Thesis Project Portfolio

Developing an Internal Notification Feature

(Technical Report)

The evolution of push notifications: from reminders to communication to marketing

(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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Sociotechnical Synthesis

With the increased usage of technology as the main form of communication for almost everything, notifications are becoming increasingly relevant in allowing people to be aware of events that are happening, being used as reminders for tasks that need to be done or receiving other forms of information. The technical report is based on an implementation of an internal notification system that helps with the improvement of the detection and response times for failing services. The paper gives an explanation on the entire design and implementation process for the internal notification system including the database and backend implementation, frontend implementation, and finally the integration and testing of the internal notification system. Also, the expected outcomes and some plans for future improvements on the internal notification system is also discussed.

The STS thesis is based on a similar topic of the societal influences of push notifications. The paper performs an introduction and discussion about the evolution of notifications from reminders to communication to marketing and the factors that affect the evolution. The paper then goes over case studies that collect information on how users interact and react to the push notifications they receive. Through the analysis of case studies it reveals the increased quantity of notifications have impacted users to become more desensitized to the notifications. The paper ends with the discussion methods that have been implemented to help reduce user desensitization to notifications.

Through the two papers, one will be able to learn the significance of having only the amount of notifications necessary for the user to get the desired information. A portion of the technical process focused on making sure users wouldn't receive duplicate notifications and the STS thesis explains the downside of sending users a large quantity of notifications.