Exhibit 1
FEATURE ARTICLE

Al-Qa`ida's First American Foreign Fighter after 9/11

Bryant Neal Viñas and Mitchell D. Silber

A VIEW FROM THE CT FOXHOLE

Kevin McAleenan
Commissioner, U.S. Customs and Border Protection
Seventeen years after 9/11, the threat posed by jihadi terrorist groups is in a state of flux. The demise of the Islamic State’s territorial ‘caliphate’ has demoralized some of its supporters and eroded some of the group’s ability to direct attacks in the West. But the Islamic State still has a large sympathizer base, a significant presence in Syria and Iraq, and dangerous nodes in other parts of the world. Meanwhile, al-Qa’ida and its network of affiliates and allies have grown in strength in some regions and could pivot back to international terror. Worryingly, both groups in the years to come may be able to draw on an ‘officer class’ of surviving foreign fighters who forged personal bonds in Syria and Iraq.

In our cover article, Bryant Neal Viñas, the first American to be recruited into al-Qa’ida after 9/11, writes about his experiences for the first time in the hope that his case study sheds light on the foreign fighter issue. Viñas was convicted for his actions and recently completed his prison sentence. His article is co-authored by Mitchell Silber, who supervised analysis and investigation of his case at the NYPD Intelligence Division. During his time in the Afghan–Pakistan border region between 2007 and 2008, Viñas came into contact with a variety of jihadi groups, was trained by al-Qa’ida, and spent time with several of the group’s most senior figures. After his arrest, Viñas immediately started cooperating with U.S. authorities and contributed significantly to the near destruction of al-Qa’ida in the tribal areas of Pakistan.

Our interview this month is with Kevin McAleenan, the commissioner of U.S. Customs and Border Protection. Drawing on extensive field reporting, Michael Knights documents how Houthi forces in Yemen metamorphosed in just five years from guerrilla war fighters into a powerful military entity capable of deploying medium-range ballistic missiles. His article provides a case study of how an ambitious militant group can capture and use a state’s arsenals and benefit from Iran’s support. Audrey Alexander and Rebecca Turkington find mounting evidence that women engaged in terrorism-related activity receive more lenient treatment by the criminal justice system than their male counterparts. Derek Flood reports on how the Islamic State’s cave and tunnel complexes in the Hamrin Mountains are helping it sustain insurgent attacks in northern Iraq.

Paul Cruickshank, Editor in Chief
A View from the CT Foxhole: An Interview with Kevin McAleenan, Commissioner of U.S. Customs and Border Protection

By Brian Dodwell and Paul Cruickshank

Kevin K. McAleenan was sworn in on March 20, 2018, as Commissioner of U.S. Customs and Border Protection. Prior to his confirmation, Mr. McAleenan had served as the Acting Commissioner from January 20, 2017. As the agency’s chief executive, Mr. McAleenan oversees 60,000 employees and manages a budget of over $13 billion, working to uphold CBP’s mission to protect national security while promoting economic prosperity. McAleenan previously served as Deputy Commissioner from November 2, 2014, until his appointment to Acting Commissioner. Prior to that, McAleenan held several leadership positions at CBP and one of its legacy agencies, the U.S. Customs Service. From 2006 to 2008, Mr. McAleenan served as the Area Port Director of Los Angeles International Airport, directing CBP’s border security operations at one of CBP’s largest field commands. In December 2011, Mr. McAleenan was named acting Assistant Commissioner of CBP’s Office of Field Operations. In 2015, McAleenan received a Presidential Rank Award, the nation’s highest civil service award.

CTC: How does CBP’s mission and the activities of CBP contribute to the field of counterterrorism?

McAleenan: CBP was created as the Unified Border Security Agency with the priority mission of preventing terrorists and terrorist weapons from entering the country. That was our galvanizing call after 9/11, when we were created under the leadership of Commissioner Robert Bonner, who had a very clear picture of the importance of the border security agency in preventing the next 9/11 or preventing a foreign terrorist entry into the U.S. to mount an attack. So we play a multifaceted role, ensuring we address risk of travel to the United States, both of course at the immediate border but also through our National Targeting Center in supporting risk assessments for travelers that are applying for visas, people that are applying into the visa waiver program, or seeking that permission to travel to the United States.

So we do that with partners in the Department of State and with Immigration and Customs Enforcement’s Homeland Security Investigations’ Visa Security Unit, which has that responsibility alongside State and foreign embassies to assess risk of those applying for visas. It’s our data and our analytics and our mission to support partners in making these decisions. At the immediate border, we have the responsibility to interview and inspect all travelers and make decisions on whether they present a risk. And between the ports of entry, we have to stop and interdict all illegal activity crossing between ports of entry.

On the cargo side, we’re trying to identify risk and prevent it from even heading into the global supply chain to the U.S. borders. Starting after 9/11, we implemented the Container Security Initiative where we partner with 58 sea ports around the world from where the vast majority of cargo heads to the U.S., working with foreign partners to assess cargo for risk and make inspection decisions before it’s even leaving on a vessel destined to the U.S. And then, from lessons learned from the [October 2010] Yemen air cargo plot, we developed a similar capability, an air cargo assessment system, which we’ve just formalized in regulation this year, to do that for parcels headed to the U.S. using advanced data targeting partnerships with the air cargo industry, to examine those for risk before they board aircraft.

CTC: You mentioned the Yemen cargo plot targeting U.S.-bound cargo planes back in October 2010. In the summer of 2017, an alleged plot in Australia was thwarted where the allegations were that the Islamic State airmailed a partially assembled explosive device all the way to a cell in Australia who were in touch with the Islamic State and were planning to take out a passenger jet there with the device. How much of a wake-up call for your agency and U.S. agencies was that plot?

McAleenan: Well, actually, it’s a threat that we’ve been very focused on, along with our partners at TSA, really since 2010 [the Yemen air cargo plot]. That was our wake-up call in terms of the risks of a potential device in a small parcel in an aviation environment, whether on all-cargo aircraft as it was then or potentially a passenger aircraft like we’ve seen more recently. But I do think [the Australia plot] galvanized international attention in partner agencies in Europe and elsewhere to focus on this threat. From my perspective, it starts with getting good data, what’s entering the supply chain, and having those partnerships with foreign governments on the intel exchange so that we’re seeing the risk in the same way and we can together make good decisions about what should be leaving on aircraft, what should be inspected before it goes, and making sure that we have the highest common denominator on our aviation security standards as well.

So that’s an area where CBP has that hybrid responsibility. We’re a security agency, but our regulatory authority allows us to collect data in a way that we can support aviation security and counterterrorism investigations in partnership with other agencies in the United States and internationally.

CTC: A big part of this is the foreign fighter travel concern. Thousands of Islamic State veterans are believed to have survived the collapse of the territorial ‘caliphate.’ What are you doing in your agency to identify these individuals and to prevent them from traveling into the United States? And what are you doing internationally with partner countries?

McAleenan: This is an area we’ve been focused on since the outset of the conflict in Syria and Iraq with ISIS, and just as you articulated in the question, both trying to identify potential foreign terrorist fighter travel to the U.S. through visa application, through the visa waiver country partner, through their ESTA application [Electronic System for Travel Authorization] but also very importantly, helping partner governments build the capacity to identify risk in those travel cycles. Two very important U.N. Security Council resolutions over the last two and a half years, 2178 and 2396, both have focused on the need for that global capacity-building to identify high-risk travel.

We can’t have a situation where one government has information on a potential foreign terrorist fighter, has shared it with a partner government, and the ball is dropped because they haven’t built a capacity to check at their border or upon international air travelers entry to their country and actually interdict and address that threat. So we’ve tried to really offer our lessons learned since 9/11, not only our own Automated Targeting System Global [ATSG], which is a system that we’ve offered to support partners around the world—we have over two dozen partnerships right now with ATSG—but also an open-source cloud protocol called the Global Travel Assessment System [GTAS] that we’ve created to really support capacity-building with any interested partners that want to augment the source code or really get in depth. It’s cloud-enabled. It’s something that we want to continue to improve and integrate with partners.

We take our capacity-building responsibility in this area very seriously and have had a lot of successes after the focus at the global level on foreign terrorist fighters and the U.N. Security Council resolutions. We’ve also had a role in partnering with our European friends in looking at their systems, ranging from the development of their ETIAS system, which is going to be an ESTA-type system for electronic visas, to supporting their development of their own organic reservation data analysis systems, as many countries in Europe have gone to under the PNR [Passenger Name Recognition] Directive, to really supporting good watch list checking at their external borders. These developments have been positive enhancements to our net security.

The challenge we face going forward is how can we share information while respecting privacy and civil rights and civil liberties, and distinctions in partner countries’ domestic law? I think technology is the answer there as well, with anonymized data sharing that’s going to allow watchlists to interact with transactional data in a way that professionals can make decisions while protecting the privacy of their citizens. That’s the next frontier that we really need to work on.

CTC: Have Western countries, including the United States, identified most of the foreign fighters who traveled to Syria and Iraq in recent years?

McAleenan: I think there’s a sense that most have been identified, through U.S. efforts, through foreign partner efforts, and on the battlefield. In terms of determining which identify they might be using and how their travel looks, that’s where we need to continue to focus the effort. It wasn’t so many years ago when we faced skepticism when working with European counterparts on whether a foreign terrorist fighter would enter through a refugee process. The [November 2015] Paris attack and subsequent attacks have proven that’s a methodology that the terrorists are willing to utilize.

So I think we know who most of the foreign fighters are. It’s a matter of working together to make sure we understand their movements, what risks that additional training and battle-hardening produces for Western governments.

CTC: What has been the importance of CBP’s National Targeting Center in U.S. counterterrorism efforts?

McAleenan: The National Targeting Center has become a really fundamental capability that supports the interagency counterterrorism effort, especially as it relates to the movement of people and goods or finance that could present a risk. The National Targeting Center was built out of the imperative after 9/11 to identify potential risky travel and cargo coming to the United States. But it’s become a great deal more. When it comes to building out that capability, we’ve seen partner agencies take advantage of it for their related mission sets, to include Immigration and Customs Enforcement’s Homeland Security Investigations for their visa assessment; our Coast Guard partners, who are assessing the risk presented by crewmen on a cargo vessel or a cruise ship coming toward the United States; and the Department of State for their visa application and recurrent visa vetting. If someone’s added to the watchlist after they’ve been issued their visa, the National Targeting Center helps identify that risk and ensures that that visa could, if necessary, be revoked and any necessary action can be undertaken by Department of State.

The National Targeting Center is an essential component supporting all those interagency missions. And that’s why we’ve been asked to build on the foundation of the National Targeting Center to create the National Vetting Center, which will be a distinct entity and create a common set of tools and processes for our interagency partners to use to vet and identify security threats and create a center of excellence, including intelligence community data with transactional data so that we can take our threat identification to the next level.

---

b Editor’s note: ESTA is an automated system that determines the eligibility of visitors to travel to the United States under the Visa Waiver Program.

c Editor’s note: The European Travel Information and Authorisation System, which the European Commission hopes to put into operation by the end of 2021, “will carry out pre-travel screening for security and migration risks of travellers benefiting from visa-free access to the Schengen area.” “Security Union: Commission welcomes the European Parliament’s adoption of the European Travel Information and Authorisation System (ETIAS) and a stronger EU-LISA Agency,” European Commission, July 5, 2018.
CTC: Turning to another tool in your toolkit—the Tactical Terrorism Response Teams deployed at U.S. ports of entry. How have they helped counter terror threats?

McAleenan: Let me provide you with some context to explain the key role they play. In the immediate aftermath of 9/11, the U.S. Customs Service established an office of anti-terrorism. I was the second permanent director of that office. And what we did was really focus on building the policies and protocols to make sure that we were identifying and addressing potential terrorist risks at the border effectively. We were already building on strong foundations. Our field operations, which oversee ports of entry, had a well-developed capability for narcotics detection, both being brought by travelers as well as in cargo, and we were able to take that existing targeting capability and apply it to a new priority mission relatively quickly. And then, of course, make it mandatory on some of the

Editor’s note: Tactical Terrorism Response Teams are “deployed at U.S. POEs and consist of CBP Officers who are specially trained in counterterrorism response. TTTRT Officers utilize information derived from targeting and inspection to mitigate possible threats. TTTRT officers are immersed in the current and developing threat picture through the continuous review of information, and are responsible for the examination of travelers identified within the Terrorist Screening Database, and other travelers suspected of having a nexus to terrorism who arrive to a POE.”


Commissioner of the United States Customs and Border Protection, Kevin K. McAleenan, (pictured center) at the Nogales Port of Entry earlier this year (CBP)

That process started in the field, teaching our officers how to do counterterrorism interviews, which they were well-suited to as professional interviewers, but then when we built out the targeting capability, it became a very headquarters-driven function. There was a sense that headquarters had the best awareness of the intelligence, that they could apply risk algorithms in a way that would give a broader sense of what might be coming at us. And with the creation of the Terror Screening Center and the National Counterterrorism Center process, targeting became a headquarters-run mission set.

The Tactical Terrorism Response Team concept was a conscious effort by the Office of Field Operations to get back to that mission imperative in the field, to take advantage of those instincts and encounters that our officers have with travelers to make decisions based on risk for people that might not be known on a watch list, might not be a known security threat, and they’ve been a tremendous success in identifying previously unknown individuals that present a security risk and in denying entry to folks that were not watch listed prior to their travel. So it’s been a real way to galvanize our counterterrorism mission and ensure field officers remain engaged.

CTC: You mentioned the Tactical Terrorism Response Teams have had significant success. What metrics does your agency use to assess the effectiveness of this and the broader enterprise? Because that’s always been the challenge for every CT agency, how you measure effectiveness.

McAleenan: We use a variety of metrics, both hard data on individuals that were not watchlisted that were determined to be security risks during a border interview or inspection and were denied entry,
that’s one fairly obvious measure. But also watchlist nominations that devolve from a good interview at the border. That’s a second one we utilize. Then on the positive side, we have a lot of people traveling to different regions of the world that want to offer information to the government about security risks that they saw in their foreign engagements. Being able to offer that information to agency partners is another way we measure our success.

CTC: The Novichok attack in Salisbury in the United Kingdom earlier this year really focused attention on the CBRN threat. When it comes to protecting the U.S. homeland from the entry of radioactive material, chemical agents, nerve agents, biological agents, what steps are you taking to further build capability on that front?

McAleenan: We maintain a world-leading regime for detecting and responding to radiological and nuclear isotopes that might cross our border. Nearly 100 percent of seaborne and landborne as well as air cargo containers are inspected for radiological and nuclear materials present. And we resolve thousands of alarms every year through an advanced telecommunications process and very disciplined protocols. The key is to make sure this strong regime is maintained. Many of our radiation portal monitors are coming up on their end of life. We’ve been able to extend their effective life with advanced algorithms that are giving us an even better sense of reducing both the false alarms and ensuring that we identify potential threat material. So that’s something we need to maintain and continue to invest in.

When it comes to chem-bio threat detection, recent experiences abroad and just the ongoing threat where we’ve learned from ISIS’ development of this kind of capability on the battlefield and potentially other terrorist groups’ interest in it as well, means we need to stay out in front of it. I think we’re getting a kind of live test with the high-potency synthetic opioids that we’re currently seeing. Part of building an effective inspection regime is you have to have the opportunity to interdict things and detect them to build that muscle tissue, if you will, with the field professionals and with our protocols. Our ongoing experience with dealing with fentanyl and the risk it presents, even in very tiny amounts, to our personnel, to our canines, and the fact that we’re now making thousands of pounds of seizures a year on fentanyl, which is potent in droplet size, is going to position us well for chemical threats in the future.

I’m also very excited to see the development of the Countering WMD office at the Department of Homeland Security. I think that focus will help galvanize the overall departmental mission. It will be able to work with our DHS science and technology directorate and galvanize the R&D funding we need for that kind of pre-release detection capability. I’m also looking at it through the lens of advantages in computed tomography on the aviation security side, how we can apply that with the right algorithms to see what’s in the small packages we’re dealing with due to the growth of e-commerce and how that can apply to the chem-bio threat detection piece.

CTC: When it comes to radioactive materials potentially entering the United States, the United States is widely recognized as a world leader in its radiation detection systems. But when you get to something like Novichok, which was widely reported [in the Salisbury case] to have been stored in a perfume bottle, the worry is that it would raise few questions and be easy to trans-
ones targeting certain countries. I wondered if you could speak to how your organization is implementing that. And then, more specifically, how you assess the effectiveness of that program as a CT tool.

McAleenan: The presidential proclamation that’s in effect on travel from certain countries is really focused on the integrity of the document issuance by that foreign partner. And the way the Department of Homeland Security has applied it—and it’s not a CBP function—is to really assess the validity of those document issuance authorities, the security features of the document itself, and whether that document can be trusted as someone applies for a visa or seeks to travel internationally. So I think it’s fairly limited in scope. It’s very targeted. One of the countries has already achieved compliance and been removed from that list. But CBP’s responsibility, especially as we work toward the second executive order on a national vetting center, is to build out our ability to do individualized risk assessment effectively. If you have the right system for assessing the risk presented by an individual, it can be applied without requiring a country-based approach. And we think that’s most effective.

CTC: More broadly, how do you handle CBP’s dual mission of keeping dangerous people and things out but also safeguarding and expediting lawful trade and travel. The vast majority of travelers don’t pose a threat. How do you balance these two things, which could be seen to directly conflict with each other?

McAleenan: Our central purpose is ensuring and facilitating lawful trade and travel while preventing risk from coming into the country. So we’ve described it as a balance. We’ve described it as two sides of the same coin. We like to start with a good foundation on the intelligence side, a good understanding of the risk presented that we need to interdict. But then we try to make the haystack smaller. We really try to build our trusted population. That’s a philosophy we’ve taken in terms of our travelers as well as our trade partners. On the travel side, global entry has grown to almost seven million people. Their presence is critical. Their contribution to our economy is essential. And in terms of international trade, $4 trillion moves across our border every year. The vast, vast majority of that is compliant with all laws and regulations. We need to get out of the way of that lawful commerce while doing our best to, first of all, stop any security threats, but also to address contraband and then trade violations. It’s a multifaceted strategy. It’s our central charge as a border security, border management agency, and we work very hard at it.

CTC: You mentioned engagement with the private sector. On the one hand, they have a vested interest in complying and ensuring the security of trade because it keeps business going, but on the other hand, security can be costly. How do you work with the private sector to ensure their participation in this mission?

McAleenan: It’s a critical partnership for us. We just had our trade symposium in Atlanta with over 1,200 representatives, the biggest American importers and exporters, customs brokers, foreign partners, foreign manufacturers, air carriers, really across the board of private-sector businesses that we need to relate to do our mission effectively. We try to find that sweet spot where compliance produces benefits economically in terms of the ease of border crossing, in a way that enhances security of the system. They can maintain their certainty and predictability on their supply chains, and we can work together to have a much better system overall. That’s the sweet spot that we’re looking for in our private-sector partnerships.

One way we’re applying that, just in the air environment, for instance, is the advances in facial comparison technology. We have the entry-exit mandate that CBP was given in 2014 to ensure biometric exit is captured for anyone leaving the country. We have an Oversight report where we have good biographic confirmation for air and sea. We’ve been instructed to extend that to biometric confirmation. The ability to compare pictures in a database against a picture of a traveler expeditiously and accurately has just advanced dramatically over the last five years. So we tested this technology with over 600,000 travelers and got a 98 percent match rate.

We can make matches because we’ve got existing photos on over 97 percent of the traveling public, including U.S. persons via their passport pictures and foreign visitors who should have had a picture captured on entry. So we’re able to not only make that security confirmation, we’re able to partner with our air carriers to expedite the boarding process. An A380 at LAX right now for Lufthansa or British Airways is boarding in half the time. You don’t have to take stack. Then, we have to apply good analytics. We have to have the right data coming in on those transactions; we have to have it verified and audited in terms of the accuracy. And then we have to apply the right risk algorithms. They’re based on operational experience; they’re based on intelligence; and now we’re using more advanced analytic technologies to help us make good risk-assessment decisions on people and goods crossing.

The last part is relying on our people, training them effectively, empowering them with the technology solutions to make good decisions and to do good interviews at the border. Because economic security is national security. One of the three pillars in the national security strategy of the United States is trade and economic strength. CBP plays a critical role in that, especially in terms of travel facilitation and trade facilitation. Travel exports are the largest component of our export economy. We want to welcome foreign visitors. Their presence is critical. Their contribution to our economy is essential. And in terms of international trade, $4 trillion moves across our border every year. The vast, vast majority of that is compliant with all laws and regulations. We need to get out of the way of that lawful commerce while doing our best to, first of all, stop any security threats, but also to address contraband and then trade violations. It’s a multifaceted strategy. It’s our central charge as a border security, border management agency, and we work very hard at it.

---

Editor’s note: Under a Presidential Proclamation issued in September 2017, entry restrictions were placed on nationals from Chad, Iran, Libya, North Korea, Somalia, Syria, Venezuela, and Yemen. “Presidential Proclamation Enhancing Vetting Capabilities and Processes for Detecting Attempted Entry Into the United States by Terrorists or Other Public-Safety Threats,” White House, September 24, 2017.

Editor’s note: In April 2018, Chad was taken off the list of countries subject to entry restrictions. “U.S. lifts travel ban on Chad citizens: White House,” Reuters, April 10, 2018.
out a QR code. You don’t have to fumble with a boarding pass. You simply walk up. Your picture’s confirmed. And you’re boarding that aircraft. And it protects privacy as well. So as we find that sweet spot, “Hey, we can enable your traveler. We can provide a better customer experience for your boarding process, and turn that around and make your international arrivals more efficient. And we’re meeting our security mandate, and we’re protecting privacy at the same time.” That’s the kind of partnership on the security side that we’re looking for.

CTC: Thinking forward to not just the next couple of years, but the next 20 years, with biometrics, with facial recognition, with all these new technologies becoming available, how do you see your agency best using those technologies to speed up the entry process and to better protect the public?

McAleenan: I think the first and most fundamental aspect that’s going to be transformed is that important process of confirming identity at the time of border crossing. That family of four that’s going for their third trip to Orlando to go to Disney World from Germany, we’d like them to walk up, have their picture taken together, and be able to confirm their arrival, assess risk, and do an interview very quickly. So you take a 10- to 12-minute process and reduce it to two minutes with higher security, and you’re empowering that law enforcement officer to do their mission as opposed to administrative tasks with documents and swipes and statements. So confirming identity expeditiously in a way that reduces wait time and increases security is probably the fundamental thing that we think biometrics is going to deliver.

We also believe we can get to that fidelity with entry and exit. The U.S. did not invest in departure control approaches. We don’t have the staffing going outbound at airports. We don’t do two-way border crossings like many countries do. We do, however, want to get to the point where we can use biometrics to know who’s in and who’s out of the country. We think they’ll enable that beyond the air environment and certainly in the sea environment but also in the land border. So the biometric potential, for us, is very powerful. Doing it in a way, with facial, it’s privacy-protected because you don’t have to take your travel document out and hand it to a number of different people in your process. The system confirms it, we have the picture on file, we don’t have to make new collections for U.S. travelers. So it’s a very powerful technology that we think we can apply effectively.

CTC: The United Nations is developing best practices for the responsible use and sharing of biometrics between members in counterterrorism. How important is coming up with global standards on this?

McAleenan: One of, I think, the important developments in the U.N. Security Council Resolution 2396 is the affirmative statement that these systems should be developed by national governments. There should be a biometric capability for border crossing. I think that’s the next challenge that you outlined that we need to tackle, is how can we take these national capabilities and make them more effective on the international side while protecting privacy and civil rights and civil liberties. There are very strong regimes in Europe, in the U.S., in Canada, in many countries in Asia. We need to find a way to share that information across borders to facilitate travel and protect people at the same time. That’s the next challenge. I think technology is the answer to that challenge, too, in terms of protecting privacy.

CTC: You’ve had a great amount of experience in U.S. counterterrorism thinking about possible threats. The 9/11 Commission report famously called the failure to anticipate and prevent 9/11 “a failure of imagination.” What keeps you up at night when you look at the threat picture from terrorism, and what do you see as the greatest challenges in the future?

McAleenan: I’m concerned about potential terrorism threats attempting entry in the regional migration flow toward the U.S. southern border. We need to be vigilant of potential security threats created by global human smuggling organizations who are offering access to the United States, including to individuals coming from conflict zones in the Middle East and East Africa, and bringing them all the way to our border through South America. From a CT perspective, that is what keeps me up: known threats exploited.

And there’s a final layer of the challenge that we haven’t talked about, and that is the increasing expectation of travelers, in terms of the customer-service side. So even as we increase our security and even as we try to keep up with five-percent growth a year in international travel, we need to provide better service because that’s what our citizens and international visitors expect. That dynamic creates a lot of pressure on border agencies.

---

Citations


---

Editor’s note: A QR code is a matrix barcode providing the ability to check in to a flight via a mobile device.