

Memo

Onderwerp
Keuze leveranciers voor de 'wereld-verificatie' in de
Praktijkproef Biometrie

Datum
15 december 2003

Onderdeel
DGKB BPR

Inlichtingen
T (070) [redacted]
F [redacted]

Blad
1 van 8

Aantal bijlagen
2

Aan
[redacted]

Van
[redacted]

Afschrift aan
[redacted]

Introduction

The biometrics trial will simulate the application for and issuance of a biometric document in the form of a passport. After issuance of the biometric document a biometric verification is performed to test the overall performance of the document. The test will be conducted in 6 municipalities, where biometric travel documents will be issued and tested.

The Biometrics Trial based on the Dutch Biometric Test Document (BTD) consists of two more or less independent processes:

1. application, enrolment and document issuance
2. biometric verification in the simulated world.

As a result of the application, enrolment and document issuance procedure a Biometric Test Document (BTD) which resembles the Dutch ID card or the Dutch passport, is produced and made available to the civilian. During the issuance procedure a biometric verification of all biometric properties which are stored on the BTD takes place.

After issuance the civilian receives the newly issued BTD and uses it for a biometric verification on 2 facial verification systems and 2 fingerprint verification systems. These verification systems represent the world.

During both processes, all kinds of information is gathered in order to determine the quality of the BTD and the performance indicators for the use of biometrics in the Dutch population.

These procedures will be implemented in 6 municipalities. The equipment from the following vendors is planned to be used:

Enrolment Verification at issuance	Facial Verification	Fingerprint Verification
[redacted]	XXX	YYY



Enrolment Verification at Issuance	Facial Verification	Fingerprint Verification
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

The criteria for the selected vendors are:

- The vendor is a major player in the area of facial and/or fingerprint verification.
- The vendor is able to interface with travel documents according to ICAO standards.
- The vendor has to offer state of the art technology.
- The vendor has a good reputation in the industry.
- The vendor has experience in conducting this type of tests.

Initially, the idea was to invite [REDACTED] and [REDACTED] to also participate in the world verification test. This however introduces the problem of a (theoretical) possibility that the results of the verification can be manipulated in case equipment from the same vendor is used. This means that the results of the trial may not be reliable and can not be used as basis for advice on the future Dutch passport. The vendors, [REDACTED] and [REDACTED] have indicated that they understand the position of the BPR, and are still willing to cooperate in the trial.

For convenience, the below the pros and cons of using equipment from the same vendor in the world verification and the enrolment systems are summarized.

Pros	Bron
The simulation of the world-wide operation of the Biometrics passport requires the use of the largest vendors	[REDACTED]
In the real world the same vendors will be used for both verification and enrolment	[REDACTED]
The trial is not a vendor test, any vendor will do, why not use a vendor twice.	[REDACTED]
E/SDU has integrated the libraries into the enrolment systems, the equipment will differ from the verification systems	[REDACTED]
Probably the equipment used in enrolment and verification will be different anyhow.	[REDACTED]
During enrolment, images are captured according to ICAO standards. These do not carry vendor specific properties	[REDACTED]
If Enschedé/sdu uses a standard technology in the enrolment phase there will be no impact on the verification system in terms of interoperability. Its concern is to assure that its BTD can be verified by all systems	[REDACTED]
If the vendor uses an open architecture in the verification phase there	[REDACTED]



should be no interoperability problem with the enrolment system.

Cons	Bron
[redacted] and [redacted] equipment is used in verification at document issuance. Having them in the world verification means duplication	BPR
Should there be a significant difference between the results of the [redacted] equipment and the other vendors, this may raise suspicions. This may influence the overall project result.	BPR
The possibility of manipulations of the images can not undeniably excluded.	BPR
The enrolment should be done with different equipment than verification, because it can be assumed that verification with the same equipment will work.	BPR
Different equipment is to be used in enrolment and verification, since this is the basis of the ICAO specification	BPR
This is not a vendor test, so the equipment used is not really important.	BPR
If the vendors all comply to the ICAO specifications there should be no interoperability problem with the enrolment and verification systems.	BPR

Conclusion

Based on the arguments above, it is best to exclude [redacted] and [redacted] from the World Verification test, because

- a) the verification results are in the test (verification at document issuance)
- b) the possibility of manipulation is eliminated

Both [redacted] and [redacted] have indicated that they understand our position and that they continue to work with us and will make the trial a success.



Appendix 1 : Input from [REDACTED]

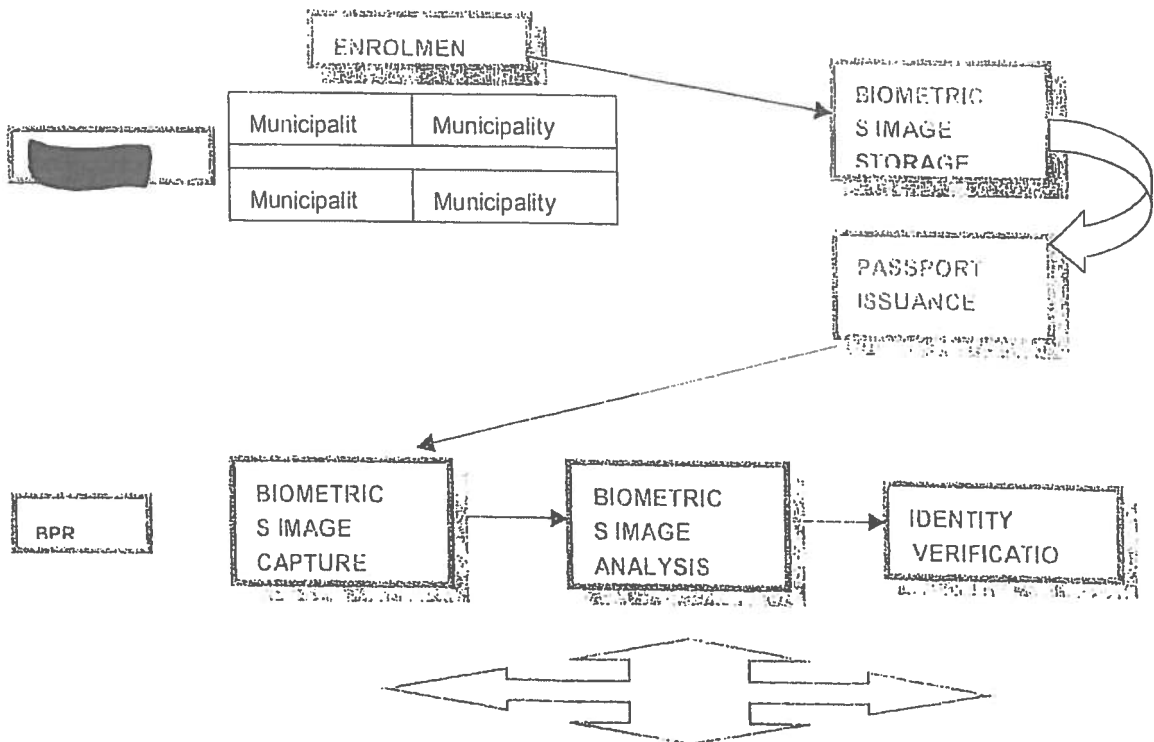
BACKGROUND

The Personal Records and Travel Documents Agency of the Ministry of Interior of Holland (BPR BZK) prepares a pilot to test the introduction of biometrics technology into the Dutch passport (BTD).

OBJECTIVES OF THE TRIAL

1. To check interoperability between biometrics verification systems (3 for face and 4 for fingerprint) : Each BTD is verified by different systems
2. To gather information for statistical analysis
3. To check if the travel documents work properly according to ICAO standards

WHO IS DOING WHAT ?



FACE



FINGERPRINT



?

Is there any advantage given to the vendor who is used both in enrolment and in verification phases ?

To answer that question let us see what is really enrolment and what is really verification

WHAT IS ENROLMENT ?

ACQUISITION of

Alphanumerical data
Portrait
Fingerprint

CONDITIONS

NO proprietary algorithm (ICAO standards)
Storage of images and not features extracted from those images
Personalisation of the BTD made by Enschedé/sdu and not by the vendor
The vendor supplies only acquisition hardware and not specific software

CONCLUSION

- * If Enschedé/sdu uses a standard technology in the enrolment phase there will be no impact on the verification system in terms of interoperability. Its concern is to assure that its BTD can be verified by all systems.

SUGGESTION

Enschedé/sdu could simulate from time to time a bad quality enrolment (modifying the thresholds) in order to check if the verification systems can verify the BTD or not. Because that can happen in a real world. A traveller can present at a Dutch border a foreign passport which has bad quality images.



WHAT IS VERIFICATION ?

AUTOMATIC VERIFICATION of

Alphanumerical data
Portrait
Fingerprint

CONDITIONS

All the vendors are equally invited to verify the BTD through their own system with their own proprietary 1:1 algorithm.

Some vendors have algorithms who have good performances only with their proprietary sensors used at the enrolment phase rather than other very standard sensors.

Those vendors can worry about the sensors used at the enrolment.

But the BTD producer is also concerned by the real environment and will necessarily use only standard equipment and not proprietary equipment

CONCLUSION

- If the vendor uses an open architecture in the verification phase there should be no interoperability problem with the enrolment system.



Appendix 2 : Input from [redacted]

Aan [redacted]

Cc [redacted]

Paalman

Datum 16 december 2003

Van [redacted]

Nummer Memo Vendor selection for the 'world-verification' in the
Dutch Biometrics Trial3

Onderwerp Verificatie apparatuur

Beste [redacted]

Gisteren hebben wij gesproken over de deelname van biometrie leveranciers aan de praktijkproef.

Hierbij gaf jij aan dat BZK voornemens is om de leveranciers die aan [redacted] enrolment apparatuur leveren uit te sluiten van het onderdeel 'Verificatie in de wereld', de simulatie van een werkelijke mondiale situatie, waarbij een zo groot mogelijke diversiteit van systemen wordt toegepast.

Ik heb een aantal argumenten tegen dit voornemen aangevoerd. Op jouw verzoek bevestig ik deze hierbij:

- Belangrijke doelstelling van de proef is het vaststellen van de wereldwijde interoperabele werking van het reisdocument met biometrie. Simulatie van de wereld komt het best tot zijn recht, indien dit een afspiegeling van de werkelijke situatie vormt. Bedoelde leveranciers zijn belangrijke partijen, die in de echte wereldsituatie veel systemen zullen leveren en derhalve van belang zijn voor een representatieve proef.
- Ook in de echte wereld, die tijdens de proef gesimuleerd wordt, zullen leveranciers zowel enrolment apparatuur als verificatiesystemen (bijv. op grensposten) leveren.
- BZK heeft terecht aangegeven, dat de praktijkproef geen leveranciersonderzoek is. Een leveranciersonderzoek zou onder strikt geconditioneerde omstandigheden moeten plaatsvinden teneinde een zuiver vergelijk te kunnen maken. Dit is tegenstrijdig met de doelstelling om interoperabiliteit in een wereldsimulatie te meten.
Er kan derhalve geen sprake zijn van 'voordeel' van een leverancier boven een andere.



- In haar aanvraag- en uitgiftesysteem (REVU) maakt [REDACTED] gebruik van enrolment apparatuur en software libraries van leveranciers. Integratie van deze apparatuur wordt door [REDACTED] gerealiseerd. Ten behoeve van de wereldsimulatie leveren de leveranciers complete controlesystemen. Deze wijken per definitie af van de aanvraag- en uitgifte apparatuur van [REDACTED]
- Het is zelfs nog maar de vraag of de opname apparatuur die aan [REDACTED] geleverd wordt, gelijk zal zijn aan de hardware, die een leverancier gaat inzetten in de wereldsimulatie opstelling.
- Tijdens enrolment worden van de biometrische kenmerken (gelaat en vingers) images opgenomen, conform de ICAO normen. Deze images hebben per definitie geen leveranciersgebonden kenmerken of gegevens in zich. Dit betekent dat het 'basismateriaal' voor verificatie voor iedere leverancier gelijk is.

Op grond van bovenstaande ben ik van mening dat de inzet van leveranciers van [REDACTED] in de wereldsimulatie deze leveranciers niet bevoordeelt ten opzichte van andere. In feite is dit bevoordelingsaspect zelfs niet relevant, aangezien de proef geen leveranciersvergelijking is. Uitsluiting van deze leveranciers is ons inziens nadelig voor de kwaliteit praktijkproef.

Groeten,
[REDACTED]

