boyeva mashina pekhoty*
(Russian infantry fighting vehicle)
BMPT – *boyevaya mashina
podderzhki tankov* (Russian tank-

support combat vehicle, nicknamed
“Terminator”)
BTR – *bronetransportyor* (Russian
armored personnel carrier)
FMSO – Foreign Military Studies
Office

NATO – North Atlantic Treaty
Organization
NLAW – Next-Generation Light Anti-
Tank Weapon

Armored Fighting Vehicles of the World

BMP-3 (IFV) 



The BMP-3 Infantry Fighting Vehicle has been in service since 1987, successor to the BMP-1 and BMP-2. Features include a stabilized 100mm gun/launcher, able to fire shells or the Bastion ATGM, and a 30mm autocannon. Recent upgrades on some vehicles include a 57mm autocannon and a remote weapons station fitted with (AT-9 Spiral-2) missiles. It can also carry the Shtora-1 electro-optical jammer. In service with numerous countries; Russia being the primary user (720+).