Fraudulently Obtained Genuine (FOG) Documents

An ITW Security Division White Paper – February 2017

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Overview

Fraudulently Obtained Genuine (FOG) travel documents are a major problem today to the extent that the number of FOG documents in existence is believed to be greater than that of falsified or counterfeit documents. Such fraudulent use of identity travel documents, whether FOG, falsified or counterfeit, presents a threat to the security of countries, their citizens, the economy and global commerce as a whole facilitating both crime and terrorism. Some quick statistics highlight the issue:

- **In France between 500,000 to 1,000,000 of the 6,500,000 biometric Passports in circulation are estimated to be false having been obtained on the basis of false breeder documents.[1]**

- **In Greece, it is estimated that 5-7% of all Greek Passports are issued as a result of non-genuine ID cards or birth certificates that are fairly easy to procure.[2]**

- **One European Union government recently declared that it issued some 6 million passports in 2015, however, it estimated that of these, as many as 650,000 - or roughly 10% - were issued to false identities[3].**

- **In the UK, ID theft is responsible for more than £1.3 billion of crime a year with financial fraud estimated at around £755 million in 2015, an increase of 26% since 2014[4]. FOG travel documents are said to significantly contribute to this as the passport then allows the opening of bank accounts and taking out loans, mortgages and credit cards.**

- **In the UK an investigation revealed that most criminals using FOG travel documents had convictions for serious crime such as murder, rape, drug importation or pedophilia with one well known criminal being given a 28-year prison term for his part in an attempt to smuggle 1½ tons of cocaine into Britain on his yacht[5].**

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[1] http://www.leparisien.fr/faits-divers/plus-de-10-des-passeports-biometriques-seraient-des-faux-19-12-2011-1775325.php

[2] http://www.politico.eu/article/europes-fake-forged-stolen-passport-epidemic-visa-free-travel-rights/

[3] http://drrichswier.com/2016/05/31/global-airline-security-threat-fraudulent-travel-documents/

[4] https://www.financialfraudaction.org.uk/fraudfacts16/assets/fraud_the_facts.pdf

[5] http://www.thetimes.co.uk/article/home-office-walked-away-from-huge-problem-of-fake-passports-9sjd0s9kk

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So what exactly is a FOG document and why are they easy to acquire? According to Interpol[6] a fraudulently obtained genuine document is an authentic document obtained through deception by submission of either false or counterfeit documents, typically birth certificates.

In most cases Birth Certificates appear to be the document of choice given that they are relatively easy to forge, copy or simulate due to their lack of sophisticated security features. There is also the added complication that the look and feel of certificates across countries and/or states is very different, with potentially multiple versions of the same certificate in circulation in the same country at any one time making validation of a genuine certificate even more difficult. According to a 2011 report, A New Architecture for Border Management, there are over 16,000 different offices in the United States alone that can issue birth certificates and over 14,000 different kinds of birth certificates in circulation[7].

Whilst Governments acknowledge the potential issues of unsecured breeder documents (documents used for access to other forms of legitimate identification, such as a birth certificates or driver's licenses, for the purpose of establishing a false identity), often referred to as the weakest link in the current identity chain[8], the steps required to secure them can often appear daunting and can in many cases develop into complex projects. In Europe the ORIGINS project was set up in 2014 to help member states improve the security of e-passports issuance, by assessing the risk associated with breeder documents. The aim of the project is to make recommendations to improve their security and also promote standardisation at a European Level. Even at this regional level though and with the considerable buy in from member states, this is a huge undertaking and two years in, the work is not as yet complete.

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[6] https://www.interpol.int/es/Criminalidad/Delincuencia-financiera/Counterfeit-currency-and-security-documents/Identity-and-travel-document-fraud
[7] http://thefranco-americanflophouse.blogspot.co.uk/2012/02/breeder-documents.html
[8] The Weakest Link – Ronald Belser, Keesing Journal of Documents & Identity, October 2015

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Paper Stock Authentication

Countries however do not always need to focus on breeder document improvements on such a large scale, there are steps that can be taken quite quickly and within country to both standardise and improve upon the Birth Certificates they are issuing. One of the first things that can be done is to authenticate the document itself by adding a hologram to the paper stock. This should always be a hologram sourced from a reputable company, with industry and security accreditations, and supplied into a secure supply chain. It is essential that the hologram cannot be removed and is tamper evident as well containing a number of Level 1 (Overt) and Level 2 (Covert) security features, especially those that cannot be easily replicated or simulated by fraudsters. Security Hot Stamping Foil available from ITW Security Division is ideal for this type of application. Recommended security features from ITW would include:

Kinetic Movement (Level 1)

Kinetic effect with fine lines that light up sequentially when viewed at different angles to generate the appearance of movement.

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Switch Effect (Level 1)
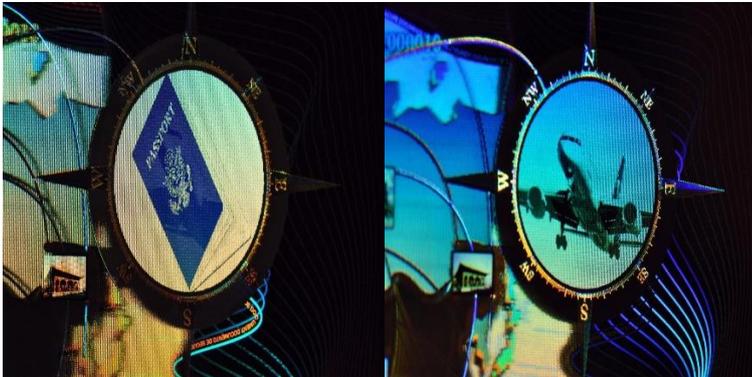
Two or more distinct images can occupy the same area of a hologram, shifting from one to the other when viewed at different angles. This highly-valued feature enables the viewer to authenticate the image by observing the switching images in a defined area.

Achrogram (Level 1)

An Achrogram is a colourless image with positive and negative components that swap when viewed at a 90-degree angle. Colourless images are not easy to replicate or simulate on standard commercially available origination equipment.
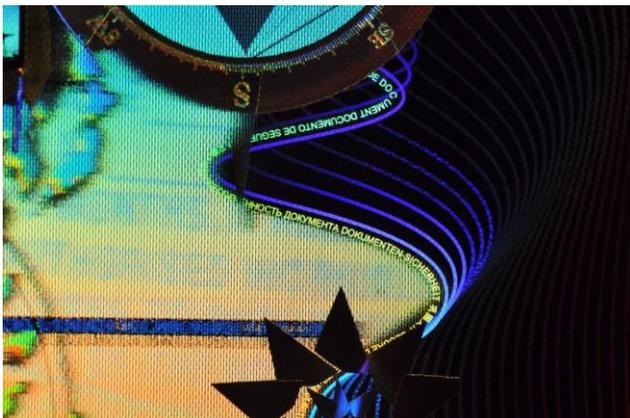
Microtext (Level 2)

Diffractive or non-diffractive micro text, that can be as small as 175 microns high, is clearly viewed only with an eye loupe or magnifying glass with 10x to 20x magnification.

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Nanotext (Level 2)

Viewable only through a high-powered microscope, 40 to 175 micron nano text can be diffractive or non-diffractive. This feature would not be easily visible to anyone trying to replicate the hologram and is something that can be easily verified should the authenticity of the hologram be called into question.

Actual Size

Micro Imagery (Level 2)

True color micro images or photographs, as small as three square millimeters, require the use of a loupe or magnifying glass to authenticate.

The best method to secure a document is at its point of issuance. Applying holograms en-masse and storing paper stock with the holograms already applied presents a significant security risk, in that should the paper stock be stolen or fall into the wrong hands, an authenticated blank document is available for personalisation by the fraudster. To assist with point of issuance hot stamp holograms there is a range of desktop applicator machines available on the market. The machines are relatively inexpensive and easy to use and apply the hologram onto the document as it goes live and is personalised to the relevant holder.

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These machines also enable users to apply an additional security feature into the hologram known as Micro Emboss. This feature will enhance the security of the hologram further as it uses a bespoke etched stamping die which very few people can manufacture. It can also assist in customising holograms for various application without having to purchase multiple bespoke holograms. Micro Emboss holograms are being used successfully in decentralised secure document applications around the world, including birth certificates.

Micro Emboss

Unique micro etch stamping dies are used to customise the hot stamping hologram ensuring a unique hologram for each application.
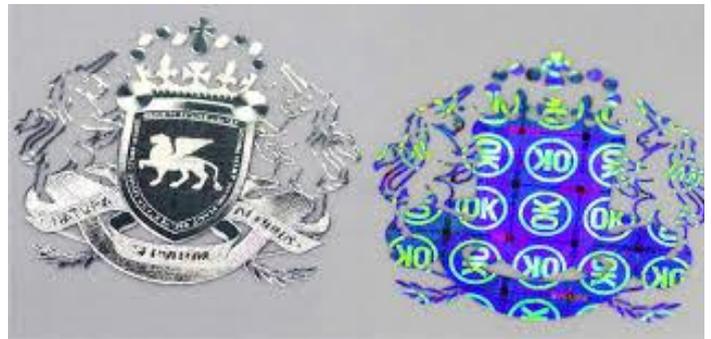
Serial Numbering

Serial numbering can be added to each hologram and the number can be used to trace where the document was issued.

Tactile Embossing

Tactile embossing can be integrated into the hologram to further enhance features in the design.

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Security Print

Alongside the use of the hologram it is also advisable that the paper stock be a security paper and contain a certain level of security features, covering both Level 1 and Level 2. Should would-be counterfeiters try to simulate or copy an original Birth Certificate it is unlikely that they will have access to security paper stocks. Some of the recommended features include:

UV Features (Level 1 & 2)

Ideally the paper would be a security paper from a secure supplier with fibres. These fibres would be visible in one colour and invisible in another. The invisible fibres would flouress under a UV light.
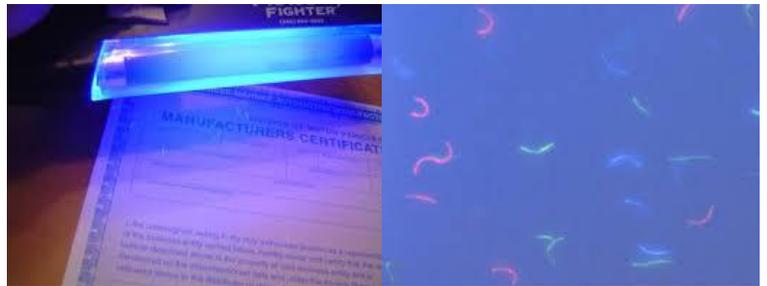
UV Print (Level 2)

The overall printed design should contain some invisible UV printed features. These features should work as part of the overall design and be invisible to any would-be criminal trying to copy a certificate.

Anti-Copy Feature (Level 2)

Where possible an anti-copy feature in the paper is recommended. If someone tries to photocopy a certificate, the words copy or void will appear in the background.

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Chemical/Solvent Sensitive Paper (Level 2)

Chemical or solvent sensitive papers are another suggestion. If any attempt is made with a chemical to remove or change data the use of the chemical will be visible.

Intaglio (Level 1)

This isn't always an inexpensive option, but adding an Intaglio printed area is a great Level 1 feature. The printed area is raised in nature and is an immediate check that the paper stock and print are genuine.

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Variable Data Protection

Whilst the hologram with authenticate the paper stock itself and prevent plain or unauthenticated paper being used, the next key step is to protect the variable data printed on the certificate. Criminals often attempt to change or alter the data on genuine birth certificates. In many cases they choose certificates of recently deceased children as additional personal records are unlikey to exist anywhere else (governmental or financial databases) compared with older people of school age and beyond. To prevent this happening one solution is for the the issuing office to place a small thin film tamper evident seal over the variable data of the holder. This protects the information from being altered as the seal cannot be lifted to alter the data underneath nor can it be overwritten without looking immediately obvious. Fasprotek® Seals are available from ITW Security Division to provide this security and also offer a range of unique features to help with their authentication. Such features include:

Matte/Shiny

A unique feature where areas of the surface seal appear matte and other areas appear shiny. If any attempt was made to try and remove the seal, the frangible surface would split and the disturbances noticeable in the imagery/text.

OVTek®

Another unique level 1 feature that is very easy to verify. The feature is essentially a transparent colour shifting ink feature where different graphical elements are printed in different colours but the swap from one colour to another based on the viewing angle.

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Imaprotek®

Imaprotek® is a polychromatic image, derived from a photograph, using proprietary technology. It is invisible under daylight yet vibrantly visible when exposed to UVA light. Additional images can also be printed that are visible under UVC light.

Summary

If breeder documents, specifically Birth Certificates are deemed to be the weakest link in the secure document chain of a country then it is imperative that the state or country addresses this issue as quickly as possible. A great deal of time and effort is placed on adding the most secure technologies and features into travel documents, but if these documents that can be genuinely obtained by fraudulent means then all the hard work is in vain. If we do not strive to see our secure documents in a holistic approach, as part of a secure document chain, we will continue to be exposed to weaknesses that potential criminals will then see as opportunities.

Improving the security of breeder documents to ensure that they are not easily simulated, copied or falsified is possible with even a small number of steps and significantly enhances the security protection. The most successful security documents rely on the principles of 'layered security' and by using the recommendations outlined in this White Paper, this principle is well served.

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About Us – ITW Security Division

The ITW Security Division was formed in 2012 through the coming together of the management teams, technologies and resources of Covid®, Fasver® and Imagedata™. Leveraging the strengths of these brands, the ITW Security Division today offers the secure document market a single source supply for high security laminate documents and dye diffusion (D2T2) ribbons.

As an independently operated division of Illinois Tool Works Inc. (ITW), a Fortune 200 company, we have the financial resources necessary to continually invest in new technology, research and development. This global footprint and view has enabled us to supply products to more than half the world's countries from our secure facilities in the UK, France and USA.

At ITW Security Division we understand that the foundation for secure materials begins with highly secure manufacturing facilities. We manufacture products from start to finish in one of our secure facilities enabling us to meet the 'under-one-roof' production requirements demanded by many governments. Our products and technologies driven by our Covid® and Fasver® brands have developed a global reputation for highly advanced security solutions. Overt, covert and forensic security technologies are customised to the specific requirements of each document program to enable the widest combination of personalisation methods and substrates for passport and ID Card issuance worldwide. The companies within the security division include:

ITW Covid Security Group Inc was one of the world's first holographic and OVD manufacturers and now has over 25 years' experience. Located in New Jersey USA, the company is ISO14298 & NASPO (North American Security Products Organisation) accredited and manufactures all of its products under one roof, from holographic design and origination through to shim production, embossing, metallising, laminating, die cutting, converting and packing.

ITW Imagedata is a global manufacturer of consumables for the Card industry located in the UK, specialising in the design and manufacture of D2T2 (dye sublimation) ribbons that we supply exclusively to OEM Card printers. The company is ISO 9001 and ISO 14001 certified.

Fasver® **S.A.S.U.** is a global leader in the design and production of security products for the protection of personal data on identity documents including Passports & ID Cards. Located in Montpellier, France, the company is ISO & Intergraf accredited and their unique authentication solutions have been protecting documents for over 25 years.

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