

# **FIDO Alliance Seminar in D.C.**

## **Case Study: NTT DOCOMO**

October 5, 2015

NTT DOCOMO, INC.

# Table of Contents

- Motivation: docomo ID and 4-digits
- Overview: NTT DOCOMO's Deployment
- Solution Architecture: docomo ID and 4-digits
  - Before and after the FIDO integration
- More About NTT DOCOMO's Deployment and Thoughts
  - Biometric Data and Secret Key stored in Secure Area
  - Open Standards for Future Interoperability
- DOCOMO Joined the FIDO Alliance
- Fresh News as of September 30<sup>th</sup>
  - Six More FIDO-certified™ Devices Unveiled
  - More Services, New Payment Method, and w/ Partners

# Motivation: docomo ID and 4-digits

- NTT DOCOMO provides our customers Open ID based **docomo ID** in addition to **4-digit** passwords for online service access including DOCOMO branded services and carrier billing payments.
- NTT DOCOMO wanted to help our customers, who always needed to remember their passwords, for their convenience in a secure way, and recognized that the FIDO standards may help.



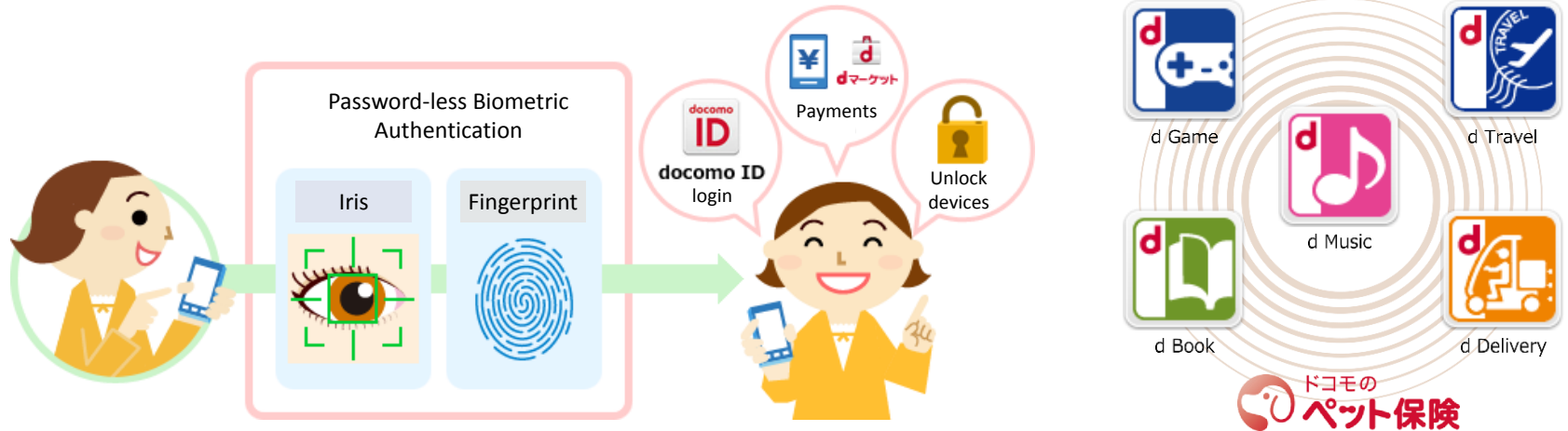
Biometric Authentication  
Your Security. More Simple.

<https://www.youtube.com/watch?v=UP0DyYk5IXc>

© 2015 NTT DOCOMO, INC. All Rights Reserved.

# Overview: NTT DOCOMO's Deployment (1/2)

- DOCOMO used to provide DOCOMO branded devices equipped with fingerprint sensor but mainly for device lock/unlock.
- DOCOMO started to support online authentication with biometric sensor device for **docomo ID** login and carrier billing payments from May 2015.



Limited number of services FIDO-enabled at the beginning.

# Overview: NTT DOCOMO's Deployment (2/2)

- NTT DOCOMO selected the FIDO UAF 1.0 standard due to reasons below:
  - Easy, and fast online authentication using biometric data
  - Secure protocol that utilizes public key cryptography
  - Open-standard specification for practical interoperability in the future
- NTT DOCOMO launched four FIDO-certified™ devices, and enabled the **docomo ID** server FIDO compliant in May 2015.

Iris: one model

Fingerprint: three models



*ARROWS NX*  
F-04G



*Galaxy S6 edge*  
SC-04G



*Galaxy S6*  
SC-05G

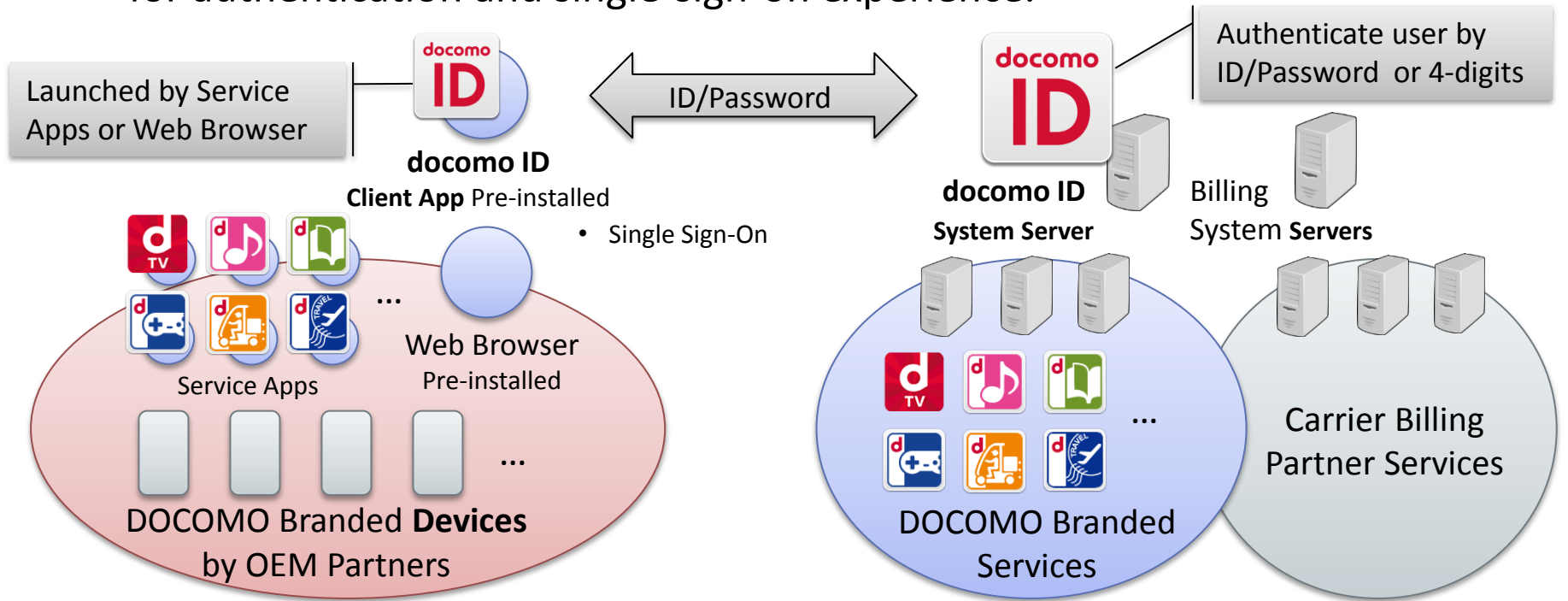


*AQUOS ZETA*  
SH-03G



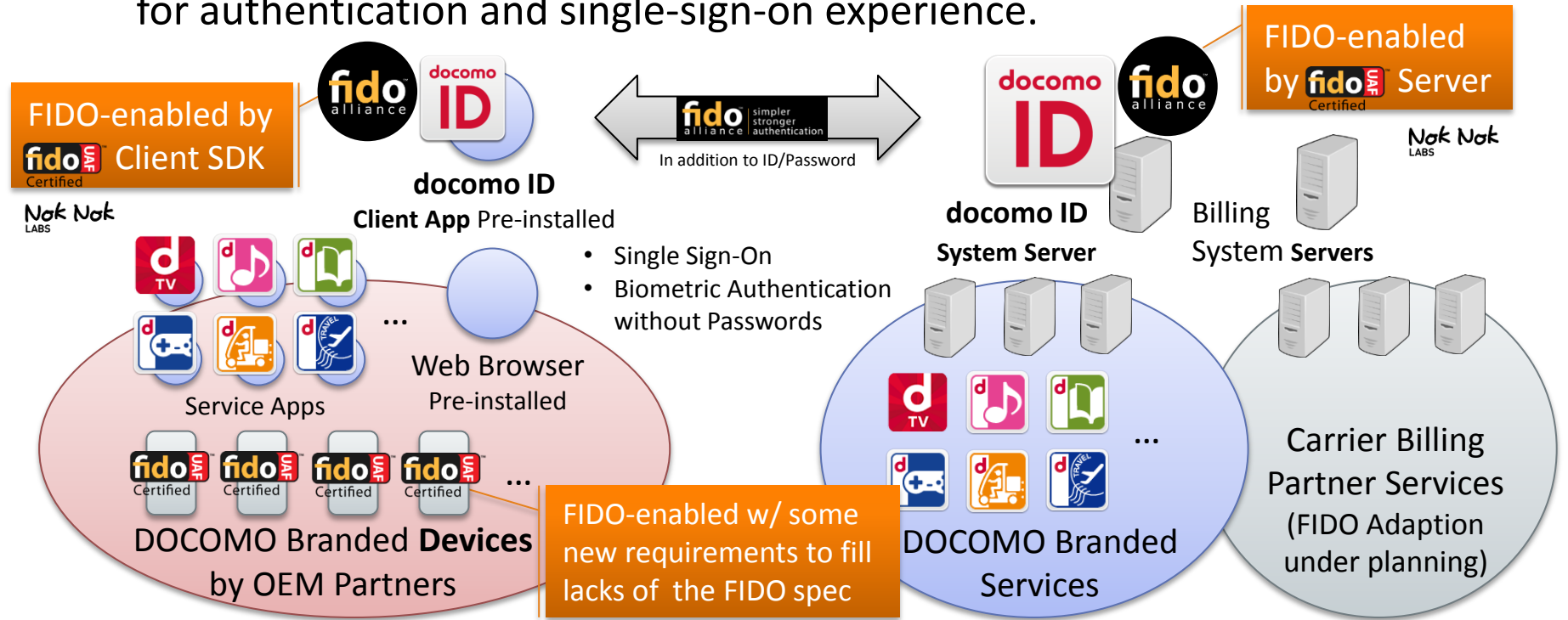
# Solution Architecture: docomo ID and 4-digits [before the FIDO integration]

- The docomo ID app and system had already been introduced and operated for authentication and single-sign-on experience.



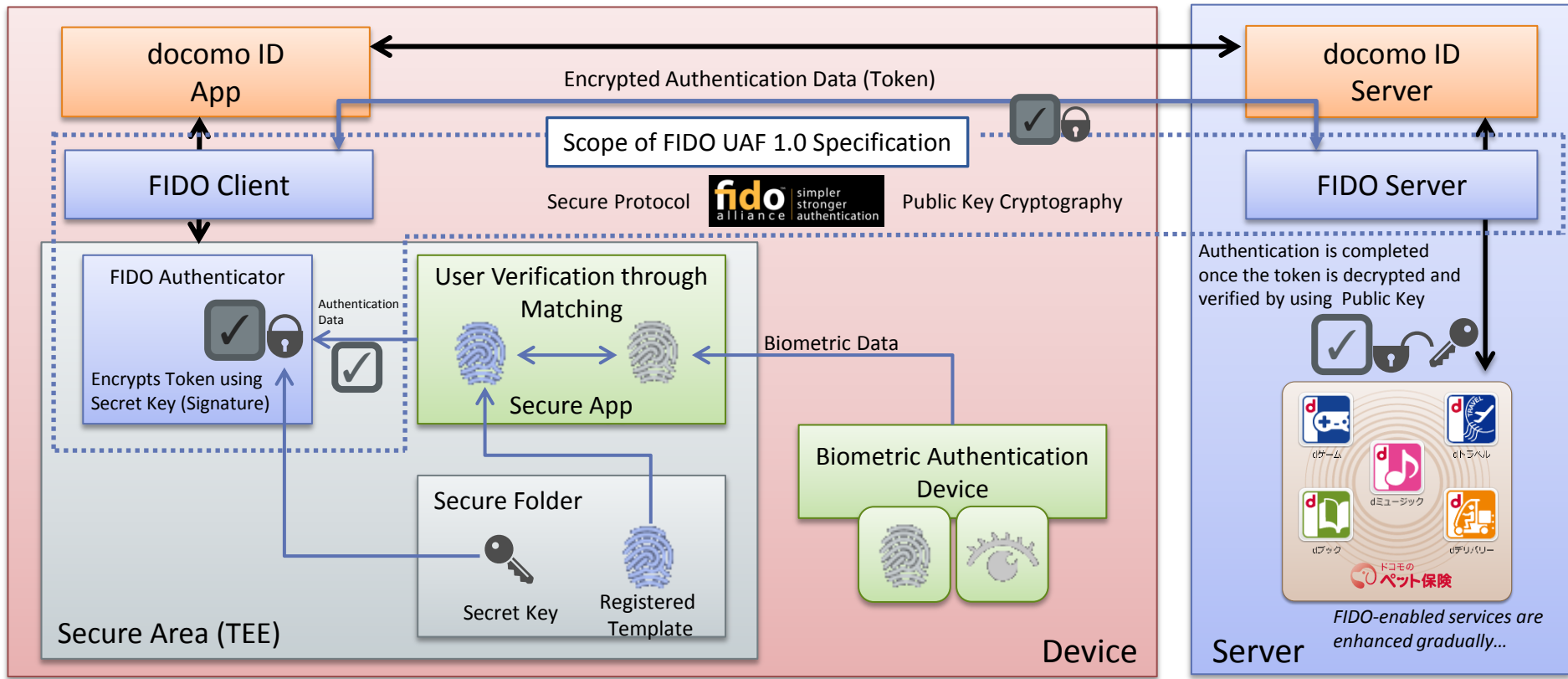
# Solution Architecture: docomo ID and 4-digits [after the FIDO integration]

- The docomo ID app and system had already been introduced and operated for authentication and single-sign-on experience.



# FIDO Enables Online Authentication by Utilizing Biometric Data in a Secure Manner

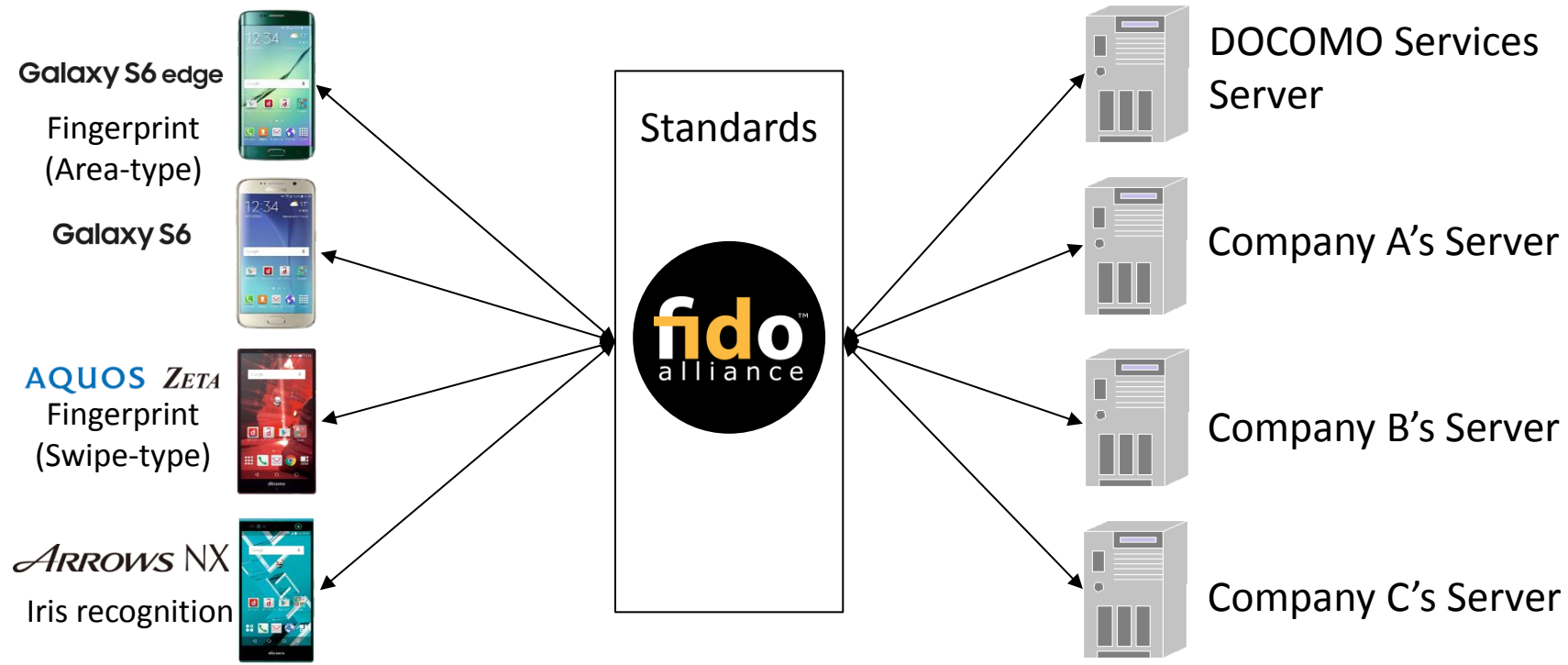
– Biometric Data and Secret Key stored in Secure Area –





# FIDO Allows Multiple Types of Authenticators Equipped with Different Biometric Devices

– Open Standards for Future Interoperability –



# DOCOMO Joins FIDO Alliance as a Board of Directors

- By commercially launching FIDO devices and services in May 2015, NTT DOCOMO achieved the following "**world's firsts**" :
  - Commercial deployment by a mobile network operator
  - Support for both Iris and Fingerprint sensors
  - Launch of multiple FIDO-certified devices from multiple OEMs

 NTT DOCOMO joined FIDO Alliance in May to contribute toward future FIDO specs and enhancing the FIDO ecosystem through collaboration with FIDO Alliance with our deployment experience.

- *NTT DOCOMO is now chairing a new WG "Deployment at Scale" in short "D@S". Please join FIDO, join D@S WG, and let's make it happen together!*

# Fresh News as of September 30<sup>th</sup> (1/2)

## Six More **fido UAF™** Certified Devices Unveiled

Iris: one more model

Fingerprint: five more models



arrows NX  
F-02H



arrows Fit  
F-01H



AQUOS ZETA  
SH-01H



XPERIA Z5 Premium  
SO-03H



XPERIA Z5  
SO-01H



XPERIA Z5 Compact  
SO-02H

***In total 10 FIDO-enabled smartphones will become available from NTT DOCOMO this year.***

## More Services, New Payment Method, and w/ Partners



*More DOCOMO Services gradually...*



*Additionally d-Point will become available for FIDO authentication.*

**ABC Cooking MARKET**



*DOCOMO Carrier Billing Partners will also be supported.*

# Creating a World without Passwords

“The new of today, the norm of tomorrow.”

- Through collaboration with the FIDO Alliance, NTT DOCOMO will further deliver “Your Security. More Simple.”



<http://www.youtube.com/watch?v=NOHkCXH9tj4> (only Japanese at YouTube as of Oct 5<sup>th</sup>)

© 2015 NTT DOCOMO, INC. All Rights Reserved.

# Links

- 2015 May Announcements

- [https://www.nttdocomo.co.jp/english/info/media\\_center/pr/2015/0526\\_00.html](https://www.nttdocomo.co.jp/english/info/media_center/pr/2015/0526_00.html)  
Attachment: [Biometric Authentication from DOCOMO](#) (PDF format: 957KB)  
Movie: [Biometric Authentication](#)
- <https://fidoalliance.org/fido-alliance-welcomes-ntt-docomo-to-board/>
- <https://www.qualcomm.com/#/news/releases/2015/05/25>
- <https://www.noknok.com/what-they-say/press-releases/ntt-docomo-selects-nok-nok-labs-power-first-fido-enabled-ecosystem>

- 2015 September Announcements

- [https://www.nttdocomo.co.jp/english/info/media\\_center/pr/2015/0930\\_01.html](https://www.nttdocomo.co.jp/english/info/media_center/pr/2015/0930_01.html)
- <https://fidoalliance.org/worlds-first-mobile-network-operator-to-deploy-fido-authentication-ntt-docomo-extends-its-mobile-innovation-lead-with-new-fido-certified-devices-and-services/>  
Movie: [Biometric Authentication Chapter II](#) (only in Japanese as of Oct 5th. English will become available very soon.)