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**Use of Biometrics within Sub-Saharan  
Refugee Communities**

Jodi M. Delgado

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4850 Mark Center Drive Alexandria,  
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# Executive Summary

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## Introduction

Biometrics typically comprises fingerprint patterns, iris pattern recognition, and facial recognition as a means of establishing an individual's identity. Biometrics creates and confirms the identity of an individual.

## Biometrics in Africa

In January 2012, the United Nations High Commissioner for Refugees (UNHCR) reported that Liberia was the first to undertake refugee registration through biometrics in West Africa. In January 2013, UNHCR conducted the first biometric registration exercise in South Sudan using digital fingerprint technology. At least 37 countries, including many in sub-Saharan Africa, have multiple applications (sometimes five or more) of developmental biometrics, and in these countries it is commonplace for citizens to provide multiple biometrics to different government agencies and sometimes to private firms.

The need to use biometrics to identify refugees is acute, because such a population is subject to recruitment by rebel groups. The presence of armed groups within refugee camps, including members of known militia, rebel, and terrorist groups such as Al-Shabaab and M23, is a particular concern. Incorporating biometrics within refugee camps would help to develop biometric enabled intelligence on those rebel and militant groups who are seeking to use the camps to recruit, thereby preventing their infiltration and establishing greater regional and global security. Biometrics could also be applied to enhance border and refugee camp security, which would deny access to those seeking to harm local and regional security.

## Conclusions

Biometrics affords refugees a credible means of establishing identity and likely increases the political viability of projects designed for their benefit, by improving accuracy of identification and resistance to fraud.

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# 1. Background

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Biometrics creates and confirms the identity of an individual. Formal identification is a prerequisite for development in the modern world, and the inability to authenticate oneself inhibits access to basic rights and services, including education, formal employment, financial services, voting, and social transfers, among others. Unfortunately, under-documentation is pervasive in the developing world. Civil registration systems, if they exist, only cover a fraction of a country's population because they do not take into account refugees, foreign laborers, and other non-citizens. This "identity gap" is recognized not only as a symptom of underdevelopment, but as a factor that makes development more difficult and less inclusive because it severely limits opportunities for economic, social, and political development. Although biometrics is associated with law-enforcement applications in the developed world, in sub-Saharan Africa it is associated primarily with civil applications.

Biometrics typically comprises fingerprint patterns, iris pattern recognition, and facial recognition as a means of establishing an individual's identity. Fingerprint comparison is the oldest form of identification, but iris recognition is considered the most accurate biometric technology for identity authentication because it identifies an individual based on mathematical analysis of the random pattern visible within the iris. Facial recognition is more widely used in some parts of the world, but when used as a single-modal approach, there are many limiting factors that make it significantly less reliable. Other applications, such as gait recognition, voice recognition, and rapid DNA analysis, are being studied and developed to contribute to the biometric effort.

Biometrics produces identity resolution, which can be used in counterterrorism and counterinsurgency, ultimately leading to an increase in security. In addition, research has proved weak border enforcement allows for the undocumented movement of individuals between countries.<sup>1</sup> Conversely, strong border enforcement, augmented through the use of biometrics systems, allows for closer control and monitoring of the movement of individuals. Those countries with weak or nonexistent biometrics systems to support

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<sup>1</sup> Walter Ewing, "Sabotaging National Security: The Paradox of U.S. Border-Enforcement and Immigration Policies," Immigration Policy Center.

border enforcement are used as points of entry for terrorists and transnational criminal organizations, which affects U.S. interests.<sup>2</sup>

The concept of using biometrics within refugee populations is controversial. Researchers argue that biometrics will inhibit refugees' rights to freedom of movement and potentially be used against them, but the benefits of biometrics within such population—increasing food security and addressing known criminal elements within the population—cannot be ignored. Developed countries have long used biometrics for forensics and to maintain security through law-enforcement efforts, but fewer have incorporated them into their national identity systems or used them to underpin public service delivery. On the other hand, developing countries rely on biometrics for non-security applications, such as civil registries, voter registration, social transfers, health services, pension payments, but the security application of biometrics is rarely seen. Many people living in poor countries lack official identification cards. These individuals therefore do not formally exist and as a result are excluded from the many points of engagement between a modern state and its citizens. Some form of official identification documentation can be an essential step toward security, freedom, entitlement, and inclusion. Identification also raises concerns about government encroachment on citizen's rights and is associated with victimization, oppression, and exclusion. Biometric-enabled identification elicits similarly opposing views; some see it as a means to improve services and others associate it with an invasion of personal privacy.<sup>3</sup>

A birth certificate serves as the most common form of official documentation as it is the only document that can prove age, nationality, and parentage, yet estimates of the rates of unregistered births in many parts of the world are sobering. According to a UNICEF analysis, in 2000, sub-Saharan Africa had the second highest percentage of unregistered births (55 percent). Even for those births that are registered, birth certificates are often difficult to access due to poor record keeping, lack of mobility, or corruption, especially among the migratory population, refugees included.<sup>4</sup>

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<sup>2</sup> Representative Michael T. McCaul, "A Line in the Sand: Countering Crime, Violence and Terror at the Southwest Border," A Majority Report by the United States House Committee on Oversight, Investigations, and Management. One Hundred Twelfth Congress Second Session. November 2012.

<sup>3</sup> Alan Gelb and Julia Clark, "Identification for Development: The Biometric Revolution," Center for Global Development, Working Paper 315, January 2013, [http://www.cgdev.org/sites/default/files/1426862\\_file\\_Biometric\\_ID\\_for\\_Development.pdf](http://www.cgdev.org/sites/default/files/1426862_file_Biometric_ID_for_Development.pdf)

<sup>4</sup> Ibid.

## 2. Where and How in Africa Is Biometrics Being Used?

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In January 2012, the United Nations High Commissioner for Refugees (UNHCR) reported that Liberia was the first to undertake refugee registration through biometrics in West Africa. Biometric registration is the fingerprinting of the refugee population to verify identity. A fingerprint is completely unique to an individual and remains unchanged throughout an individual's lifetime. The electronic identification of persons is to enhance protection and avoid or detect double and multiple registrations. During the exercise, all refugees of Bahn and Saclepea camps 14 years or older were fingerprinted. The biometric registration system efficiently marries fingerprinting identification with UNHCR's refugee database system called "proGres." The refugees were reportedly very supportive and open to the idea of being fingerprinted. Before the biometric exercise in Liberia began, a mass information campaign was undertaken during which refugees were informed about the process and nationals requested to desist from registering because doing so could have adverse consequences on their citizenship.<sup>5</sup>

In January 2013, the UNHCR conducted the first biometric registration exercise in South Sudan using digital fingerprint technology. The nearly 200,000 refugees in the country had been previously registered in standard databases, but it is believed that biometrics will help to better identify refugees for a more efficient deployment of assistance to them. In the Yida refugee settlement (with more than 65,000 refugees, it is the largest in South Sudan), biometrics is a critical way for UNHCR to target services, prevent multiple registrations, and make service planning and delivery more efficient. Yida is close to the Sudan-South Sudan border, and the UNHCR suggests that it is not unusual for refugees to risk their lives by returning home to escort their family members to safety. These movements make maintaining accurate population figures for the refugee settlement a necessary challenge.<sup>6</sup>

According to the UNHCR, it is using this registration process to update information on special needs groups, such as female-headed households, pregnant or lactating

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<sup>5</sup> "UNHCR Begins Biometric Registration," *Refugees Daily*, November 3, 2012; "UNHCR Begins Biometric Registration," *The Inquirer*, [http://www.theinquirer.com.lr/content1.php?news\\_id=344&main=news](http://www.theinquirer.com.lr/content1.php?news_id=344&main=news).

<sup>6</sup> "New Refugee Arrivals at South Sudan's Yida Settlement," UNHCR, The UN Refugee Agency, November 16, 2012, <http://www.unhcr.org/50a62ca89.html>; Adam Vrankulj, "UNHCR Relies on Biometrics for Refugee Assistance Programs in South Sudan," [www.biometricupdate.com](http://www.biometricupdate.com), January 1, 2013.



women, and malnourished children. In this way, protection staff can quickly identify and meet the needs of the most vulnerable in a camp made up of more than 70 percent women and children.<sup>7</sup>

Biometrics and digital fingerprinting are proving themselves to be essential technologies for managing refugee assistant programs for the UNHCR. The UNHCR is also working in partnership with the Senegalese government to provide digitized biometric ID cards to some 19,000 refugees. These biometric ID cards include a picture of the holder as well as fingerprints and biographical data.

In March 2013, the UNHCR posted a Request for Proposal (RFP) for a new supplier to implement a biometric identity-management system for quick and accurate enrollment and verification of persons of concern across UNHCR operations.<sup>8</sup> In 2010, the UNHCR announced its policy on biometrics in refugee registration and verification processes. The policy stated that the UNHCR should introduce the collection of biometric data as a regular and routine feature of its registration process.<sup>9</sup>

At least 37 countries, including many in sub-Saharan Africa, have multiple applications (sometimes five or more) of developmental biometrics, and in these countries it is commonplace for citizens to provide multiple biometrics to different government agencies and sometimes to private firms. The number of biometrics applications is where the problems and risks of fraud begin. The bulk of biometric coverage across Africa has come from voter registration projects and a handful of national identity initiatives, yet many of these are incomplete and still in the planning or enrollment phase, and none of them wholly incorporate the refugee population.

UNHCR added a biometric fingerprint module to proGres, created under Project PROFILE in five country operations, including Kenya. This expansion of biometric capability occurred in response to concerns of misrepresentation of Kenyans as Somalis in the Dadaab and Kakuma refugee camps. Under its Immigration law, Kenya has the right to regulate the presence of non-nationals in its territory and may therefore prevent certain people from entering or remaining in Kenya, including those deemed a threat to its national interests. But international and Kenyan law obliges Kenya to allow all people claiming to be refugees (“asylum seekers”) access to Kenyan territory to seek asylum with the Kenyan authorities or with UNHCR, and every asylum seeker has a right to have his or her case considered.<sup>10</sup>

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<sup>7</sup> “Modern Technology Helps Meet the Needs of Refugees in South Sudan,” *Making a Difference*, December 27, 2012.

<sup>8</sup> Request for Proposal: No. RFP/2012/507 For the Provision of a Biometric Identity Management System. <http://www.unhcr.org/50c85dd69.html>, January 31, 2013.

<sup>9</sup> Ibid.

<sup>10</sup> “Kenya’s Forgotten Somali Refugee Crisis,” *Human Rights Watch*, March 2009.

Where used, biometrics helps (1) identify and manage asylum seekers' applications, (2) facilitate refugees' freedom of movement through incorporation into their travel documents, (3) the UNHCR prevent fraud in refugee camps, and (4) provide states with a workable means of reducing the detention of asylum seekers. Fraud occurs when individuals register as refugees multiple times under various names in order to receive more than one allowance of aid in the way of resources. This type of fraud inflates the population of the refugee camps, strains the resources, and contributes to an inequitable distribution of goods and services. Some argue that the use of biometrics has facilitated the enforcement of laws that operate to deny refugees and asylum seekers their basic rights, but interviews of refugees may prove otherwise.<sup>11</sup> The UNHCR has successfully used biometrics in West African refugee camps to assist in the registration of refugees and to prevent errors and fraud. UNHCR is expanding its capacity to make use of biometrics, and the refugees under its protection will likely benefit as a result. The use of biometrics has proven to be an effective check.<sup>12</sup>

Biometrics was introduced in Kenya in early 2012 specifically to support the elections. This is contrary to UNHCR reporting, which states that it is now registering and obtaining fingerprints from new arrivals before making certain entitlements available. UNHCR also coordinates with the Kenyan government by cross-referencing fingerprints of individuals aged fifteen or older with the Kenyan biometric database, thereby avoiding registering Kenyan nationals attempting to obtain assistance in the camps. Refugee camps are trying to improve the positions and well-being of locals because it is believed refugees have better status than locals. Currently, positions within the refugee camps are being staffed with local citizens.<sup>13</sup>

While biometrics, specifically fingerprints and iris scans, has been introduced, implemented, and used in Kenya, according to interviews conducted with officials within the Dadaab and Kakuma refugee camps in Kenya, the use of biometrics has not yet begun within the camps. One refugee camp official opined that the use of biometrics within camps is not feasible because of weak preexisting capabilities, general resistance, and poor connectivity. Improving the food pipeline and ensuring that food lasts longer were cited as factors in the push to introduce the biometric system in the two camps. Currently, refugees receive food twice a month, which is expected to last them 15 days. Refugees are reporting the food allocated to them lasts only 10 days, however. Camp managers and

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<sup>11</sup> Rebekah Alys Lowri Thomas, "Biometrics, International Migrants, and Human Rights." *Global Migration Perspectives* 17, January 2005, Global Commission on International Migration.

<sup>12</sup> Achraf Farraj, "Refugees and the Biometric Future: The Impact of Biometrics on Refugees and Asylum Seekers," *Columbia Human Rights Law Review* 42: 891–941, [http://www3.law.columbia.edu/hrlr/hrlr\\_journal/42.3/Farraj.pdf](http://www3.law.columbia.edu/hrlr/hrlr_journal/42.3/Farraj.pdf).

<sup>13</sup> The IDA researcher interviewed four individuals associated with the refugee camps in an attempts to gain their inside understanding of the application of biometrics within their respective refugee camps.

aid agencies assert that biometric system would help resolve this current situation. The success of biometrics in addressing food security will have an indirect and positive impact on overall regional security within the camp and in the host community. On the other hand, it is believed refugee leadership will resist use of biometrics because it will be perceived as being used to return some refugees to their home countries, at which point they would lose their refugee statues and the opportunity to relocate to a developed country.

### 3. Recruitment within Refugee Camps

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For exiled rebel groups, a refugee population provides international legitimacy, a shield against attack, a pool of recruits, and valuable sources for food and medicine. In essence, refugee camps serve as rear bases for rebels and militant groups who attack across the borders.<sup>14</sup> While the highest percentage of refugee camp “residents” are young men between the ages of 15 and 25, the historical taboo against the use of child soldiers seems to have decisively broken down, and the problem has become geographically widespread.<sup>15</sup> Modern communication methods, including cellular telephones and the Internet, are found within the camps, suggesting communication across the region is easily facilitated and not always for beneficial purposes.

The presence of armed groups within refugee camps, including members of known militia, rebel, and terrorist groups such as Al-Shabaab and M23, is a particular concern. Recent arrests of armed combatants at the Dadaab refugee camp in Kenya demonstrate the threat posed by the infiltration of refugee populations by militia and rebel groups, as well as criminal organizations.<sup>16</sup> Kenya has seen a huge influx of refugees over the recent years owing to the political instability experienced in its neighboring states, particularly in the Horn of Africa. The Al-Shabaab insurgency in Somalia has seen Kenya give refuge to countless individuals who cross its borders daily to escape from the war in Somali. These refugees, whose status was traditionally conceived and presented as humanitarian issues, are now increasingly viewed as security threats.<sup>17</sup> Refugee camps located in or near conflicts are often vulnerable to armed insecurity, threatening displaced people and host communities on the one hand and humanitarian workers on the other. A refugee camp can be targeted by domestic and foreign security forces and used as training grounds and recruiting bases for nonstate actors. The general insecurity in Somalia can act as a catalyst to this, and it may be difficult for the Kenyan authorities to differentiate

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<sup>14</sup> Sarah Kenyon Lischer, *Dangerous Sanctuaries: Refugee Camps, Civil War, and the Dilemmas of Humanitarian Aid* (Ithaca, NY: Cornell University Press, 2005).

<sup>15</sup> P.W. Singer, *Children at War* (New York: Pantheon, 2005), 15, 38.

<sup>16</sup> Eliza Johannes and Ivanna Djak, “Refugees, IDPs, and Insecurity in Sub-Saharan Africa Refugee Camps as a Security Threat in the Great Lakes Region of Africa,” October 2012.

<sup>17</sup> Edward Mogire, “Refugee Realities: Refugee Rights Versus State Security in Kenya and Tanzania,” *Transformation: An International Journal of Holistic Mission Studies*, January 2009.

between genuine refugees and insurgents. The presence of small arms in refugee camps acts as a threat to regional and national security.<sup>18</sup>

Incorporating biometrics within refugee camps would help to develop biometric enabled intelligence on those rebel and militant groups who are seeking to use the camps to recruit, thereby preventing their infiltration and establishing greater regional and global security. Biometrics could also be applied to enhance border and refugee camp security, which would deny access to those seeking to harm local and regional security. Protecting the refugees within the camps from infiltration and preventing the creation of safe havens by rebel and terrorist groups seeking to recruit mostly children will reduce the violence in the region and maintain the rights of the refugees.

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<sup>18</sup> Charles M. Mwalimu, "Refugees and State Security: Kenya's Obligation Under International Humanitarian Law and the Impact of the Law on State Security," [http://www.academia.edu/3471520/Refugees\\_and\\_State\\_Security\\_Kenyas\\_obligation\\_under\\_International\\_Humanitarian\\_Law\\_and\\_the\\_Impact\\_of\\_the\\_Law\\_on\\_State\\_Security](http://www.academia.edu/3471520/Refugees_and_State_Security_Kenyas_obligation_under_International_Humanitarian_Law_and_the_Impact_of_the_Law_on_State_Security).

## 4. Conclusion

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Establishing a proactive means of ensuring not only the region's security but also that of U.S. interests could go a long way toward ensuring that the refugees are afforded the rights to which they are entitled and not forced to live in fear in a home that is not theirs.

Biometrics affords refugees a credible means of establishing identity and likely increases the political viability of projects designed for their benefit, by improving accuracy of identification and resistance to fraud. The application of biometrics to refugees could potentially result in violations of privacy, misidentification, stigmatization, and the potential to block meritorious asylum applications; however, interviews of refugees suggested otherwise.

The increased use of biometrics could help enforce a right that UNHCR has long considered particularly important, namely the right of refugees to travel to seek opportunities for education, training, and employment. Refugee travel documents (RTD) are integral in preserving refugees' freedom of movement, both within countries of refuge and third countries. As travel-related security concerns are becoming commonplace, challenges to the authenticity of RTDs are becoming more common and therefore undermining refugees' ability to move freely. This is a place where biometrics could be incorporated to reduce the amount of travel fraud and assure the receiving countries of the authenticity of the individual as a non-security threat. But the use of biometrics is only effective if the enrollment process is completed accurately and efficiently.

Once a universal biometrics system is established, with a single point of enrollment, that supports voter registration, civil and social services, and with an interest in enhancing regional security, the communities supported by such a system will realize the overall benefits.

## **Appendix A. Partnerships**

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Biometrics information is stored in a number of databases within the United States. The Federal Bureau of Investigation (FBI) maintains the Integrated Automated Fingerprint Identification System (IAFIS), which is the largest database of fingerprints in the world. Local, state, and federal law enforcement agencies contribute their collected data to IAFIS. The Department of Homeland Security (DHS) maintains the Automated Biometric Identification System (IDENT), which is the central DHS-wide system for storage and processing of biometric and associated biographic information for national security; law enforcement; immigration and border management; intelligence; background investigations for national security positions and certain positions of public trust; and associated testing, training, management reporting, planning and analysis, or other administrative uses. The legacy Immigration and Naturalization Service (INS) developed IDENT in 1994 as a law-enforcement system for collecting and processing biometrics. In 2004, the DHS established the U.S. Visitor and Immigrant Status Indicator Technology (US-VISIT) Program as the first large-scale biometric identification program to support immigration and border management. IDENT has evolved over the years into the central DHS-wide system for the storage and processing of biometric data. IDENT stores and processes biometric data—digital fingerprints, photographs, iris scans, and facial images—and links biometrics with biographic information to establish and verify identities. IDENT serves as a biographic and biometric repository for DHS. Effective March 2013, US-VISIT changed its title to the Office of Biometrics Identity Management within DHS.<sup>19</sup>

IDENT and IAFIS are considered interoperable, with some limitations. The Department of Defense (DOD) also maintains its own system that feeds into IAFIS and can search both IAFIS and IDENT, with limitations. The FBI, DHS, and DOD also maintain foreign biometric exchange programs with their respective law enforcement, immigration/homeland security, and military counterparts; however, they are frequently seen as stovepiped in that the data does not easily transition the agency/affiliation barriers.

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<sup>19</sup> “Privacy Impact Assessment for the Automated Biometric Identification System (IDENT),” DHS/NPPD/USVISIT/PIA-002, December 7, 2012; Department of Homeland Security website, <http://www.dhs.gov/obim-biometric-identification-services>.

The mission of the FBI's Criminal Justice Information Services (CJIS) Division, Global Initiatives Unit (GIU), is to combat terrorism, improve law-enforcement effectiveness, promote public safety through the global exchange of biometric and other identity data, and provide rapid identification services. The goal is for the FBI to collect as much intelligence as possible to secure U.S. borders. The sub-goal is for the United States to help other countries deal with their criminal elements and prevent them from entering or otherwise affecting the United States. The benefit to the partner countries is to enable the ability to flag their records in the system and run the same through IAFIS, creating a shared biometrics/fingerprint exchange with enhanced capabilities.

The GIU maintains relationships with 70 countries throughout the world and has collected biometric records from 50 of them. Although the GIU does not currently have any formal agreements with any countries in Africa, it does have informal agreements with 17 African countries, including Uganda. To date, the GIU has only collected about 1,100 biometric records from African countries with the largest share, 800, coming from Morocco. The GIU has initiated outreach to another 16 African countries, but there are no real sharing prospects from any of them at this point. Some of the relationships between the GIU and identified countries are working jointly with DOD or the State Department. The GIU works through the country Legal Attaché (LEGAT) to conduct outreach with countries CJIS identifies as wanting to exchange biometrics, based on FBI priority intelligence requirements. The GIU researches the specific country's systems, processes, and procedures in advance and then representatives travel to the country to conduct site surveys. The GIU looks for opportunities within the countries in accordance with their own laws and offers biometrics, forensics, and emergency-response training to the country and funding for capacity enhancement (electronic capability). Some countries only share records for non-citizens, individuals with no status, and identified terrorists. There are currently no refugee or illegal entry records on file in IAFIS, although there was a proposal in place by the FBI to deploy U.S. personnel to collect from African refugee populations, based on assumption/intelligence of terrorist recruitment.<sup>20</sup>

The Biometric Identification Transnational Migration Alert Program (BITMAP) is a collaborative effort between with DOD, DHS, and FBI to biometrically search and enroll individuals, namely special interest aliens, terrorists, and gang members abroad, for intelligence and screening purposes. The purpose of BITMAP is to increase the national security of the United States and host-country partners through biometric enabled intelligence. BITMAP offers the capability to search, enroll, and identify known or suspected terrorists, violent international gang members, and other individuals of interest by leveraging the three primary U.S. databases with host-government coordination in order to identify and reduce threats to the United States and its foreign partners. The

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<sup>20</sup> Teleconference with Gary Wheeler, Unit Chief, Global Initiatives Unit, Criminal Justice Information Services Division, Federal Bureau of Investigation, 11 June 2013.



collected biometrics are the property of the host country, however, and are shared with the United States for intelligence purposes, virtually extending U.S. borders by vetting individuals prior to their arrival in the United States. The program also serves to build capacity for partner nations to collect biometric information and synchronizes biometric collection efforts with other U.S. Government entities operating in the overseas environment. BITMAP was initiated to track and map the movement of aliens as they migrate to the United States from Mexico and Central America, but the program has been extended to Africa through a partnership between U.S. Africa Command's Identity Resolution Team and DHS.<sup>21</sup>

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<sup>21</sup> Josh Piela, Deputy Program Manager, USAFRICOM J34 Special Programs Branch, "Identity Resolution Program BCC COCOM Panel," September 19, 2012, [http://biometrics.org/bc2012/presentations/DoD/06AFRICOMBCCslides\\_2012.pdf](http://biometrics.org/bc2012/presentations/DoD/06AFRICOMBCCslides_2012.pdf).

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