

## The Utilization of Field Information Support Tool to Enhance ASEAN Regional Security Communication

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### ABSTRACT

Transnational crimes include terrorism, illicit drugs, human trafficking, money laundering, and other crimes such as arms smuggling, sea piracy, international economic fraud and cybercrime still remain the significant security problems and obstacles in ASEAN region. The national security organization in each country particularly the Ministry of Defense should be responsible directly to defend its own territory against enemies and also to provide combat capabilities to protect its sovereignty and integrity of the country. The Field Information Support Tools or FIST is an Internet-based intelligence communication tool co-developed by the United States government agency and Kestrel Technology Group to assist military forces to collect data concerning security operations and HADR missions and trainings. FIST is a field-based collection system using commercial off-the-shelf mobile electronic devices, customized software and a robust information management back up known as *FusionPortal*. The overarching goal of FIST is to develop a user-friendly data collection tool that utilize automated information system to enable unstructured data to be collected, processed and structured for analysis and visualization. In this article, the authors discussed how FIST has been utilized in Thai military and civilian security and HADR exercises. In addition, FIST highlights the capacity of information and communication technology to facilitate civilian-military coordination on ASEAN security operations. However, it was found that the Thai military technical students from the military technical training school or other armed service non-commissioned officer schools still lacked skills on integrated communications technology. Most curricula in the Ministry of Defense were designed to develop applied science and technical skills to support traditional military needs such as artillery, cavalry, communication, infantry, mechanic, music, and transportation. Thus, it is critical to design military technical curriculum based on FIST system.

**Keywords:** Communication tool, crimes prevention, FIST (Field Information Support Tools), information management, security system

## **INTRODUCTION**

Since the establishment of the Association of Southeast Asian Nations (ASEAN) in 1967, the ten ASEAN member states of Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam have been working together to develop greater capacity to bring peace, stability and mutual cooperation into the ASEAN region. This progress is derived from the stipulated ASEAN goals of accelerating economic growth, enhancing social progress, nurturing cultural development, promoting regional peace and stability, and intensifying active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields.

With the launch of the ASEAN Economic Community (AEC) in 2015, member states have formed a tighter, more integrated group to foster an exclusive market and a dynamic industrial production capacity. This action has significantly increased the competitiveness of the ASEAN economies by supporting inclusive growth and by bringing ASEAN into the global economy. ASEAN is a pivotal point for both regional and global economic powers because ASEAN states are situated at strategic geographical locations – bordering two of the world’s most powerful economic powers – China and India. However, ASEAN member states are also enmeshed in territorial disputes with the interested powers. China’s claim to territories in the South China Sea, for example, overlaps with competing claims by Brunei Darussalam, Malaysia, the Philippines and Vietnam. While there are challenges, closer coordination and common goals among ASEAN governments could promote stability and lessen the prospect of conflicts (Mahmood, 2018).

The challenges of regional peace and security have been discussed and would be solved by mutual or multilateral agreement. In addition, ASEAN affirms its commitment to implement the ASEAN Community Vision 2025 and the importance to maintain ASEAN peace and unity in community building efforts and engagement with external partners, including the major powers (APSC, 2019). Nevertheless, the region is in urgent need for workable answers to the challenges of regional security which are experiencing an increasing strain. Hence, ASEAN with rapid development and economic expansion, should pay more attention to the current security threats and challenges. Philips (2019) stated that the ASEAN region continues to face an array of immediate security problems that call for cooperative responses. These problems range from terrorism, natural disasters, and humanitarian crises (such as the one in the Rakhine state) to non-traditional security threats at sea such as illegal fishing and the impact of climate change.

Given these concerns, ASEAN leaders need to consider finding effective strategies for national defence and to seek efficient tools to ensure that the region remains peaceful and safe. Most Ministries of Defence serve as the official agency with a mission to oversee and protect national sovereignty, integrity, and solidarity. The Ministry of Defence (MOD) of the Kingdom of Thailand is concerned with the national security, territorial integrity, and national defence. In terms of regional security, the MOD has been seeking to collaborate with friendly countries to obtain and exchange critical information about internal and external threats. The MOD also coordinates military policies and actions with other governmental agencies concerned with national security. In fact, the MOD has the duty to defend and maintain the stability of the Kingdom from external and internal threats. The military forces were established and trained to protect the monarchy, to fight the rebels and the riots, to develop the country and to protect the national interests as defined by the Thai laws (<https://www.globalsecurity.org/military/world/thailand/mod.htm>).

According to the press statement by the Chairman of the ASEAN Foreign Ministers’ Retreat in Chiang Mai, Thailand 17-18 January 2019, there were two remarkable issues needed to be discussed: (a) the need to have a comprehensive approach to address transnational crimes, and (b) the need to strengthen efforts to counter terrorism and violent extremism. In this regard, ASEAN countries need to strengthen their cooperation on border management to safeguard the region while facilitating cross-border trade and movement of people. In the context of counter-terrorism, ASEAN should support the activities of Southeast Asia Regional Centre for Counter-Terrorism including capacity-building programs, joint research projects and related events. These issues have driven each ASEAN country to consider the use of technological advances in order to combat the threats to homeland and regional security.

One of the advanced technological tools is the Field Information Support Tools or “FIST” which has its genesis as a research project at the US Naval Post-Graduate School with commercial partner, the Kestrel Technology Group has been applied to use for intelligence support for ASEAN region. Transitioning from the academic and research environment, FIST has become an efficient communication and knowledge management capability sponsored by the US Pacific Command and is in use in multiple countries in the Asia Pacific region. FIST operates in a variety of environment and supports a multiple mission sets such as counter-insurgency operations, counter narcotics, HADR and other inter agency operations.

### DEVELOPMENT OF FIST SYSTEM

The Field Information Support Tools or FIST is an Internet-based intelligence communication tool co-developed by the United States government agency and Kestrel Technology Group to assist military forces to collect data concerning security operations and HADR missions and trainings. FIST is a field-based collection system using commercial off-the-shelf mobile electronic devices, customized software and a robust information management back up known as *FusionPortal*. The overarching goal of FIST is to develop a user-friendly data collection tool that utilize automated information system to enable unstructured data to be collected, processed and structured for analysis and visualization. FIST uses COTS (commercial-off-the-shelf) mobile devices and custom smartphone applications, in conjunction with a globally accessible web portal (*FusionPortal*) to perform real-time visualization and assessment, data collection, analysis, alarming, dissemination and system-to-system interoperability. FIST additionally enables sensor fusion, as well as media-rich real-time information to an analyst followed by operator tracking and tasking to the field. FIST has shown ready capability for rapid deployment with both limited and advanced data management skill-sets. FIST functions in both connected and austere wireless network environments as a multi-mission tool for counterinsurgency operations (COIN), counter narcotics missions (CN), humanitarian assistance and disaster relief (HA/DR), medical / health / disease mapping, civil affairs, capacity building, law enforcement, human terrain mapping and public media fusion. FIST can support these tasks through rapid and efficient knowledge creation and the implementation of a continuous information cycle. The system is easily implemented, simple to use and versatile in the kinds of information that can be quickly collected and displayed to a global audience with multi-level data access. Figure 1 displays the FIST diagram.

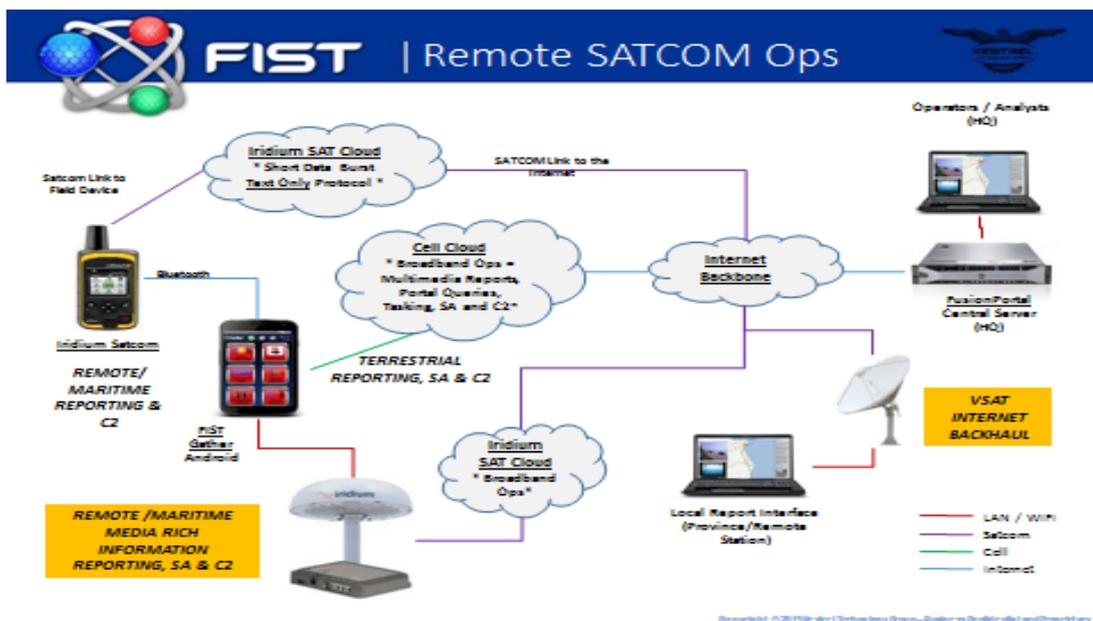


Figure 1: Field Information Support Tool process

The FIST Gather application is the primary method for entering data into the FIST data repository. This can be done directly over the commercial internet via a smartphone host using cellular, 3G, or WiFi connectivity. Alternatively, data can be entered via file uploads or browser windows to the web-based data repository (*FusionPortal*). Currently, FIST Gather is designed to be loaded on a smartphone with an Android operating system. The application has customizable modules to align to a particular user’s mission set. FIST Gather enables the field-based collection of data in a structured, form-based menu interface to be transferred to the remote *FusionPortal* server. It also provides continuous positional tracking via the smartphone GPS set and can receive user specific media infused (audio, video, images) tasking messages. Figure 2 shows Field Information Support Tool cycle.



Figure 2: Field Information Support Tool cycle

The central application in the FIST system is called *FusionPortal*. *FusionPortal* is a globally accessible web server that can be accessed via any standard internet browser. This application receives data input from the field, as well as external files and then processes the data into a fused view that can be processed and analyzed. Aggregation and visualization of raw data creates information much more useful to a user, be that an analyst or decision-maker. The FIST multi-source data fusion is shown in Figure 3.

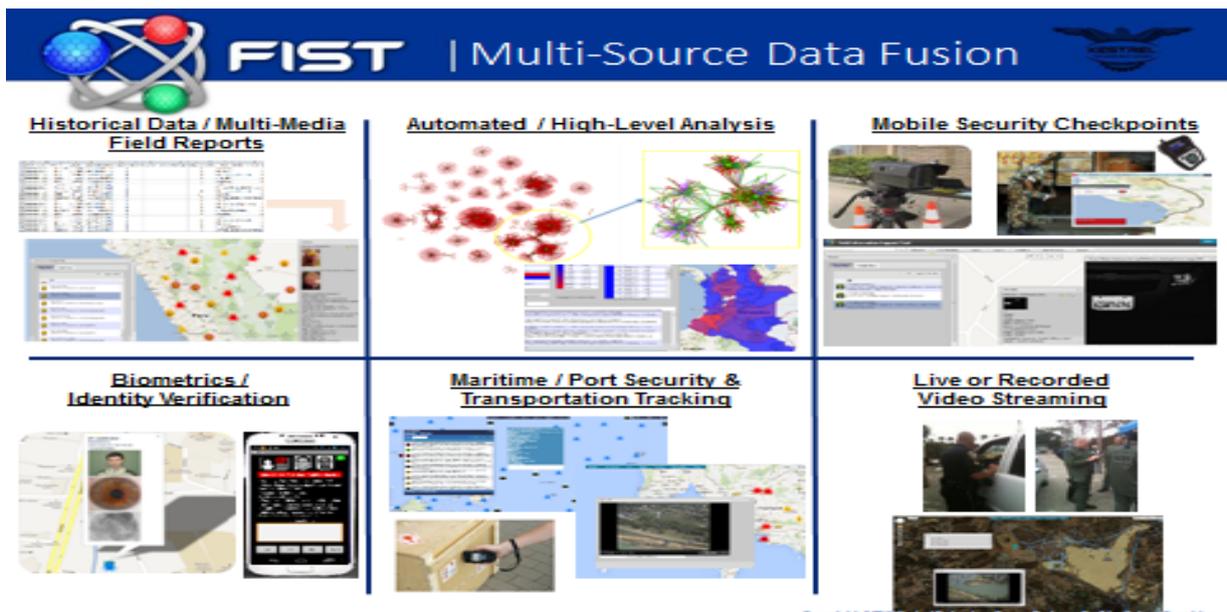


Figure 3: Field Information Support Tool: Multi-Source Data Fusion

According to FIST after action reviews (The FIST team, 2013), it was found that the users became familiar with the FIST technology and understood how to incorporate it into their own tactics, techniques, and procedures to collect multi-media data in the field. The users also could provide reporting and common operating picture in support of the FIST counter-narcotics scenario and the HA/DR exercise. The FIST technology has brought important capabilities to the Royal Thai Armed Forces.

### **UTILIZATION OF FIST**

In Thailand, FIST system has been applied as an advanced communication technology in several events. For instance, the Thai-Cambodian Joint and Combined Exercise 2012, held at the Rama VI Thai Border Patrol Training Camp at Hua Hin, Thailand, on 20-24 August 2012. This small bilateral exercise focused on Humanitarian Assistance / Disaster Relief (HA/DR) under the umbrella of the Association of Southeast Asian Nations (ASEAN) and Thai Supreme Commander and Cambodia Supreme Commander as co-hosts. The primary mission of the exercise was to enable the ASEAN nations to develop the capability to identify and prepare for various types of threats including natural disasters and to also develop the capability to mitigate the effects of major disasters.

The other significant event was the Cooperation Afloat Readiness and Training (CARAT) which was a series of annual bilateral military exercises conducted by United States Pacific Fleet with several member nations of the Association of Southeast Asian Nations (ASEAN). Participating nations include Bangladesh, Brunei, Cambodia, Thailand, Malaysia, the Philippines, Singapore, Thailand and the United States. The objectives of CARAT include enhancing regional cooperation, building friendships, and strengthening professional skills. The activities were held at the Red Horse Exercise Facility on U-Tapao Royal Thai Navy Airfield, the Hat Yao Training Area, Thailand. The participants used FIST for real time data collection, analysis, and sharing operations by providing a capability for multinational organizations to contribute to the overall maritime domain awareness picture in conjunction with Pacific Fleet and Pacific Command theatre maritime security initiatives. As one of the authors was a Thai defence intelligence researcher who has been observing and monitoring FIST system for more than 10 years, she considered FIST as not only a communication tool to facilitate the military security mission but also as a learning tool that intelligence military forces or technical personnel should have an opportunity to learn on its algorithm and how efficiently the technology has been systemically integrated for an intended mission. Thus, the utilization of Field Information Support Tool to enhance ASEAN regional security communication is critical.

### **DESIGN MILITARY TECHNICAL CURRICULUM BASED ON FIST SYSTEM**

FIST is one of highly advanced technologies that needed specific expertise personnel to design algorithm and architectural design to match ultimate requirements of the users. Apart from participating using FIST technology, military technical personnel or students from non-commissioned officer schools in which their curricula consisted of general and vocational studies should have an opportunity to learn the FIST system. To implement the FIST system in each military exercise, it is necessary to have a great deal of support from qualified personnel who have technical knowledge of defence strategies, communications, intelligence operations and information technologies. However, it was found that the Thai military technical students from the military technical training school or other armed service non-commissioned officer schools still lacked skills on integrated communications technology. Most curricula in the Ministry of Defense were designed to develop applied science and technical skills to support traditional military needs such as artillery, cavalry, communication, infantry, mechanic, music, and transportation. In sum, it is critical to design military technical curriculum based on FIST system.

## CONCLUSION

The purpose of this research was to utilize Field Information Support Tool (FIST) to enhance ASEAN regional security communication. In combating threats to regional security, ASEAN has established various mechanisms of cooperation and adopted for implementation cooperation frameworks and action plans in the respective sectors. However, the region still faces emerging challenges and threats. To be able to stand tall against these threats to regional security, ASEAN member countries need to maintain their unity as a regional community. They need to exert leadership and commitment through partnership with the global community and, as a group, they need to ensure that they get the priorities right. ASEAN also needs to ensure that partnership with the global community will be according to local regional characteristics and needs. However, while it has to act regionally, ASEAN would need to think globally. To move forward regional cooperation more effectively, ASEAN needs to engage relevant partners from both within and outside ASEAN to jointly implement activities of mutual interest. With unpredictable threats, unstable security and disasters, ASEAN member states should learn and prepare themselves to handle with upcoming phenomena with modern technology.

Technology is moving so fast that is favorable for everyone both friend and opponent. It is getting more difficult to reliably predict the future even a few years ahead. New challenges posed by technologies such as artificial intelligence contains the potential: (a) to change the characters of war in unpredictable ways, (b) to disrupt the conventional warfare, and (c) to enable autonomous and smart system to launch an attack. Terrorists can use advanced communications to launch attack with little warning. Military forces in every level should realize how importance of intelligence communication tools to be able to access rapid signals and real time situation which can support military missions. The Field Information Support Tool (FIST) is one of integrated communication technologies which enables users to turn real time data feeds and archived data into actionable intelligence. In addition, FIST highlights the capacity of information and communication technology to facilitate civilian-military coordination on ASEAN security operations. However, it was found that the military personnel still lacked skills on integrated communications technology. Most curricula in the Ministry of Defence were designed to develop applied science and technical skills to support traditional military needs such as artillery, cavalry, communication, infantry, mechanic, music, and transportation. Therefore, it is critical to design military technical curriculum based on FIST system.

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