

Public summary

Designing a graphical tool for an access control system

Mathijs Boer, Industrial Design Engineering, University of Twente

This bachelor thesis was executed at Nedap, a technology company based in Groenlo, their motto "technology for life" aims to create human-centred technology that is of added value to people's professional lives. Nedap has several branches, this assignment was executed at the security management branch, where they make physical access control systems for large clients in the Netherlands and abroad. A physical access control system is a system that is designed to control who enters a location and when. It works by firstly authorising the right people, who are then authenticated at an entrance, where they will be given access according to their authorisation. All doors and other connected appliances can give various status updates to a central systems. All events happening at every location can therefore be monitored centrally by for example a security guard, and potential threats can be reported as an alarm.

One access control system of Nedap is AEOS, which is a very complex but versatile access control system. At larger clients with hundreds or thousands of doors, it can be difficult for a user to get an overview of all reported alarms, as it is a vast number. For this, a graphical tool was developed by Nedap to help the user gain overview by giving them a graphical overview of the site to be monitored. The user interface of this graphical is now dated and in need of an update. This assignment aims to design a new graphical tool for AEOS as a replacement for the current graphical tool.

To achieve this, an analysis of AEOS as whole, its context and the current graphical tool was performed. This was done together with a user analysis to get a better understanding of the current issues as well as the goals and requirements of a new graphical tool. Information and understanding of the system was gathered by having interviews with internal company experts, as well as users at client companies.

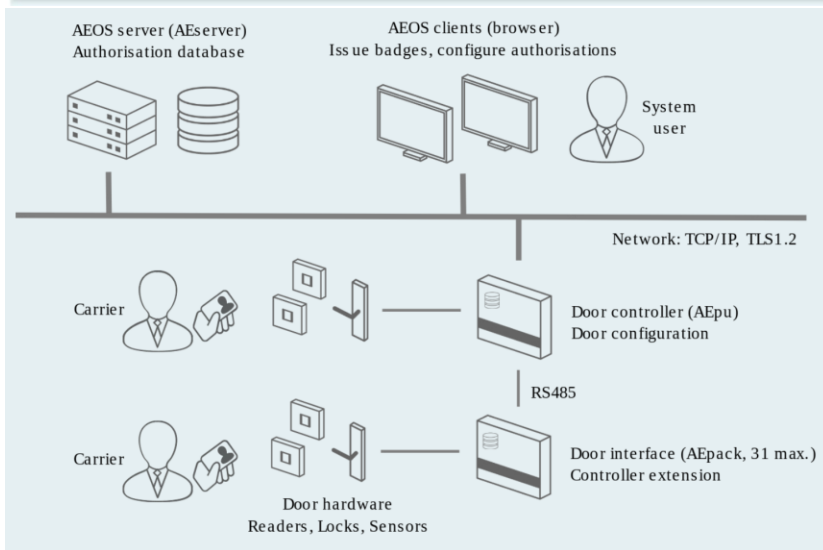
The main goal of a new graphical tool would be to better organise all incoming information, and allow the user to prioritise these to their current needs. This way the system would be more flexible to the user context.

With these requirements kept in mind, a design phase was started. After some ideation, four concepts were formed. These were then evaluated together with an expert, to find out which was the best according to the requirements. This concept was then further developed in the final design iteration of the new graphical tool.

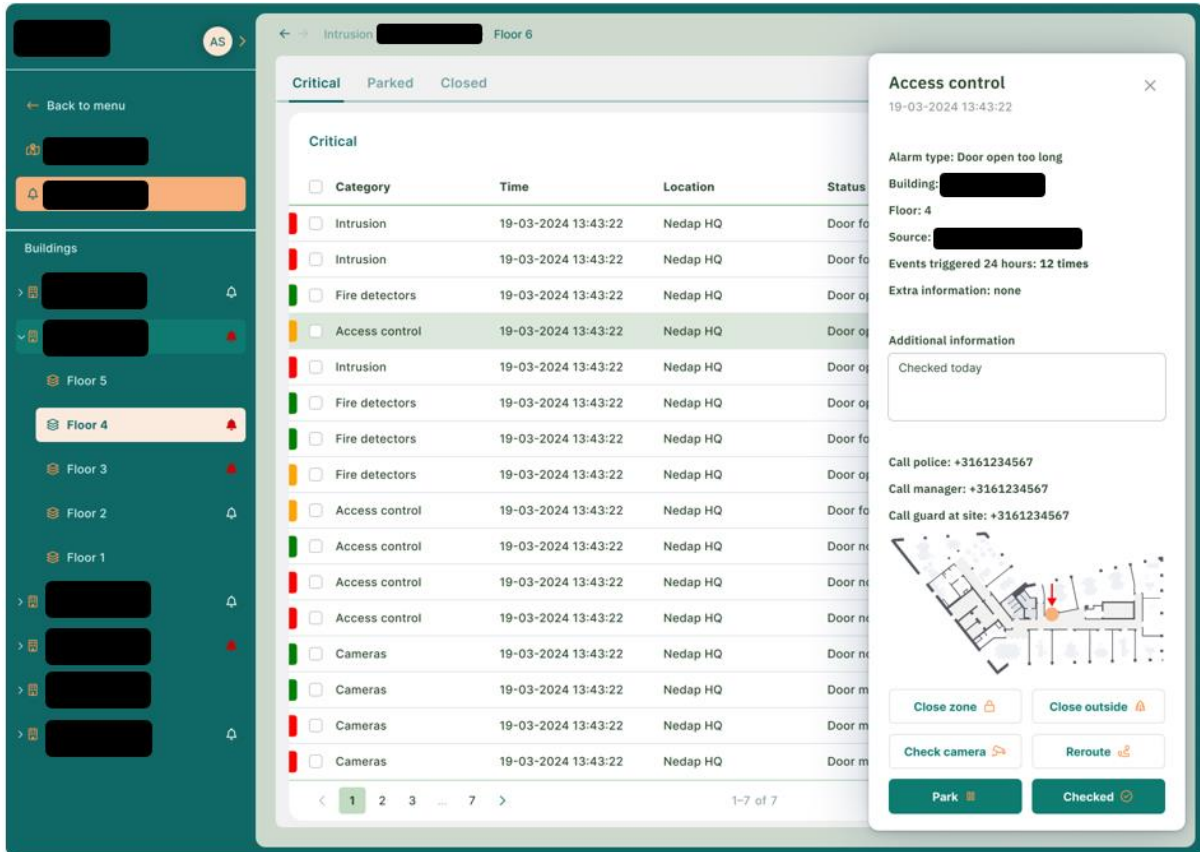
This final design is a vision of what a new graphical tool of AEOS could look like. The new version would allow more customisability for the user compared to the old version, enabling them to adapt to the current situation in their area of surveillance. By giving the user more control of what choosing what information is relevant, their overview of their area of surveillance would be improved, increasing security by not letting crucial information slip through.

This new version is currently a proof of concept, this could later be prototyped and extensively tested by users, to evaluate whether this could be of added value to Nedap's portfolio of products and services.

Pictures







Introduction

Any organisation strives to keep personal and company assets secure. Physical access control systems are crucial in achieving a safe environment for an organisation and its employees. Nedap's AEOS system is such a system. But surveying large premises and keeping them safe with obstructing the authorised personnel as little as possible can be difficult. At large premises with lot's of access points, there can be a lot of status updates from the system. This can be overwhelming for a user, and difficult to comprehend. This research aims to create a tool to help a user gaining an overview of the area of surveillance. Allowing them to organise and prioritise the incoming data and ensuring no important information slips through is crucial. The final model can be described as a user friendly, flexible tool, adaptable to the user and its current context, enhancing user experience and security.