

Five-dimensional battlespace

By Sid Heal

By nature, tactical operations unfold in a multidimensional battlespace. A dimension may be best understood as a realm characterized by a specific feature and governed by its own rules. Battlespace is that domain or realm where an adversary can be acquired and engaged. Battlespace is always multidimensional and so the term replaces the more antiquated “battlefield” to broaden thought and understanding of the implications.

The most familiar dimension is *space*. Space is already three-dimensional in that it has a length, width and height/depth. Space always involves terrain of some type and so an understanding of how to identify and control terrain to gain an advantage becomes important. The maneuver elements are physical; that is, they take up space and have weight and mass. People and conveyances, like vehicles, trains, boats and aircraft, are some of the most common. Maneuver in space is measured in distance and the predominant objective is to gain and maintain control of key terrain.¹

The fourth dimension is *time*. Time is a “non-space continuum” where events occur in an irreversible succession from the past through the present to the future. There is no terrain in time so the rules that govern maneuver in space are irrelevant and inap-

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plicable. Therefore time is a separate and distinct dimension but a critical component of battlespace nonetheless. Being in the right place but at the wrong time is every bit as bad as being at the wrong place anytime. Because the dimension of time is a non-space the maneuver elements are notional; that is, they exist only as a mental image. Maneuver in time is measured in speed and the predominant objective is to identify or create and exploit opportunities.²

For thousands of years these four dimensions were sufficient to provide a basis for planning and decision-making in

support of tactical operations and disaster responses. As time has passed, however, this understanding of battlespace is proving increasingly inadequate. Battlespace has acquired a new dimension.

The fifth dimension is *cyberspace*. While most people think of cyberspace³ as the on-line world of computer networks it is actually a much richer and deeper environment. It is better understood as a domain of information. Besides information transferred between computers (like email, file transfer protocols [FTP], web browsing and the like) it includes all types of information like that transferred from wireless cell phones, text messaging, pagers, and even electronic door locks, TV tuners or garage door openers. Understandably, the maneuver elements in cyberspace are information of all types. Maneuver is measured in knowledge and the ultimate goal is to acquire and apply understanding.⁴ Conversely, when adversaries are involved the goal may be to deprive them of understanding. As USMC General Al Gray once commented, “The best tactics not only leave your enemy defeated, but confused!”⁵

Of critical importance is to understand that each of these five dimensions is fundamentally distinct from one another and rules for one dimension are completely

Dimension	Maneuver Elements	Measured in	Objective
SPACE	Physical	Distance	Gain and maintain control of key terrain
TIME	Notional	Speed	Identify, create and exploit opportunities
CYBERSPACE	Informational	Knowledge	Acquire and apply understanding

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irrelevant for another. For example, speed in space means nothing without time and there is no distance in time. Likewise, in cyberspace time and space are completely irrelevant for one simple reason; knowledge can reside in more than one place at the same time.

Despite their fundamental differences all five dimensions interact with one another with humans the common “go between” or element. Every disaster or tactical situation is a result of a unique and temporary set of circumstances. Unique because each situation is dependent only upon the peculiar situation which is present at that particular time and place, and temporary because the outcome of actions affects the next set of circumstances. Unseen but ever present is the information involved, including that of the authorities, victims, bystanders, witnesses and even suspects. It also includes information between people and things, like a suspect remotely opening or closing a garage door or setting off a bomb. Some of this information is valuable and some is even crucial. Imagine trying to manage such a situation without an ability to transfer knowledge from one person or place to another. Thus, all five dimensions are an integral part of battlespace.

In law enforcement applications, 5D battlespace can be readily understood in the stark reality of everyday examples. For example, it is not uncommon to stop a vehicle for a traffic violation and after leaving

the scene to find out that the driver was just involved in a crime. It is a stark example that the suspect was trapped in both time and place during the stop but the lack of knowledge left him immune from attack. So it is with tactical operations. No good commander ignores an unprotected flank and a lack of knowledge can be every bit as devastating as being in the wrong place or at the wrong time.

Well over a century ago, American Civil War General Ulysses S. Grant said, “The laws of successful war in one generation would ensure defeat in another.” Whether it is the war on crime or the war on terrorism, the surest way to lose it is to use the last one as the model for the next one.

It would seem prudent then to understand the implications of a multidimensional battlespace. It is important to understand, for example, that two adversaries need not be in each other’s battlespace at the same time. The officer’s lack of knowledge of the driver’s criminal conduct was a critical vulnerability⁶ which resulted in the escape of the suspect. Conversely, the knowledge of the driver provided an ability to manipulate a situation to make getting caught even more difficult, to include the use of surprise. Tragically, this has resulted in the deaths of officers who stopped criminals unaware and were killed. As can be seen, because of a lack of knowledge the officer was in the suspect’s battlespace but the suspect was not in the officer’s battlespace — which provided a decisive advantage.

Likewise, attempting to impose rules for one dimension on another is a recipe

for disaster. No amount of force, for example, will defeat an undetected adversary. Arriving at a location after a suspect has left is only one common example. Similarly, submachine guns and large caliber handguns are completely irrelevant in defeating an anonymous terrorist. Tactical teams must be equipped to fight in all dimensions. Retooling rather than rearming will be necessary.

Most importantly, planners and decision-makers need to recognize the existence and implications of a multidimensional battlespace. Terrorists and criminals gain a substantial, even decisive, advantage by maneuvering in all five dimensions of battlespace if a commander chooses to ignore any one of them. Well over a century ago, American Civil War General Ulysses S. Grant said, “The laws of successful war in one generation would ensure defeat in another.” Whether it is the war on crime or the war on terrorism, the surest way to lose it is to use the last one as the model for the next one. It may not be the war we want but it’s the one we have. ◀◀

Endnotes

1. For more information on key terrain, see “Terrain Analysis,” *The Tactical Edge*, Summer 2000, p. 73.
2. For more information on time, see “Maneuvering in Time,” *The Tactical Edge*, Fall 2001, pp. 60-61.
3. “Cyberspace” was coined by science fiction author William Gibson, in his book *Neuromancer*, published in 1984.
4. For more information on cyberspace, see “Fighting in the Fifth Dimension,” *The Tactical Edge*, Winter 2003, pp. 20-25.
5. General A.M. Gray, 29th Commandant of the Marine Corps.
6. For more information on critical vulnerability, see “Center of Gravity and Critical Vulnerability,” *The Tactical Edge*, Winter 1997, p. 53.

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