Mobile ID (Asan Imza) – Future for Secure Identity. Anybody-Anywhere-Anytime

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Head of the Mobile-ID center

www.asanimza.az
Global trends to keep an eye on

People are going mobile

- Smartphones and tablets – fast growth ahead!
- User interface for everything
- Social distribution happens in hours

Big Data → service innovation

- Real-time data – uploadable, findable, sharable
- Processing costs fall rapidly → accessibility improves
- Data mining and analytics: finding patterns

But: cyber threats are intensifying
The need for a universal digital identity

3.2 billion people are frustrated by their digital experiences

**No convenience:** having to deal with multiple usernames and passwords combinations

**Top 5 Passwords in 2015:**
1. 12345 2. password 3. 12345678 4. qwerty 5. abc123

**No trust:** being concerned about privacy and security of their online identities (more than 3 billion data records have been breached since 2013)

1 minute is the average time required to hack a password

There is a huge price to pay for hacking: Cybercrime costs online service providers an estimated $445B every year

During 2015 the average cost of cyber crime attacks in the United States amounted to $15.42M. Second-ranked Germany averaged $7.5M in damages per company attack. Third-ranked: Japan – $6.8M
What is Mobile-ID?

SIMPLE

DIGITAL AUTHENTICATION & SIGNING

SECURE

ACCESS TO SERVICES

ANYWHERE, ANYTIME, ANYHOW

Access to ANY service by ANYBODY

Asan Imza: SIM based personal identification for digital services
Asan Imza—mID guaranteed & issued by STATE

GOVERNMENT services

FINANCIAL services

BUSINESS services

>95% of services do not need physical presence

IT’s me - Jon

AUTHENTICATION

Qualified electronic signature with qualified digital certificate

I confirm this with my Signature

STATE LEVEL
issued mID creates state & international level of TRUST

TRUSTWORTHINESS
Is in dependence of the ISSUER of the mID

Source: Oleg Shvakovsky
Asan Imza – the highest level of assurance

- The domain of issuing identity is usually seen as a fundamental government task
- Identity management based on government knowledge and information (population registry, checking validity of identity documents, fingerprints, photo, citizenship, etc)
- Identity is confirmed by state
- Identification and method for processing mID applications must ensure high level of trust

NIST declares the age of SMS-based 2-factor authentication over

Mapping between (ISO) Assurance levels and authentication methods
Source: ‘Eurosmart position paper – server signing within the eIDAS regulation’
Asan İmza– uses the highest security standard

- Asan İmza is the SIM-based digital signature system: most secure on the market.
- Asan İmza uses SIM cards that are evaluated at the EAL5 level: higher than required by international standards.
- Most secure, surpassing the required EAL4+ level and going as high as EAL5
  - Signing keys are stored in the secure SIM card that is installed into phone
  - The keys are protected using the separate PIN codes and user has total control over the keys
- Can be used for the governmental communication (Applet supports RSA1024/RSA2048/ECC256 (ECDSA) encryption)
- Can be used with all phones: both simple ones and smartphones
Asan İmza verification process during registration

Face-to-Face only

1. Turn to your mobile operator (Azercell, or Bakcell or Nar) and apply for an Asan İmza (Mobile ID) SIM-card.

2. Please note that you need to provide an identification document to be authenticated in accordance to the requirements.

3. Sign a subscription for an Asan İmza (Mobile ID) SIM-card and services.

4. After the subscription is signed, your mobile operator provides you with a new, PKI SIM card, which you must place in your mobile phone.

5. Turn to an office of the Asan Certification Service Centre of the Ministry of Taxes (ASXM) in order to activate the service. Please note that you need to bring an identification document (containing yours FIN number – unique personal identification code) with you. You can then apply for the activation of the Asan İmza (Mobile-ID) by filling in and signing an appropriate form. The registrar of the Asan Certification Service Centre of Ministry of Taxes (ASXM) will approve your application and enter your data into system.

6. The registrar of the Asan Certifications Service Centre of the Ministry of Taxes (ASXM) will explain you the conditions of the Asan İmza (Mobile-ID) and print out certificate acceptance form for you. By signing the certificate acceptance form you accept the conditions of the Asan İmza (Mobile-ID) service and confirm that you have received certificates you applied for. The certificates will thereupon be activated and you are ready to start using the Asan İmza (Mobile-ID) services (authentication and digital signing).

7. If you would like to make all above mentioned steps in one place please turn to ASAN Xidmət - one single window Service-Centers.
Does mID solution use biometrics?

Andrew Tryie, the chair of the UK government's influential Treasury Select Committee: The letter says that the Committee has heard evidence that biometric data can be "relatively easily obtained by fraudsters".

Olga Kochetova, security expert, Kaspersky Lab, says: "The problem with biometrics is that unlike passwords or pin codes, which can be easily modified in the event of compromise, it is impossible to change your fingerprint or iris image.

In September 2015, the US Office of Personnel Management warned that hackers who breached its systems over the summer made off with the fingerprint records of 5.6 million individuals, raising questions over the security of biometrically-protected identities.

https://www.finextra.com/newsarticle/29529/bank‐regulators‐urged‐to‐address‐security‐of‐biometric‐data

How privacy is secured for citizens?

This is PKI solution which is using private and public key pairs. Privacy for citizens secured by Private key, which only stores in sim cards and belongs to citizens. It can’t be copied, duplicated or moved out from chips.
Azerbaijan Asan Imza in 2016

✓ Pilot launch in **September 2013**, product in February 2014 as the first SIM based digital identity in Azerbaijan

✓ Issued by **all major mobile operators**: MNO Azercell (Telia), Bakcell and Azerfon

✓ **Two years in numbers:**
  ✓ Issued more than **250 000** Mobile-ID certificates
  ✓ More than **15.5 million** transactions and Mobile ID signatures
  ✓ Over **90%** of tax declarations submitted electronically (in total 400 thousand taxpayers in Azerbaijan
  ✓ over-state e-service using Asan İmza in process of appointment of authorized persons and labor contracts registration
  ✓ Around **500** different e-services in Azerbaijan
During two years of operation...

- Asan İmza has been the best-performing identity solution in Azerbaijan able to demonstrate such a tremendous leap in its growth; it surpasses all its analogues around the globe for its growth rate.
- Asan İmza puts the aim to make Azerbaijan the most Mobile-ID penetrated country in the world.
Who is the mID user?

✓ there have been issued around **250 000** Asan İmza certificates in the country.
The most popular governmental e-services portals

- over **450** public and private e-services are available to Asan İmza users in Azerbaijan and more than **15.5 MLN.** transactions done.
The most popular e-Services used with Asan İmza

- **Tax services**
  Ministry of Taxes of Azerbaijan holds the premier position among other public service providers. 62 of 432 public e-services are provided by the Ministry. It is one of the few government authorities rendering its services to the users also via a dedicated tax portal (www.e-taxes.gov.az). In general, in 2015 taxpayers conducted around 2.5 MLN. tax operations using their Asan İmza via the e-Tax Portal.

- **Labour and social protection e-services**
  The second largest figure of using e-services with Asan İmza is related with the e-services of labor contract registration for employers and employees rendered by Ministry of Labor and Social Protection of Population and e-services of State Social Protection Fund. The cumulative number of usage of these e-services with Asan İmza made approximately 1.5 MLN. in 2015.

- **e-Custom declaration**
  The newly introduced e-customs declaration service allows citizens and businessmen to electronically declare their imported goods and transport means using mobile ID (Asan İmza) without the need to physically apply to any customs broker/customs department as it earlier used to take place. The whole process is as easy as logging in to the e-Government portal using Asan İmza, filling in the e-declaration and signing the ready declaration with again Asan İmza. Within only 6 months more than 211 000 declarations have been sent.
TOP governmental e-services

Top-10 public e-services with Asan İmza on E-Gov portal in 2015

- Registration of Employment Contract Notifications and Provision of Information to the Employer...
- Obtaining Information About Employment Contract Notifications by Employees
- Online Registration of an Insured Person
- Submitting Computational Table Regarding Maternity Allowance
- Submitting Computational Table Regarding Temporary Disability Allowance
- Submitting Computational Table Regarding Birth Allowance
- Submitting Computational Table Regarding Allowance on Maternity Leave up to 3 Years of a Child
- Reference on Employment
- Filing Application for Changing of State Social Insurance Certificate or Obtaining of its Duplicate
- E-Payments

Top-3 tax services used with Asan İmza in 2015

- VAT payment (EDH): 18.13%
- Online Invoices: 61.62%
- Online applications: 20.25%

Graph showing the top-3 tax services with percentages:
- VAT payment (EDH): 18.13%
- Online Invoices: 61.62%
- Online applications: 20.25%
People prefer mID to eID

**ASAN İMZА VS. E‐IMZA: CERTIFICATES IN 2014**

- **Government**: 5% (Asan İmza) vs. 60% (E‐Imza)
- **Business**: 5% (Asan İmza) vs. 44% (E‐Imza)
- **Individual**: 5% (Asan İmza) vs. 51% (E‐Imza)

**ASAN İMZА VS. E‐IMZA: CERTIFICATES IN 2015**

- **Government**: 3% (Asan İmza) vs. 62% (E‐Imza)
- **Business**: 3% (Asan İmza) vs. 46% (E‐Imza)
- **Individual**: 3% (Asan İmza) vs. 51% (E‐Imza)

**ASAN İMZА (launched July 2013) vs. E‐İMZA (launched Sept. 2011)**

- **01/01/2013**: 4656 (Asan İmza) vs. 0 (E‐Imza)
- **01/07/2013**: 28664 (Asan İmza) vs. 28664 (E‐Imza)
- **01/01/2014**: 23690 (Asan İmza) vs. 35668 (E‐Imza)
- **01/07/2014**: 28324 (Asan İmza) vs. 38478 (E‐Imza)
- **01/01/2015**: 147786 (Asan İmza) vs. 171600 (E‐Imza)
- **01/07/2015**: 171600 (Asan İmza) vs. 69194 (E‐Imza)
- **01/12/2015**: 190848 (Asan İmza) vs. 75760 (E‐Imza)
Asan Imza is easy

All you need is a mobile phone with secure SIM

Mobile-ID requires no device upgrades on the customer side.

People are going mobile
Definitive data and analysis for the mobile industry

<table>
<thead>
<tr>
<th>GLOBAL DATA</th>
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<tbody>
<tr>
<td>Mobile connections, including M2M</td>
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<tr>
<td>Jan 2016</td>
</tr>
<tr>
<td>7,639,191,938</td>
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<tr>
<td>- 6.10%</td>
</tr>
</tbody>
</table>

Source: GSMA Intelligence 2015, current year-end data except interpolated subscribers and connections
How secure SIM cards look like

✓ Asan Imza also supports Mobile Number Portability service.
Asan Imza – unified authentication both for public and private sector services
Reasons for banks to use Asan İmza

- **New concept of customer service**
  Nowadays banks are globally moving from the traditional “face-to-face” model of customer service to an innovative concept of “e-branches”. Using e-ID solutions such as Asan İmza definitely contributes to this process allowing banks to cut traditional costs on maintenance of physical branches and be online 24/7 for customers.

- Planned integration of Asan İmza into innovative **video-banking** channels and ATMs

- **Maximum security of operations**
  Thanks to Mobile ID technology, there is no need to use such vulnerable and old-fashioned authentication methods as usernames and passwords. Asan İmza can no way be hacked or compromised by any third party, thus providing top level of security for all online operations and personal data of customers.

- **Enhanced customer satisfaction**
  Bank customers can get all required services online with their Asan İmza just in two clicks not spending their time and resources to visit physical branches of a bank. Additionally, they can use their Asan İmza as a single authentication tool across multiple online banking platforms of various banks.
Asan İmza – secure key to financial services (KYC)

Usage of Asan İmza in e-systems of private service providers

<table>
<thead>
<tr>
<th>Bank Name</th>
<th>Status</th>
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<tbody>
<tr>
<td>Yapı Kredi Bank Azerbaijan</td>
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<tr>
<td>Bank Respublika</td>
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<tr>
<td>Kapital Bank</td>
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<td>Access Bank</td>
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<td>Nikoil Bank</td>
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<td>Hesab.Az</td>
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<tr>
<td>Bank of Baku</td>
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<tr>
<td>Atabank</td>
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<tr>
<td>Unibank</td>
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<tr>
<td>AzerTurk Bank</td>
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<tr>
<td>VTB Bank</td>
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<tr>
<td>PASHA Bank</td>
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<tr>
<td>PASHA Life Insurance</td>
<td></td>
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<tr>
<td>E-Pul</td>
<td></td>
</tr>
<tr>
<td>DemirBank (finalizing stage)</td>
<td></td>
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<tr>
<td>BTB Bank (finalizing stage)</td>
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<tr>
<td>Caspian Development Bank (finalizing stage)</td>
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<tr>
<td>Ziraat Bank (finalizing stage)</td>
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<td>Xalq Bank (finalizing stage)</td>
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<tr>
<td>Express Bank (finalizing stage)</td>
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<tr>
<td>Rabita Bank (finalizing stage)</td>
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AsanPay – a centralized portal for all kind online payments

- AsanPay – is the first nationwide web portal for online payments of fees / penalties imposed by public authorities (traffic fines, court penalties / charges, taxes etc.), private services (public utilities, bank/insurance fees etc.) and automobile parking fees throughout Azerbaijan.

- Payments can be done using AsanPay Electronic Money Wallets, mobile phone and plastic cards.

- Using AsanPay portal one can learn in real time if he/she has traffic fines, view photo- and video materials of a traffic violation and pay the fines online. Those drivers, registering their vehicles’ numbers by means of Asan İmza on the portal, will be receiving free SMS messages sent by the system about their traffic infringements. The same is applicable to other types of administrative fines as well.

  More information at [www.asanpay.az](http://www.asanpay.az)
ADA University Asan İmza Portal: mobile ID brings innovations to education

- The first-ever online platform in the Azerbaijani education sphere integrated with the Mobile ID technology – Asan İmza.

- ADA Asan İmza Portal represents a unique digital environment to combine existing and future e-services of ADA University. This portal currently incorporates e-services on registration of admission to the university and e-signing of Honor Pledge of ADA University. The portal can be accessed only by students who have been admitted to the master degree of ADA University this year as well as relevant officers of the university. The authentication tool for logging in to the portal is “Asan İmza” (Mobile-ID with e-signature).
Innovative services with Asan İmza

WELCOME TO THE DIGITAL WORLD OF AZERBAIJAN

Anywhere, anytime, anyhow any service to anybody

Our main goal is to create possibilities for citizens to use easy, secure e-services without limitation of place, time and devices and confirm operations with their mobile signature.

✓ e-Reference on employment

Using e-Government portal of Azerbaijan, citizens can generate e-Reference about their employment status and provide it upon request to respective organizations. In order to log in to the portal, citizens can use Asan İmza as one of the authentication tools.
Asan İmza has been integrated into e-Government Portal

Asan İmza allows to use all e-services
AsanDoc – over-the-country e-&m-signing portal

- Works are underway on creation of a brand-new online document storage and e-&m-signing portal which will be available to all Asan İmza (Mobile ID) users in our country and will enable them to store, sign and exchange their documents using the portal.

- The service is launched both as a business solution for corporate customers as well as for individuals who wish to benefit from the functionality provided on the portal.
ISEESCO BESTDOC Portal – a cross-border corporate platform for digital signature

✓ ISEESCO BESTDOC PORTAL, claiming to be the first ever m-signing and authentication service in the ISEESCO countries and globally as the best practice of innovative document management system for international organisations, aims to export the paperless society experience and enables sharing and m-signing of documents in any format underpinned by strong user authentication.

✓ Islamic Educational, Scientific and Cultural Organization (ISEESCO) BESTDOC PORTAL uses e- & m-signature and authentication technology that aims to be at the forefront in the mobile signature world.

✓ Introduction to the project was in November 2015 at ISEESCO annual meeting in Baku
Innovative services with Asan İmza

✓ Declaring taxes by phone: 195 Call Centre

Taxpayers can fill in and submit their simplified tax declarations by calling 195 Call Centre. There is even no need to use PC or Internet for this purpose; the operator of Call Centre will guide the taxpayer throughout the overall process only asking to confirm the ready declaration with his/her PIN2 to submit it.

✓ Expanding the list of services at 195 Call Centre and integrate other popular services via other call centers with Asan İmza
Online registration of legal entities (new system)

The process of online registration of the legal entity will be reduced from **30 minutes** to **1 minute**, rapid registration of the legal entity up to **30 seconds**

Registration documents:
- Application
- Protocol
- Charter

The Founder 1

The Founder 2

The Founder 3
Digital signing applications with Asan İmza

Mobile devices:
- iOS
- Android

iOS

Android
Are we well aware of mID?

Are You Turtle? Live You 300 Years?

Appreciate your time, nerves and money. See what a clever and successful person use!

AZAN IMZA TEAM

max 5 min

Petrol Traffic Jams Ticket Queue Official Service

NO AZAN IMZA TEAM

min 2 h
## Critical success factors

| mID should be issued on bases of the state provided information | Strong state guaranteed identity is crucial |
| Should be obligatory to accept by all Governmental institutions | mID is an infrastructure solution and public sector should take a lead |
| Strong carrier should be used (special SIM) | Carrier SIM based national mID increases security and trust |
| Qualified e-signature = handwritten signature | Handwritten signature should not be privileged |
| PKI access to the services | Qualified digital certificates will provide chain of trust |
| Should be usable to access ALL public services | Challenge for TRUST |

Source: Oleg Shvaikovsky
Conclusion: some challenges still exist…

✓ E-environment of Azerbaijan should be streamlined: usage of traditional usernames/passwords and other unsecure authentication methods should be eliminated in favor of mobile and e-ID as strong authentication tools.

✓ Asan İmza is the best way for the public and private sectors to save substantial amount of funds: according to studies, using mobile ID through creating wide e-environment in the country, can save almost 2% of GDP on average.

✓ Existence of multiple certification centers is not an efficient mechanism for the overall development of e-government; the best practice is to have a single certification center for all digital ID instruments used in the country.

✓ Using of one unified key of identity will stimulate rapid development of e-government, simplify usage of e-services for the population and significantly improve e-literacy of the population.
Asan İmza – Happy to share
My government is always with me

www.asanimza.az