Thesis Project Portfolio

Developing a Project Management Tool for Network Migration to Improve Transparency between Enterprises and Network Experts

(Technical Report)

An Ethical Consideration of Manipulative User Experience Design: Determining User Understanding and Regulation

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science
University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree
Bachelor of Science, School of Engineering

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Spring, 2023
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Sociotechnical Synthesis

User experience (UX) design is a fundamental aspect of how people engage with different platforms and interfaces. UX design is the process of designing systems or products that aren't only useful, but easy to use and creates an enjoyable experience when interacting with the product. This portfolio includes two research projects which involve UX design with a focus on effectiveness, usability and the ethical implications of UX design.

The capstone technical work is centered on designing an interface for migrating an enterprise network to a cloud-based platform that can help a company realize the benefits of increased automation, security, scalability, and usability. Since the process of migration can be tedious, time-confusing and may require an experienced network engineer, a need for an interface between the enterprise and network engineer has been identified. A project management tool was designed after extensive research and evaluation of requirements that realized three novel features: a task-based structure that centralizes resources, a graphical map for evaluating the status of dependent tasks, and embedded learning resources for furthering knowledge of networking, to effectively bridge gaps in communication between enterprises and network engineers.

The STS research focuses on the negative ethical implications that can result from manipulative UX design and what positive UX design involves. The decisions made during the design process of a UX design can largely impact the way in which users perceive the interface, making it vital to assess UX designs from multiple perspectives. For this reason, the STS theories of Actor-Network Theory and Ethics of Care were used in analyzing the issue to identify the values and opinions of all the involved actors. To conduct the research, Case Study and Policy Analysis methods were used to analyze the use of manipulative design tactics, the

regulation or lack of it, and the subsequent impact that manipulative design leaves on users. The goal of this research was to identify existing manipulative designs and discuss methods in which users can be given more autonomy in how they interact with interfaces as well identify design processes and practices that would result in more effective and positive user experiences while maintaining business goals and objectives.

Both of these projects, together, allow for a more in depth understanding of effective UX design. The ethical implications of manipulative design that were discussed in the STS research were applied and kept in mind when designing the interface for the technical project. Understanding the different ways manipulative design techniques can be used and negatively impact the users helped create a more positive and effective user experience for the interface. The combination of the two projects offers an extensive examination of a positive user experience design process and identifies areas for improvement.