MEETING DOCUMENT

<table>
<thead>
<tr>
<th>From:</th>
<th>General Secretariat of the Council</th>
</tr>
</thead>
<tbody>
<tr>
<td>To:</td>
<td>Visa Working Party</td>
</tr>
<tr>
<td>Subject:</td>
<td>Interoperability and the visa procedure - Possible implications of Interoperability on the daily work of the consulates - Presentations</td>
</tr>
</tbody>
</table>

Delegations will find attached the presentations made by the Commission services, eu-LISA and the Presidency on the abovementioned subject at the Visa Working Party meeting on 10 July 2019.
The interoperability between EU information systems

Presentation in the VISA WP

10 July 2019

Adrian.Perez-Martinez@ec.europa.eu
European Commission – Directorate-General Migration & Home Affairs
Unit B3 – Information Systems for Borders and Security
Interoperability proposals: Decembre 2017

The Regulations were adopted on 20 May 2019 and published on 22 May 2019 (Regulations (EU) 2019/817 and 2019/818)

Interoperability between EU information systems operated at the EU central level.

Interoperability is about making the systems talk to each other and work together in a smarter way

Each system has its own objectives, purposes, legal bases, rules, user groups and institutional context. Interoperability does not change that.
The three existing centralised information systems so far are:

- The Schengen Information System (SIS) with a broad spectrum of alerts on persons (refusals of entry or stay, EU arrest warrant, missing persons, judicial procedure assistance, discreet and specific checks) and objects (including lost, stolen and invalidated identity or travel documents);

- the Visa Information System (VIS) with data on short-stay visas; and

- the Eurodac system with fingerprint data of asylum applicants and third-country nationals who have crossed the external borders irregularly or who are illegally staying in a Member State.
In addition to these existing systems, the Commission proposed in 2016-2017 three new centralised EU information systems:

- the Entry/Exit System (EES), which will replace the current system of manual stamping of passports and will electronically register the name, type of travel document, biometrics and the date and place of entry and exit of third-country nationals visiting the Schengen area for a short stay;

- the European Travel Information and Authorisation System (ETIAS), which will be a largely automated system that would gather and verify information submitted by visa-exempt third-country nationals ahead of their travel to the Schengen area; and

- the proposed European Criminal Record Information System for third-country nationals (ECRIS-TCN system), which would be a system for exchanging information on previous convictions handed down against third-country nationals by criminal courts in the EU.
The specific objectives of the 'interoperability' proposals are to:

1. ensure that end-users have fast, seamless, systematic and controlled access to the information that they need to perform their tasks;

2. detect multiple identities linked to the same set of biometric data;

3. facilitate identity checks of third-country nationals, on the territory of a Member State, by police authorities; and

4. facilitate and streamline access by law enforcement authorities to non-law enforcement information systems at EU level

Those objectives are achieved using several technical components.
To enable end-users (or central systems) to simultaneously query several systems in parallel.

End-user access rights are determined and enforced by the underlying systems!

The ESP is a message broker that will choose the systems to be queried based on user credentials.
A shared Biometric Matching Service providing a fingerprint & facial image search service to cross-match biometric data present on all central systems.

The sBMS contains biometric templates only!
Common Identity Repository (for TCNs)
A front-end infrastructure component

- Name, surname, gender, data of birth.
- Travel document data.
- Biometric data

The "identity triangle"

- The Common Identity Repository would combine biographical identities of persons (name, gender, date of birth)
- The common identity repository for third-country nationals would enable identification of TCNs without (proper) travel documents and is key for the functioning of the MID
What data is stored where?
(some examples)

<table>
<thead>
<tr>
<th>Entry Rome, IT 23/05/2018</th>
<th>Exit Palermo, IT 27/05/2017</th>
<th>Entry Warsaw, PL 05/07/2017</th>
<th>Exit Hamburg, DE 08/07/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank SMITH M 16/06/1946 USA 123456789</td>
<td>Frank T. SMITH M 16/06/1946 USA 123456789</td>
<td>Lea Tolstoy F 08/10/1952 RUS 76543210</td>
<td>Fulan Al Fulani M 01/01/1991 SY ????</td>
</tr>
<tr>
<td>Born in New York (US) Address Washington Professional visit No major diseases Sufficient funds Health insurance: xyz</td>
<td>Born in Tula (RU) Address Moscow Tourism visit No invitation Sufficient funds Port of first entry: Berlin, DE Multiple-Entry visa</td>
<td>?</td>
<td>? Belgium Terrorism</td>
</tr>
<tr>
<td>Frank SMITH M 16/06/1946 USA 123456789</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lea Tolstoy F 08/10/1952 RUS 76543210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulan Al Fulani M 01/01/1991 SY ????</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salah Abdeslam M 15/09/1989 MAR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To allow linking identities present in different systems, the Multiple Identity Detector will simultaneously query the EU information systems:

- Detect a possible link
- Determine the type of link
- Store the link for future use
MID links are 'colour-coded' to indicate the following situations:

**YELLOW:**
- A link may exist, manual verification will lead to maintaining the link with a different colour

**GREEN:**
- Same or very similar biographical identities with different biometric data

**RED:**
- Different biographical identities are linked to the same biometric data and manual verification determines that this is unlawful (identity fraud)

**WHITE:**
- Same biometric data and same (or very similar) biographical data (same person in multiple systems)
- Same biometric data but lawfully differing biographical data after manual verification

Examples:

**YELLOW:**
- John Irving (SIS) & Jonathan P. Irving (VIS) are probably the same person

**GREEN:**
- Donald Trump (SIS) & Donald Trump (VIS) are two different persons

**RED:**
- Richard Rinkens (SIS) & Song Lee (EDAC) are the same person using different IDs

**WHITE:**
- Jean-Philippe Smet & Johnny Hallyday are legally different identities for the same person
- Detailed rules on when and how the comparison of data results in a yellow link are yet to be defined.

- General rule on who is responsible for the multiple identity detection:
  - The authority that is adding the data resulting in a yellow link

- Specific rule for Article 26, 32, 34 and 36 SIS alerts:
  - The SIRENE Bureau of the MS that created the alert

- There are specific limitations to the general rule of information on the existence of a link for reasons of security, public order, to prevent crime and guarantee no investigations can be jeopardised.
Q&A
The information in this presentation is marked as:

Protection level  LIMITED BASIC
Releasable to  Information Stakeholders

Handling instructions:
• Distribution on a need-to-know basis.
• Not to be released outside of the information stakeholders.
• Not for publication.
Building Interoperability

State of Play
Changes to VISA and Border Control Authorities
Planning
Transformation of Border Management & Internal Security

Shift from physical to virtual

Very fast convergence between border management, internal security and migration management
Interoperability: break the silos
EES - Developments on the Way to Interoperability

- EES development and new capabilities
- Enhancement of VIS and BMS to support EES volume projections. Extension and creation of interfaces to support new EES processes and data flows
ETIAS - Developments on the Way to Interoperability

- ETIAS development and new capabilities (including ETIAS screening engine)
- EES implementation of incremental ETIAS specific capabilities & functionalities
- Enhancement of existing systems to support ETIAS volume projections and extension of existing, or creation of, interfaces to support new ETIAS processes and data flows
- Commercially available services
Changes to the core VIS system
Development & implementation of incremental VIS specific capabilities & functionalities in re-usable assets and interfaces
Enhancement of existing systems to support VIS additional volume and, where required, extension of existing interfaces to support new VIS process and data flows
Interoperability components providing:
- An interface to other systems ESP (ETIAS)
- A common identity repository (EES/ETIAS)
- A shared biometric matching system
- Multiple identity detection capabilities
Interoperability for VISA and Border Authorities

Consulates (VISA Authorities) --> N-VIS --> ESP

Border Authorities

Europol

Interpol

CIR

MID

SIS

EES

ETIAS

VIS

EDAC

ECRIS TCN

sBMS
Objectives of Technology and Redesign

- Turn data into information
- Holistic view on systems and processes
- Interoperability
- Common standards
- Information exchange
Specifying an Interoperable Architecture

Three Distinct Stages of Decision-making

1. Decide on how systems will operate together
2. Define implementation and governance matters
3. Decide options on how systems will work
Interoperability Architecture - Objectives

**Definition of the future architecture**
Interoperability architecture comprising the ESP, shared BMS, CIR, MID and CRRS

**High level impact assessment**
Based on relevant criteria for data migration

**Interface mapping**
Between interoperable components and existing and future systems

**Definition of the different architecture perspectives**
Covering business, application, data, technology and security

**Providing a valid reference point for decision-making**
For implementing new systems, updating existing ones, interfacing
Interoperable and Reusable Repository

**Architecture Vision Document**
Shows a high-level aspirational view of the end architecture product (target architecture).

**Architecture Requirements Specification**
Specifies the high-level requirements of the target architecture.

**Architecture Definition Document**
Describes the target architecture on the business, data, application, technology and security domain.

**Architecture Building Blocks**
Defines the various application architecture building blocks for the interoperability components.

**Architecture Repository**
Consists of a structural framework allowing eu-LISA to differentiate between different types of architectural assets.

**Service Oriented Reference Architecture (SOA)**
Explorers the capabilities and benefits of adopting integration, SOA and API-based solutions.

**Recommended Usage Patterns and Guidelines for SOA**
Presents guidelines and recommendations to evaluate on when to introduce SOA architectures.

**SOA Runtime Architecture**
Lists considerations on runtime management, monitoring and organizational management in a SOA architecture.

**Requirements Impact Assessment**
Analyses the new requirements and their impact on an organizational and architectural level.

**Architecture Roadmap**
Summarises the required initiatives to transition from the baseline architecture to the target architecture.
Indicative Timeline – Implementation Plan Roadmap

Information systems

- shared Biometric Matching System
- Central Repository for Reporting and Statistics
- Entry-Exit System
- Schengen Information System
- European Travel Authorisation and Information System
- Visa Information System
- Common Identity Repository
- European Criminal Records Information System for Third Country Nationals
- Eurodac
- European Search Portal
- Integration Layer
- Multiple Identity Detector

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
<tr>
<td>SIS Recast &amp; CS-SIS upgrade</td>
<td>Live</td>
<td>eBiMS migration</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
<tr>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
<tr>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
<tr>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
<tr>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
<tr>
<td>Procurement</td>
<td>Development (+ live)</td>
<td>Iterative Evolution</td>
<td>Procurement</td>
<td>Development</td>
<td>Live</td>
</tr>
</tbody>
</table>

Transition Architecture A

Final

Interoperability components

Core Business Systems

Integration Layer
Indicative Timeline – Migration Plan Roadmap

**shared Biometric Matching System**

- Entry-Exit System
- Schengen Information System
- Visa Information System
- Common Identity Repository
- European Criminal Records Information System for Third Country Nationals
- Eurodac
Thank you for your attention
Any questions?
Interoperability and visa issuance process
Multiple Identity Detection (MID)

10.7.2019
Matti Pitkäniitty
The Finnish Ministry of the Interior
Interoperability is a System of Systems

1. MEASURES IN THIRD COUNTRIES
   - VIS (Schengen visas)
   - ETIAS (Visa free travellers)

2. COOPERATION WITH NEIGHBOURING COUNTRIES
   - Entry/Exit System (EES)
     - Short stay visitors
   - SIS (Suspects etc.)

3. EXTERNAL BORDERS
   - EURODAC (Asylum seekers)
   - ECRIS-TCN (Criminal records)

4. MEASURES WITHIN THE AREA
   - Legal travellers
   - Illegal border crossers
   - Residence permits and D-visas?
Key points of the regulation

**Multiple-identity detection (Art 27)**

1. Multiple-identity detection in the CIR and SIS shall be launched where:
   - (b) an application file is created or updated in VIS in accordance with Regulation (EC) No 767/2008;

**Manual verification and authorities responsible (Art 29)**

1. Authority responsible for manual verification of different authorities shall be:
   - the visa authorities for matches that occurred when creating or updating an application file in the VIS
2. (in certain cases) Sirene Bureau of the Member State that created the alert in SIS
3. the Authority responsible shall have access to linked data. It shall assess the different identities without delay.
**INDIVIDUAL FILE**

Identity file stored in the CIR

<table>
<thead>
<tr>
<th></th>
<th>VIS</th>
<th>ETIAS</th>
<th>EES</th>
<th>Eurodac</th>
<th>SIS</th>
<th>ECRIS-TCN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIOMETRIC DATA</strong></td>
<td>10 FP</td>
<td>-</td>
<td>FI, 4 FP</td>
<td>10 FP</td>
<td>(poss.) FP</td>
<td>FP</td>
</tr>
<tr>
<td><strong>IDENTITY DATA</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>(X)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>TRAVEL DOCUMENT DATA</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>(X)</td>
<td>(X)</td>
<td></td>
</tr>
</tbody>
</table>

**Abreviations:**

FI = Facial image, usable for automated biometric matching
FP = Finger prints, usable for automated biometric matching
EU IT-systems
"Born in the silos"

Interoperability and fundamental rights implications

Opinion of the European Union Agency for Fundamental Rights

Annex 1: Identity data to be stored in the Common Identity Repository according to Article 18 (1)

<table>
<thead>
<tr>
<th>Legal instrument</th>
<th>EES Regulation</th>
<th>VNS Regulation</th>
<th>ETIAS Proposal</th>
<th>Eurodac proposal</th>
<th>ECRS-TCN proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article(s) referred to</td>
<td>16 (1) (a)-(d) (g) 17 (3) (c)-(g) 9 (4) (3) (c), (3) (f)</td>
<td>15 (2) (a) (c)-(d)</td>
<td>13 (3)-(a)-(c) (h)</td>
<td>17 (3) (a)-(b) (h)</td>
<td>Some data from Art. (2) (1) (a)-(g) + 18 (1) (a)-(c)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surname and/or family name</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>First name(s) and/or given name(s) and/or forename(s)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Surname at birth</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Name at birth</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Former surname(s)</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Previous names</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Alias(es)</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>Pseudonym(s)</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Artist name(s)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Legal name(s)</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Date of birth</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Place of birth</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Country of birth</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Nationality(ies)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nationality at birth</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Sex or gender</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>First name(s) of parents</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Type and number of ID(s)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Authority issuing the ID</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Reason code of the issuing country</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Issuance date</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Expiry date/validity</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Local image(s)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Fingerprints</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Photograph</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Notes:
- O: Identity data as defined in Art. 4 (9)
- X: Other data included in Art. 19 (1)
- X*: Except for expansion to third-country nationals
- X**: Only for visa-exempt third-country nationals
- X***: Including the reference number of the fingerprint data of the convicted person including the code of the convicting Member State

Source: FRA, 2018

EU2019.FI
Automated Comparison of individual files

**SYSTEM A**

- Biometric data
  - Depending on the system

- Identity data
  - Depending on the system

- Travel document data
  - Depending on the system

**MID**

- Same
- Similar
- Different

**SYSTEM B**

- Biometric data
  - Depending on the system

- Identity data
  - Depending on the system

- Travel document data
  - Depending on the system
Comparison (1:n)

**AUTOMATED COMPARISON**

**A**

- White link

**B**

- Yellow link

**MANUAL VERIFICATION**

**B1**

- Green link

**B2**

- Red link

**B3**

- White link

**SYSTEM A**

<table>
<thead>
<tr>
<th>(same, similar, different)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biometrics</td>
</tr>
<tr>
<td>Identity data</td>
</tr>
<tr>
<td>Travel document</td>
</tr>
</tbody>
</table>

**SYSTEM B**

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biometrics</td>
</tr>
<tr>
<td>Identity data</td>
</tr>
<tr>
<td>Travel document</td>
</tr>
</tbody>
</table>
Visa process
Case with External Service Providers (ESP)

1. Applicant fills the visa application form

2. At the Visa Centre ESP collects:
   - Application
   - Biometrics
   - Documents

3. Applicant returns to home

4. ESP delivers collected data to the consulate (digital/paper)

5. Data is uploaded to national visa system for processing

6. Application is created in the VIS

7. Visa is issued

EU2019.FI
Questions to be asked

1. Workload coming from Interoperability
   • How many yellow links there will be?

2. Need to adjust process for visa handling
   • How does one clarify yellow links in practice?
   • In case of a yellow link – should we meet the applicant?
   • How to inform negative decisions and the rights of an applicant?

3. Need to adjust Visa Code and VIS regulation
   • What is the impact of unharmonized datasets and data quality in different IT-systems?
Thank you for your attention

Matti Pitkäniitty
matti.pitkaniitty@raja.fi
@MPitkaniitty