Access Control Visualizition

This is an add-on to Simac IDS's Pronto, an access control system. This add-on allow for visualization of Pronto's maps and floorplans, on to which zones, readers and controllers can be dragged and dropped. Furthermore, this technology will allow for easier management and searching/finding features on the maps and floorplans.

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Impact on society

What impact is expected from your technology?

What is the challenge at hand? What problem (what 'pain') does this technology want to solve?

Currently, the managing of maps/floorplans, zones, readers, and controllers is handled in a simple interface with a lot of drop-down menus. This system however, is not very intuitive and can be rather confusing. We want to make the management and handling of the system easier by adding a graphical visualization of these maps.

Can you indicate why you are sure that this technology is solving the right problem?

This visualization add-on is a direct request from the product owner, so we know what the problem is and from his feedback we've gathered how he wants us to fix it.

How is this technology going to solve the problem?

By visualizing the floorplans and map with their additional features, it should make the system more accessible and intuitive to use.

What negative effects do you expect from this technology?

People could become too dependant on the visualization. If for some reason the add-on is not operational, and someone doesn't know their way around Pronto without the visualization, it could lead to them not being able to use the system correctly or not being able to use it at all.

In what way is this technology contributing to a world you want to live in?

This technology doesn't directly impact society as a whole, but could improve the day to day use of Pronto. This could lead to an increased use of Pronto, which could in turn lead to the system becoming more mainstream and in general lead to the broader implementation of access control systems in society.

Now that you have thought hard about the impact of this technology on society, what improvements would you like to make? List them below.

We noticed that being too dependand on this technology pose an issue, if it is out of order. The improvement for us is to make sure that the end product is robust and doesn't need a lot of maintenance. If we reach the point of

making a manual for the add-on, it might be handy to attach Pronto's manual to it in case the visualization does go down.

Hateful and criminal actors

What can bad actors do with your technology?

In which way can this technology be used to break the law or avoid the consequences of breaking the law?

1. If someone gets unauthorized access to the system, it could result it them being able to trespass on private/restricted property.
2. Someone could get access to a reader and copy their details when they use their access token. This way, someone could trick the system into thinking that they are someone else.

Can you imagine this technology being used to cross personal - or societal boundaries?

If someone changes or disables the autorization in certain zones, this could lead to them entering private property without the correct credentials, thereby crossing personal boundaries.

Can this technology be used against certain (ethnic) groups or (social) classes?

The system is just an expansion to the Pronto system, which allows certain people to enter certain zones based on their credentials, not their ethnicity or social status.

In which way can bad actors use this technology to pit certain groups against each other? These groups can be, but are not constrained to, ethnic, social, political or religious groups.

A bad actor could specifically exclude certain people from certain zones if they have access to the system. This bad actor could then restrict people based on their political preferences, religion, race or other factors. This would however mean that the bad actor would have to know all these specific facts about every single person they want to restrict, which Pronto doesn't keep track of.

How could bad actors use this technology to subvert or attack the truth?

We could not find any ways in which the technology could be used to subvert or attack the truth.

Now that you have thought hard about how bad actors can impact this technology, what improvements would you like to make? List them below.

In order to for someone to malicously use the technology, they first must gain entry to it. The best way to stop these bad actors would be to stop them from easily entering this system. Good password protection and automatically logging out when there is inactivity are the best means of protecting the add-on from bad actors.

Privacy

Are you considering the privacy & personal data of the users of your technology?

This category is only partial filled.

Does this technology register personal data? If yes, what personal data?

Access to areas could be coupled to an access token. In this way, some personal data is registered.

Do you think this technology invades someone's privacy? If yes, in what way?

This add-on itself does not invade someone's privacy.

Do you think this technology is compliant with prevailing privacy and data protection law and can you indicate why?

This question has not been answered yet.

Does this technology mitigate privacy and data protection risks/ concerns (privacy by design). Please indicate how.

This question has not been answered yet.

In which way can you imagine a future impact of the collection of personal data?

This question has not been answered yet.

Now that you have thought hard about privacy and data protection, what improvements would you like to make? List them below.

This question has not been answered yet.

Human values

How does the technology affect your human values?

How does your technology affect the identity of users?

It's mainly just an add-on to the current Pronto system, which - for as for as we know - does not affect the identity of their users. This add-on only expands the system, it does not inherently change it.

How does the technology influence the users' autonomy?

We hope that our add-on only gives the user easier access to managing Pronto, and to give them more space to make decisions without having to worry about interfacing with the system, which leads to improved autonomy.

What is the effect of the technology on the health and/or well-being of users?

The system should take away the stress of having to deal with the normal Pronto interface, which could be perceived as confusing by the users.

Now that you have thought hard about the impact of your technology on human values, what improvements would you like to make? List them below.

We don't see any main improvements to how we already want to handle the impact of our add-on on human values, since its main focus is a quality of life improvement.

Stakeholders

Have you considered all stakeholders?

This category is only partial filled.

Who are the main users/targetgroups/stakeholders for this technology?

Name of the stakeholder
Christian van Deuren (development & operations manager at Simac IDS)

How is this stakeholder affected?
Christian is our product owner, and as such he is the direct link between us and Simac IDS. Our performance and end result could directly affect their Pronto access control system, which could lead to more sales of the product.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Name of the stakeholder
Customers of Simac IDS's Pronto system

How is this stakeholder affected?
These are the end-users of the product; they will directly be interacting with our add-on to Pronto. These customers include the current customers and potential future customers.

Did you consult the stakeholder?
Yes

Are you going to take this stakeholder into account?
Yes

Did you consider all stakeholders, even the ones that might not be a user or target group, but still might be of interest?

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Now that you have thought hard about all stakeholders, what improvements would you like to make? List them below.

In order to allign the end-product more with what the end-users want, we could inquire Christian more specifically about what improvements their

customers would like to see in this visualization add-on.

Data

Is data in your technology properly used?

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into account in your technology?

Zone access privileges are coupled to their access token, which could be the main issue here in case an access token is given too many or too little privileges when being registered.

How does the technology organize continuous improvement when it comes to the use of data?

The only real data that our add-on stores is related to the floorplans and maps, and the placement of zones, readers and controllers. Changes to floorplans/maps can affect the zones/readers/controllers, but that's all we really have to take into account when it comes to the continuous changes to our data.

How will the technology keep the insights that it identifies with data sustainable over time?

As long as no real personal data is used/leaked by our add-on, it should remain sustainable to the end-user - as long as they still have the license to use Pronto. They should still be able to edit the floorplans/maps even when the support for the software ceases to exist.

In what way do you consider the fact that data is collected from the users?

The only personal information that is collected by our add-on is related to accessing certain zones via certain privileges. These privileges will have to be kept track of, but should not directly store personal information about the user themself.

Now that you have thought hard about the impact of data on this technology, what improvements would you like to make? List them below.

We don't really see a main improvement when it comes to the impact of data on our technology.

Inclusivity

Is your technology fair for everyone?

Will everyone have access to this technology?

The admins, maintainers and receptionist of the Pronto system should only have access to the visualization.

Does this technology have a built-in bias?

Some people are or are not allowed into certain areas (for example a guest at a park shouldn't be allowed to enter a maintance room). This isn't really a bias, but does distinguish between people.

Does this technology make automatic decisions and how do you account for them?

The Pronto system detects whether someone can or cannot enter a certain zone based on their access token's credentials.

Is everyone benefitting from this technology or only a a small group? Do you see this as a problem? Why/why not?

Only a small group of people will benefit from this, namely the only the admins, maintainers and receptionists, not the regular users of the access control system. We do not see this as a bad thing, since this add-on was specifically designed to make the lives of these three actors easier.

Does the team that creates the technology represent the diversity of our society?

Our groups spans 3 nationalaties and incorporates male and female developers. We hope that these different cultures and viewpoints lead to more diverse and creative solutions to the problems facing us during this project. Furthermore, we hope that this will also lead to a broadly accessible product which is not dependent on someone's values and believes.

Now that you have thought hard about the inclusivity of this technology, what improvements would you like to make? List them below.

We will try to clearly communicate how we want our personal values to be reflected in this project, such that we can all feel included when it comes to development as well as the final implemetation of our technology.

Transparency

Are you transparent about how your technology works?

How is it explained to the users about how a technology works and how the business model works?

Since we are working on the visualization of an already existing system, the main focus of our technology is making an intuitive system that - by using UX guidelines and heuristics - shouldn't need too much explaination. Still, we would like to add a user manual in order to clear some things up, provided we have the time.

If this technology makes an (algorithmic) decision, how is it explained to the users how the decision was reached?

No algorithmic decisions are made.

Is it possible to file a complaint or ask questions/get answers about this technology?

While it is still in development, yes. The product owner and possible other stakeholders are free to intervene during meetings/demos for giving feedback.

Is the technology (company) clear about possible negative consequences or shortcomings of this technology?

We can make clear to the user that this is only an add-on, an ease of life improvement. This should not replace the existing access control systems, but is just an extension. We will try to communicate this clearly to the end-user.

Now that you have thought hard about the transparency of this technology, what improvements would you like to make? List them below.

Currently, not really. Maybe add a notification when logging in for the first time to remember the user about the fact that this is only an add-on.

Sustainability

Is your technology environmentally sustainable?

In what way is the direct and indirect energy use of this technology taken into account?

Pronto is already running on servers, which generally consume a lot of energy. If possible, we would like this add-on to also run on these servers, which should minimize energy use compared to running it on its own dedicated server.

Do you think alternative materials could have been considered in this technology?

It is only a software solution, it will save some material compared to paper maps/floorplans.

Do you think the lifespan of this technology is realistic?

As long as the fundamentals of Pronto don't change, our technology won't really need to be adjusted. Therefore, its lifespan is tightly coupled to the lifespan of this technology.

What is the hidden impact of this technology in the whole chain?

It will require some more server processing power, but in general no large extra effect to the environment/sustainability of the system is expected.

Now that you have thought hard about the sustainability of this technology, what improvements would you like to make? List them below.

We do not see any real improvements we can make when it comes to the sustainability of our technology. If we can make the system robust and easy to modify - if needed - in the future, it should be sustainable enough.

Future

Did you consider future impact?

This category is only partial filled.

What could possibly happen with this technology in the future?
If implemented correctly and satisfactory according the the PO's requests, this add-on could greatly enhance the user experience with the Pronto system. This gives the current users incentive to keep using Pronto, and could even help sell the system to future customers.

Sketch a or some future scenario (s) (20-50 years up front) with the help of storytelling. Start with at least one utopian scenario.
This question has not been answered yet.

Sketch a or some future scenario (s) (20-50 years up front) with the help of storytelling. Start with at least one dystopian scenario.
This question has not been answered yet.

Would you like to live in one of this scenario's? Why? Why not?
This question has not been answered yet.

What happens if your technology (which you have thought of as ethically well-considered) is bought or taken over by another party?
This question has not been answered yet.

Impact Improvement: Now that you have thought hard about the future impact of your technology, what improvements would you like to make? List them below.
This question has not been answered yet.