A new installation tool for reader installation and support improvement

Nedap Identification Systems, in short NIS, offers readers which use Radio Frequency to identify tags. The reader its Radio Frequency field can detect tags and collect data from it. NIS provides different readers which each are designed for different applications like city access for public transport, or people identification in a hospital. A reader is installed by an installer, the installer doesn't always have experience in installing these readers.

Every reader is provided with a manual where all installation information can be found. Besides that there is an E-learning provided at the partner portal which the installer can perform to go through the installation steps. A disadvantage of the manual and E-learning is that not all information is needed for one particular installation. This can result in situations where an installer performs installation actions which are not even needed or important information is missed because of all other information in the manual. The conditions of an installation can be very different and the current use of a laptop which is needed for the configuration of the reader is not optimal. A mobile device is easier to handle. When the installer gets stuck during installation he can request support from Nedap by mail or telephone. These contact options are not sufficient enough, because the support desk has difficulties determine what is wrong. NIS would like to know if the reader functionalities can be presented in a new way suiting the person who needs it to.

Result: A new installation tool in the form of an application for the installer. This application provides personalized installation information. By providing the order number of the reader, the first information about the reader type and type of tags is known. The installers account is connected to the reader and installation information. In the application the installer can start with the installation.

The installation is provided in small steps, each step is supported with a supporting image. The steps are provided in a sequential way. By the use of checklists during the installation steps, the installer can insert the properties of the installation, like which connections have to be made. This reduces the chance of missing important information or performing actions which are not needed for that installation. Because of the small steps the installer can easily see how far he is in the installation process. A navigation menu should enable navigating through the different installation steps and give the opportunity to recover from mistakes like filling in the checklist wrong. During the configuration part where settings have to be made to the reader, the application should be connected to the reader. This leads to changes for the readers, a Bluetooth communication should be set up between the reader and mobile phone. The readers should therefore get a Bluetooth module.

Besides the new presentation of the installation info, it should be easier to find the right contact data. This contact data is also provided in the application and the application should support a videocall. During the videocall, support can watch along the installation by the use of the mobile camera. During this contact an info package of the proceeded actions and the reader settings is send to support. This should make it easier to indicate the problem.

To make this communication possible, an infrastructure is needed and the information should be stored somewhere. This can be realized by a cloud infrastructure. The scalability of the cloud infrastructure makes it possible to apply this application to all readers and eventually to make the application even suitable for possible customers. The AR part can also easily be added to the application.

Booklet:

Nedap Identification Systems offers readers which use Radio Frequency to identify and collect data from a tag. An installer doesn't always have experience in installing readers and providing support to the installer is hard. NIS would like to know if the installation can be improved.

The result of this thesis is a new installation tool in the form of an application for the installer. The installation actions are provided in the app in small steps. By the use of checklists during the installation steps, the installer can insert the properties of the installation. This reduces the chance of missing important information or performing actions which are not needed for that installation. Besides that it is easier to find the right support contact data in the app and with the new video call function, support giving should be easier.