

Editorial

We mark the end of 2018 with our final issue of the year, Pointer Vol. 44, No. 4. As we wind down and celebrate the festivities with our loved ones, we bear in mind the varied events that have happened, both globally and locally and the impact they have on us—whether it is the security threat from the ever-present terrorist danger that menaces us, to the increasingly sinister attacks in the cyber domain and false news, to trade wars that all have serious impact on Singapore as a whole. To be sure, it is crucial that Singaporeans unite to deal with these threats together. As Minister for Defence, Dr Ng Eng Hen puts it: “To respond to these ever-evolving threats, we need a collective will, a Total Defence to stand as one people united in resolve and action.”¹

The essays in this issue cover a diverse list of topics with novel ideas like crowdsourcing intelligence to prevent lone-wolf attacks on Singapore’s Smart Nation efforts. We have also included other subjects like hybrid warfare, social media in the military, the dangers of unmanned aerial vehicles as well as the various challenges facing the Singapore Armed Forces (SAF) as it moves steadfastly beyond the past five decades of its development.

The essay entitled, ‘Crowding Out the Lone-Wolf – Crowdsourcing Intelligence to Prevent Lone-Wolf Attacks’ is by MAJ Jeffrey Ng Zhao Hong. According to MAJ Ng, with terrorist networks turning toward lone-wolf attacks as their choice *modus operandi*, homeland security forces are quickly realising that traditional top-down surveillance programmes are ill-suited to detect the subtle indicators of sporadic attacks perpetrated by legal residents with no known links with terrorist cells. In this essay, MAJ Ng studies successes in commercial applications of crowdsourcing, and argues that crowdsourcing intelligence provides greater degrees of penetration and persistence in community surveillance, and is more attuned to detecting subtle signs masked within a local context. He then provides recommendations on building and

sustaining a wide base of motivated and committed users in order to refine existing nation-wide initiatives into effective intelligence crowdsourcing platforms. MAJ Ng feels that the effective implementation of crowdsourcing as a novel intelligence tool will not only enhance intelligence collection on lone-wolf terrorism, but also engender a stronger sense of ownership for homeland security among the citizens, and project a tougher deterrence stance against terror networks.

In the essay, ‘Survivability of a Smart Nation’, ME6 Calvin Seah Ser Thong, highlights that in this age of technology, the trend of cyber attacks is ever increasing and, no nation is spared. Even in Singapore, it has been reported that 16 waves of targeted cyber attacks have been surfaced to the Cyber Security Agency of Singapore from April 2015 to June 2016. More recently, two waves of cyber attacks disrupted StarHub’s broadband network in October 2016. On both occasions, subscribers’ bug-infected machines turned into zombie machines that carried out distributed denial-of-service attacks on StarHub’s network. Following these attacks, security experts have warned that armies of unsecured ‘smart’ devices like web cameras could become a rising force of disruption. ME6 Seah says that as Singapore embarks on the Smart Nation initiative to transform itself into the world’s first true Smart Nation, there could potentially be a Centre of Gravity that could pose as a critical vulnerability. ME6 Seah explores this notion by firstly examining Singapore’s Smart Nation Initiative. Next, he examines Clausewitz’s Centre of Gravity concept and explores whether the Information and Communications Network can become the Centre of Gravity of a ‘Smart Nation’. Finally, ME6 Seah proposes recommendations to bolster a Smart Nation’s security by adopting Dr David Wilkes’ Survivability Onion, a five-layer defence to mitigate against any potential threats.

The essay, ‘Hybrid Warfare – A Low-Cost High-Return Threat to Singapore as a Maritime Nation’ is written by MAJ Bertram Ang Chun Hou. MAJ Ang feels that the advent of hybrid warfare has raised concerns

for Singapore with the potential challenges that it may bring. Being a nation surrounded by water on all sides with no natural resources, maritime trading has not only become a way to maintain sustenance, but a key contributor to Singapore's economy. An attack on Singapore's maritime sector would not only affect its way of life, but undermine shipping and erode confidence in Singapore as a transshipment hub. While the SAF is already well-prepared against a conventional threat, a hybrid threat can inflict equal or even more damage than any conventional means and, at a lower cost to the adversary. In this essay, MAJ Ang discusses the vulnerabilities in Singapore's maritime domain, and how an aggressor could exploit this through hybrid means, evading the SAF's conventional defence methods. The rationale behind a potential aggressor attacking Singapore through the maritime domain is also deliberated, providing examples as to how maritime sabotage could affect the populace in Singapore. MAJ Ang also scrutinises various hybrid methods while explaining the ineffectiveness of responding through conventional means to a hybrid threat. Lastly, MAJ Ang provides recommendations on how the SAF can augment the Republic of Singapore Navy (RSN) to better combat hybrid threats.

According to MAJ(NS) Tan Kok Yew who wrote, 'Winning Hearts through Communication – A Social Media Engagement Strategy for the Military', with the high social media penetration rate in Singapore, it would be beneficial if a model to engage military personnel through the Social Media could be promulgated to guide commanders, human resource managers and communication practitioners. In this essay, MAJ(NS) Tan combines a military retention framework derived from civilian employee retention models and gaps in existing military employee retention frameworks, applying it to Social Media strategies to devise a Social Media engagement model to propose an enhancement to military employee retention in the SAF. He proposes the POWERS framework to provide the first step towards an effective employee retention model for the SAF.

In 'Beyond SAF50: Maintaining the SAF's Edge amidst Global, Regional and Domestic Challenges', MAJ James Yong Dun Jie explores the various difficulties facing the SAF as it moves beyond its 50th anniversary. MAJ Yong highlights that while the SAF has undoubtedly

served its purpose in deterring potential adversaries for the past five decades, it has also allowed Singapore to gain the confidence of foreign nations, resulting in continued economic growth. In addition, the participation of the SAF in multinational operations has also forged partnerships with countries, which promoted the growth of defence diplomacy. All these were attributed to Singapore's ability to react to the ever-changing strategic landscape thus far. In this essay, MAJ Yong analyses the emerging trends from the three domains—global, regional and domestic—and the potential challenges that may dull the SAF's edge. With the rise of hybrid warfare, geopolitical tensions, alongside a shrinking population, MAJ Yong discusses how the aforementioned factors could impact Singapore, and offer recommendations on how the SAF can remain relevant to national defence as well as to act as a stabilising anchor for Singapore.

In the essay entitled, 'Unmanned Aerial Vehicles – A Clear and Present Danger and What We Can Do About Them', MAJ Jerry Chua examines how Unmanned Aerial Vehicles (UAV) have transformed into a deadly weapon that is utilised by both military and terrorists. According to MAJ Chua, there is no single solution to deal with the threat posed by UAVs in hostile hands. Possible defence concepts such as geo-fencing, high energy lasers and jamming may still not succeed. MAJ Chua then proposes a multi-layered approach in dealing with UAVs to provide for contingencies in the event that one layer fails. This five-layer defence model comprise the concepts of Prevention, Deterrence, Denial, Detection and Destruction/Interruption. With this model, MAJ Chua discusses how Singapore can prevent attacks from UAVs and instead, plan a counterattack against the aggressor.

We would like to wish all our readers happy reading for the holiday season. Have a Merry Christmas and Happy New Year 2019!

The POINTER Editorial Team

ENDNOTES

- 1 https://www.mindef.gov.sg/web/portal/mindef/news-and-events/latest-releases/article-detail/2018/october/04oct18_speech2