

**techfass**

## ***TF Mobile ID***

***The mobile phone application to emulate RFID card by smart phone***



# 1 Content

1	Content.....	2
2	Description .....	3
3	How does it work? .....	3
4	Compatible smart phones .....	3
5	Compatible RIFD readers .....	4
6	Identity.....	4
6.1	Free ID.....	4
6.2	Standard ID.....	4
6.3	Business ID.....	4
7	Manual step by step.....	5
7.1	Free ID activation.....	5
7.2	Standard ID activation.....	5
7.3	Business ID activation.....	5
8	Version .....	6
9	Works of third parties in the application .....	6

## 2 Description



With mobile application TF Mobile ID you can use your smart phone instead of a classic RFID card or tag to get access to the building. It is important to check, that your smart phone meets the requirements necessary to run the application properly. These requirements are mentioned in chapter 4. Similarly, your RFID reader has to be compatible with the application as well, see chapter 5. The application can be used under license agreement, which can be found directly in the application or on [www.techfass.com](http://www.techfass.com). You can download the application for free on Google Play.

## 3 How does it work?

The application TF Mobile ID is tied to the unique number of your mobile phone (IMEI). In case you will change your device, you will need to install the application again and if needed to buy the identity again as well (details in chapter 6). It follows the model with plastic RFID cards, once the card is lost, you need the new one. Every compatible device (RFID reader) can include several free identities (so called Free ID) which can be used directly after downloading the application free of charge. The identity needs to be added to the system by system administrator absolutely the same way as any other plastic RFID card.

## 4 Compatible smart phones

Recent application version TF Mobile ID 0.60. uses NFC technology to transfer the information between the smart phone and the RFID reader. This technology can be used on smart phones with operating system Android 4.4 (Kit Kat) or higher. There is a list of tested smart phones available on [www.techfass.com](http://www.techfass.com).

Operating system	OS Android 4.4 and higher	
communication	NFC	

*Table 1: Smart phone requirements necessary for the application TF Mobile ID.*

*There are many smart phone manufacturers supporting OS Android and NFC functionality and it is not possible to test all models with all possible OS versions. It can happen, that even if some device run on appropriate OS and supports NFC the application will not work. In this case please contact [support@techfass.cz](mailto:support@techfass.cz).*

Android® is registered trade mark Google LLC.

## 5 Compatible RIFD readers

Product version	Product name	Description	Catalogue number	Technology	Identity (ID)		
				NFC	Free	Standard	Business
	WRE 120 BK	Black glossy	56412000	✓	5	✓	✓
	WRE 120 WH	White glossy	56412001	✓	5	✓	✓
	WRE 121K BK	Black glossy w/ keypad	56412100	✓	5	✓	✓
	WRE 121K WH	White glossy w/ keypad	56412101	✓	5	✓	✓
	WRE 121A BK	Black glossy w/ symbols	56412200	✓	5	✓	✓

Table 2: List of compatible RFID devices – readers with application version sw 0.60. updated by volume of supported Free ID identities and possibility to use Standard or Business ID.

## 6 Identity

After the mobile application TF mobile ID is installed on your smart phone, you can imagine that your smart phone (application) has the same functionality as your wallet, where you put several RFID cards (Identities) or as your key ring, where you can put several RFID tags. Now you can use different identities with different level of security.

### 6.1 Free ID

Free ID offers basic level of security between application and the RFID reader. If the RFID reader supports Free ID, it is possible to use it immediately after downloading the application free of charge. The number of possible Free ID users is limited according to the device, see chapter 5. Good example of Free ID application is a family house.

### 6.2 Standard ID

Most common identity type with robustness security of the data transfer and it solves possible issue with limited number of Free ID identities. For example, if more than five users are needed in case of RFID reader WRE 120 BK, you can ask for Standard ID.

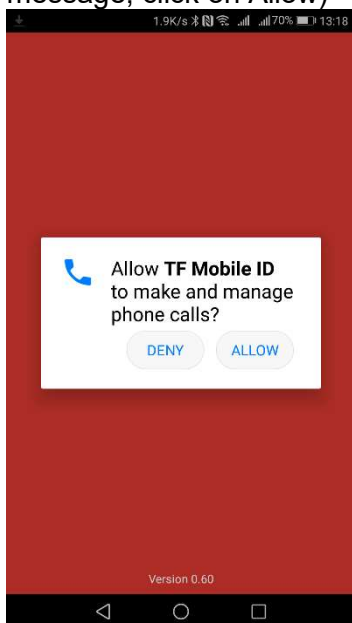
### 6.3 Business ID

Business ID supports the highest level of security with so called localization, where the identity is tied to exact buildings. This identity cannot be used with the readers, which aren't installed in dedicated objects. Good example is hotel, apartments.

There can be several identity types together in one application, per one smart phone.

## 7 Manual step by step

1. Download the application.
2. Allow the access to the IMEI number of your device (OS Android pops up the following message, click on Allow)



Picture 1: OS Android does not have any special message for accessing the IMEI number. It uses the same message as for allowing the phone calls. Application TF Mobile ID is not able to manage or make any phone call.

3. Grant your approval with license agreement and privacy Policy.
4. Check your smart phone that the NFC is activated.

### 7.1 Free ID activation

Automatically, just put your smart phone by NFC antenna close to the reader antenna (check the reader manual for antenna position).

### 7.2 Standard ID activation

1. ID administration.
2. Request for Standard ID.
3. Please enter your email address.
4. Send request.
5. Forward received email to your business partner.
6. Business partner will send the activation code to you.

### 7.3 Business ID activation

7. ID administration.
8. Request for Business ID.
9. Please enter your email address and customer number.
10. Send request.
11. Forward received email to your business partner.
12. Business partner will send the activation code to you.

Note: Some smart phones (depends on the version of operating system Android) enable NFC function to run on the background, without necessity to wake up the phone. Some smart phones need to be waken up / unlocked to enable the NFC functionality.

## 8 Version

Latest software version of TF Mobile ID is sw 0.60.

## 9 Works of third parties in the application

The TF Mobile ID application uses following works of third parties with their license agreements:

### a) ksoap2-android Project (MIT license) -

Copyright © 2006 James Seigel, Calgary, AB., Canada,

Copyright © 2003,2004, Stefan Haustein, Oberhausen, Rhld., Germany

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

- The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.
- THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### b) HockeySDK-Android

LICENSE INFORMATION (I/III)

**HockeySDK-Android (MIT license) Copyright © Microsoft Corporation. All rights reserved.**

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

- The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.
- THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### LICENSE INFORMATION (II/III)

The following classes are based on code from the project android-remote-stacktrace:

- Constants
- CrashManager
- ExceptionHandler

Source: <http://code.google.com/p/android-remote-stacktrace/>

The original license of these classes is:

#### **android-remote-stacktrace (MIT license) Copyright © 2009 nullwire ApS**

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

- The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.
- THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Contributors:

- Mads Kristiansen, [mads.kristiansen@nullwire.com](mailto:mads.kristiansen@nullwire.com)
- Glen Humphrey
- Evan Charlton
- Peter Hewitt

#### LICENSE INFORMATION (III/III)

The following class is based on code from the Android Open Source Project

- Base64

#### **The Android Open Source Project (Apache license) - Copyright © 2010 The Android Open Source Project**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

#### **c) Butterknife (Apache license) – Copyright © 2013 Jake Wharton**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

**d) Apache Commons (Apache license) – Copyright © 2017 Apache Commons**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

**e) Reactive X/RxJava (Apache license) – Copyright © 2016-present, RxJava Contributors**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

**f) googlesamples/easypmissions (Apache license) – Copyright © 2017 Google**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

**g) Gson (Apache license) – Copyright © 2008 Google Inc.**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.

**h) LeakCanary (Apache license) – Copyright © 2015 Square. Inc.**

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and limitations under the License.



