A project proposal: The Shadow of Digitalization

1. Introduction

The energy consumption of ITC-sector in the world is before Corona19 about 2 % all consumption. It is as big as whole air traffic of the world. The half of ITC-consumption is made of streaming digital content, eg. 1 %. And the situation is rapidly changing: estimation is that there will be at least 4-5 times bigger consumption in ITC during next 10 years.

The Shadow of Digitalization (In short: SoDa) application opens this fact to an individual user of the digital services by illustrating his/ her own steaming activity. Same time application connects his /her own data of steaming to a larger audience, a society of activist, who have loaded the application. Together they are smelting ice in Antarctica. Visualization shows it and also helps the user to understand how a small activity can turn important to fight the climate change.
The ideology of SoDa is a combination of quantify yourself movement and environment activity with gaming attitude. SoDa is not trying to be accurate in numbers, but it tries to make an estimation in PC-platform. So SoDa can help governance to estimate more accurate at this moment totally hidden volume of steaming activity's energy consumption.

2. Goals

The team should built up SoDa in PC / Windows environment and test it with possible target group in Aalto students. This include
- refresh the visualization idea
- create concrete time table and project plan for SoDa
- solve how steaming content is find in PC and make it useful for SoDa
- design user interface both for individual user and scale it for bigger community
- design visualization (smelting ice ?)
- test SoDa with single user and with larger community
- deliver it to the client
- muuta?

3. Technologies

PC / Windows environment. If there is time in project plan also for alternatives, then possibility study is android /linux environment.

The group can decide what technologies it uses. We can not guarantee support to this, but we can try to help.

4. Students

The students should have
- a keen interest of ITC-sector's affect on energy consumption and climate change
- basic knowledge of operating systems and web technologies
- interest in visualization and gaming communities

5. Legal issues

The results will be published under an MIT open source license.
Signing the NDA included in the Aalto's contract template is required

6. Client

The client is department of computer science in Aalto

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7. Other information

This SoDa application is a part of bigger "Shadow of Digitalization" documentary film project, which is in developing phase. Film studies what can we do in our life with ITC and energy consumption. The students of the group are invited in making of this documentary film. At the first phase it means, that they are willing to be interviewed 3-4 times during the project and also make short video commentaries of their work. This material is used for promoting the documentary film. Later, if the money raising is successful, the material can be included in actual film.
PR dep. of Aalto can also have interest for the material. The material can reveal the actual teaching situation within corona19 and the ways of future's working and learning conditions.

A publication from ETLA (June 2020) about ITC and energy for those who are interested in joining to the group:

https://www.etla.fi/julkaisut/informaatiosektorin-energian-ja-sahkonkaytto-suomessa/