

An Example of the Ukrainian Military's Asymmetric Combat Performance

¹Sang-Hyuk Park, ²Seung-Pil Namgung, ³Sung-Kwon Kim*

¹Associate professor, Dept. of Military, Woosuk Univ, Korea

²professor, Dept. of Military, Woosuk Univ, Korea

³Assistant professor, Dept. of Military, Woosuk Univ, Korea
krbsd@hanmail.net

Abstract

This study is a case study of the Ukrainian military's asymmetric combat performance method. The composition of this study is as follows. First, it presented the background for the outbreak of war in the macroscopic framework of Russia-Ukraine. Second, the Ukraine-Russia war, which broke out in February 2022, presented the justification for the study, that is, the direction of the Ukrainian military's asymmetric combat performance in terms of microscopic aspects of the study, and detailed analysis of precision strikes using commercial drones and advanced sensors. Finally, we covered in-depth the case of Ukrainian troops who attempted to attack Russian tanks using semi-automatic laser homing technology. Therefore, the Korean military organization also suggested the justification for gradually introducing and utilizing the system for the Ukrainian military's asymmetric combat performance method, and related follow-up studies should be actively conducted following this study.

Keywords: *Combat, Performance, Ukraine, Asymmetrical, Military*

1. INTRODUCTION

The Ukraine-Russia war, which broke out in February 2022, is called the fight between David and Goliath in the 21st century [1]. According to Global Firepower, a global military strength evaluation group, Russia ranks second in the world's military power and Ukraine 22nd as of 2022 [1]. Considering this assessment, it is not strange at all to expect a landslide victory for Russia [1]. However, the war is far beyond the expectations of many experts, and the general assessment is that Ukraine has been fighting well so far in August 2022.[1]. After the Donbas War (2014-2015), Ukraine continued to change the military's constitution by analyzing military training and innovating the way to fight Russia, which has significantly different military power, into a decentralized battle based on Mission Command [1].

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Corresponding Author : krbsd@hanmail.net

Tel: +82-63-290-1631, Fax: +82-63-290-1631

Assistant Professor Dept. of Military Science, Woosuk Univ

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Figure 1. Ukrainian Javelin Anti-Tank Missile[2]

In addition, to support this, an asymmetric weapon system was introduced that could offset the strength of the Russian military, such as a top-down Javelin anti-tank missile, a TB-2 with a small RCS, and a mobile electronic warfare equipment.[1] Therefore, the purpose of this study is to derive the implications of the study by analyzing cases of the Ukrainian military's asymmetric combat performance methods.



Figure 2. Ukrainian Stinger Weapons[3]

2. Background of the Russia-Ukraine war

The conflict, which began in February 2014, refers to a conflict between Ukraine and aggressors Russia and pro-Russian separatist forces in Ukraine.. Several countries provided Ukraine with varying levels of support, which provided Russian military access within Belarus' territory during Russia's full-scale invasion of Ukraine in 2022 [4]. Immediately after the Ukrainian Revolution in 2014, Russia began hostile acts, mostly focusing on the political status of Crimea and Donbas, which is internationally recognized as Ukraine's territory [4]. The invasion of Ukrainian territory culminated in Russia's annexation of Crimea, and shortly thereafter, the Donbas War broke out between Russian-backed separatist forces and Ukraine [4].

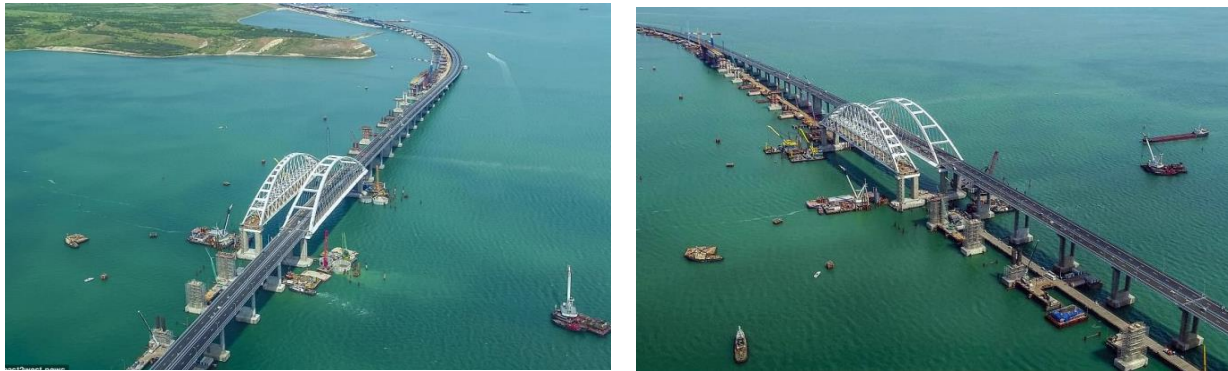


Figure 3. Crimea Bridge[5]

In addition, in the eight years since the beginning of the conflict, several incidents such as maritime conflicts, cyber warfare, and various political tensions have occurred [4]. Throughout 2021, tensions between the two countries escalated due to increased Russian forces around Ukrainian territory, and Russia's invasion of Ukraine on February 24, 2022 intensified the conflict into an all-out war[4].



Figure 4. Russian and Ukrainian drone battles[6]

3. How to conduct a battle using asymmetry

Asymmetry means 'a property that is not paired while facing the other person in the same way [7]. In order to use asymmetry militarily, it is necessary to focus our fighting power on the opponent's weak means, methods, time, and space, combine them with at least two to create synergy, and this trend is gradually deepening as the fourth industrial revolution technology is advanced [7]. In this Ukraine-Russia war, the Ukrainian military's ingenious methods of combat stand out [7].



Figure 5. Russian-made Unmanned Aerial Systems[8]

3.1 How to conduct a battle using asymmetry

Ukrainian forces are actively using commercial drones in this war [7]. In particular, it can be seen that the combination of laser markers, various sensors, and rapid explosives on commercial drones is forcing significant damage to the Russian military, and the collected images are uploaded to the artillery brigade Facebook to shorten the fire request time and post a hit on SNS [7].

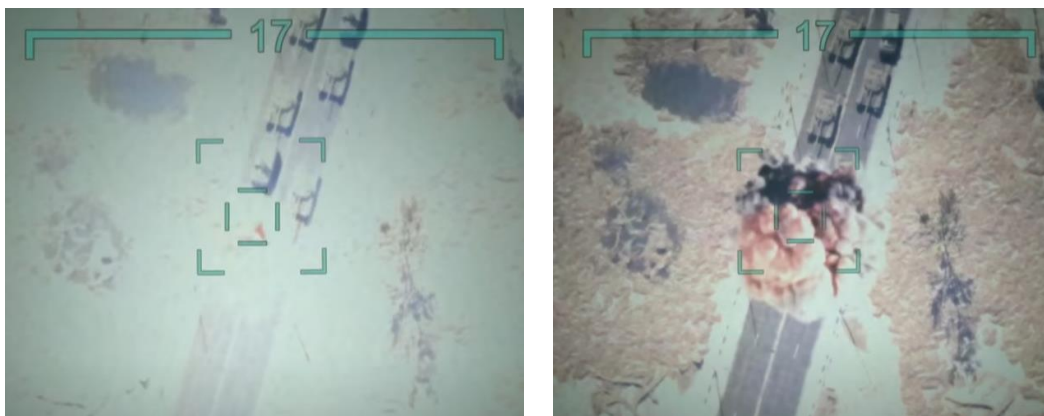


Figure 6. Drone Battle Video Posted on YouTube [9]

4. Anti-tank Attack Using Semi-Automatic Laser Homing Technology

Semi-automatic laser homing technology is the principle that when an observer marks a target using a laser indicator, a missile strikes the target along a reflected beam [10]. The Ukrainian military is actively using this homing technology to destroy Russian tanks, and the Ukrainian anti-tank attack team operates separately from laser markers and anti-tank missile operators when it identifies targets [10]. This situation is closely related to military innovation in both countries as in the previous case [10]. Both the Ukrainian and Russian forces have semi-automatic laser homing technologies, and the Ukrainian army established a practical education and training system after the Donbas War and participated in local battles in Donetsk and Lugansk [10]. On the other hand, the Russian military reduced the service period of conscripts from 18 months to 12 months in 2009. [10].

5. Conclusion

The implications of this study are as follows. First, the Korean military organization should also focus on development to benchmark the Ukrainian military's asymmetric combat performance so that precision strikes using commercial drones and advanced sensors can be made. Second, semi-automatic laser homing technology should be secured and developed to be used in the Korean military organization, and in particular, through peacetime training through the technology of the 4th Industrial Revolution. Third, theoretical and practical curricula should be organized in military organization training institutions to establish an education and training system and gradually expand it.

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