

□ 수요희망 국가 : 영국

□ Ref NO. TOUK20180607002

### 기술 & 시장 분야

**기술 키워드** : 스마트카드 및 액세스 시스템, 데이터 보호, 암호, 전자서명, 생체 센서 등

**예상 적용 제품/공정(관련시장)** : 금융, 보험, 전자상거래 및 보안관련 솔루션/앱, 생체인증

### 세부 내용

영국 동부의 IT 기업은 추가 하드웨어 없이 일회성 코드를 생성하는 전자인증 시스템을 개발함. 해당 솔루션은 사용자가 특정 모양이나 패턴을 기억함으로써 로그인 시마다 항상 다른 코드를 사용하여 인증을 할 수 있는 서비스를 제공함. 스크린에 불특정 숫자가 나타나면 사용자는 패턴에 일치되는 숫자를 입력하며, 패턴은 사이트/계정마다 다르게 지정하거나 한 가지 패턴으로 모든 계정을 설정하는 것도 가능함.

사용자가 설정한 패턴은 서비스 시스템 내부의 다양한 곳에 조각조각 저장되어 있으므로 MS Active Directory와 같은 패스워드 암호화 및 저장 시스템보다 해킹하기가 어려움.

현재 은행 및 기타 서비스에서 제공하는 비밀번호 저장방식보다 안전한 방식으로 비밀번호 보호가 가능하며, 금융, 보험, 전자상거래 등 안전한 인증이 필요한 산업 분야에서 안전한 인증 관련 서비스를 제공하거나 개발하는 파트너와 라이선스 계약을 맺기를 희망함

### 요청 사항

- **협력방식**
  - 라이선스 계약 후 서비스에 전자 인증 기술적용

### 협력 희망 유형

- 라이선스 계약

## Technology Offer

# A new authentication method that is both more secure and more user-friendly

### Summary

*A UK company has developed an authentication method that is easy for users to memorise whilst generating one-time codes and being extremely secure. It is also hardware-free and easy to roll out for authentication solutions developers and users in sectors such as banking, insurance, e-commerce. Businesses are sought for license agreements.*

<b>Creation Date</b>	07 June 2018
<b>Last Update</b>	12 June 2018
<b>Expiration Date</b>	13 June 2019
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### Details

#### Description

We all know the problems with passwords. Users dislike being forced to keep creating new ones, and unfortunately, hackers manage to get hold of passwords – which allows them to impersonate the user. The service providers sometimes get hacked.

On the other hand, biometric identification has not taken off properly due to civil liberties and reliability issues.

The key-fobs that generate one-time codes are good but they are dependent on additional pieces of hardware being carried, introducing additional cost and inconvenience. Also their “keys” have to be stored in a global database such as RSA’s that was hacked in 2011 leading US defence contractor Lockheed Martin to blame RSA for a subsequent break-in.

A young East of England company has developed an entirely hardware-less system that combines the convenience of a mentally-held secret (users’ create a pattern or shape when enrolling) with the strength of key-fobs, which are able to provide different codes every time they need to log in, be authenticated or provide their authorisation to perform an action.

The picture shows a matrix (which would be displayed on the user’s screen) filled with random numbers. Using their mental pattern, the user is able to read off a new code. The system is secure against shoulder-surfing or other threats.

The next time, the numbers in the matrix will be different, but using the same pattern, the user is able to create or extract a different code. A user may use a single pattern for all the different

sites or accounts he needs to access – or he/she may choose to have different ones. The pattern and the software have the potential to replace all fixed passwords, PINs, credit/debit card PINs and other authorisation codes. It is also possible to combine it with biometrics.

The entropy offered exceeds that of key-fob tokens, making it more secure.

The “secret ingredient” is how the mental pattern that is shared with the service provider is scrambled. It is stored in fragments in different places and is therefore significantly more difficult to break into than the standards for password encryption and storage in systems like MS Active Directory.

For service providers this solution is very convenient and cost-saving as the matrix can be reproduced on any device with a display or even in hard copy.

In theory at least this solution alleviates all frequent troublesome situations where passwords and hardware are lost or stolen. All the user needs is to remember the pattern.

The UK company is seeking partners amongst a variety of businesses developing or offering secure authentication. Finance, insurance, e-commerce are a few sectors to name. The software APIs will be shared under license agreements.

## Advantages and Innovations

The innovation lies in the combination of the high security of one-time codes with a mental pattern that is easy to remember yet is very unique.

The proprietary technical advancement focuses on the secret sharing of the mental pattern in a significantly more secure way than passwords are currently held by banks and other providers. The solution is hardware-free and is cheap and easy for service providers to roll out.

## Stage of Development

Available for demonstration

## IPR Status

Secret Know-how

## Profile Origin

Private (in-house) research

## Keywords

### Technology

01002013	Smart cards and access systems
01003009	Data Protection, Storage, Cryptography, Security
01003011	Electronic Commerce, Electronic Payment & Signature
01003019	Electronic Signature
01003023	Environmental and Biometrics Sensors, Actuators

### Market

07002005	Other retailing
09002001	Insurance related
09002003	Banking

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## Network Contact

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### Issuing Partner

ED Research Co. Ltd.

### Contact Person

Franchesca Park

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### Email

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**Open for EOI :**    **Yes**

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## Dissemination

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### Send to Sector Group

ICT Industry and Services

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## Client

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### Type and Size of Organisation Behind the Profile

Industry SME <= 10

### Year Established

0

### Already Engaged in Trans-National Cooperation

No.

### Languages Spoken

English

### Client Country

United Kingdom

## Partner Sought

### Type and Role of Partner Sought

Type of partner sought: industry

Specific area of activity: finance, insurance, e-commerce

Role of partner sought: to implement the APIs under license.

### Type and Size of Partner Sought

SME 11-50, SME <10, >500 MNE, 251-500, SME 51-250, >500

### Type of Partnership Considered

License agreement

## Attachments

Capture.PNG

