Blcokchain DID And Understanding of K-DID

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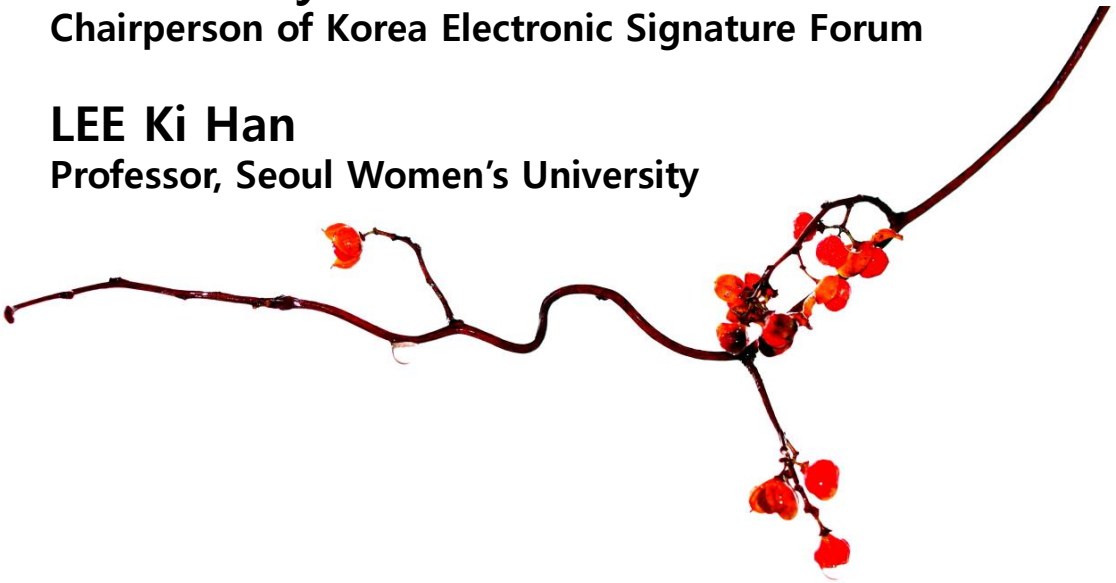


Digital Identity

National ID Card

한호현(韓祜鉉)

200102-3456789

서울특별시 디지털구청장

Digital Identity

Accredited certificate
For
Electronic Signature

Electronic Government Services
Online Financial Transaction

DID

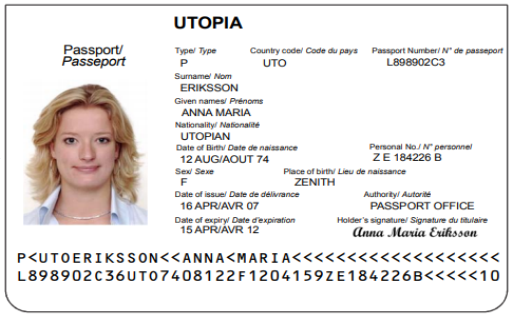
Before Digital Age **2002** **2020**

Identity : An attribute or set of attributes that uniquely describe a subject within a given context
(NIST : SP800-63-3)

DID : Decentralized Identity

Decentralized Identity
Distributed Identity
Decentralized Identifier

Authorized Issuer (Government)



Cigarette

present

Only Age over 19

Holder

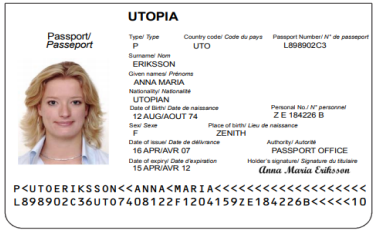
present

Travel

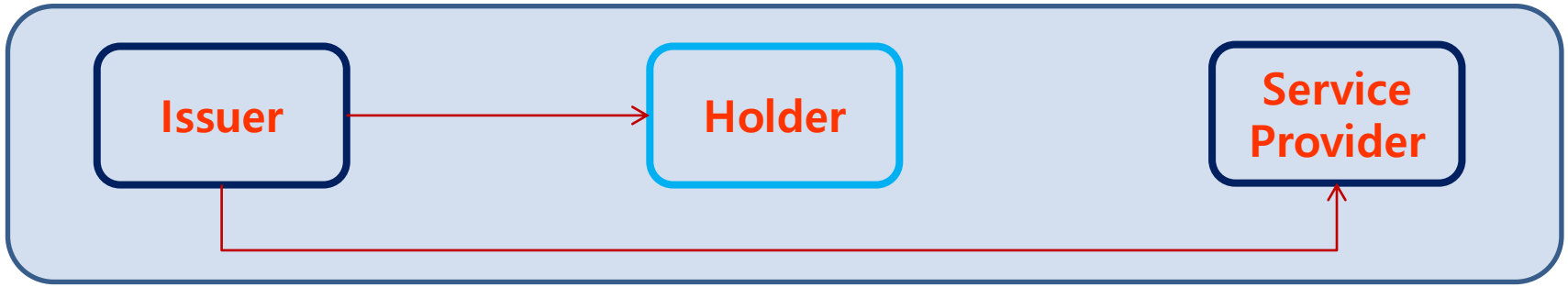
Every Personal Information
And
Issuing Information

DID : Decentralized Identity

Decentralized Identity

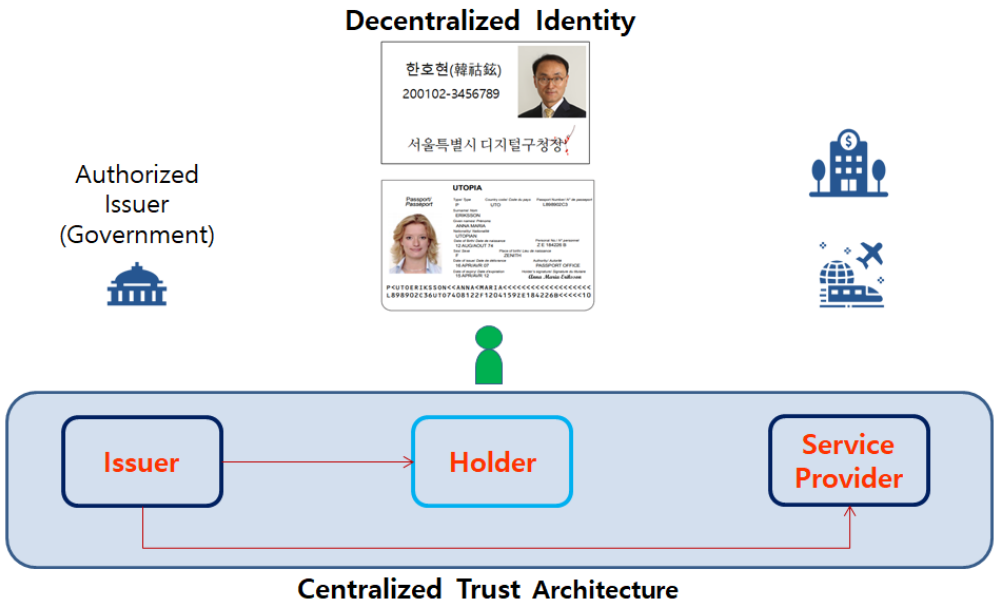


Authorized Issuer (Government)



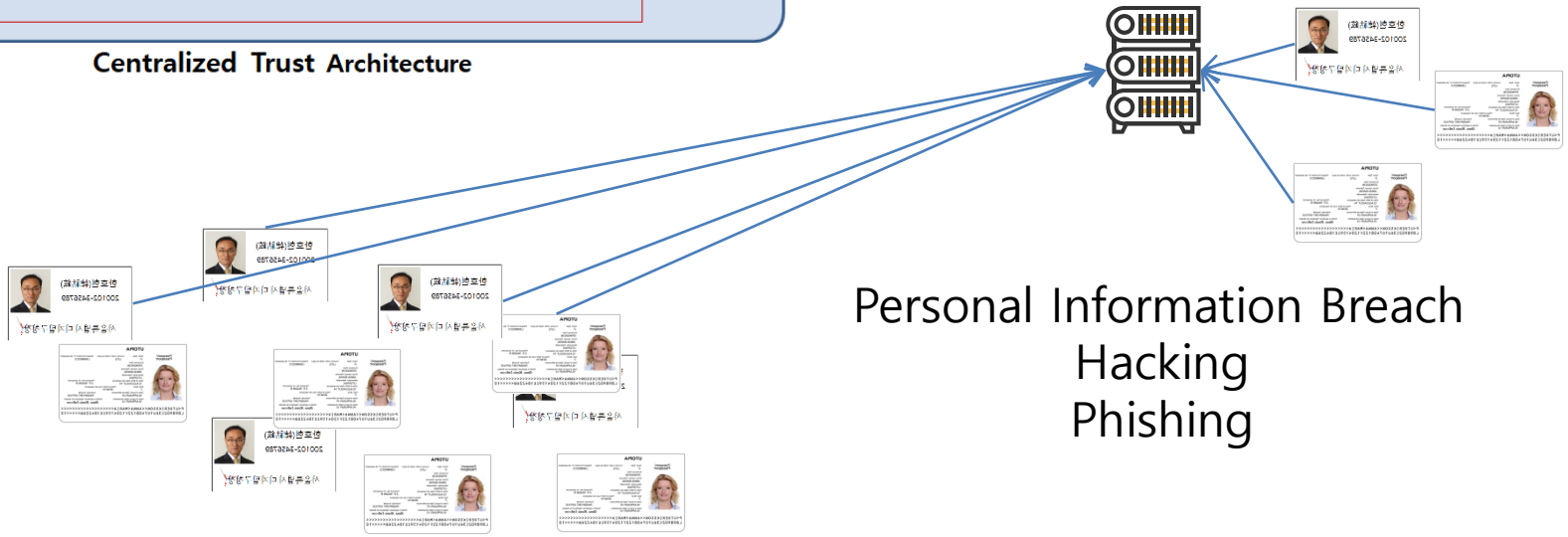
Centralized Trust Architecture

DID : Decentralized Identity



Internet Service

Service Provider



Personal Information Breach
Hacking
Phishing

Digital Identity - Principles

1) Privacy - When personal data is accessed people will have confidence that there are measures in place to ensure their confidentiality and privacy; for instance, a supermarket checking a shopper's age, a lawyer overseeing the sale of a house or someone applying to take out a loan.

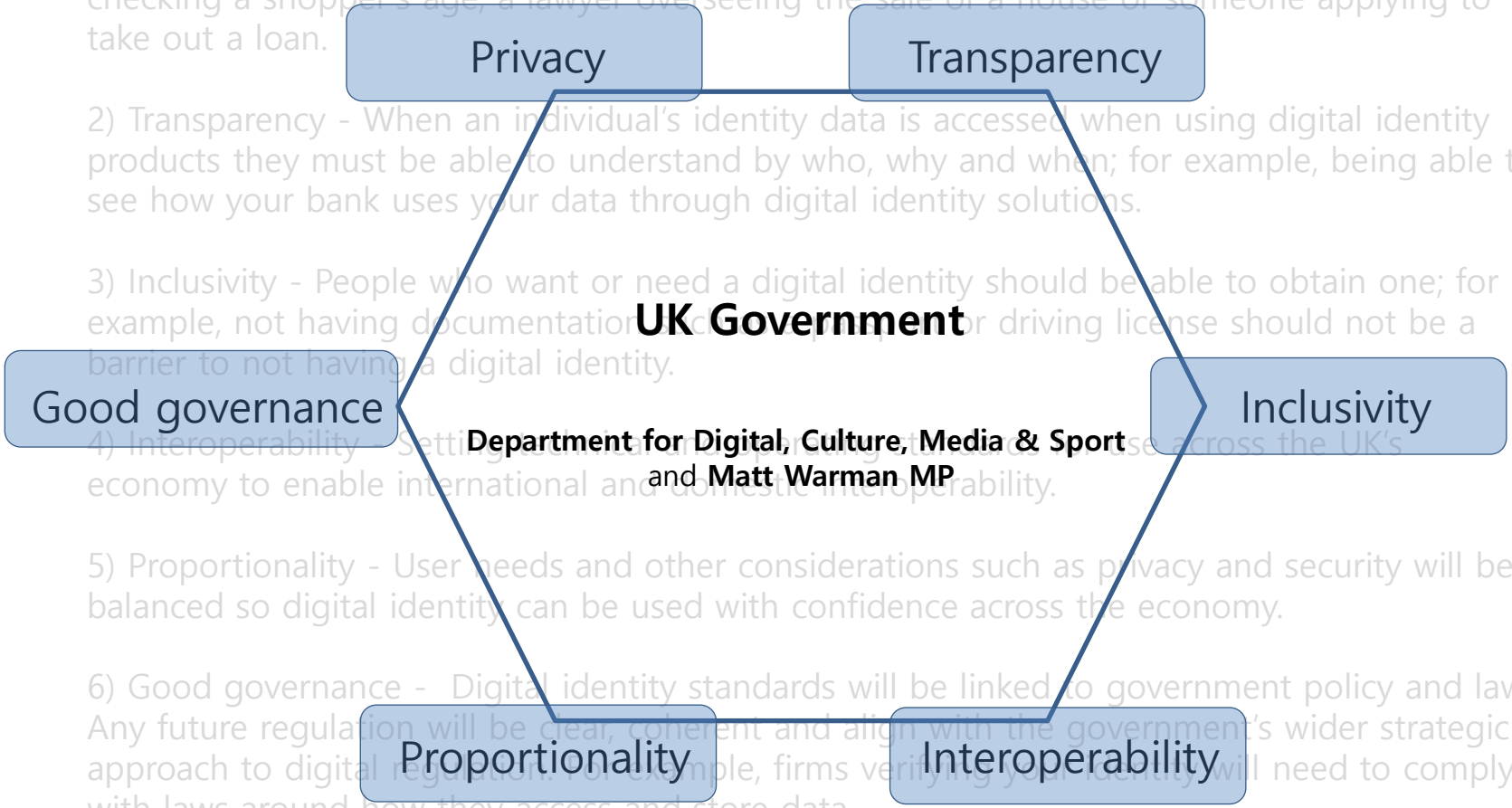
2) Transparency - When an individual's identity data is accessed when using digital identity products they must be able to understand by who, why and when; for example, being able to see how your bank uses your data through digital identity solutions.

3) Inclusivity - People who want or need a digital identity should be able to obtain one; for example, not having documentation such as a passport or driving license should not be a barrier to not having a digital identity.

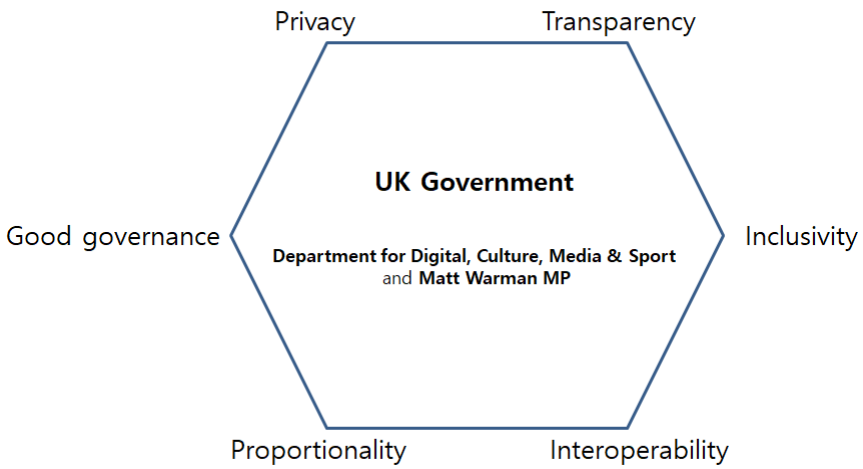
4) Interoperability - Setting standards and promoting their use across the UK's economy to enable international and domestic interoperability.

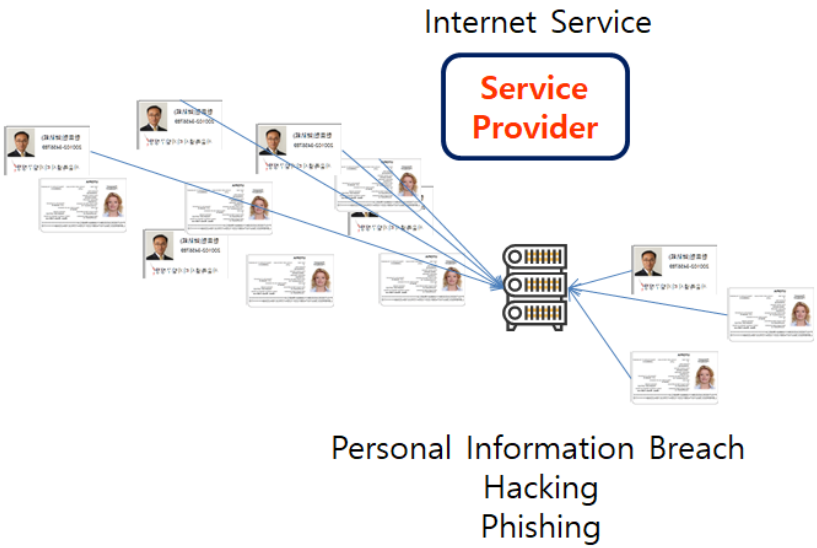
5) Proportionality - User needs and other considerations such as privacy and security will be balanced so digital identity can be used with confidence across the economy.

6) Good governance - Digital identity standards will be linked to government policy and law. Any future regulation will be clear, coherent and align with the government's wider strategic approach to digital regulation. For example, firms verifying your identity will need to comply with laws around how they access and store data.



K-DID





DID

How to Realize Digital Identity Dream ?

K-DID

We Need Accumulated experience and knowhow

K-DID Movements

Experience of Digital Identity Before Digital Age
Knowhow of National-wide Electronic Signature

행정안전부 Ministry of Interior and Safety

- 디지털 정부혁신 추진계획, DID기반 모바일신분증 사업 착수
- 21년 DID기반 모바일 운전면허증, 진정한 Digital Identity 구현
- 디지털 뉴딜中 지능형 정부, 비대면 행정 위한 민간 확산 전략 수립

Financial Services Commission

- 디지털 금융 종합 혁신방안으로 DID 신원확인 방법 도입 검토
- 위조 신분증을 이용한 금융사기를 방지하기 위해 신기술 활용
- 업종별(이체/결제), 고객별(신규/기존) 신원확인 수준 차등 적용

금융위원회

과학기술정보통신부 Ministry of Science and ICT

- 블록체인 기술 확산 전략, DID기술 활용 7대 분야 선정
- 비대면 혁신 서비스 발굴 및 인증 수단용 연계 방안 수립
- DID 협의체를 통한 글로벌 표준 대응 강화 및 법제도 개선

K-DID Movements

initial

OMNIONE

MYiD alliance

MYKEEPiN ALLIANCE

언택트 시대, 한국이 세계 DID 주도하려면...
국내 연합체 힘 모아야...

"블록체인, 韓 IT가 세계 선도할 드문 기회"

오세현 SKT 블록체인사업개발유닛장 인터뷰

블록체인 기술이 세상을 바꿀 것이라는 기대가 높다. 보안성, 신뢰성, 투명성, 확장성 등 블록체인 기술이 품고 있는 특성을 곱씹어 볼 수록 산업은 물론 사회 전체에 미칠 파급력이 상상 이상일 것이란 전망에 무게가 실린다.

전 세계 IT기업들은 새 패러다임 변화를 주도하겠다는 생각으로 블록체인에 뛰어들고 있다. 치열한 주도권 싸움이 예상된다. 한국 IT는 과연 블록체인이 [illegible] 변화에서 기회를 잡을 수 있을까.

국내 IT기업 주요 경영진(C레벨) 중 블록체인 분야에 가장 전문성을 가진 인물로 꼽히는 SK텔레콤 블록체인사업개발유닛장 오세현 전무는 이런 물음에 "블록체인은 한국이 세계 IT 시장을 선도할 드문 기회"라는 긍정론을 펼치고 있다.

오 전무는 2016년 7월 SK C&C에서 처음 블록체인을 심도있게 들여다 본 후, 파괴적 혁신을 가져올 기술임을 직감하고 깊이 빠져들었다. 오 전무는 한국블록체인오픈포럼을 만들어 초대 의장 역임하고, <블록체인노믹스>라는 책을 공동 저술(오세현·김종승)하기도 했다. 현재는 SK텔레콤에서 블록체인사업개발유닛을 이끌며 관련 신사업을 발굴, 개발하고 있다. 오는 6월 서비스 론칭이 목표다.

최근 오 전무를 만나 '블록체인 기술이 어떻게 세상을 바꿀지, 한국은 이 변화에 어떻게 대응해야 할지' 그의 생각을 들어봤다.

코로나 이후 언택트 시대…K-DID 키워 대비를

코로나19 사태를 보면서 덴마크 철학자 키에르케고르의 '죽음에 이르는 병'이라는 책이 떠올랐다. 책은 죽음에 이르는 병이 '절망'이라고 했다. 또 불안과 고통의 절망에서 벗어나려는 인간의 의지는 오직 '희망'이라고 했다. 우리나라를 포함한 전 세계가 코로나19 사태로 절망을 말할 때 우리 주변에서 흔들리지 않고 묵묵히 일해온 분들이야말로 우리의 희망이었다.

코로나19 사태 초반의 불행을 딛고 지금은 'K-방역체계'로 글로벌 진출을 위한 희망을 찾아가고 있다. 이처럼 포스트 코로나 시대를 맞아 더 많은 관심을 받고 있는 비대면, 이른바 '언택트(영어로는 non-contact)' 기술에서 기회를 잡아야 한다. 이러한 언택트 산업의 핵심인 보안인증 기술은 바로 FIDO와 분산ID 기술이 융합된 'DID(Decentralized Identity)'가 있다.

DID는 블록체인 기술의 데이터 위·변조 방지 특성을 이용해 신뢰도와 보안성을 강화한 신원(ID)을 확인해주는 보안 인증 기술이다. DID는 이용자 신원정보를 중앙 서버에서 관리하는 것이 아니라 스마트폰 등 개인 기기를 통해 분산 관리한다. 이 기술은 금융핀테크 서비스를 시작으로 출입 관리, 모바일 신분증, 제증명 서비스 등 사물인터넷(IoT), 스마트 팩토리, 스마트홈 등 네트워크에 연결되는 사물에 대한 주요 보안 인증 기술로도 활용되고 있으며, DID 시장은 모든 산업의 보안이 강화된 인증 서비스로 빠르게 확산될 것이다.

DID는 우리나라 기업들이 세계 최고 기술력을 가지고 있다. 그러나 시장 형성 초기에 선점하지 못하면 향후 5년 이내에 글로벌 DID 인증 시장 주도권을 미국이나 유럽 DID 관련 기업에 넘겨줄 수 있다. 다행인 것은 DID 기술 잠재성을 인식한 정부가 공공 분야에서 언택트 인증 기술로 DID 기술에 관심을 갖고 지원하고 있어 관련 기업들이 기술 노하우를 쌓고 있다는 점이다. 2020년 하반기에 행정안전부가 모바일 신분증을 도입할 때 주요 보안 인증 기술로 DID를 고려하고 있다. 과학기술정보통신부도 한국인터넷진흥원을 통해 다양한 DID 관련 사업을 추진 중이라는 것도 환영할 만한 일이다.

이를 통해 우리나라 DID 관련 업체들이 언택트 시대에 신뢰할 수 있는 레퍼런스를 구축한 경험과 노하우는 글로벌 시장에서 경쟁할 때 큰 자산이 되어 줄 것이다.

이기혁 DID 얼라이언스 코리아 부회장

人 사이트 김영린 DID얼라이언스코리아 회장

"세계 DID 표준 주도하려면 국내 연합체 힘 모아야"

〈탈중앙화 신원증명〉

"한국은 블록체인 기반 탈중앙화 신원증명(DID) 시장 주도권을 쥘 역량이 있습니다. 세계 DID시장 표준을 선점하려면 한국 기업, 연합체가 모여 큰 그림을 그려야 합니다."

김영린 DID얼라이언스코리아 회장은 본지 인터뷰에서 국내 산업계 협업을 거듭 강조했다. DID는 기업, 정부가 중앙집권적으로 관리하던 신원확인 방식을 탈피, 블록체인으로 개인이 자신의 개인정보 통제권을 갖게 하는 간편 신원증명 기술이다. DID로 세계 어디서든 신원확인, 금융거래가 가능해진다.

김 회장은 한국은행, 금융감독원 [illegible] 서 언택트 인증 기술로 DID 기술에 관심을 갖고 지원하고 있어 관련 기업들이 기술 노하우를 쌓고 있다는 점이다. 2020년 하반기에 행정안전부가 모바일 신분증을 도입할 때 주요 보안 인증 기술로 DID를 고려하고 있다. 과학기술정보통신부도 한국인터넷진흥원을 통해 다양한 DID 관련 사업을 추진 중이라는 것도 환영할 만한 일이다.

국내는 물론 세계 각국 기업과 기관이 DID 서비스 상용화를 추진한다. DID는 블록체인 산업 중 효용성이 가장 높은 분야로 각광받는다. 병무청 등 국내기관에서도 최근 DID 솔루션을 시범 도입했다.

김 회장은 국내 연합체 간 동맹을 제안했다. 내수시장을 두고 표준 다툼에 골몰할 경우 세계시장 경쟁에선 각개 격파될 수 있다는 우려 때문이다. 국내에선 금융결제원, 라온시큐어 주축의 DID얼라이언스코리아, 아이콘루프가 중심이 된 '마이아이디얼라이언스', 이동통신 3사가 주도하는 '이니셜 DID 연합'이 대표적이다.

그는 "미국 사례와 비교해봐도 국내 기업, 기관의 DID 참여도는 매우 높다. 세계시장에서 실질 사업 성과를 낼 수 있다"고 평가했다.

이어 "마이아이디얼라이언스, 이니셜 DID 연합이 DID얼라이언스와 함께 하길 원한다"면서 "한국이 세계 DID 시장 표준을 선점해야 한다. 각사 핵심 솔루션을 호환하도록 문호를 개방하고, DID 표준을 키우자"고 제안했다.

국내 DID 서비스 상용화 시대가 목전이다. 라온시큐어의 옴니원 메인넷이 올해 7월 오픈한다.

김 회장은 DID 상용화가 소비자 생활을 크게 바꿀 것이라고 예측했다.

그는 "이제껏 기업과 기관이 내 데이터를 활용, 관리했지만, 우리에게는 아무 보상이 없었다. DID는 개인정보 주권을 개개인에게 돌려준다"면서 "개인정보를 이용할 때마다 당사자는 마일리지 개념의 리워드를 받을 수 있다. 리워드는 실생활에서 현금처럼 활용할 수 있다"고 말했다.

또 "금융 분야에서 DID 서비스가 먼저 자리를 잡을 것이다. 이후 적용 분야가 넓어질 것"이라면서 "글로벌 기업도 지속적으로 DID 생태계에 동참할 것"이라고 전망했다.

이영호기자 youngtiger@etnews.com

K-DID Movements

韩国区块链技术应用:
提升金融机构安全程度 仍存标准

Blockchain 기반의 신원인증기술, 한국이 세계시장 선도할 것...
사용자 중심의 국제표준 마련이 "승부수"

行业落地分析

每经记者 张红蕾 韩国首尔报道
每经编辑 赵 桥

2018年被认为是区块链技术应用落地的元年,而金融领域的应用则被视为区块链技术应用的热土。据《每日经济新闻》记者了解,最近几个月,中国多家行业巨头企业相继将金融业务与区块链结合:蚂蚁金服称将瞄准区块链跨境汇款;玖富科技宣布旗下AI及区块链公司成立;苏宁消费金融通过独立部署节点成功接入苏宁联盟链;京东推动独立部署联盟链;腾讯云与华夏银行联合推出基于区块链技术的供应链金融平台等。

在国内区块链技术与金融业结合火热的背景下,韩国的现状又如何?近日,《每日经济新闻》记者独家专访到已经将区块链技术运用在韩国新韩金融集团的区块链公司Raonsecure CEO李淳珩。在他看来,金融领域无疑是区块链技术应用的第一赛道,但仍然面临着参与机构少、标准尚未统一等"痛点"。

韩国也缺真正区块链专家

阅读是李淳珩的习惯之一,最近他对区块链方面的知识热情高涨,原本一周阅读一本书的频率现在不断加快。"我一般早上7点出门,8点上班,上午在公

地开花的态
域这个高地之
在物流产业方面有

2012年成立的Raonsecure是韩国生物认证领域市场占有率第一的企业,在提供生物认证、密码认证、保安服务、研究安全技术和培养安全人才方面有自己的解决方案,其掌舵者李淳珩在安全加密领域有20多年的经验,在两三年前开始研究区块链技术,并在2017年将自身的区块链技术推向韩国市场,2018年将区块链加密技术及区块链+生物认证技术运用在韩国金融机构新韩金融集团。

"在区块链技术应用之后,金融机构安全程度和清晰度进一步提升。"李淳珩向记者介绍,眼下,除了Raonsecure,韩国的部分公司也对区块链+金融有所布局。比如,三星SDS公司也开始给韩国部分金融

度还不够。现在的区块链技术像是没有乐器的乐队,区块链发展的当务之急是确立全球统一标准。"李淳珩说,虽然Raonsecure在区块链产业布局较早,但并不能将自身称为领先的企业,区块链目前发展的瓶颈则是标准难以统一,这需要政府相关部门和企业共同努力探索,这也是企业能够一决高下、分出领先者的前提。

按照李淳珩的理解,区块链技术在金融机构应用最重要的因素之一,是政府的政策和态度。作为在纽交所和韩国证券交易所的上市公司,韩国新韩金融集团拥有自身较为独立的管理体系,在运用区块链技术过程中具有一定的灵活性。不同于上市公司,一些与政府机构密切相关的金融

协会,在引入区块链技术
介入和限制。
多企业也想进入中国市
,需要双方在基础设施、
进行探讨和探索,一起
两国在区块链方面的发
听说,中国和韩国对于
代币)的态度都比较统
保守的态度。但在支持
管层的意向很大,对于
进行扶持,而韩国的支
,其实韩国已经准备好
有相关专家,希望相关
块链产业发展。

10 | Interview

MONDAY, MARCH 23, 2020 • The Korea Times

Decentralized ID to ensure personal data autonomy

By Lee Kyung-min
leekm@koreatimes.co.kr

The Decentralized Identity (DID) Alliance Korea, an open industry association created to develop a standardized, interoperable framework for decentralized identity services, will seek to become a global leader in the building industry with much growth potential, the alliance head said Monday.

A fully operational DID system would mean a Korean national, for example, could pass through immigration services in the US via DID and use financial services there without any difficulty.

This would be possible as the personal personal information, including passport number and bank and credit records would be stored in the DID system, ready to be reviewed for clearance by the immigration and financial authorities there.

The organization's combined effort, the head said, will enable Korea to have a greater say in setting global DID standards, facilitating the global expansion of not only local companies but also domestic technologies. "It similar to how Kenoh Yankowitz became a full medal Olympic sport," DID Alliance Korea Chairman Kim Young-rin said in a recent interview with The Korea Times.

"The International Olympic Committee (IOC) had a Korean vice president and the creativity matrix set was adopted as an official Olympic sport. Korea needs to lead the global discussions on the decentralized ID fully backed by its competitive IT technologies, prompting other nations to follow our lead in the development and implementation of the necessary systems."

The vision comes amid the growing importance of "self-sovereign identity," an industry term referring to a new form of identification which, through a form of technologies, enable individuals and organizations to assert their own identity.

This is different from existing identity certification processes which require the help of intermediaries including government-certified or public entities that manage personal data.

"Personal identities are currency," said the former head of Financial Security Institute (FSI) who also served a deputy governor at Financial Supervisory Service (FSS). Kim also worked at the Bank of Korea (BOK).

The new way of characterizing what largely remains under the "care" of state-run, or financial services firms follows a series of data leaks at major such organizations over the past years.

Mass data leaks at card firms in 2013, for example, put the issue front and center, prompting calls for personal data to be managed and controlled by individuals and centralized institutions known for their high reliability with little accountability.

The Seoul High Court upheld a lower court's ruling that fined KB Kookmin, NongHyup cards 15 million won ($12,000) each and Lotte Card 10 million won, March 3. The Supreme Court is reviewing the case. The ruling came about five years after the three firms were indicted for failing to supervise workers who handed over to an outside IT contract worker a combined 100 million unencrypted user data. Some of them sold the data to loan sharks.

"Crimes like this will no longer be possible if DID services are implemented."

Frustrating the calls are global moves seeking to strengthen protection of personal data and to recognize them as personal assets, grounds for bolstering individual autonomy of what is rightly the bearers. "A decentralized ID increases transparency, management efficiency of data," Kim said. Also to be helped by the DID initiative are about 13 percent of the global population currently without an identity.

According to 2018 World Bank Group data, an estimated one billion people around the globe face challenges in proving who they are.

"They are denied basic services such as finance and mobile connections, not to mention the high and unbearable risk of them falling victim to human trafficking. A global implementation of the DID will help solve the human rights crisis around the world."

The DID Alliance Korea is a local office of the DID Alliance, a global foundation set up by IT firm Raon Secure CEO Lee Yoon-hyung and Ramesh Kesanupalli in San Francisco, US, in 2019.

The DID Alliance has 62 members including Korea Financial Telecommunications & Clearings Institute (KFTC), SG CNS, NH NongHyup Bank, Samsung SDS, Samsung Card, Shinhan Bank, KB Kookmin Bank and Korea Foundation.

Kesanupalli is the founder of the Fast Identity Online (FIDO), an open industry association launched in February 2013 to develop and promote authentication standards that help reduce the world's over-reliance on passwords.

Business model viability

The organization is set to make a test case of the firm's marketability in July, five months after the successful operation of OmniOne Network, a blockchain-based intranet needed to make the DID service function.

At the Seoul headquarters of Raon Secure, where OmniOne Network was showcased Feb. 6, Kim said the main version of the network will be launched in July following trial operations centers with participating firms.

"Based on our Global Association for Digital Identity (GADI) initiative, we will connect human identity with digital identity. This will not only help solve data breach issues but also give an ID to those yet to have one around the world."

The confidence stems due in a large part from a number of test-proven cases that highlight the organization's business operability.

An DID system was implemented by the Military Manpower Administration (MMA) and KFTC, a success much limited for removing administrative inefficiency and bolstering user convenience.

One of two key technologies in place to help efficient operations was those developed by FIDO Alliance, and the other was OmniOne Network whose blockchain-based functions not only improved the system credibility but also fundamentally removed the possibility of disputes over record alterations or any other claimed failures of draft notice delivery.

The key characteristics of blockchain-based systems are resistance to data modification, meaning data recorded on "the digital ledger" cannot be easily altered retroactively, which helps ensure accountability.

The number of the DID system users on the MMA website topped 8,500 over the past month, a remarkable feat given the official launch was only in late January. The service was used over 52,000 times.

The ministry is expected to soon, given the over 1.65 million credible drafted manpower are highly likely to choose online services over time consuming in-person visits to local district offices and MMA offices.

"We identified problems and set up a system with a solution functions applied. Our efforts were well received by the users and this helps us stay motivated to be better at what we do and be more efficient", Kim said.

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businesswire

DID Alliance Brings Trust and Accountability to the Digital World With Launch of GADI, the Global Association for Digital Identity

GADI Enables User Control of Digital Identities and Personal Data

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Press Release

DID Alliance Brings Trust and Accountability to the Digital World With Launch of GADI, the Global Association for Digital Identity

Published: Nov. 7, 2019 at 8:00 a.m. ET

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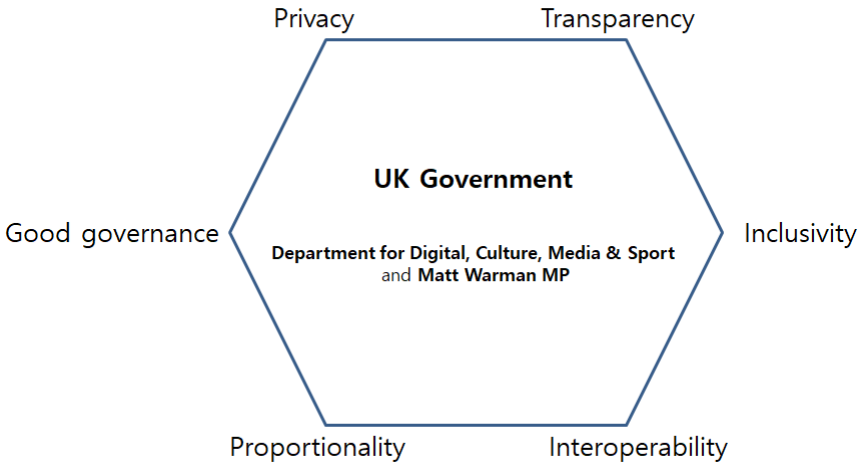
BIOMETRIC UPDATE.COM

Decentralized Identity Alliance Korea seeks to lead global personal data control movement

Mar 26, 2020 | Chris Burt

CATEGORIES Biometrics News | Trade Notes

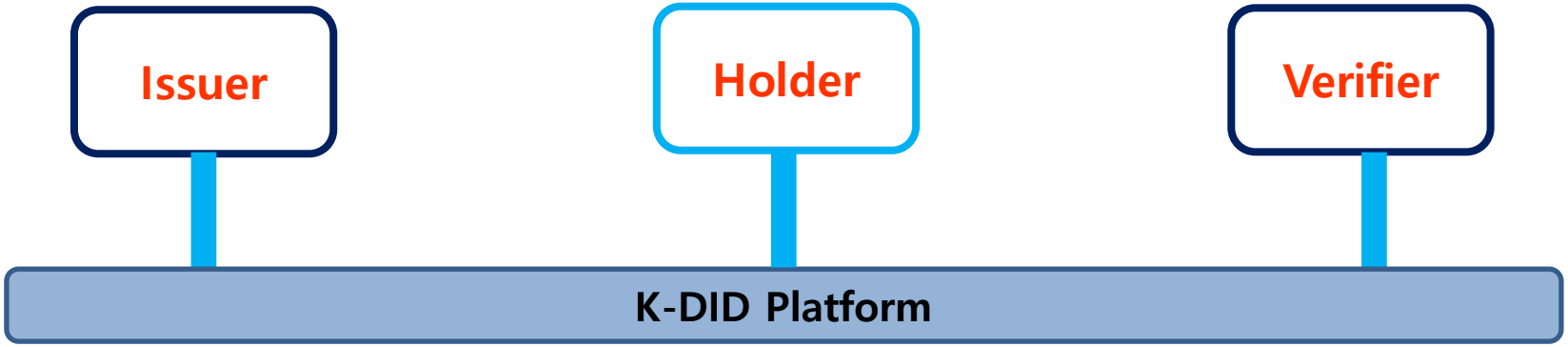
K-DID Movements



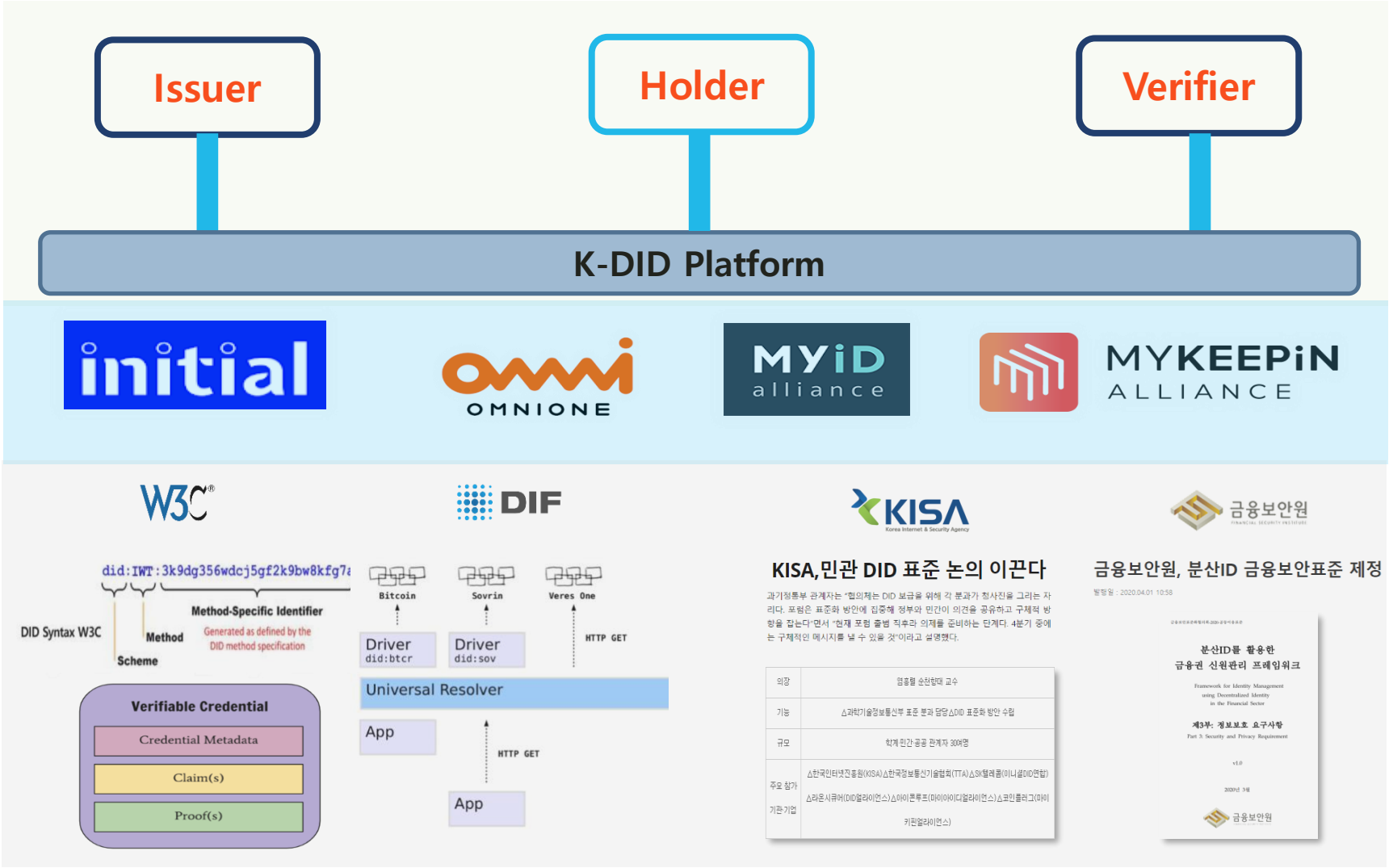
Identification

Authorization

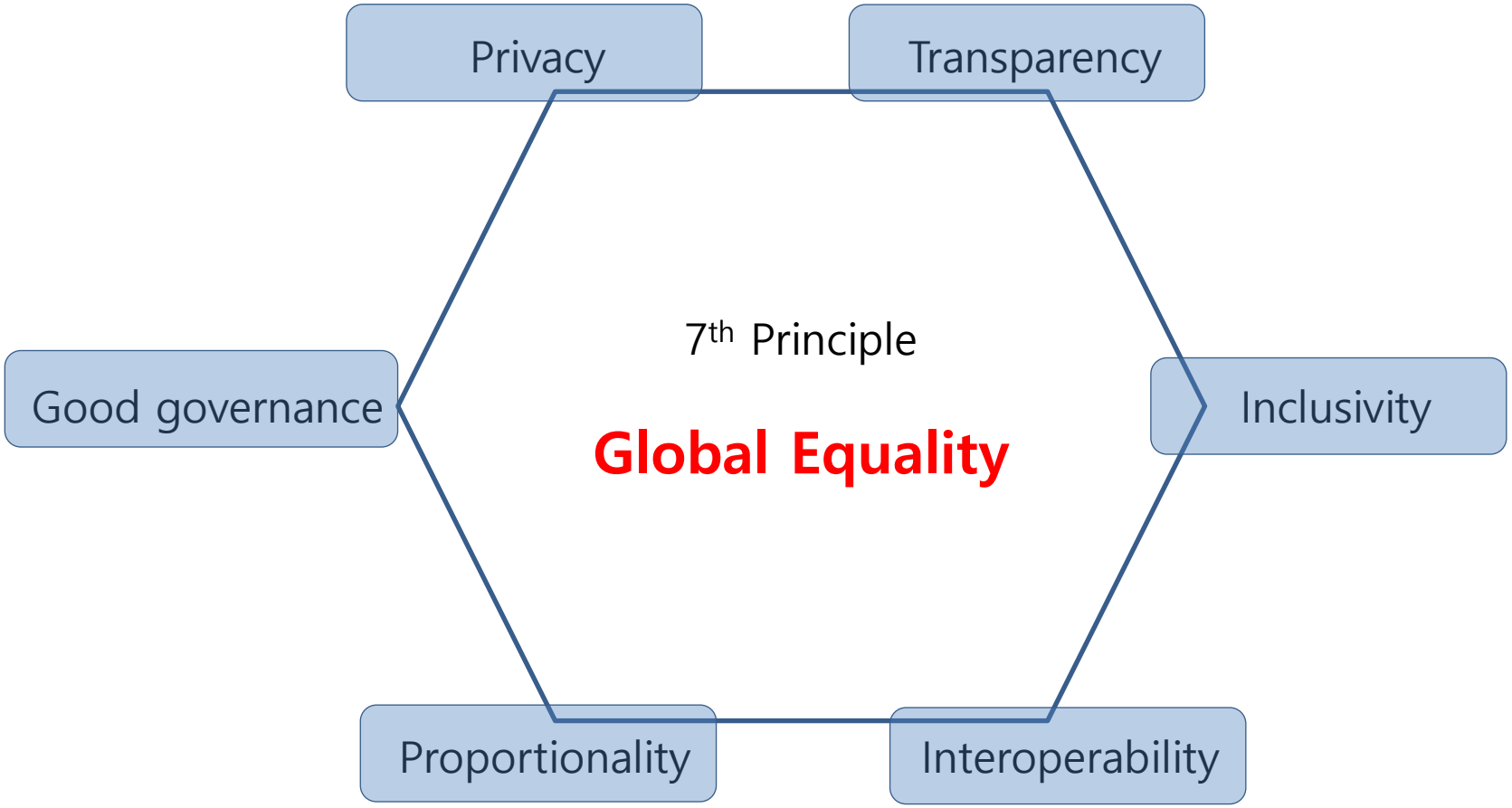
Self Sovereign



K-DID Infrastructure

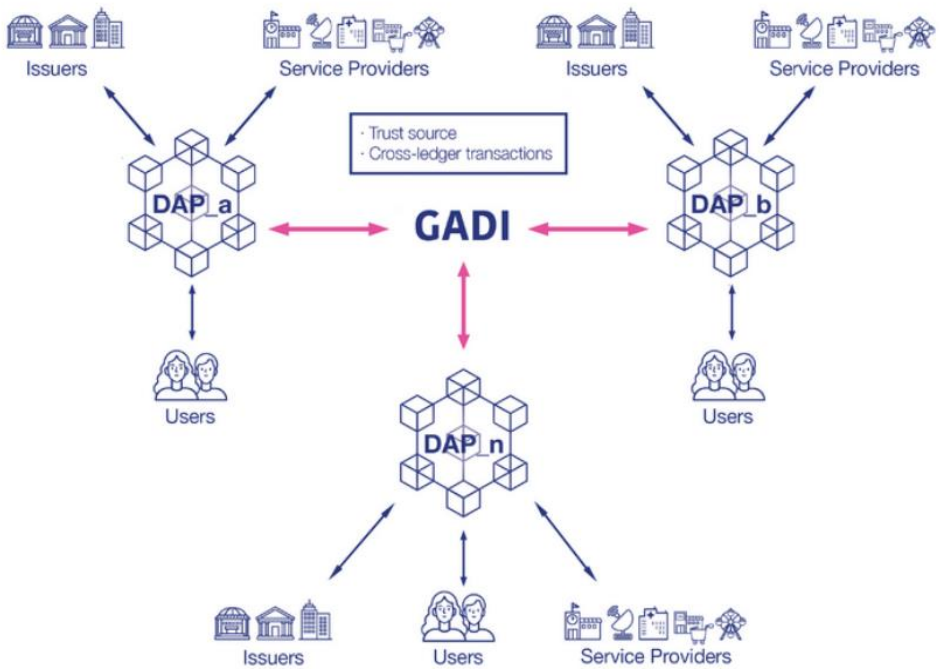


Digital Identity - Principles



GADI

COVID19 Pandemic



Identification over Internet

Service Provider on DAP b
- Consumes verifable presentations of credentials

Issuer on DAP a
- Issues verifable credentials
- Provides credential validity data to Service Providers
- Provides On-boarding (registration) of Users
- Is GADI certified

DAP Wallet app / User
- DAP Wallet manages Digital Address (via DAP account)
- Wallet controls credentials signed by issuer

GADI Connection
DAP API

Authentication over Internet

KFTC's K-DID Service

First National-wide K-DID Service

- Currently Test Stage
- Will be Launched before March, 2021
- For Banking Industry and Government Service

KFTC : Korea Financial Telecommunications and Clearings Institute (KFTC)

Thank You