

ATAK SITUATIONAL AWARENESS ARRIVES AT THE BORDER

US CBP leads the way in combining USSOCOM software and consumer communications hardware to greatly increase agent safety and effectiveness in austere environments
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Border security is a dangerous law enforcement mission. Frequently executed in remote and austere environments, border agents have to contend with rough terrain, extreme remoteness from external support, and the very real risk of life threatening situations.

In these environments agents must depend on the support and operational intelligence provided by their team on the ground, however the very nature of where they are operating makes this very difficult due to the lack of effective communications systems. Tasked with protecting vast expanses of

land that are more often than not completely devoid of any traditional communications networks, establishing communications across agents is of utmost importance.

In the ongoing challenge to increase border agent security and operational effectiveness in the field, the US Customs and Border Protection Agency (CBP) has turned to a toolkit directly sourced from Special Operations community – the Android Tactical Assault Kit (ATAK). First fielded in 2010 during operations in Afghanistan and Iraq, USSOCOM's ATAK platform has become the de facto situational awareness and



command/control battlespace management tool for not only SOF operators, but conventional military, and now civilian law enforcement as well.

Although the name and pedigree may make the system sound like a tool solely suited for war, the ATAK platform is actually much less scary and aggressive than it may appear when looking at its name (likely why the civilian version is more often called the Android Team Awareness Kit). ATAK can perhaps be best described as a combination of Google Maps with WhatsApp.

Now this is definitely a simplification of the capabilities within ATAK, but roughly speaking this is accurate. The ATAK system is an Android application which displays map data and, more importantly, allows its users to communicate critical situational awareness data in a live, dynamic, and

user friendly interface over that map data.

Although the diversity of tools within ATAK are way too numerous to list out, at its core the platform is used to communicate 3 simple, but critical, types of information to its users:

First and foremost, there is blue force tracking. ATAK displays all users on its map allowing teams to have rapid visual confirmation of their position and the position of their teammates. In the rough and vast expanses covered by border security agents, the ability to know one's location as well as the location of their team is of utmost importance – not unlike a SOF team assaulting a target in a military operation.

Secondly, ATAK allows its users to quickly create markers and waypoints and other points of interest for their entire team. This could be something as simple as a rally point to help gather a team after a dispersed operation, or something more critical like marking a possible hostile actor in a hidden position. Once again, although SOF teams might use this tool for marking snipers and IEDs, something border agents hopefully do not have to encounter on a regular basis, at its core, the utility function is the same. Perhaps a border team uses the tool to mark hidden groups of people or rally or observation points, but the use case is functionally the same.

Finally ATAK is also used to communicate commands back and forth via a straightforward chat messaging tool which helps coordinate actions around the

geospatial markers that team members are creating for their squads.

Although this may sound like an incredibly simple set of features, things we take for granted almost every day with our Google Maps and WhatsApp, ATAK is a game changer for these field operators for a few reasons.

Firstly, it offers significantly more advanced map data, marker accuracy, and other tools that are necessary when the task at hand isn't finding your friend on a street corner, but possibly coordinating actions which could result in life or death consequences. It is difficult to describe the gamut of features in ATAK that make it so much more than the commercial tools we see every day, but its quick uptake across the US DoD, NATO partners, FBI, Secret Service, CBP and many more attest to its criticality.

However what is perhaps the clearest differentiator of ATAK (aside from its commercial availability, ease of use, and stability) is that unlike the Google and other commercial tools, it is capable of operating in completely disconnected environments. Although ATAK does have a server-based system, it is also natively integrated with the latest off-grid communications tools that allow tactical operators to continue to use these situational awareness features in places where they would traditionally expect to be completely disconnected – remote and hostile locations - exactly where border agents need to operate.

But as valuable as this ability to



operate off-grid and without a server is, it is also one of the most difficult capabilities to practically field.

Simply put, although ATAK can work off-line with radios, the reality is that traditional tactical radios are astronomically expensive. Costing on average over \$15,000 per unit, a digital tactical radio link, until recently, has remained a capability only accessible to the most well funded of tier-1 SOF teams. CBP and many others knew and trusted the capability of ATAK, but they simply couldn't afford the kind of investment needed to meaningfully equip their agents in a way where they could trust and rely on the system. Although some tests had been run using ATAK on regular cellular connection, the reality was that the remote and austere nature of border operations necessitated an answer to the off-grid problem before ATAK or any other such platform could ever be realistically operationally integrated.

This all changed recently however with the introduction of a new player in the tactical radio space, goTenna. A small Brooklyn-based startup that originally focused on the recreational hiking and skiing market, goTenna started creating miniaturized radios for consumers to pair with their smartphones to allow them to text and track each other's locations offline while doing off-grid sports.

What made goTenna radios unique was that they did not attempt to provide broadband data communications like other legacy systems. Instead, they focused solely on providing short-form burst data transmissions, sufficient for locations, markers, shapes, and text – but no more, no less. What goTenna got in return for its conservative approach to features was the creation of a family of radio systems that can be best described as very practical and accessible. A humble set of descriptors, but extremely meaningful.

Although conservative in features,

these radios provided the core of what was needed – situational awareness – and provided it at a radically lower size, weight, power, and cost than anything else around – \$499 to give it a number.

These practical advantages quickly caught the eye of DARPA and SOCOM who realized that the small bursts of data supported by the little consumer radio systems could successfully support the core functions within the ATAK platform. It couldn't support everything feature within ATAK, but it supported the most important components of personnel tracking, map marking, and text. This led to a quick integration between the goTenna radios and ATAK which soon saw the systems deployed with SOF teams in combat in locations as extensive as Iraq, Afghanistan, Niger, and more – primarily as a tool to enable local partner forces to interoperate with coalition forces who could not provide them with their restricted and expensive radio systems.

As unique as SOF operations might be in their fine details, taking a macro perspective shows that their requirements are little different than that of a border security team, or even a crew of wildland firefighters. Everyone needs to know where they are, where their team is, the dangers/objectives, and issue commands to address those objectives. Its pretty simple, but its what is needed.

What has resulted from this similarity in mission requirements is that SOCOM software, consumer smartphones, and a radio system originally designed for hiking have suddenly come together to

create a practically accessible and operationally relevant situational awareness and command/control system which can be had for just a few hundred dollars per agent – not tens of thousands.

This is a game changer, and many outside of the military have taken notice.

Seeing an opportunity to really move the needle in operational capabilities, in late 2017 CBP purchased roughly 1200 goTenna radios for a price tag that didn't break \$1MM. CBP was able to follow the lead of SOCOM's foreign operations to equip over a 20th of its border force for a cost that barely registered a blip on its budget.

CBP's creative efforts at enhancing agent situational awareness in austere environments have drawn the attention and support of its parent agency in the US, the Department of Homeland Security (DHS), which kicked off an APEX operational evaluation program specifically designed to officially review the power of the ATAK platform, and its supporting systems, for broader deployment across the breadth of US security forces.

As smartphones, goTenna, and ATAK are all EAR99 non-controlled systems – this is a capability architecture which any border security agency around the world should carefully look into.



East African Customs will work together to enhance border control through PGS

Under the auspices of the WCO/JICA (Japan International Cooperation Agency) Joint Project, to support trade facilitation and border control in Africa, a Sub-Regional Awareness Raising Seminar on Programme Global Shield (PGS) in East Africa was held in Nairobi, Kenya, from 15 to 17 May 2018. This is the first activity of the enhanced border control component of the new Trade Facilitation and Border Control project launched by the 5 Revenue Authorities in East Africa.

Programme Global Shield is a multilateral WCO initiative, which aims at building the capacity of customs administrations to counter the illicit trafficking and diversion of chemicals and other components used by terrorists to manufacture improvised explosive devices (IEDs). The Seminar aimed at raising awareness amongst East African Customs of the threat posed by IEDs and demonstrating ways how customs can contribute to mitigating the threat. It also provided a platform for participants from East Africa to share their experiences, exchange and discuss best practices.

Twenty (20) Customs officials from Burundi, Kenya, Rwanda, Tanzania, and Uganda in addition to five (5) observers from Kenya Revenue Authority participated in this seminar. Each Customs administration shared its country presentation that included their efforts in strengthening customs control at the borders, the level of cooperation between Customs and other law enforcement agencies, and how they deal with explosive precursor chemicals and other components used to manufacture IEDs.

During the seminar, the WCO experts provided updates on the WCO Security Project's initiatives and shared information about Customs role in border security, technology deployment, and operational activities. The Joint Improvised-Threat Defeat Organization's briefing set the scene in relation to the global harm and regional perspective of IED use; while Japan Customs expert explained how advanced technologies can help Customs to efficiently identify chemicals.