# CHALLENGES IN AUTOMATED ID AUTHENTICATION



ARIF A MAMEDOV, PH.D.



2012

SOUTH KOREA

2011

**BRAZIL** 

2006

**RUSSIA** 

2000

**UKRAINE** 

2011

**NETHERLANDS** 

2010

USA

2005

**LATVIA** 





1992

**BELARUS** 



# Regula = Hardware + Software + Databases

- 40 models
- 100 modifications









- Ministry of internal affairs
- Ministry of foreign affairs
- Border control police
- Immigration departments
- Embassies
- Criminalistic laboratories
- Law enforcement agencies
- Customs
- Banks
- Printing companies
- Airlines
- Hotels
- Mobile operators





# **ENITIAL REMARKS**

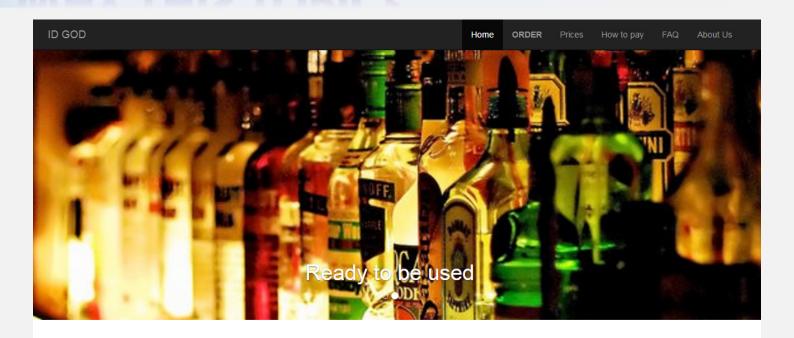
At Regula we have experience working in almost every country in the world (either direct or trough the partners). In 25 years history we have been exposed to many standard operating procedures (SOPs). In many cases we have been involved in SOP development

Some of the opinions are driven from personal observations, discussions and request, given to us by end user/integrator.

The goal of this presentation is to facilitate discussions to share knowledge and experience at the seminar in order to improve document authentication standards.



# WHY THIS TOPIC?



#### ♦ What we do?

We offer high quality IDs at an affordable price. Every ID comes with a free duplicate and tracking number. All IDs are programmed to be scanned and to pass the backlight test. And....we do more then that! We offer you the chance to have a great time with your friends!

### How we do it?

Provide us with a digital photo of yourself up against any colour wall or backdrop. Wear dark clothing for contrast covering skin and keep your hair nice and neat. That is all you need to worry about! Let us do our job in order for you to taste some freedom!!

### ► How to pay?

We offer you secure and anonymous payment methods. Also, your information are safe with us! If you want an ID you can get it by paying via Western Union or BitCoin. For special offers check our Products page.

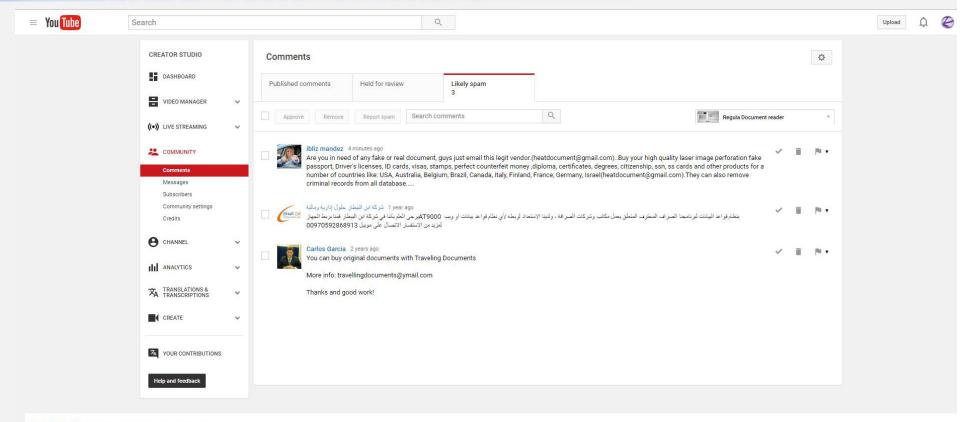
### idgod.ph is the #1 trusted Fake ID Website Worldwide

Are you thinking about all those parties and all that booze? Do you and your friends want to be a part of it? In that case, we've got the answer for you! If you are wondering where to get a fake ID, you came to the right place! You can rely on us to actually get what you payed for - a high quality fake ID card.

www.regulaforensics.com



# WHY THIS TOPIC?





#### ibliz mandez 4 minutes ago

Are you in need of any fake or real document, guys just email this legit vendor.(heatdocument@gmail.com)..Buy your high quality laser image perforation fake passport, Driver's licenses, ID cards, visas, stamps, perfect counterfeit money, diploma, certificates, degrees, citizenship, ssn, ss cards and other products for a number of countries like: USA, Australia, Belgium, Brazil, Canada, Italy, Finland, France, Germany, Israel(heatdocument@gmail.com). They can also remove criminal records from all database.....

### Globalization has mixture of positive and negative effects:

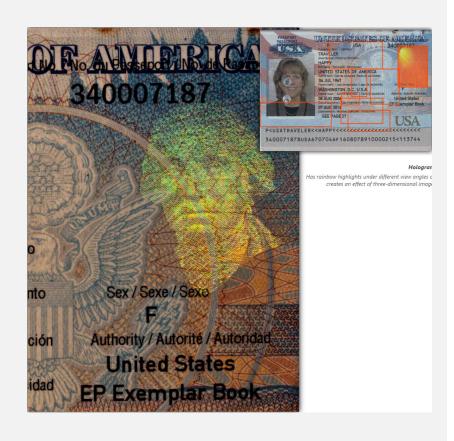
- dramatic increase in international travel and migration
- rise of international crime
- active extremist movements, terrorism activity



# **EVOLUTION OF THE IDS**

- Trends in development of new security features
- Technical Aspects
- More information is added to the ID





www.regulaforensics.com



# **EVOLUTION OF THE IDS**

- Development of security features and their use in documents must be accompanied by development of equipment to verify them
- Need for unification of technical requirements to equipment which is used to verify authenticity of documents
- Cooperation between developers of security features and companies developing equipment to control authenticity of documents



# **EVOLUTION OF THE ID VERIFICATION**

Number of falsifications in documents is growing



Variety of security features is increasing



Verification of security features is becoming authority of many and therefore can't stay "magic" anymore



Need for equipment to use in operative conditions and on the forensic level



Need for interoperable multi-modular equipment combining hardware, software and reference systems



# **EVOLUTION OF THE ID VERIFICATION**

# Document experts require more resources for qualified well informed decisions:

- reliable and easy-to-operate hardware
- multifunctional software to automatically verify documents, capture images, examine security features and compare them with trusted specimens
- Databases or reference systems of travel documents specimens with comprehensive description of security features

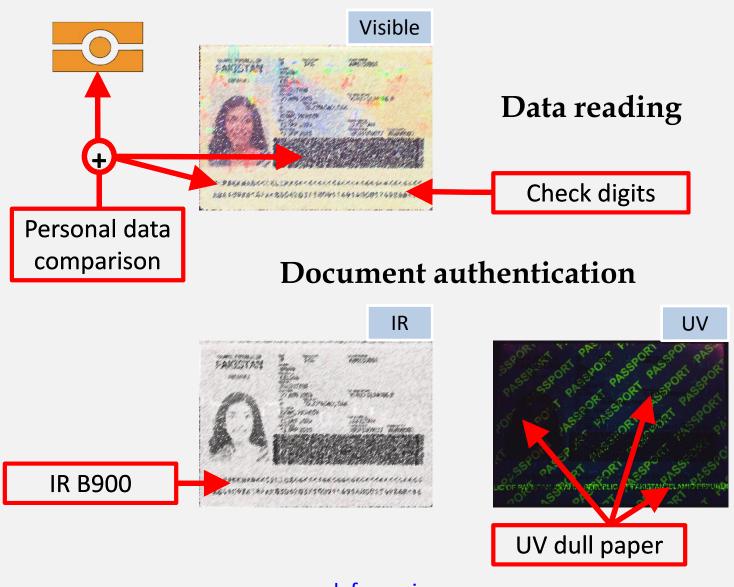


# **TECHNICAL ASPECTS OF THE ID VERIFICATION**

- Modular composition of specialized equipment allowing enhancement of functionality when used in combination
- Automatic retrieval of data, its processing and analysis
- Increasing sensitivity of document examination equipment in all spectrum ranges
- Developing ability of equipment to detect various types of forgeries in automatic way



- Classification of security features in documents
- Ability to extract additional document specific information from documents (embedded or encoded photo, information, info in foreign language, specific format)
- Reference systems, describing security features in documents and providing verification in operative conditions and/or on the forensic level
- Interoperability of reference systems with examination equipment



www.regulaforensics.com



# **AUTOMATIC VERIFICATION OF SECURITY FEATURES**



Comparing biometric data from RFID, MRZ, Barcode(s), Visual Zone



www.regulaforensics.com



# **AUTOMATIC VERIFICATION OF SECURITY FEATURES**

### Visuals of automatic capturing of data page in various light sources



White (incident, top, side)



UV (with adjustable exposure)



Infrared



Coaxial



IR luminescence



Anti-stokes















# **COLOMBIAN FAKE**

Document #

Date of issue

Date of birth

Upload: 1.113s Processing: 1.754s

Parsing result: 0.3s

1033720752

4/1/1990

### Take picture **Processing results Demo images** (Click to process) Portrait UUS98738<2UT07906075F1112256<50013871L<<<<68 Browse files FERNANDA DINETED. Signature Fingerprint Do MRZ ☑ Do Visual Text Do Graphic Fields Do Barcodes Barcode 1<LVAPA99925920121282<88882<< 8212122M1703043LVA<<<<<<<< PARAUDZINS<<ANDRIS<<<<<< Do Compress Images Colombia - Id Card #1 Document type Barcode Field type Barcode Visual zone Valid - Visual Document Class Issuing State Code COL

9/28/1993



# **COLOMBIAN FAKE**



Upload: 1.113s

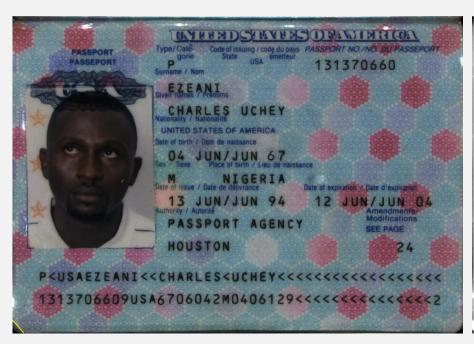
Processing: 1.754s

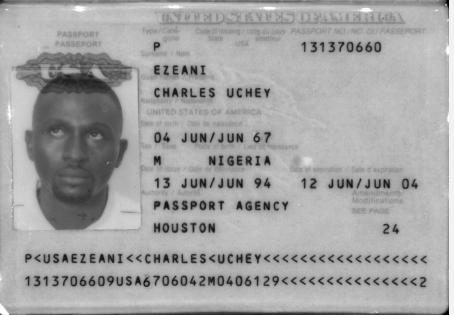
Parsing result: 0.3s

Issuing State Code		COL	06	)
Document#	1033720752		06	)
Date of issue		9/28/1993	06	)
Date of birth	4/1/1990		06	)
Place of Birth (9226)		CUCUTA^(NORTE DE SANTANDER)	06	)
Place of Birth		CUCUTA NORTE DE SANTANDER	06	)
Surname (9226)		DUARTE PRADO	06	
Surname	ARANGO	DUARTE PRADO	96	
Given names (9226)		FERNANDO ARTURO	06	
Given names	JOHANA ANDREA	FERNANDO ARTURO		
Sex	F	М	06	
Height		5 ft 7 in	06	)
Sumame And Given Names (9226)		DUARTE PRADO FERNANDO ARTURO	06	)
Sumame And Given Names	ARANGO JOHANA ANDREA	DUARTE PRADO FERNANDO ARTURO	06	
Issuing State		Colombia	06	
Place of issue (9226)		CUCUTA	06	)
5.4	**			





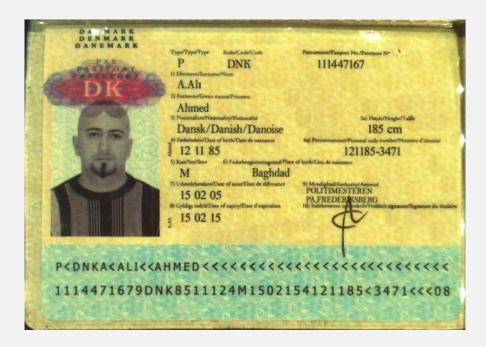




















# **CHALLENGE: STABILITY OF SECURITY FEATURES**

### Mexican voting card

















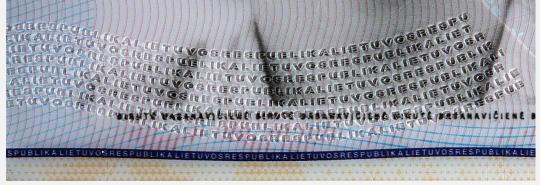


# **MOBILE ID VALIDATION: CHALLENGES**

- Working with the while light only
- Variations/limitations on hardware
- Limitations on software installation
- Limitations on the access to hardware controls



# **CONCLUSIONS AND QUESTIONS**















### Arif A. Mamedov, PhD

### Regula Forensics, Inc.

1800 Alexander Bell Drive, Suite 400 Reston, VA 20191, USA (GMT-5)

Phone: +1.703.234.2355 Cell: +1.703.473.2625 Fax: +1.703.234.7711

e-mail: arif.mamedov@regula.us