

A serene landscape at dawn or dusk. A bright sun is low on the horizon, casting a golden glow over a body of water. The sun's reflection is visible on the water's surface. In the sky, a thin, bright crescent moon is visible. The background shows a range of mountains or hills. The overall scene is peaceful and atmospheric.

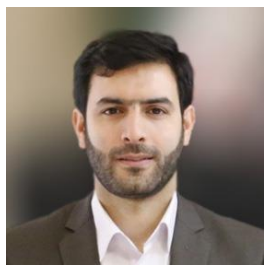
In The Name Of God

# Cross Border Recognition

Ali Rahbari

September 7, 2022

International Workshop, Bangalore, India



Ali Rahbari

### Experiences:

- 3 years at university; Faculty member of Islamic Azad University
- 4 years at government; President of Iran Center for E-commerce Development
- 14 years at private sector; Founder, CEO, Member of the Board, Management Consultant, Mentor, and so on at different fields, including Software Development, IT Solutions, Electronic Components and devices, E-tailing, Crypto Currency, Financial Technology, Public Key Infrastructure, Dispute Resolution System, Credit Rating, Logistics, ... .

He has assisted many ministries in Iran on digitalization of G2G and G2B transactions. In particular, towards digitalization, he was the senior architect, senior engineer and senior operations manager of

- National Trade Single Window (NTSW),
- National Total Transportation System (NTTS),
- National Total Warehouse System (NTWS), and
- National Anti-fraud System (NAS).

He was the vice chair of APKIC (Asia PKI Consortium) for 3 years (2019-2022).

He has several publications in high rank well-known journals (Q1).

**Rahbari, A., Nasiri, M.M., Musavi, M., Jolai, F., (2019) “The vehicle routing and scheduling problem with cross-docking for perishable products under uncertainty: Two robust bi-objective models”, [Applied Mathematical Modeling](#), 70, 605-625.**

**Nasiri, M.M., [Rahbari, A.](#), Werner, F., Karimi, R., (2018) “Incorporating supplier selection and order allocation into the vehicle routing and multi-cross-dock scheduling problem”, [International Journal of Production Research](#), 56 (19), 6527-6552.**

**Nasiri, M.M., Ahmadi, N., Konur, D., [Rahbari, A.](#), (2022) “A predictive-reactive cross-dock rescheduling system under truck arrival uncertainty”, [Expert Systems with Applications](#), 188, 115986.**

**Nasiri, M.M., Salesi, S., [Rahbari, A.](#), Salmanzadeh M., N., Abdollahi, M., (2018) “A data mining approach for population based methods to solve the JSSP”, [Soft Computing](#), DOI: 10.1007/s00500-018-3663-2.**

**Nasiri, M.M., Mahmoodian, V., [Rahbari, A.](#), Farahmand, S., (2017) “A modified genetic algorithm for the capacitated competitive facility location problem with the partial demand satisfaction”, [Computers & Industrial Engineering](#), 124, 435-448.**

**Ghaffari, Z., Nasiri, M.M., Bozorgi-Amiri, A., [Rahbari, A.](#), (2020) “Emergency supply chain scheduling problem with multiple resources in disaster relief operations”, [Transportmetrica A: Transport Science](#) 16 (3), 930-956.**

**Nasiri, M.M., Abdollahi, M., [Rahbari, A.](#), Salmanzadeh M., N., Salesi, S., (2018) “Minimizing the energy consumption and the total weighted tardiness for the flexible flow shop using NSGA-II and NREGA”, [Journal of Industrial and Systems Engineering](#), 11, 150-162.**

Part 1.

Cross Border Recognition;

The concept and environment of the problem

Part 2.

Iran PKI;

Laws and Regulation

Current state

Part 1.

**Cross Border Recognition;**

**The concept and environment of the problem**

# Government

Ministry of Oil



Ministry of Economy



Ministry of Transport



Central Insurance

Central Bank

Standards Organization

Ministry of Telecommunication



Ministry of Agriculture



Ministry of Health



Ministry of Trade



# Business

# Consumer

Ministry of Oil

Ministry of Economy

Ministry of Transport

Central Insurance

Central Bank

Standards Organization

Ministry of Telecommunication

Ministry of Agriculture

Ministry of Health

# Ministry of Trade



Trade Promotion Org.

Government



33,000  
Trader

Business

Consumer



**Ministry of Health**

**Ministry of Trade**



**Import Permit;**  
 ➤ Request  
 ➤ Issuance



**Government**

**Business**

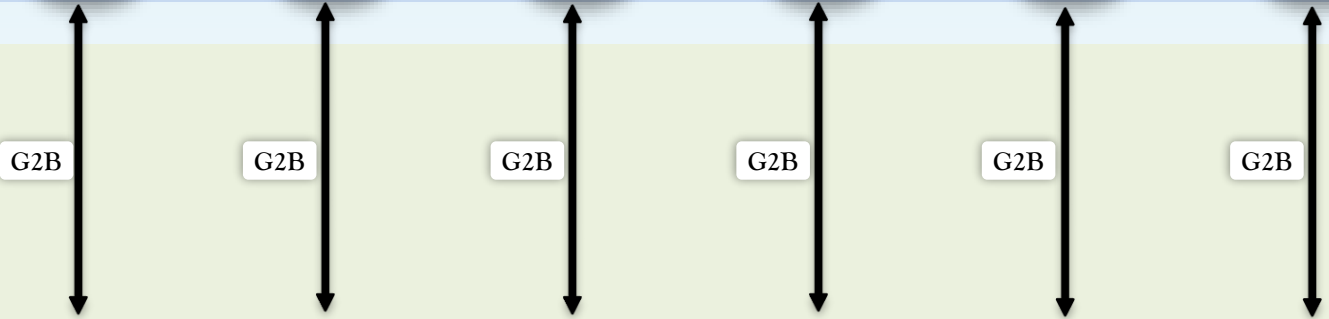
**Consumer**

Government

Ministry of Oil    Ministry of Economy    Ministry of Transport    Central Insurance    Central Bank    Standards Organization    Ministry of Telecommunication    Ministry of Agriculture    Ministry of Health    Ministry of Trade



Health Single Window    Insurance Single Window    Banking Single Window    Trade Single Window    Production Single Window    Logistics Single Window



Business



Consumer

Ministry of  
Oil

Ministry of  
Economy

Ministry of  
Transport

Central  
Insurance

Central Bank

Standards  
Organization

Ministry of  
Telecommuni-  
cation

Ministry of  
Agriculture

Ministry of  
Health

Ministry of  
Trade

Government

Business

Consumer

To do these transactions electronically (online)  
Iran have designed and developed several  
digital systems over the past 10 years,

Ministry of  
Oil

Ministry of  
Economy

Ministry of  
Transport

Central  
Insurance

Central Bank

Standards  
Organization

Ministry of  
Telecommuni-  
cation

Ministry of  
Agriculture

Ministry of  
Health

Ministry of  
Trade

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Business

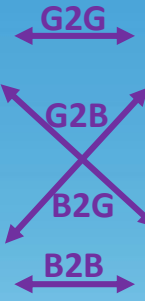
Consumer

## To secure online transactions

i.e., to protect integrity and to ensure confidentiality and non-repudiation of data and documents, Iran have employed the PKI-based digital signature certificates.

## Nation A

## Nation B



PKI Domain A

Cross Border Recognition

PKI Interoperability

PKI Domain B

Legal Readiness

Technical Readiness

Action Plan

Application Area

Part 1.

Cross Border Recognition;

The concept and environment of the problem

Part 2.

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Part 2.

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# PKI Laws & Regulations in Iran

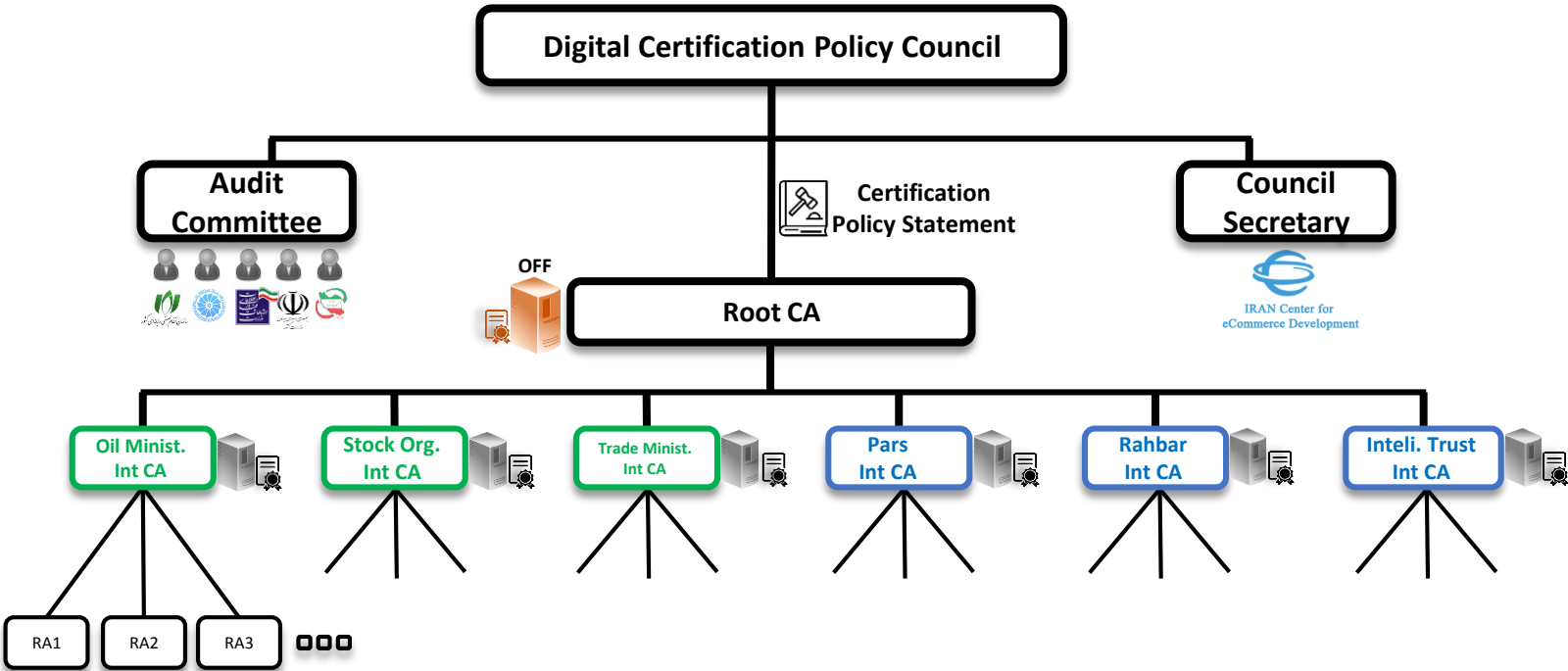
- 
- E-commerce Law

- 
- Executive Regulations, Article 32

- 
- Digital Certificate Policy Approved by Policy Council



# PKI Hierarchy in Iran



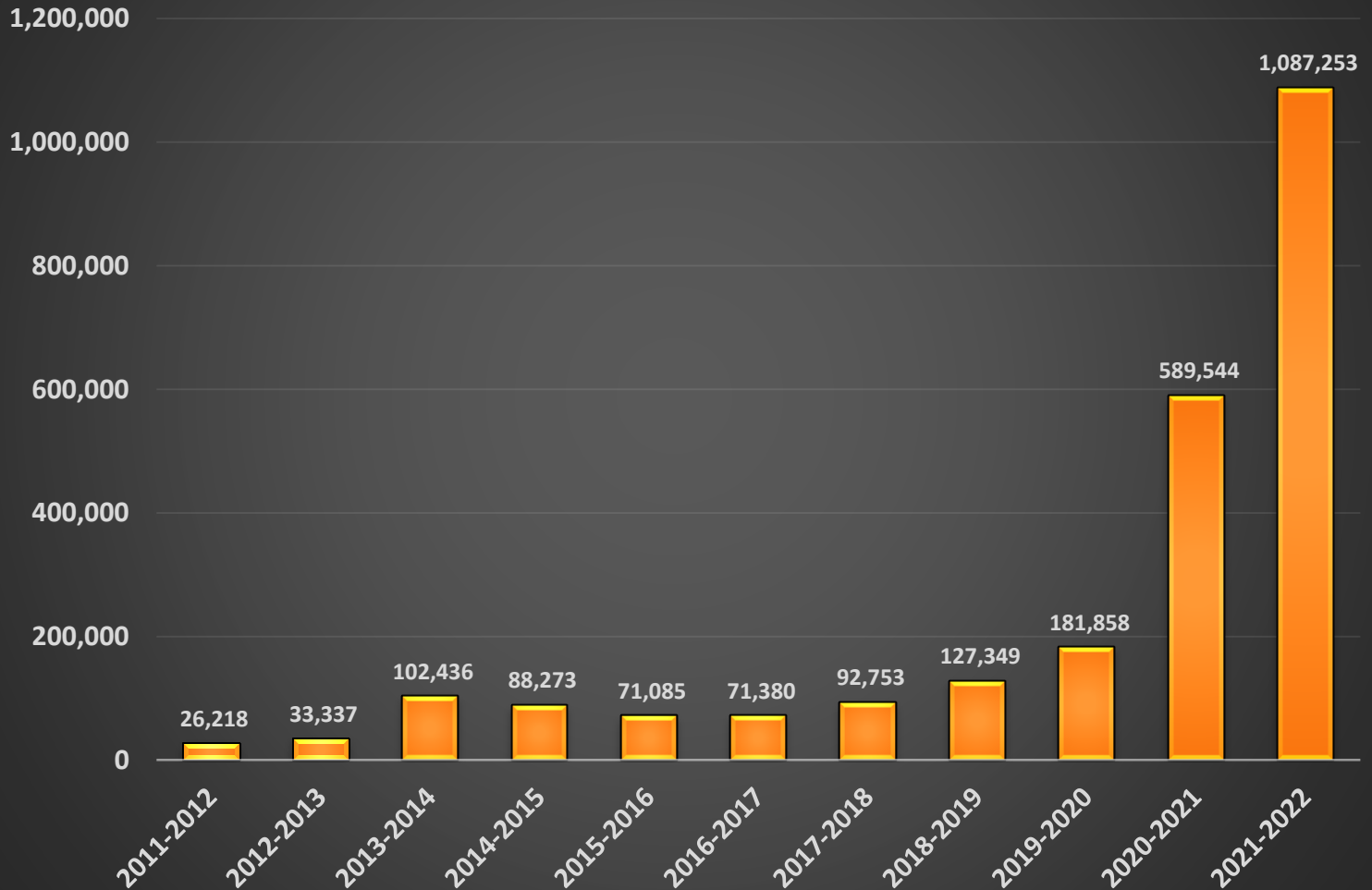
# Certificates Assurance Levels and Usages



# Certificates Assurance Levels and Usages



# Number of Digital Signature Certificate



# PKI Interoperability



- ❑ The validation and acceptance of digital certificates issued by foreign certificate authorities shall be subject to a mutual agreement between Iran's Root CA and the foreign certificate authority with consideration of the reciprocity principle and approval of digital certificate policy council.

THANK

YOU

Ph.D Candidate  
Systems Engineering  
University of Tehran

Mobile: +98 912 731 7009

Email: [Rahbari.a@ut.ac.ir](mailto:Rahbari.a@ut.ac.ir)

 Rahbari.a.pub

 Ali Rahbari

