



Report

The Fundamentals of a Trusted Identity

Introduction

Identity theft is a growing problem and a real threat for many of us.

The foundation of our identity is created at birth and the certificate issued at that time stays with a person for their lifetime. In order to obtain national identity documents, for example a passport or identity card, the traditional process requires the submission of this birth certificate.

In identity terms, this is known as creating a chain of trust with the birth certificate as its anchor. It is worth noting though, that any chain is only as strong as its weakest link.

Using a birth certificate as the source document for which the issue of other identity documents, that give greater entitlements is based, places great demands on the security and integrity of the certificate.

In today's world, where we all travel internationally and the number of global transactions through the internet is rapidly increasing, it is now more important than ever for us to be able to assert our identity in a way that can be wholly trusted.

Some of the challenges facing identity trust

Given the intrinsic link between breeder documents and passports, it might be expected they are far more closely aligned than they actually are.

- Globally, almost 50 million births are not registered each year so no documents are issued
- When they are issued, birth certificates and passports are typically issued under the jurisdiction and responsibility of different Government Departments, a situation made worse where data is not shared between the departments
- There is often a lack of follow-up when fraudulent activity occurs, for example a passport issuing office may record that a passport application was refused because a false identity was used, but it is unlikely to advise the issuer of that birth certificate of the incident
- Whilst border authorities record data with respect to false passports, there is rarely any such body that records data on falsified birth certificates. As a result, fraud issues are not recognised and the Issuing Authority assumes that their birth certificates are secure.

Without corroboration and collaboration between departments that record births and deaths and their subsequently alignment with the Passport Authorities, there is widespread potential for identity theft.

On top of this, in many countries the issuance of birth certificates and other breeder documents is not a centralised process. Instead individual States, regions or local authorities have their own inconsistent policies, procedures and certificate designs. For example, in the USA it is believed that there are circa 14,000 different birth certificates currently in circulation.

The birth certificate is in essence, simply a document that confirms an event. In this case, that a birth took place and was recorded in a register somewhere. That record may be in a physical ledger held locally, archived nationally or in a digital database.

Some nations issue birth certificates as a verification of identity once key data has been supplied and proven, others simply use it as a record of an event. This means it is not actually a validation of that person's true identity. But all too often, this is exactly how it is being used.

As populations become ever more mobile, this wide variation makes it very difficult for a passport adjudicator, or any other person needing to validate a birth certificate, to be able to say with any certainty whether that certificate is authentic or not.

Evidence of Identity

The International Civil Aviation Organisation (ICAO), who are responsible for maintaining the security specifications for passports, has acknowledged that passports are now becoming so secure that those who seek to use false travel documents have had to find alternative methods to counterfeiting and fraudulent alteration of a genuine passport to achieve their aims.

As a result of the inherent strength of the passport document, ICAO is encouraging its Member States to enhance security across all aspects of the



entire travel continuum. Otherwise known as the Traveller Identification Program (TRIP) strategy, it addresses Evidence of identity, Machine-Readable Travel Documents (MRTDs), Document issuance and control, Inspection systems and tools and Interoperable applications.

TRIP describes Evidence of Identity as 'credible evidence of identity, involving the tracing, linkage and verification of identity against breeder documents to ensure the authenticity of identity'.

Evidence of individual identity is therefore recognised as the 'trust anchor' for the issuance of a passport.

If the foundations of this anchor are strong and the features and issuance processes of the passport are secure then a Nation's passport will be trusted. But if any of those foundations are weak or unstable, that trust comes into question.

It is worth noting that when one country lacks confidence in the chain of trust of another country – for example due to a vulnerability of their evidence of identity – it may introduce a requirement for citizens of that country to apply for a visa before they travel.



A long-term digital future?

In an ideal world, every State would record all births and deaths into a central citizen register and therefore prevent the ‘Day of the Jackal’ style of identity theft where infant death is used as the basis of a false identity.

However, in most countries this would take many years to implement, not just because of the complexities, practicalities and infrastructure of the system itself, but also due to the many political discussions that would be required to agree all the roles and responsibilities of the many Ministries involved.

Even if such a system could be agreed, it would be hugely expensive in terms of assimilating, cross-referencing and validating the data, not to mention protecting it.

So, whilst the Utopian future may lie in a digital solution, we still need a workable and immediate solution now that combats the current threat of identity fraud.



An immediate physical win

Many States are now recognising that there is an accessible solution that could be implemented quickly and with minimal upfront investment.

The Revised ICAO TRIP roadmap (2019) talks about the application of security features to breeder documents such as birth certificates from 2022.

Increasing the security of the birth certificate itself need not be expensive but it can reap significant dividends in terms of identifying fraud.

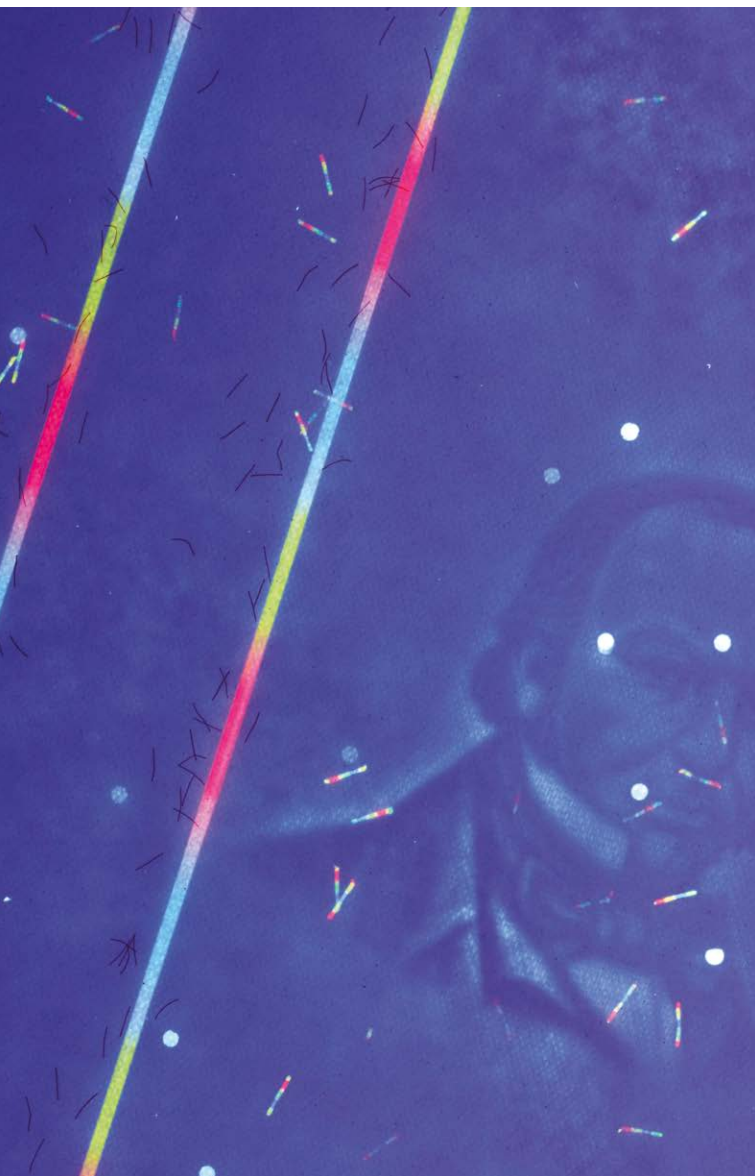
Whilst fraudulent alteration of birth certificates does occur, the lack of recognised security features in the majority of such documents, makes these types of certificate an extremely easy target for counterfeiting.

As a result, all States that currently use physical birth certificates as a part of the application process for identity documents, are being strongly recommended to upgrade their security, by adding in a series of specialist security features (such as are found in passport papers) that will protect the integrity of the document and help to prove its authenticity.

Certificate security overhaul

As already mentioned, enhancing the physical security of the certificate is an easy and quick option to implement, not only because the cost is relatively low, but also because it can be incorporated into existing workflows and training requirements would be minimal.

In addition, upgrading the physical security features to include those commonly used in currency and passports means that document checkers are already familiar with them.



1: Day of the Jackal was a novel written by Fredrick Forsyth in the 1970's and popularised in a number of films since. The method for acquiring a false identity and passport detailed in the book is often referred to as the "Day of the Jackal fraud" whereby an infant death is identified, a birth certificate for the child obtained and a passport application submitted. The death had occurred as a baby so no previous application is identified and the passport issued. There are now processes in place in many countries limiting the potential of this form of attack.

These could include...

Multi-tonal cylinder mould made watermarks

- Recognised by Interpol as being the most secure type of watermarking currently available. Easy to recognise and verify, they are virtually impossible to simulate.

Embedded threads and/or fibres

- Additional security integrated into the very substance of the paper during manufacture: fibres, threads and other inclusions are an extremely effective authentication feature.

Tamper-evident substrate

- Substrates manufactured using a predominantly wood pulp furnish show any tampering due to the nature of wood pulp's shorter fibre lengths.

Sensitisation to chemical abrasion

- The substrate can also be treated with hidden chemical sensitisation dyes that react when it comes into contact with a substance used for alteration.

Complex security designs

- Combining physical security features within the paper with a coordinated print design adds an extra level of protection to the document.

Sequential numbering

- To protect against the use of lost, blank or unissued certificates, the application of a unique numbering scheme, allows for missing documents to be identified and their serial numbers shared with the appropriate agencies.

Treatments that enhance the security of the personalisation process

- Certificate papers can include surface treatments to ensure personalisation by laser or ink jet printing is secure and effective.

Taking into account the many political entities and jurisdictions involved and a possible desire for local variance and flexibility, some degree of standardisation could still be introduced. From the list of security features detailed above a State could implement a solution in which several of the features are mandated, but others are at the State's discretion according to local practices and budget. This would take advantage of best practice, but more importantly offer enhanced levels of security and therefore trust.



Conclusion

A trusted identity remains critical to the security of society.

Yet, in spite of this, the issuance of an international travel document based on a poorly secured piece of paper is still commonplace. States are therefore being urgently and actively encouraged to pay greater attention to the foundation of their passport issuance process.

To safeguard this process and ensure an enhanced chain of trust, attention should be paid to the birth certificate itself, with a full review of the substrate and the security features that can be added to both protect and enhance this vitally important foundation identity document.

At Portals, we are experts in the design, specification and production of high security substrates for vital records like birth, education, marriage and death certificates. For more information or guidance on the subject of breeder documents and certificates, please do not hesitate to contact us - we'd be delighted to help



About Portals

Portals has two UK sites with a combined capacity of 16,000 tonnes - producing more than 70 million passports, 60 million certificates, 12 billion banknotes and 200 million brand labels each year, for use in more than 100 countries around the world. Every product we produce is bespoke and our breadth of experience and technical capabilities mean our customers have the flexibility to choose a paper solution that complements their security strategy and design requirements.

Portals is proud to be one of the only paper manufacturers in the world with a mill dedicated to producing passport, certificate, voucher and other high-security papers on cylinder mould machines. Based in the beautiful location of Bath, we are proud to say that we are a zero waste to landfill site and hold the PEFC - Chain of Custody accreditation (Programme for the Endorsement of Forest Certification Schemes) supporting sustainable manufacturing.

Our reports

This report is part of Portals' dedication to supporting our partners and driving industry innovation.

Our series of reports share best practice from within the industry and offer the latest advice and insight to help you select and adopt secure papers to meet your requirements.

Contact us

If you would like to discuss any aspect of this report further please contact us at info@portalspaper.com

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