NAME: IoT Security
DATE: September 6, 2024 12:14 PM
DESCRIPTION OF TECHNOLOGY
Security guidelines for Industry and Home/Office IoT devices.

TICT

HUMAN VALUES

The user will become more aware of the security of IoT devices.

TRANSPARENCY

The security guidelines cannot have a businessmodel, because they are security standard used for categorizing and describing security vulnerabilities and flaws.

IMPACT ON SOCIETY

The challenge is to find and secure the most common vulnerabilities in IoT devices. The security guidelines and principles will help to secure them.

STAKEHOLDERS

- Casper Schellekens (Project leader/research)
- Taede (Lector/Research group leader)
- Mark Madsen (Researcher)
- Ron Mlotte (Coach)
- Ctouch

SUSTAINABILITY

The guidelines are documents and the energy use is not applicable in this context.

HATEFUL AND CRIMINAL ACTORS

The security guidelines can be used from a hacker that can see the common vulnerabilities in IoT devices. By knowing these vulnerabilities he can try to abuse them, which in most cases is illegal.

DATA

The limitations of our research will be described in our guidelines.

FUTURE

This guideline can be updated and expanded over time. This will help to keep everything up to date, because every technology changes over time, and without updating these guidelines they will become outdated.

PRIVACY

The IoT devices can store a personal data. For example, there could be an IoT device connected to a camera or some other device that can collect and store data.

INCLUSIVITY

The security guidelines for IoT devices do not have a bias, because they are documents and the bias is not applicable in this context.

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Security guidelines for Industry and Home/Office IoT devices.

HUMAN VALUES

How is the identity of the (intended) users affected by the technology?

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?…

TRANSPARENCY

Is it explained to the users/stakeholders how the technology works and how the business model works?

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their…

IMPACT ON SOCIETY

What is exactly the problem? Is it really a problem? Are you sure?

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine…

STAKEHOLDERS

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by…

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.
…

SUSTAINABILITY

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

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS

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

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/ identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder…

DATA

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into…

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;…

FUTURE

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY

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

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like…

INCLUSIVITY

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases.…

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