eSzemélyiM mobile application

User’s Manual

1.1_en version

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1. Introduction

With the eSzemélyiM mobile application:

- you can activate, unlock, change your eSIGN and eID PINs;
- you can view the status of the electronic functions associated with your eID card;
- you can read the data stored in your eID card chip, even those that are not visible on the card, for example, your address, personal identification code, social security number (TAJ) and tax number.

Also, a smartphone can be used as a card reader with the application – in the case of an Android phone and a PC with Windows or Linux operating system – and can thus substitute special USB card readers, i.e. it enables electronic identification and, with the required computer program, electronic signatures as well.

For using the mobile device as a card reader, the eSzemélyiM mobile application has to be installed on the phone and a separate driver is to be installed on the PC.

1.1. Accessibility

The application is accessible from any smartphone with the NFC reader chip required for the application's functionality and Android 7 or iOS 13 or higher version operating system.

The iOS application can be used on all iPhone 7 or later iPhones, while the Android application can be used on mobile devices with NFC chips, and Android 7.0 or higher version operating systems.

If the application is installed on a phone that does not meet the above requirements, it will be displayed by the application.

1.2. Prerequisites

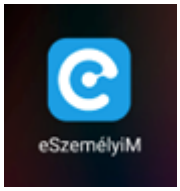
For the application to be used the user needs a Hungarian personal identity card (eID card) issued after 1st January 2016 with an electronic storage element as all of the relevant functions of the application are provided for carrying out functions relating to the eID card.

2. Downloading the application

The application can be downloaded to compatible smartphones from the store matching the platform – Apple App Store or Google Play Store – under the name of eSzemélyiM.

3. Starting the application

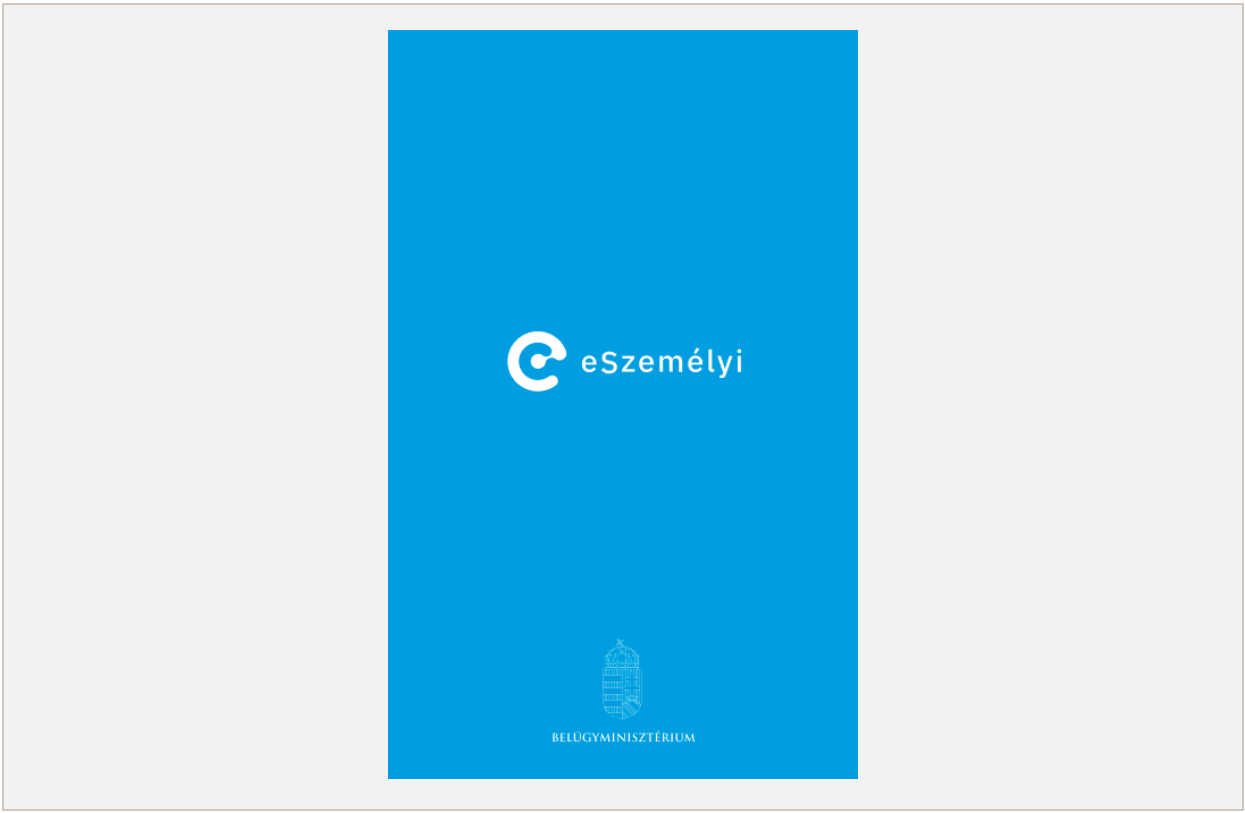
The application can be started – after download and installation – by clicking on the eSzemélyiM application icon on the main screen, in the menu or among the applications.



4. User interface

4.1. Splash screen

Upon starting the application a splash screen appears with the application's logo where the details required for the operation of the application are set. The screen automatically disappears in a few seconds.



1. Figure - The application's splash screen

4.2. Accepting the end-user contract

After the splash screen when the application is opened for the first time, or if the end-user contract has not been accepted yet, the whole text of the contract is displayed on the screen. The end-user can accept its content by tapping Elfogadom (Accept). The button is not active until after the user has read part of the text of the contract, i.e. they have already scrolled down the user contract. It is not until the contract is accepted that the application is fully available for use on the given device.

4.3. Main screen

The application's main screen appears after the splash screen or the acceptance of the end-user contract, where the user can choose from the available functions.

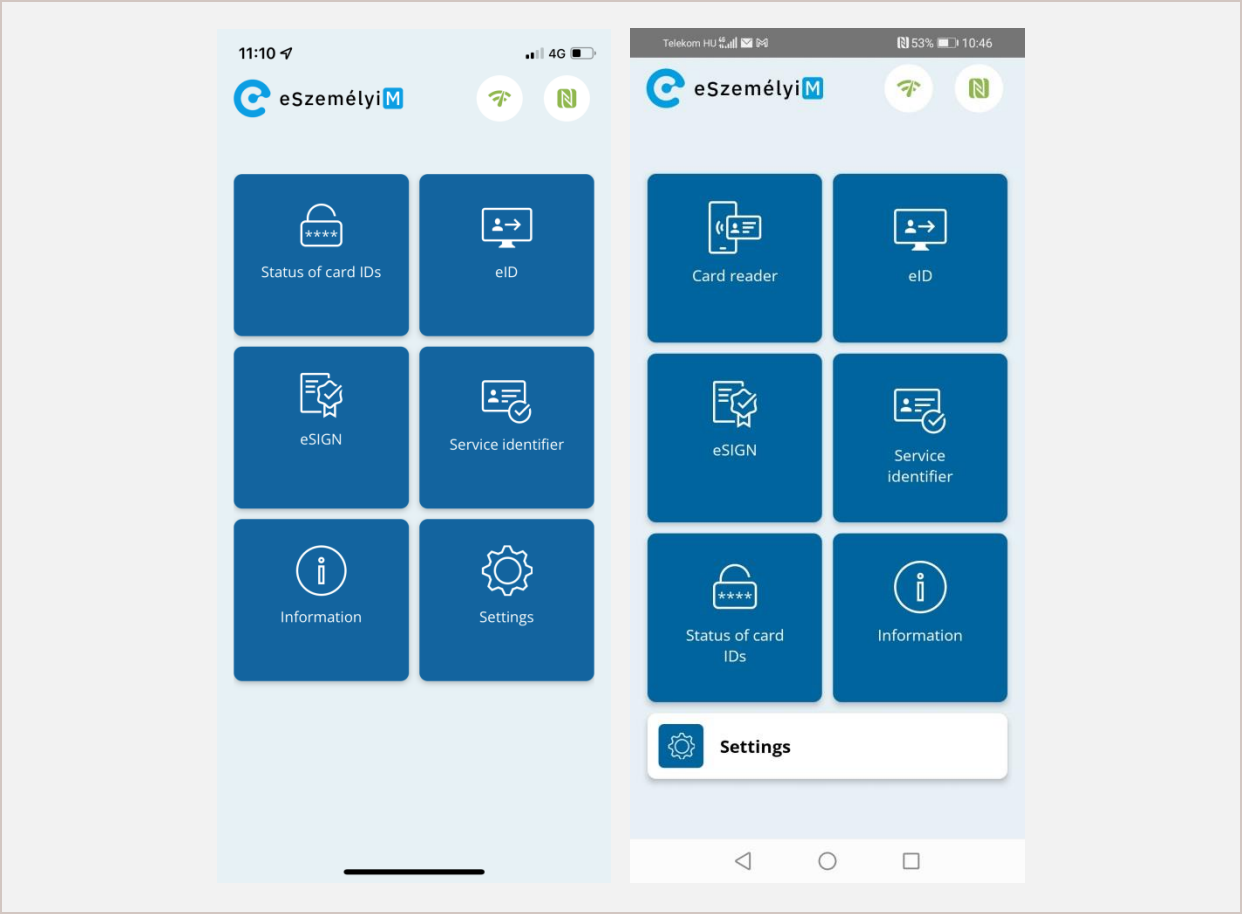
The Internet connection, which is indispensable for the use of the application, appears in the status bar at the top of the screen, together with the icon showing the NFC reading capability.

If no NFC reading capability is available or enabled on the mobile device, the NFC icon appears red. On an Android device in this case the NFC settings open upon clicking the icon, while on one with the iOS operating system a pop-up window warns the user that this function is not available.

If the mobile device has no internet connection, the Wi-Fi icon appears red. Upon tapping on the red button in the case of a phone with an iOS operating system the phone's settings appear, while in the case of the Android operating system the Wi-Fi settings are shown where the Wi-Fi connection can be set.

Upon clicking on any of the icons in the middle section of the main screen the function relating to that icon opens.

In the case of an Android operating system the tile structure is different; the Card reader function appears, on which more detail is to be found in chapter 5

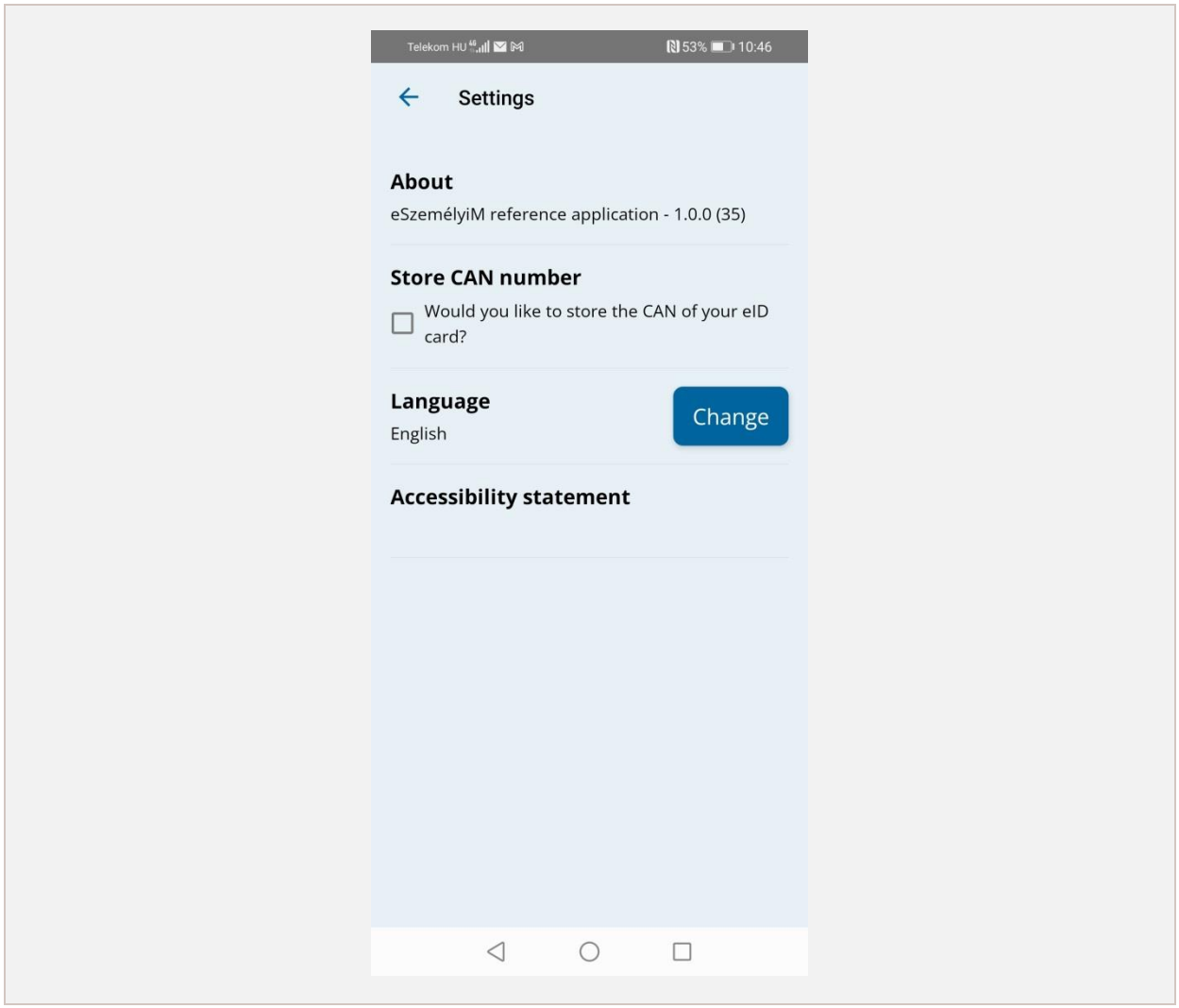


2. Figure - Application main page in iOS (left) and in Android (right) operating systems

4.4. Settings

The application's contact appears on the Settings page and it is also possible to change the application's language there.

Temporary storage of the CAN number is also possible; after ticking the first entered CAN number will be automatically stored in the application for half an hour. Once the CAN number has been stored, it needs not be entered again and again for queries; it is used automatically.



3. Figure - Settings page

4.5. Status of card IDs

This function enables viewing the number and statuses of the PIN and PUK code attempts in the eID card.

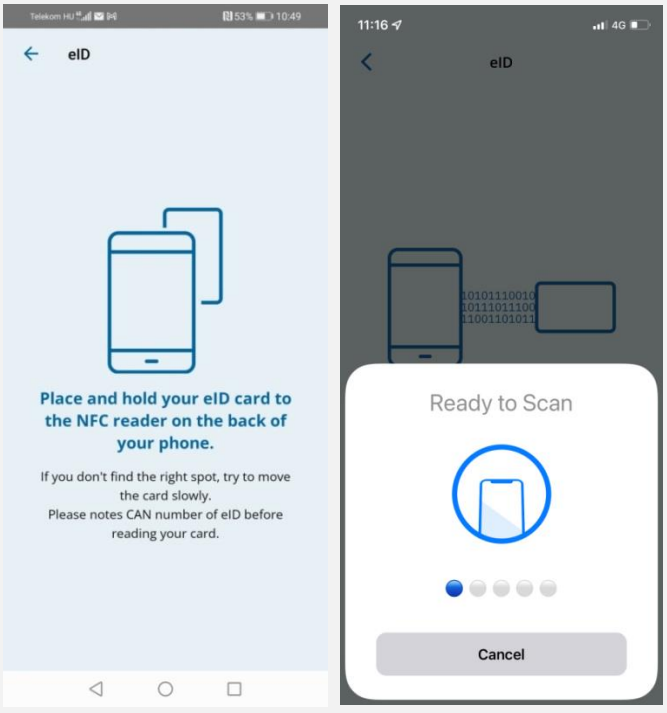
4.5.1. Reading the eID card

The first step is holding the eID card to the mobile device's NFC reader when the application asks the user to do so. If the attempt at reading fails, the card must be moved to another place or slowly moved over the back of the device.

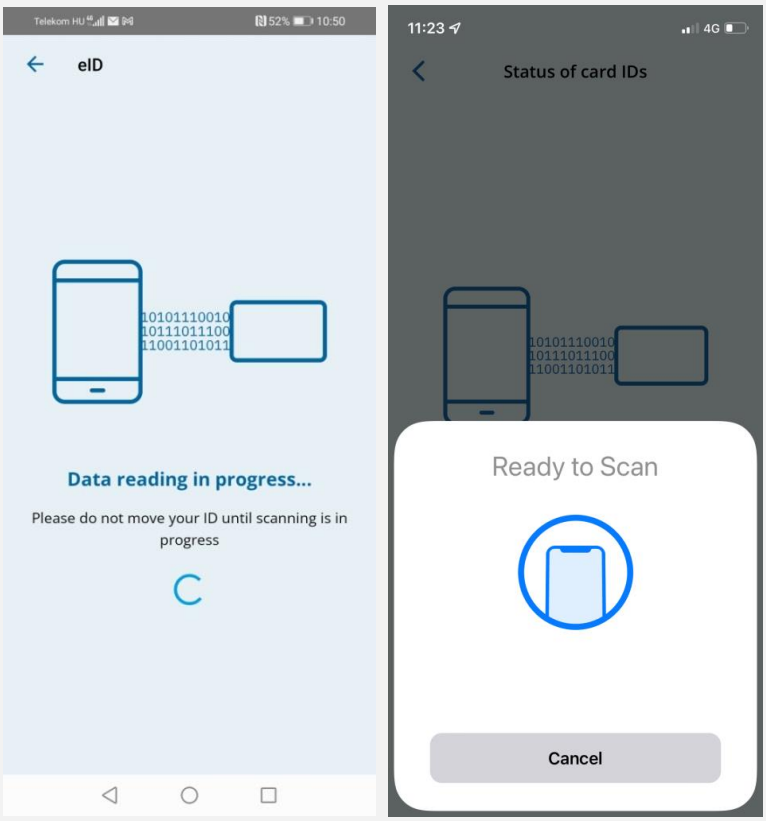
4. Figure - Holding eID card to the phone's back

If the reading has been successfully completed and if it is required for the card operation the CAN number on the eID card must be entered and then the *Tovább* (Next) button has to be clicked. Should the NFC connection break for any reason while the CAN is being entered, the card needs to be held to the NFC reader on the back of the device again.

If an error occurs during the process, the user is informed about it by the application.



5. Figure - Warning that the eID card is to be held to the back of the device, Android (left), iOS (right)



6. Figure - Data reading in progress - Android (left), iOS (right)

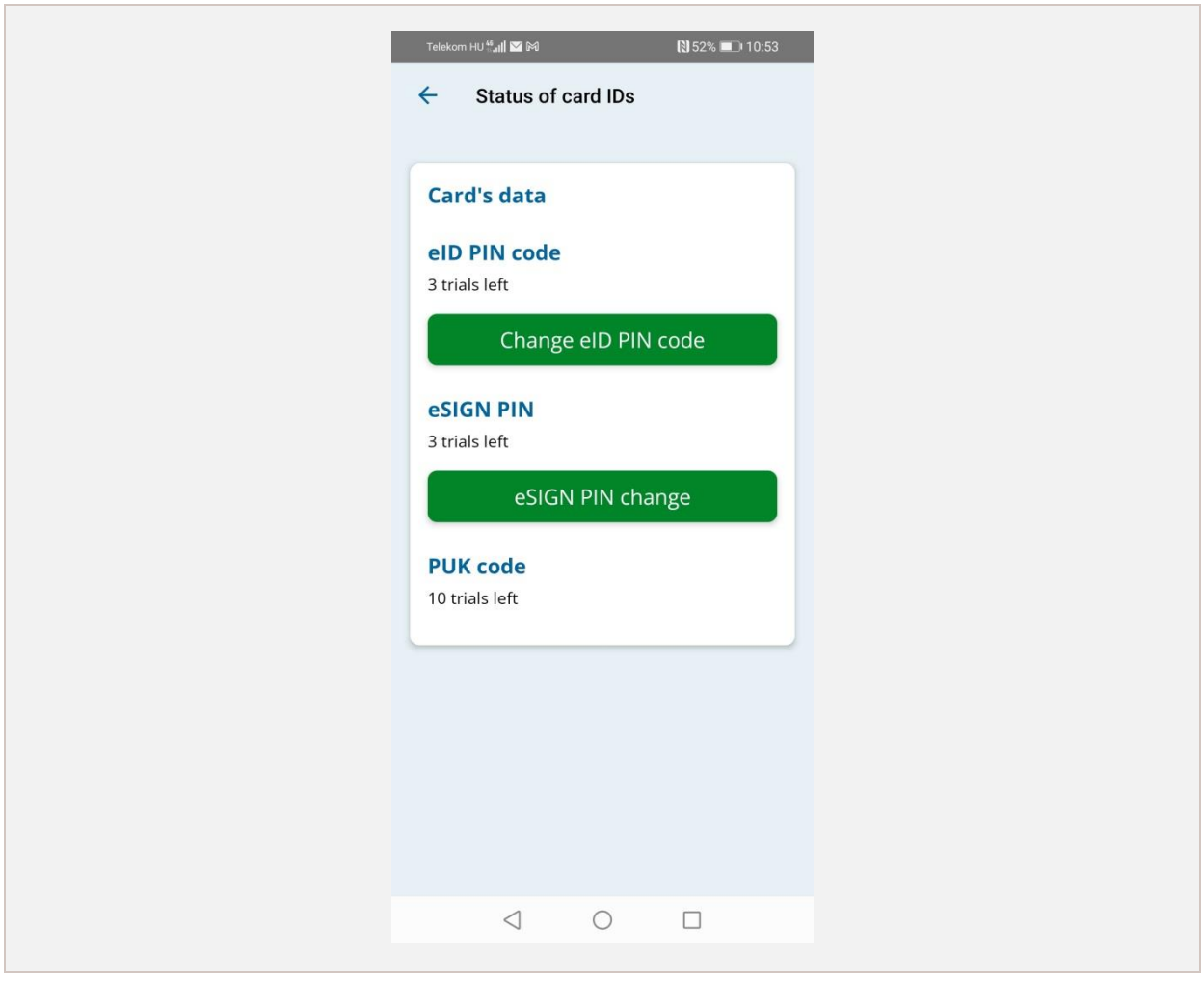
7. Figure - Entering the CAN number

4.5.2. PIN code check function

During these operations the card has to be in continuous contact with the mobile device's NFC reader.

Once the card has been read and the CAN number has been entered the application shows the status of the eID PIN, the eSIGN PIN and the PUK code on the eID card and the number of attempts that can be made at entering the correct code. If the CAN number is wrong, the PIN status of the eSIGN cannot be queried and an error message appears next to it. Having read the PIN code data it possible on this page as well to carry out the PIN code operations of eID (**Hiba! A hivatkozási forrás nem található.**) and eSIGN (4.6).

If a wrong eID or eSIGN PIN code has been entered twice already, i.e. only one attempt can be made at entering the correct one, then clicking on „eAzonosítás PIN-kód csere"/ „eAláírás PIN-kód csere" ("eID PIN replacement" / "eSIGN PIN replacement") a pop-up window appears warning the user that the function will be blocked if another wrong PIN is entered.

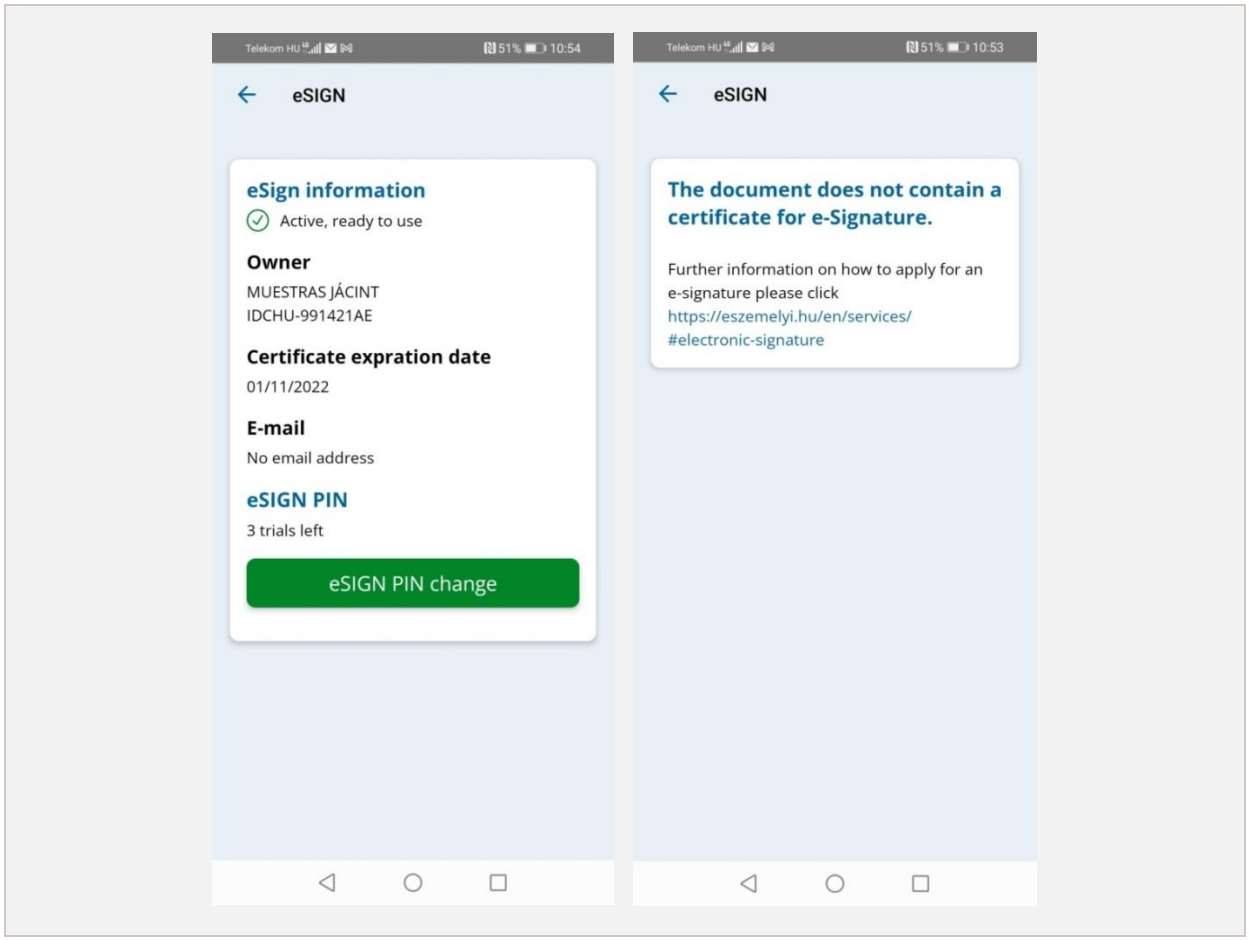


8. Figure - PIN code check screen

4.6. eSIGN

The eSIGN function enables viewing the status of the eID card eSIGN function as well as the activation and modification of the PIN associated with it.

The card has to be read and the CAN on the front of the document has to be entered in the first step. Having read the card, the functions of the eSIGN can be viewed, if it is available. If the eSIGN is not enabled on the card, this will be indicated by an error message.

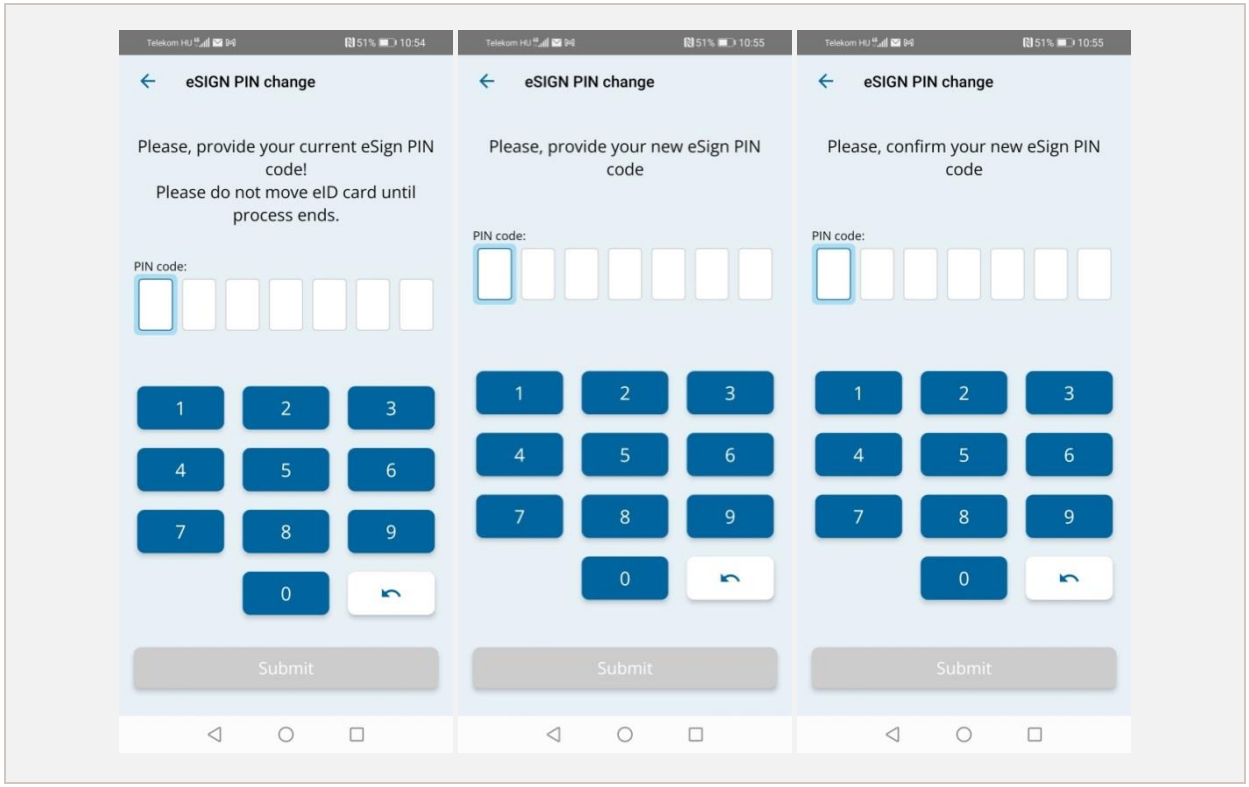


9. Figure - eSIGN screen with active PIN code (left) eSIGN screen if the card has no eSIGN feature (right)

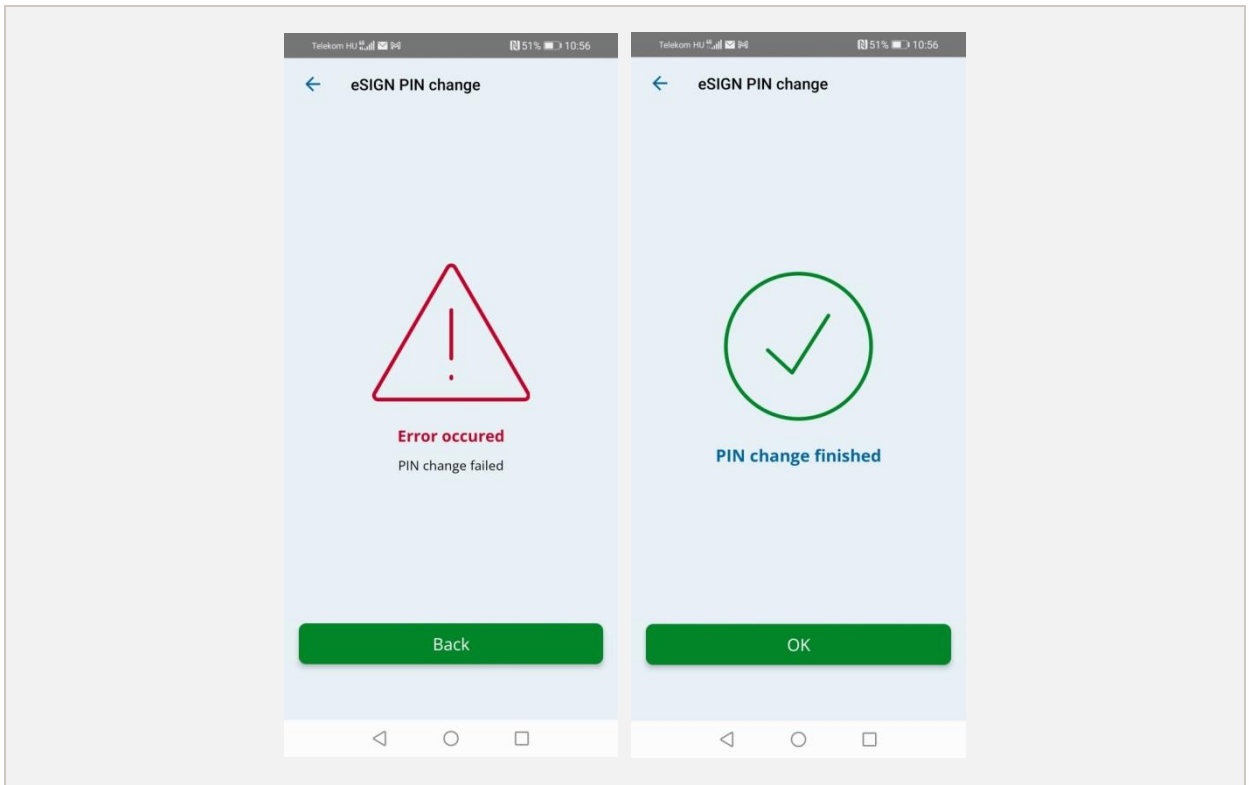
4.6.1. eSIGN PIN code replacement

The PIN code of the eSIGN can also be replaced from the application. This requires the user to enter the current PIN and then press *Tovább* (Next). This is to be followed by the entering of the new PIN code and then after clicking Tovább (*Next*) it has to be confirmed by entering it again. Once the *Tovább* (Next) button is clicked, the result of the change is displayed. This can either be successful or, as a consequence of some error, failed. The actual outcome is displayed.

If the user starts the process having only one attempt left entering the PIN, at the end of the process the application asks for the CAN number on the card as well.



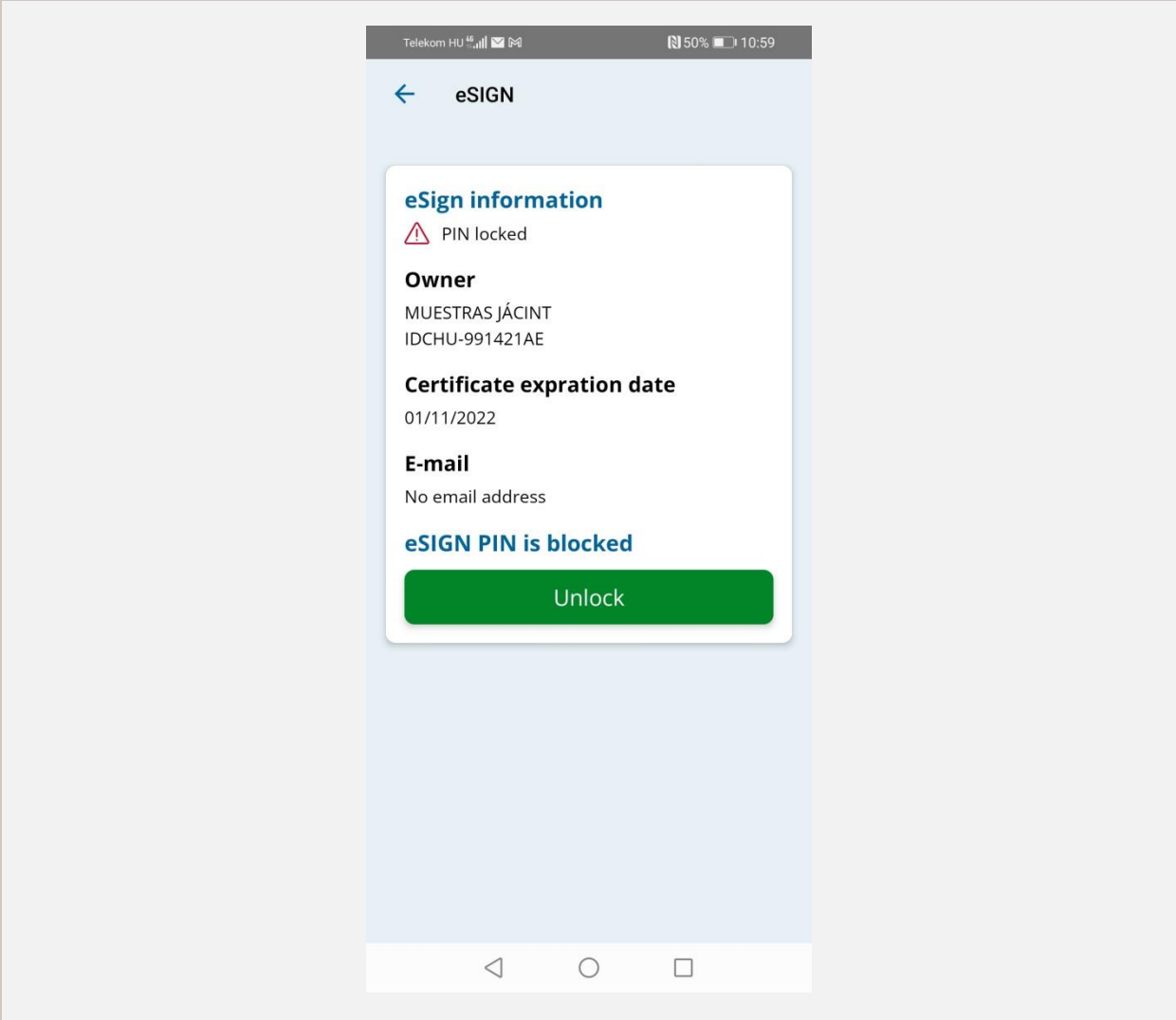
10. Figure - Entering the current, the new and the confirmation eSIGN PIN



11. Figure - Screen showing failed (left) and successful (right) PIN code replacement

4.6.2. Unblocking the eSIGN PIN

In case the eID Card eSIGN PIN has been blocked because too many wrong PIN codes have been entered, it can be unblocked by entering the eSIGN PUK code after clicking on the *Feloldás* (Unblock) button.



12. Figure - Blocked eSIGN PIN code

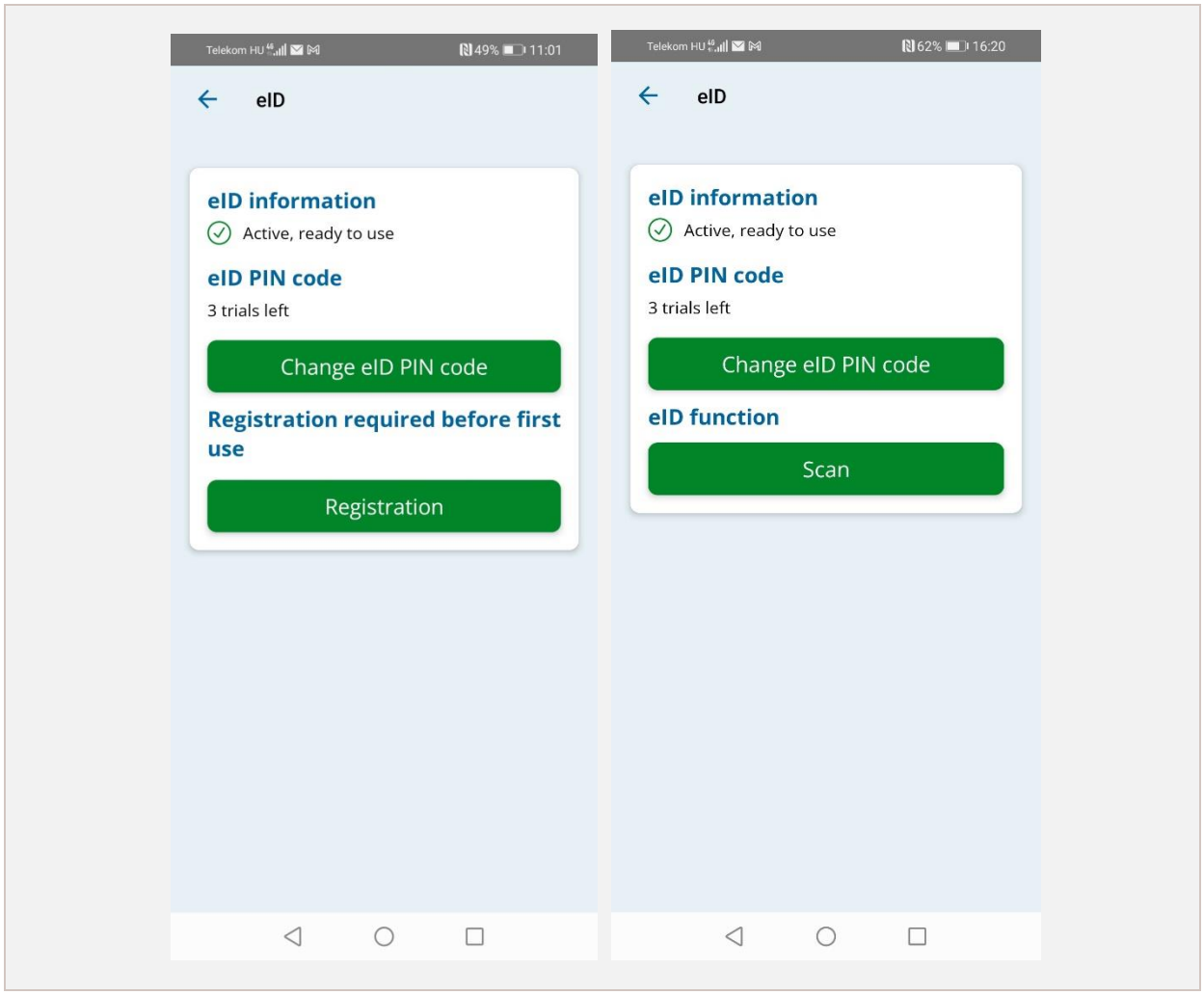
4.6.3. Activation of eSIGN PIN code

If the card has eSIGN enabled but the feature has not been activated yet, the card can be activated with the activation code given with the personal identity card after clicking on the *Aktiválás* (Activate) button.

4.7. eID

The eID function of the application enables querying the status of the card's eID function. Card reading (without entering the CAN number) is required for the function to be available.

The card needs to be registered, by pressing the Registration button, before the first data reading. If the card has already been registered, the necessary personal data can be read from the card. The eID PIN can also be replaced on this page, as described in section 4.6.1. A blocked eID PIN can also be unblocked on this page, as described in section 4.6.2. In case the card has not been activated yet, it may be done, on this page, as described in section 4.6.3.

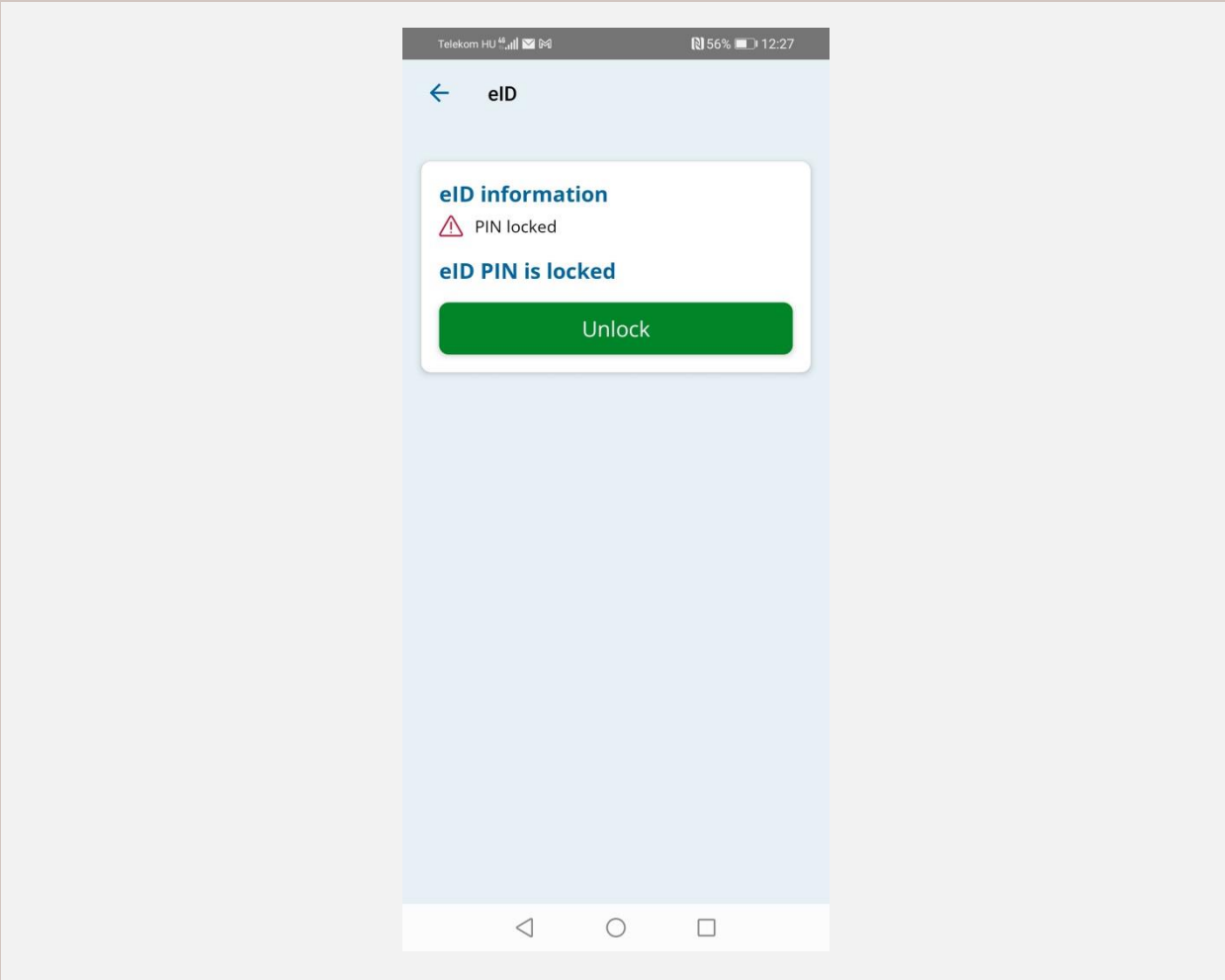


*4.7.1. **13**. Figure - The eID status screen in the case of a card not registered yet (left) and an already registered card (right)*

If the card has not been activated yet, the card can be activated with the activation code given with the personal identity card after clicking on the *Aktiválás* (Activate) button.

4.7.2. Unblocking the eID function

In case the eID PIN has been blocked because of too many failed attempts, it can be unblocked by entering the eSIGN PUK code after clicking on the *Feloldás* (Unblock) button

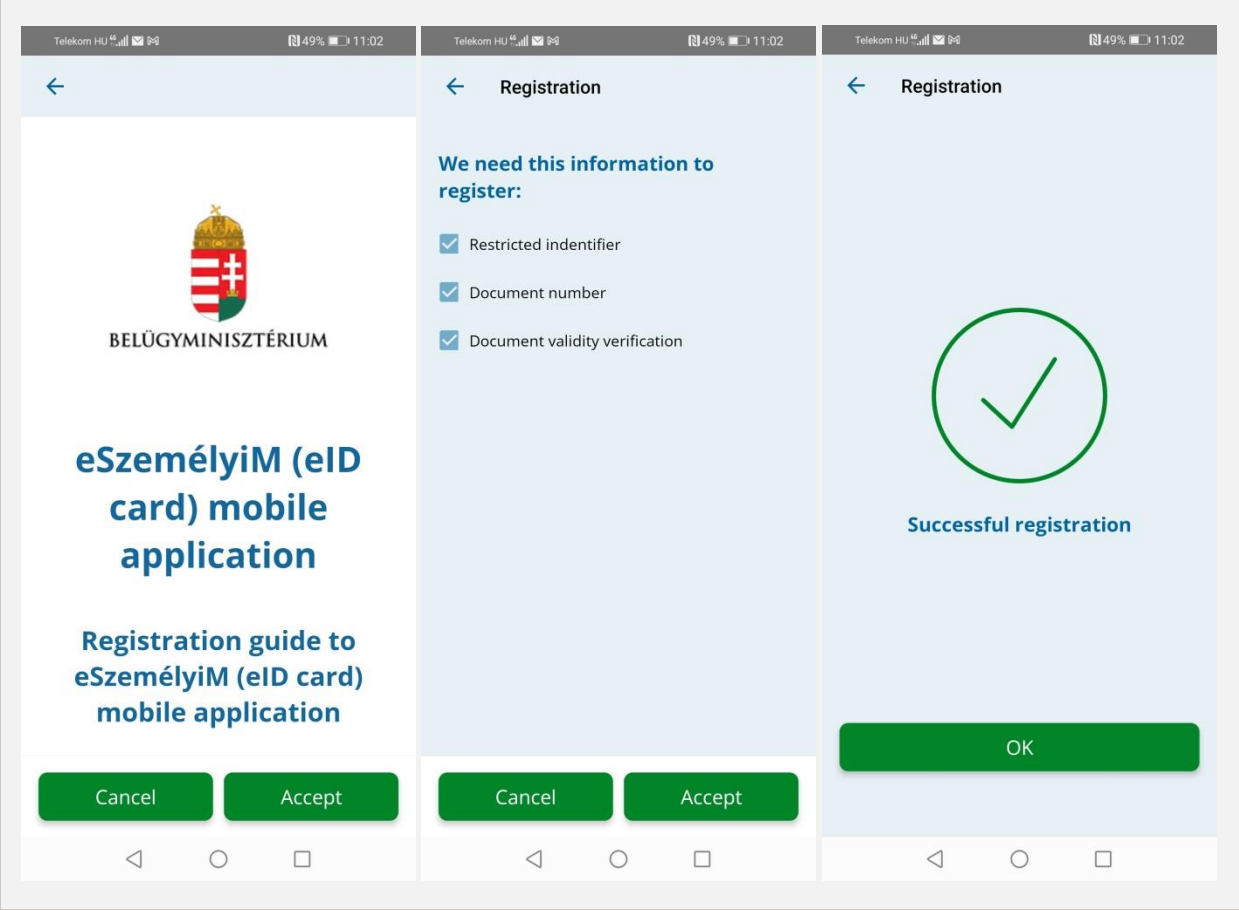


14. Figure - eID screen with blocked PIN code

4.7.3. eID registration

The privacy notice relating to the service has to be read and accepted before starting the registration process. This requires clicking on the *Elfogad* (Accept) button. The process can be stopped by clicking on the *Vissza* (Cancel) button.

After the acceptance of the privacy notice the data to be read by the application from the card is displayed for the information of the user, which can also be acknowledged by the *Elfogad* (Accept) button and the process can, again, be stopped by clicking on the *Vissza* (Cancel) button. In the next step the application asks for the card's PIN code. Once this has been entered correctly, after clicking *Tovább* (Next) the page confirming successful registration is displayed, or an error page specifying the cause of the error.



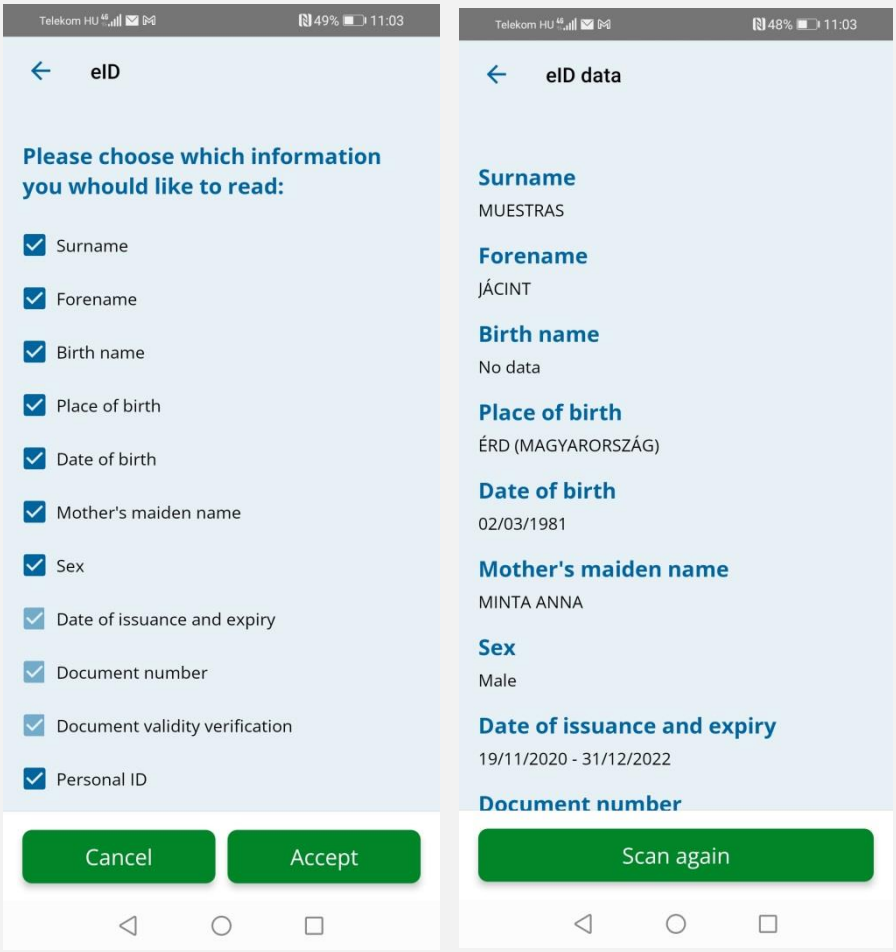
15. Figure - The two main steps of eIdentification registration

4.7.4. Reading the eID data

The eID data are scanned by clicking on the *Beolvasás* (Scan) button, after which the user has to enter the eID PIN.

Upon entering a wrong PIN an error message appears on the screen. Having entered the PIN, the user can select the data to be queried. The selected data are displayed upon pressing the *Elfogad* (Accept) button.

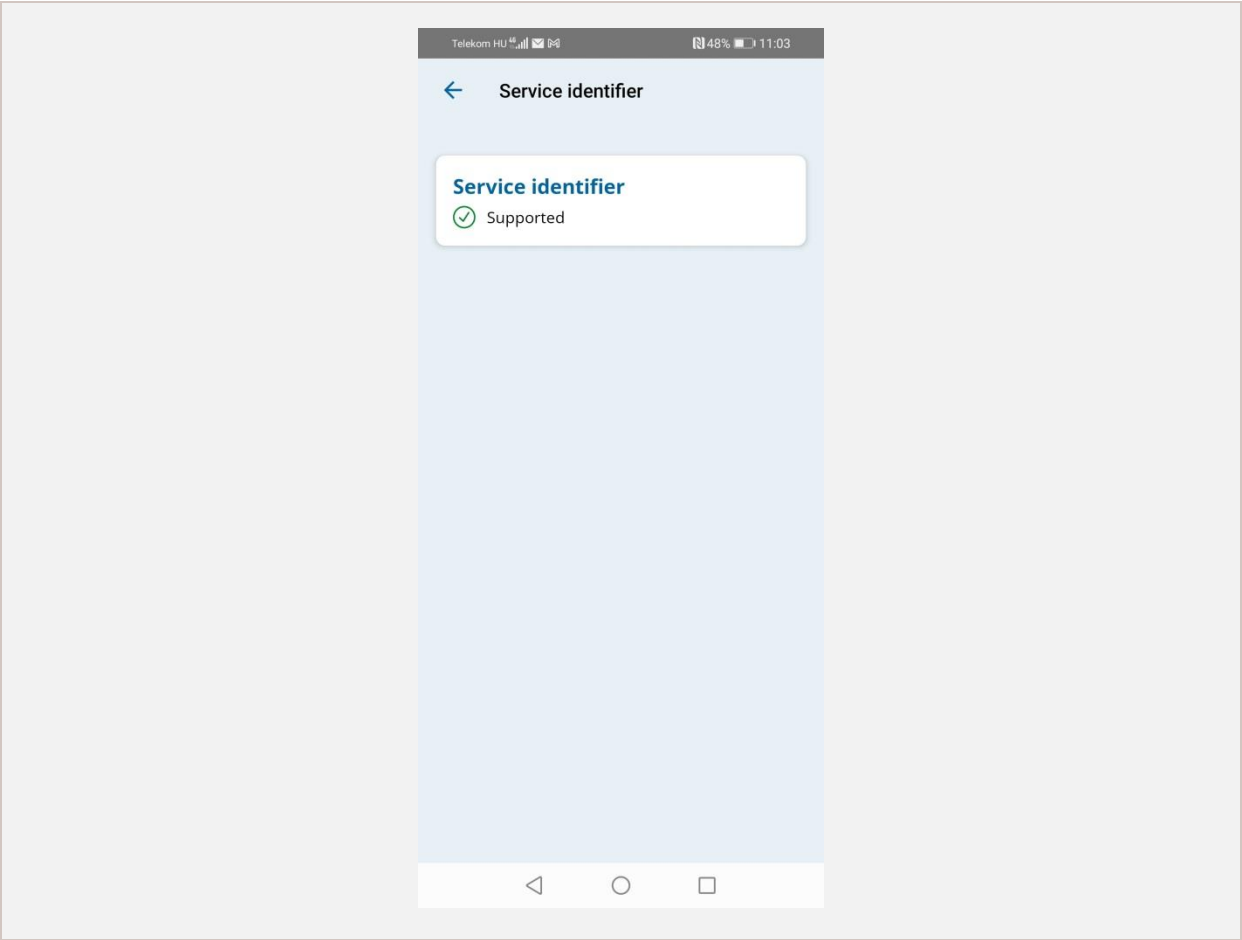
If the user starts the reading process having only one last attempt at entering the PIN left, at the end of the process the application asks for the CAN number on the card as well.



16. Figure - Selection of the data to be queried in eID (left) and the data found (right)

4.8. Service identifier

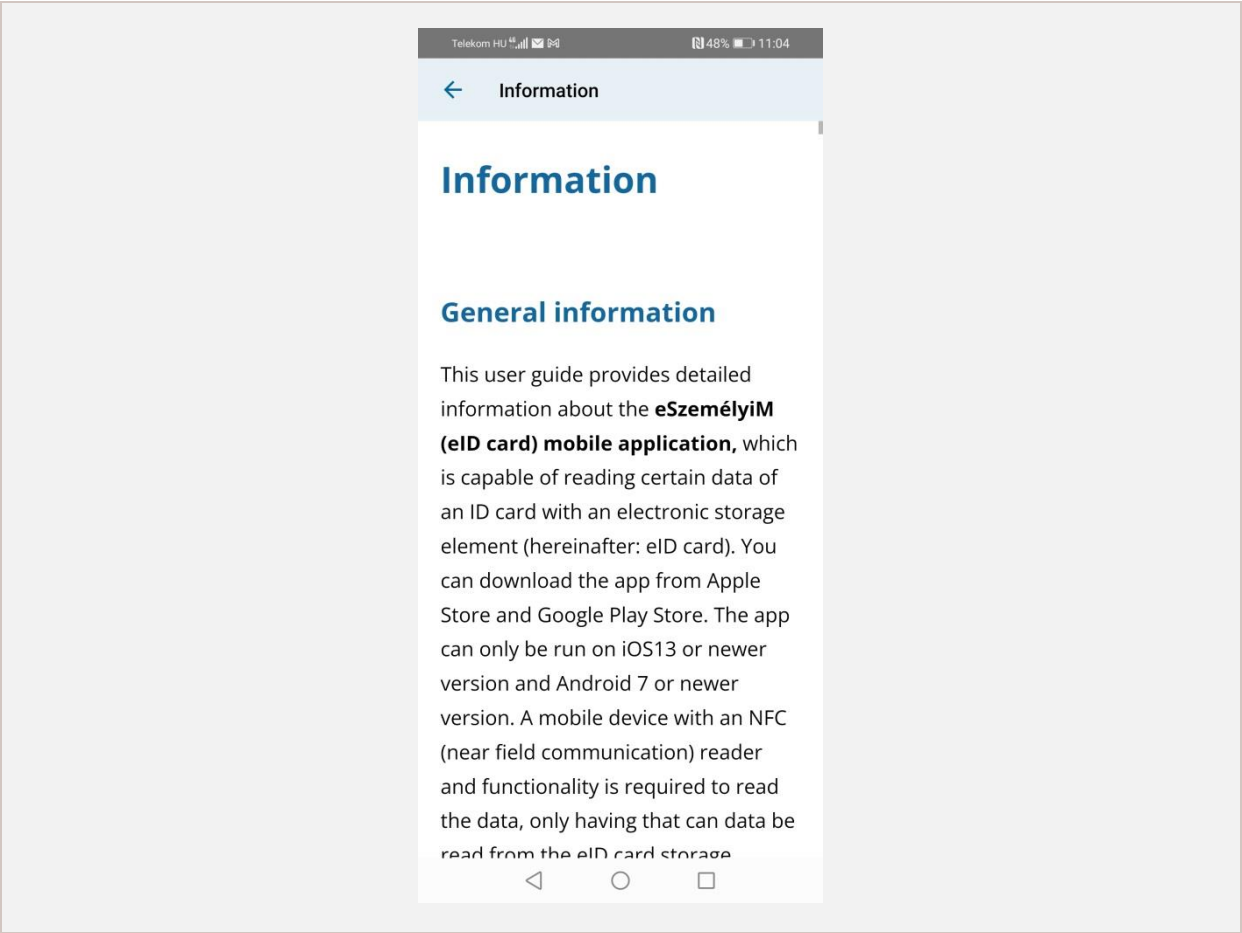
The Service identifier function enables checking whether the status of this function is 'supported' on the eID card. After successful card reading the status of the Service identifier function appears on the screen.



17. Figure - The screen showing the status of the Service identifier function

4.9. Information

Information on the use of the application is presented under this menu item.



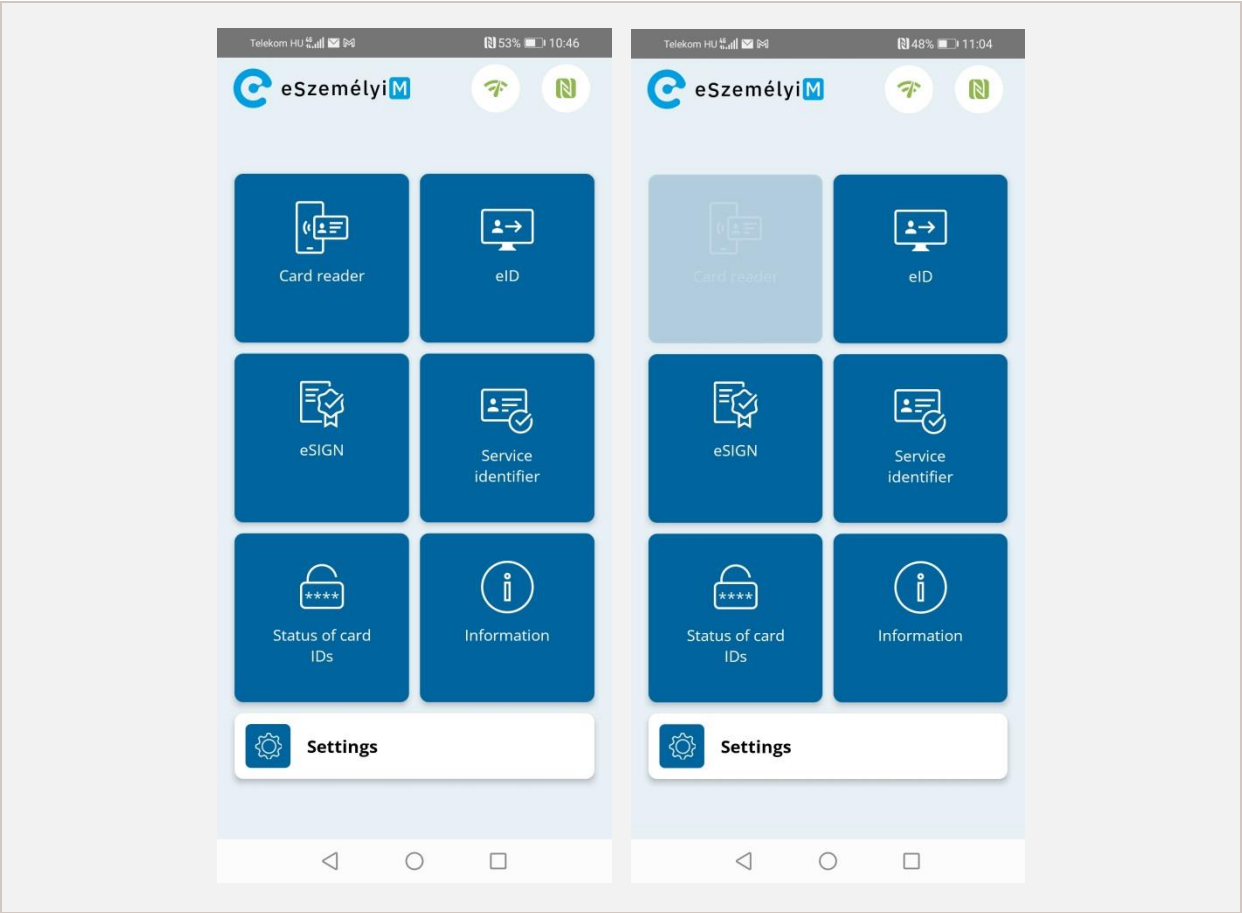
18. Figure - The screen with information on the application

5. Android-specific user interfaces

The application has a card reader function only available on Android operating systems, therefore a computer (with a Windows 7, 8 or 10, or a Linux Ubuntu/Debian operating system) can use a mobile device as an NFC card reader. The mobile device and the PC must in this case be connected to the same Wi-Fi network.

5.1. Main screen

With an Android operating system the main screen is supplemented with a Card reader button. Moreover, the functionality of the main screen is completely identical with what is described in section 4.3.



19. Figure - Main screen with Card reader button

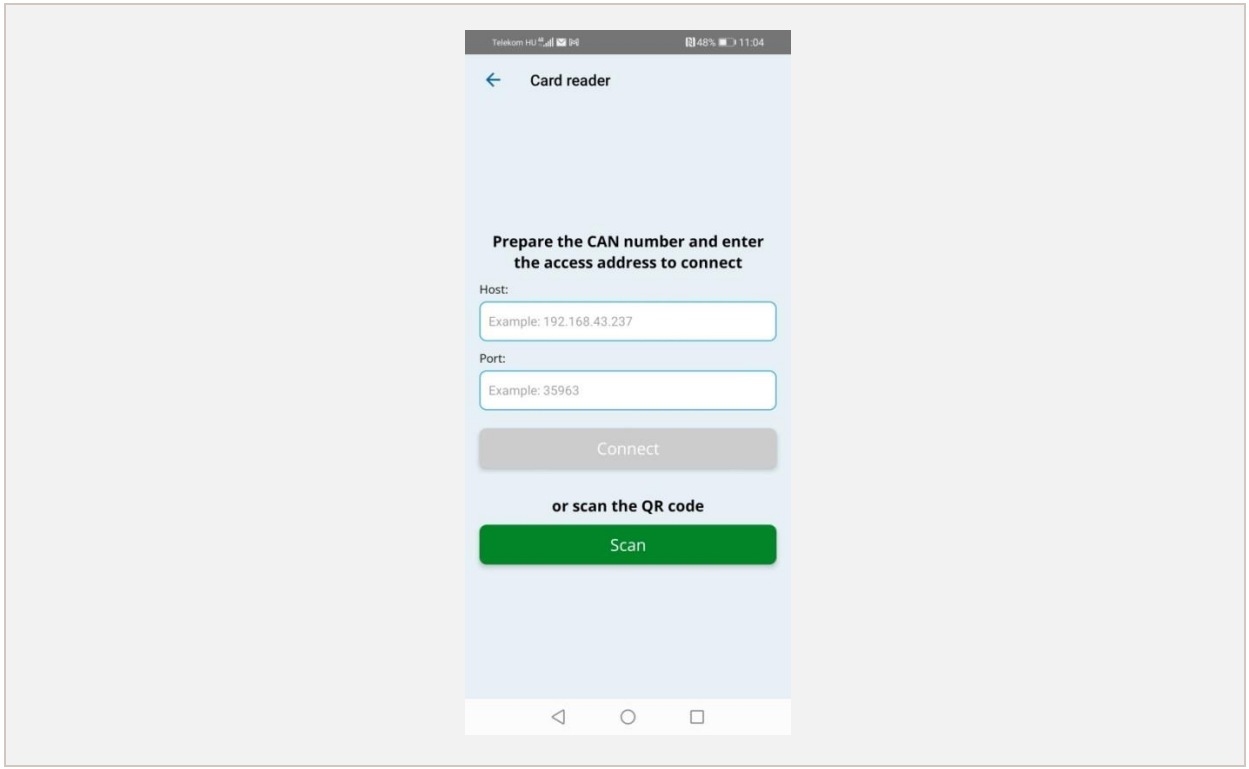
5.2. Card reader function

The following basic requirements are required for the use of the card reader function:

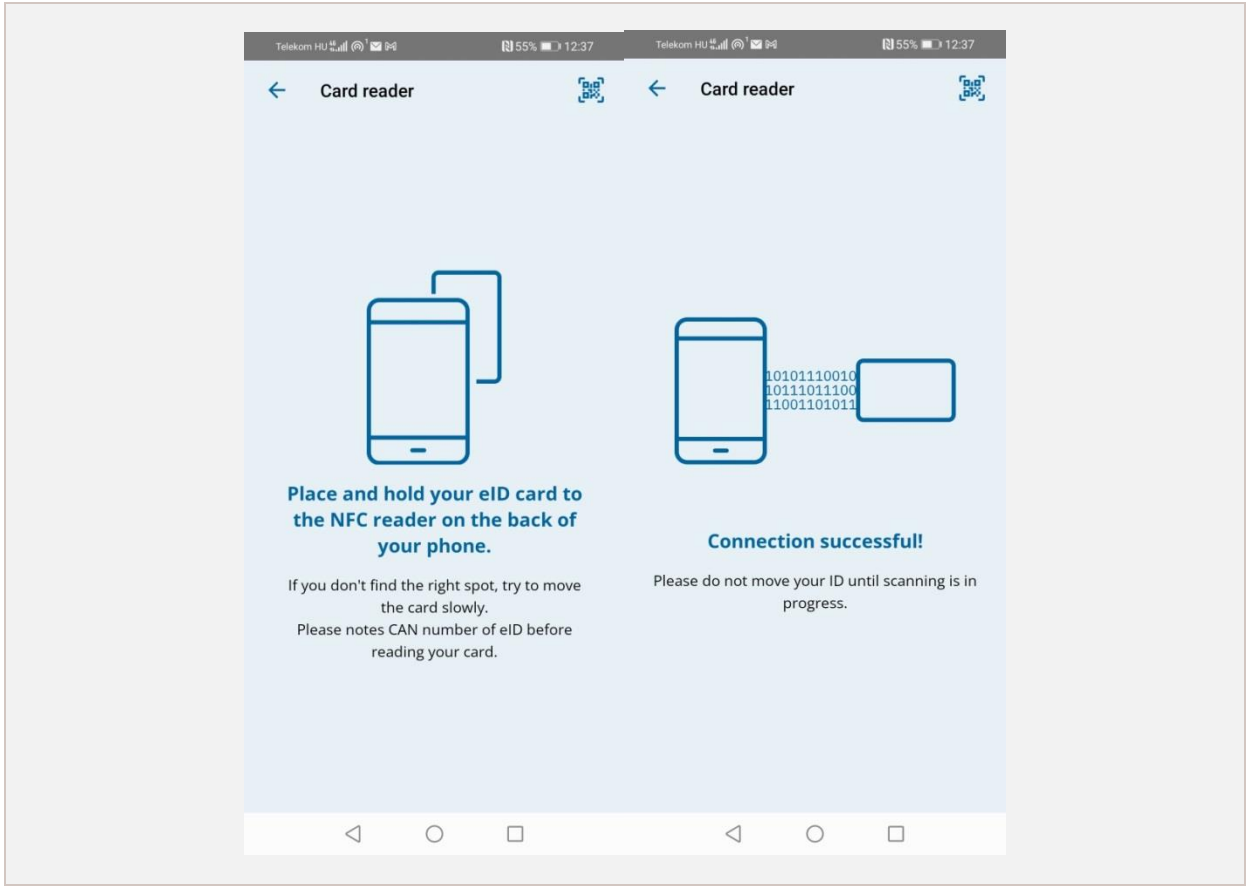
- eSzemélyiM mobile application installed on an NFC reader enabled smartphone with Android 7.0 or higher version operating system
- computer with a Windows 7, 8, 10 or Linux (Ubuntu or Debian) operating system
- connecting the two devices to the same Wi-Fi network

The user must enter the necessary data on the card reader screen for the required connection to be established between the computer and the mobile device, so that the computer can use the device as a card reader.

In the case of a Windows or a Linux operating system the steps described in section 5.3 or section 5.4, respectively, need to be carried out for the card reader function to be operational.



20. Figure - Entering of the card reader data



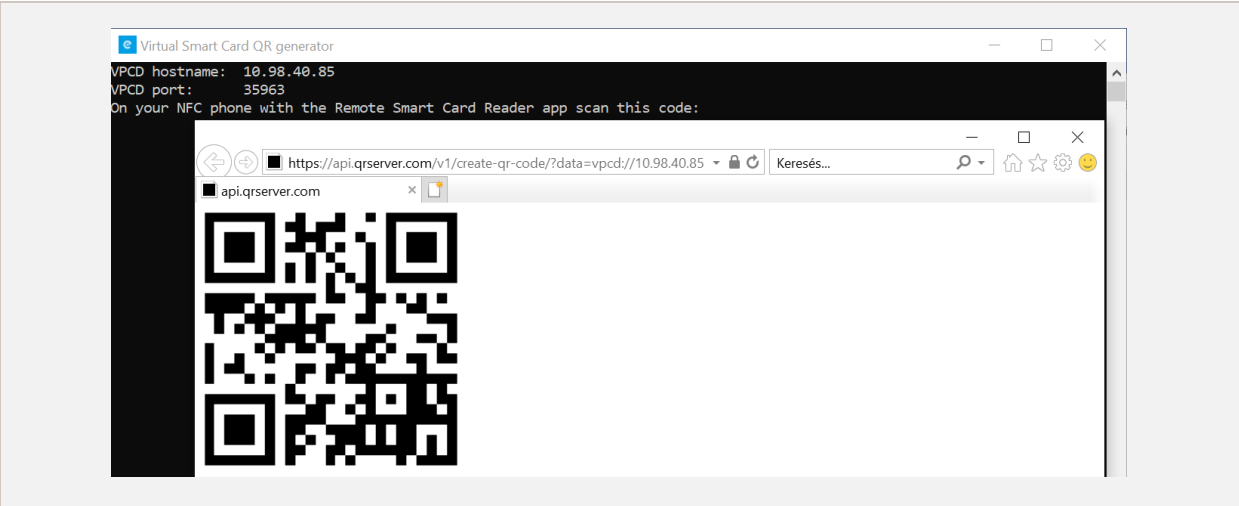
21. Figure - No card is held near the mobile device (left), mobile device connected to a card (right)

5.3. Windows system

5.3.1. Installation

Step one, downloading the installation file to the computer: https://eszemelyi.hu/letoltesek/#mobil-kartyaolvaso

Installation takes place after the starting of BixVReaderInstaller.msi, during which the Bix Virtual Smart Card Reader appears in the Device Manager as Smart Card Reader, and the No. 35963 port opens on the computer (through which the computer and the mobile application will communicate with each other). The Virtual Smart Card QR generator command icon appears in the Start menu, the running of which enables starting the utility program. After running the generator, a terminal starts up in a pop-up window, comprising the HOST name and the PORT number; then a browser window with the QR code opens automatically:



22. Figure - HOST name and PORT number, as well as the QR code on Windows

5.3.2. Start and connection as card reader

After starting the Virtual Smart Card QR generator program, the mobile device can be connected with the computer in two ways, to make available the connection required for card reading:

1. QR code: one possible way is by reading the QR code. Hit the Beolvasás (Scan) button on the mobile device display and the application navigates to a scanning screen where the camera opens. At this point the QR code opened in the computer's browser is to be positioned to the right place in the phone camera to enable the application to read the data for the connection.
2. Entering the HOST name and the PORT number: another method is whereby the user writes the HOST name and the PORT number in the computer terminal into the text entry fields on the mobile device interface and then taps the Kapcsolódás (Connect) button below. After that the application navigates to the next screen.

After the completion of reading the screen appears on which the mobile device is functioning as a card reader, i.e. if the user places the card on the required point on the device the computer can read the data.

If the connection fails, the following should be checked:

- the mobile device and the PC are connected to the same Wi-Fi network
- the Wi-Fi network should be a private network on the PC or, in the case of a public network, network discovery should be authorised
- there should be no prohibiting firewall rule defined on the PC for ports 35963 and 35964

5.4. Linux system

5.4.1. Installation

The first step is downloading the installation package for the Linux system: https://eszemelyi.hu/letoltesek/#mobil-kartyaolvaso

After unpacking the installation script (smart_card_reader_installer.sh) is to be run in the terminal, with system administrator authorisation.

```
sudo ./smart_card_reader_installer.sh
```

Once the commands have been executed one by one, the computer needs to be restarted. The completion of installation can be checked by running the following command in the terminal:

```
pcscd -f -d
```

If the installation was successfully completed, the following text appears in the terminal window: "Another pcscd (pid: XYZ) seems to be running", where XYZ can be any ID.

5.4.2. Start and connection as card reader

For starting, the file generating the connection information (vpcd-config) needs to be run in the terminal in order to generate the connection information:

```
./vpcd-config
```

If the file cannot be run, an authorisation for running the file has to be given for the current user:

```
chmod +x vpcd-config
```

After running, the HOST name and the PORT number appear in the terminal along with a link which is to be opened in the browser to generate a QR code.

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