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Application of biometrics as a means of refugee registration: focusing on UNHCR's strategy

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Abstract

In 1950, the United Nations established the United Nations High Commissioner for Refugees (UNHCR), which claims credit for essential involvement in refugee issues. UNHCR teams have worked with several standard registration systems which, however, have still needed improvements. The search for the ideal system resulted in the establishment of the registration scheme – Project Profile, which became the basis for the proGres platform. UNHCR and Microsoft developed a mobile registration database, the proGres Refugee Registration Platform, which provided refugees with new identification documents. In 2006, the UN OIOS (United Nations Office of international Oversight Services) published a report which suggested combining fingerprinting with the new database. The UNHCR officially announced its policy of biometric refugee registration in 2010 and introduced the registration technology in collaboration with several organisations. In addition, the team implemented iris scans into specialized ATMs in Jordan. The most recent registration technology, BIMS (Biometric Identity Management System), was field tested in Thailand in July 2015. The overall outcome was very impressive and the UNHCR plans to continue the application of the technology in the future. The author believes that biometrics contribute to the promotion of national welfare and sees concerns and ethical objections as legitimate, while also recognizing that these issues may contribute to the elimination of defects in the system.

Key words: technology, BIMS, recognition, privacy

Introduction

Conflicts, natural disasters and social differences have always interlaced human existence. The European refugee crisis has become one of the major events of the 21st century. Refugees from Africa, Asia and the Middle East have been fleeing their native countries to escape war, poverty, famine and other disasters, and to seek safety and economic opportunities. Several humanitarian organisations and many volunteers acted fast to ensure safe passage and provided basic aid. However, the entire process still needs improvements in coordination, long-term aid and record keeping.

Refugee registration is crucial to the monitoring of identification data, state of health and number of refugees. Registration ensures that records are kept of their status, and it helps protect refugees against forced return, arbitrary arrest and detention. It can provide access to aid services and assistance and foster freedom of movement to help their inde-

pendence. The registration of children helps prevent military recruitment, keeps families together and assists the UNHCR in re-uniting separated children with their families. (UNHCR, UNHCR - Registration 2001 - 2015)

Biometric refugee registration has had positive responses. However, strong concerns have been raised as well and most cannot be overlooked. According to several experts and reports, the main negative features of biometrics are in maintaining informational and physical privacy and accepting religious objections. Experts worldwide have been working on reducing potential concerns and defects in the system, and are preparing to present "rapid" DNA testing for refugees. A new identification smart card and mobile application has already been launched.

Refugee registration

The United Nations has been significantly engaged in refugee issues since the wake of World War II and established the United Nations High Commissioner for Refugees (UNHCR) in 1950 (UNHCR, UNHCR - the history of UNHCR 2001 - 2015). The former Portuguese Prime Minister, António Gutteres, was elected High Commissioner in 2005 and the UNHCR intervened in numerous refugee crises worldwide under his leadership. The current High Commissioner, Filippo Grandi, was elected on 1st of January to serve a five-year term until 31st December 2020 (Agency 2016). The UNHCR has twice won the Peace Nobel Prize (UNHCR, UNHCR - the High Comissioner 2001 - 2015).

Biometrics

The term "biometrics" either refers to biological or physiological characteristics which can be used for automatic recognition, or it refers to the automated process of recognizing individuals based on such characteristics (National Science and Technology Council (NSTC) 2006). These characteristics include fingerprints, facial structure, iris or retinal patterns, deoxyribonucleic acid (DNA), voice and signature (Ng 2006). The collection of biometric information from individuals is called enrollment (National Science and Technology Council (NSTC) 2006). It can take place in a variety of settings and need not be voluntary, as in cases where an individual is recorded by a camera fitted with facial recognition technology (Thomas 2005). Biometrics have therefore become a powerful technology, not only for criminal, employee and security records, but also for refugee registration (Museum 2014).

UNHCR: standard registration procedures

Many UNHCR field offices have developed their own registration systems based on local requirements. The Field Based Registration System (FBARS), including a repatriation module, was developed as part of the UNHCR Registration Guide which was issued in 1994. The system captured basic refugee bio-data and allowed simple reporting. The Registration of Individual Cases System (RICS) was a system for the registration of individual refugees and was predominantly used in urban contexts. The system also included, in addi-

tion to detailed bio-data, modules on assistance and status determination. Both systems had an attached photo module, however they did not include other identification or ID card production capabilities. Microsoft donated 100 field registration kits; self-contained transportable registration systems, to the UNHCR during the 1999 Kosovo crisis. The kit produced ID cards containing a photograph, signature and two-dimensional bar-code including the coded refugee bio-data. The Electronic Resettlement Information Submissions System (ERISS) was developed under the auspices of the UNHCR Resettlement Section and was introduced in selected countries in 2000. The system led the user through the resettlement process and the file format was electronically submitted. (Deloitte and Touche 2001)

In October 2001, the Executive Committee of the UNHCR issued Conclusion No. 91, relating to refugee registration. The Conclusion reaffirms the importance of registration as a protection tool and sets basic guidelines for all registration processes. It also represents an agreement between the UNHCR and governments on how to conduct registration activities and the operational standards that apply (Project Profile 2003). As a key response to both protection and operational challenges, a standardized registration process and new database application “Project Profile” (providing data disaggregated by age, sex and other factors) was introduced by the UNHCR and a Microsoft team (Helen Deresky 2012) (UNHCR, Report of the United Nations High Comissioner for Refugees 2005).

Project Profile

As the Kosovo refugee crisis unfolded, a group of Microsoft employees contacted the UNHCR and offered their time and technical knowledge to cooperate on the development of a mobile registration system which would provide refugees with new identification documents. Upon analysis of refugees’ needs, it was found that beyond the most basic ones, the people were left without their homes and identity papers. As a result they were completely unprotected. The UNHCR suggested that Microsoft could help resolve these problems by providing technology in the form of software and hardware. This was to become an important partnership for both the UNHCR and Microsoft. The companies involved worked pro bono to establish the refugee registration scheme Project Profile, which had by then become the real solution to the UNHCR’s first problem analysis.

Project Profile was rolled out in the summer months of 2004 in various refugee camps, and Microsoft employees were encouraged to volunteer (Helen Deresky 2012). Project Profile teams introduced new registration tools and trained staff in 30 countries with 20 operations targeted for implementation during 2005. The new system contained individual registration records for an estimated two million refugees and other people of concern. The focus was on the need to expand the issuance of individual documentation and the further development of the new proGres registration software included a fingerprint biometrics facility to detect and prevent multiple registration in selected locations (UNHCR, Report of the United Nations High Comissioner for Refugees 2005). Other objectives included the development and redesigning of simple tools such as standard cards, forms,

software and biometrics in order to make registration tasks more uniformed and effective. (Nations 2004) In addition to launching Project Profile, the Profile team also developed the proGres registration platform. The platform allowed staff to maintain and update relevant refugee data and could be adapted (UNHCR, UNHCR - Registration project improves profile of refugees in Mozambique 2004).

UNHCR: proGres Refugee Registration Platform

Project Profile evolved into the proGres database where refugees are systematically registered and the data is eventually used for the administration of the status determination process. To grant refugee status, host countries required an initial eligibility interview and application, a follow up interview, a committee review and final government approval - all of which were tracked via proGres. Once status had been granted, proGres had the capacity to issue identification cards, to record addresses and voluntary repatriation forms and to identify individuals with special needs. (Microsoft 2015) The new software programme was tested in Turkey and Ghana before the current series of training sessions in the field (Hub 2015). Therefore ProGres was the basis for refugee registration innovation.

UNHCR has been attempting to globally deploy biometric tools, including fingerprinting and iris recognition, since 2003, with some success (UNHCR, PowerPoint Presentation - 1700_Hopkins_Hughs.pdf 2014). The United Nations Office of Internal Oversight Services (UN OIOS) issued a report in 2006, titled “Audit of Project Profile: Executive Summary”, relating to the UNHCR, and one of the first references concerns combining the proGres database with biometrics. “Fingerprinting technology has been attached to the core proGres system as an additional function; it was sponsored by the Dutch Government and developed by HSB Netherlands. While biometrics is seen as a very valuable tool for validating the registration process, it is a costly method to use. Further consideration of the use of the feature is therefore necessary and the Project Profile team should clarify in which situations the use of biometrics is recommended.“ (OIOS 2006). In 2010, the UNHCR assembly announced its policy on biometrics in refugee registration and verification processes (UNHCR, PowerPoint Presentation - 1700_Hopkins_Hughs.pdf 2014). Since then, the UNHCR has signed several contracts, initiated new cooperation and upgraded their technology, for instance with the IrisGuard cooperation in 2014: IrisGuard announced that the UNHCR had adopted the company’s iris recognition identity technology to bolster the proGres Refugee Registration Platform.

Using an iris recognition system linked to ATMs, the UNHCR created an innovative aid distribution network that gave more than a third of the unprecedented 630,000 refugees in the country access to vital monthly cash assistance (Inc. 2015) (Vrankulj 2014). Instead of receiving food packages, money vouchers or bank cards from UNHCR, Syrian refugees with data in the iris-identification system received a monthly text informing them that money had been placed in their accounts. They then used a specialized ATM owned by the

Cairo Amman Bank and rather than inserting a card and punching in a pass code, they waited for recognition by a specialized iris camera. Once their ID was recognized, they could withdraw their monthly allotment of cash. John Daugman, professor of computer vision and pattern recognition at the University of Cambridge and the inventor of Iris-Guard's technology, says that individuals do not have to remove their glasses or contact lenses to be identified by the iris camera. However, linking iris technology with aid in all refugee settings still poses significant challenges; setting up such a system requires a functioning banking system, a functioning rule of law and good connectivity that allows the images of irises to be matched against an online database. The technology must also be culturally acceptable – which is not a simple task. (Maron 2013)

UNHCR: Biometric Identity Management System (BIMS)

Since 2013, BIMS has been tested under a variety of field conditions and 17,000 refugees were enrolled in the system during initial pilot tests in Malawi. During January and February 2015, DPSM (Division of Programme Support and Management), DIST (Division of Information Systems and Telecommunications) and Accenture Consulting completed development of the UNHCR's new biometric identity management system (BIMS). The final field test was conducted in Thailand. The record is available on YouTube (UNHCR, Biometrics Innovation for Refugees in Thailand - YouTube 2015).

BIMS leverages the Unique Identity Service Platform (UISP) technology from Accenture, and is the UNHCR's primary contractor, using fingerprint, iris and facial recognition and storing identity information in a central global database. This means that no matter where the refugees are, whether they have an identification document or not, they can be sure that they will not be lost down administrative holes or mistaken for someone else. (Counter 2015)

The new system rapidly registers, prevents duplicating, and verifies the identities of refugees, ensuring that the right people receive assistance where and when they need it. It also operates under a wide range of infrastructure conditions and can provide numerous operational and protection benefits to existing identity management practices. Unlike previous UNHCR biometric systems, BIMS captures and stores all fingerprints and iris scans from refugees and others of concern. Capturing these multiple characteristics, rather than relying only on fingerprints, for example, allows a more complete coverage of the population and therefore more accurate identification of people. While benefiting from an online system architecture, BIMS has also been designed to work seamlessly when no Internet connection is available due to weak connectivity. BIMS also comes in a portable mobile configuration which uses a conventional laptop and requires no extra source of power to use the USB driven fingerprint scanners, iris scanners and webcams.

After enrolment, refugees and others of concern only need to present two or more biometric elements (e.g., two fingers, two eyes, or a combination) and BIMS is able to ascertain their identity within seconds. The time for identity checks during the roll out in Thai-

land was, on average, five seconds and each refugee received an encrypted smart card with their family's bio data and photographs (UNHCR, UNHCR - Biometric Identity Management System 2015) (Accenture 2016) (Tan 2015). The overall impressive results from BIMS are available through the Accenture Client Study (Accenture 2016). The UNHCR plans to capture refugee biometrics in up to 10 countries in 2015 and in all operations by 2018. (U. T. Biometrics 2015)

Ethical and technical issues of biometrics

Many issues under discussion concerning biometric registration relate to individual rights, such as protection of personal data, confidentiality, personal liberty and the relationship between individual and collective rights. Biometrics is one of the most significant examples of the complexity of meeting individual and collective needs. Discussions inevitably lead to questions related to personal, social and collective identity which, according to some authors, are essential study domains for contemporary sociology (Jonietz 2004). Biometric systems take identity assurance beyond something you have or something you know to something you are (J. D. Woodward 2004). According to a comprehensive report by the RAND Institute published in 2001, there are three areas of ethical and social concern raised by biometric technology: informational privacy, physical privacy and religious objections.

With "informational privacy" the report refers to function Creep (the gradual widening of the use of a technology or system beyond the purpose for which it was originally intended, especially when this leads to potential invasion of privacy) (Collins 2016), tracking and data misuse. For instance - after more than a decade of biometrics, the UNHCR still does not have a publicly available policy that sets the terms and conditions for its use concerning sensitive questions, such as with whom the biometric data the UNHCR collects will be shared. The UNHCR stated: 'Biometrics will be used at the UNHCR's discretion. Whether or not the UNHCR exchanges data with partners is not relevant.' (Jacobsen 2016).

The report also raises "physical privacy" concerns and distinguishes three types of risk: the stigma associated with some biometrics, the possibility of actual harm to the participants by the technology itself and the hygiene of the biometric devices. Religious objections were raised by some Christian groups that consider biometrics to be a brand of Evil (Woodward, a další 2001). Groups in Alabama such as the Christian Coalition, Southern Christian Leadership Conference and the American Civil Liberties Union, vigorously protested against efforts to place a fingerprint biometric on all driver's licenses. It is not expected that religious objections will be widespread, however such objections must be taken seriously due to the societal and legal emphasis on respect for sincerely held religious beliefs (John D. Woodward 2001).

Biometrics is, by its very nature, intrinsically linked to what makes us 'human', as it brings together the various elements which make up our respective and unique identities (gender, skin color, ethnic origin, etc.). It has been argued that the collection, analysis and

storage of such innate and personal data is “de-humanizing” as it reduces the individual, the human being, to a number, and that leaves us with linked ethical and moral questions (International 2015). A sharp debate has emerged over whether biometric technology offers society any significant advantages over conventional forms of identification and whether it constitutes a threat to privacy and a potential weapon in the hands of authoritarian governments. Biometric technology needs democratic accountability and ethical scrutiny. Democratic accountability starts with a willingness to listen to the voices others. Ethical scrutiny begins with care for others, to relieve and to prevent their suffering. This is the lesson taught by traditional bioethics. One should now apply such a lesson to biometric technology. Public discussions on the benefits and drawbacks of biometric technology have been lamentably lacking. Such discussions are now mandatory (Mordini a Petrini 2007). A UNHCR article quotes Congolese refugee Olivier Mzaliwa saying: “I can be someone now. I am registered globally with the UN and you will always know who I am.” Even assuming that Olivier has been well-informed about the possible downsides to his registration (which seems doubtful, since even the UNHCR staff are not aware of these issues), he no longer has any control over this data about himself – and it is doubtful he has the means to regain control of it or even to find out how the data is being used. There is still a massive accountability gap. (Currion 2015) Further thorough analysis of biometric registration issues can be found in research papers and publications by the specialized project researcher[1] Katja Lindskov Jacobsen.

The U.S. has already been preparing for another technological leap: so-called “rapid” DNA testing. DNA tests for refugees and other immigrants are controversial because they can reveal deeply buried family secrets about parentage. They are extremely intrusive and, compared to other methods, very expensive. Critics also say they impose a narrow “nuclear” conception of family that is tone-deaf to the reality of refugee life, where people often care for unrelated children whose parents may be dead or missing. The U.N. has said DNA testing should be used as a last resort for refugees. Nonetheless, DNA testing has been embraced by U.S. refugee and immigration agencies to determine whether people within a family are indeed genetically related. This has been done with the aim of stymying fraud and child trafficking.

A senior resettlement officer with the U.N., Larry Yungk, said he is somewhat baffled by the overwhelming concern about security risks associated with refugees coming to America, since refugees are already rigorously screened. The process takes about two years and entails detailed interviews, three levels of background checks, three fingerprint screenings, contagious disease screening and cultural orientation. Yungk also added: “We do not fault people for worrying about security, but at the same time this is a highly secure process.” (Worth 2015).

Conclusion

The United Nations High Commissioner for Refugees is one of the most significant entities involved in the European refugee crisis, however the crisis is not only a matter of a few years. Researchers from diverse parts of the world have been working on technologies to facilitate the migration process over many years and still continue. The UNHCR has already launched a new biometric identity card for refugees in June 2016 in an effort to combat identity fraud and counterfeiting. The card includes a number of enhanced security features including 3D holograms, bar codes and a large “Secure Quick Response” (SQR) code. “To enable law enforcement authorities and others engaged in the UNHCR’s protection and assistance work to scan the SQR and verify a card’s authenticity, UNHCR Malaysia has launched the UNHCR VERIFY-MY application,” said UNHCR representative to Malaysia, Richard Towle. The UNHCR is working on more improvements and innovations in the registration systems (Mayhew 2016) (P. Biometrics 2016).

Application of biometrics to the registration of refugee and asylum seekers has markedly improved national and international efforts to promote their welfare, and the impact has been felt directly (refugee camps) and indirectly (addressing fraud and security concerns) (Farraj 2011). Biometrics has dramatically decreased the amount of fraud in the distribution of aid, it has saved refugees long waits in receiving benefits and it has reduced the possibility of the radicalization of vulnerable refugee populations. (Soliman 2016) Yet, it is also a means of personal information exposure, an opportunity for misuse and a possible weapon for enemies. Thus, raised concerns are justified and further debates, security measures and overall improvements should be made to the process in order to eliminate defects.

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