Smartphones and Orthodox Judaism

Introduction

Engineering and software development provide technical solutions to business and societal problems; however, many solutions lack cultural inclusivity. Many of these technologies solve problems in one society, but because of cultural differences, they may be harmful to another. Religion can be included in this category. Since religion is often a part of a culture, technologies should also adapt to religious requirements and solve their cultural problems as well. This case study gives a brief background of orthodox Judaism and its stance on smartphones. The text also touches on a couple of solutions Jews have developed to stay current in today's fast-paced world.

Background

Orthodox Judaism is a traditional sect of Judaism. Technological advances have influenced their traditional laws and practices. Jewish Rabbis and leaders have developed new or modified religious regulations in response to these technological advances. For example, Orthodox Jews are not allowed to turn on or off any electronic device on the Sabbath[1] as it is considered work and distracting from worship. Because of this restriction, many families use home automation to turn on their devices and lights (Woodruff et al., 2007). Another example is the smartphone. Because of the smartphone's easy access to the internet and portability, cellphones seem to conflict with some Orthodox practices. Therefore, Jewish Rabbi have had numerous debates on whether or not cellphones should be used by the Orthodox (Rosenberg et

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[1] See the Ten Commandments (Ex. 20: 1-17) in *Holy Bible*. New International Version. Biblica, Inc. https://www.biblegateway.com/passage/?search=Exodus%2020&version=NIV

al., 2019). Today, however, it is hard to get by without a smartphone. For this reason, engineers have been rethinking the smartphone to adhere to the restrictions Jewish leaders have placed on them. This phenomenon is a perfect example of a group of people "culturing" a technology by reshaping it to align with their ideals and beliefs (Campbell, 2007).

Engineering requirements

Orthodox Jews vary in the specific restrictions to which they adhere, but, in general, they require their cellphones to be free of distractions and temptations. Consequently, almost all "kosher" cellphones are free of social media, internet browsers, and entertainment applications. Orthodox Jews wish to use these devices solely for communication, productivity, and religious purposes.

Example implementations or embodiments

Several categories of kosher phones have been engineered to meet this requirement. The approaches generally fall into two categories: filtering out undesirable content ("blacklist") and allowing in only desirable content ("whitelist"). These approaches have been applied to the cellphone and to its more recent cousin, the smartphone.

On a cellphone, the primary risk of temptation is through direct person-to-person communication (texting, phone calls). Some kosher cellphones come completely without texting as it can be too tempting, *e.g.,* permitting unmonitored communication that might lead to unapproved romance. Other cellphones simply block sexual content numbers and dating services (Rosenberg et al., 2019). However, sexual content numbers and dating services are relatively easy to identify via a blacklist as phone numbers evolve more slowly and have a relatively centralized directory service.

On a smartphone, the concerns of texting and phone calls still occur and can be handled in the same ways. However, in this context there are additional forms of content to be

considered, driven by the smartphone's ability to access the Internet. Some tech companies use web filtering to fulfill the special Orthodox Jewish requirements. These organizations simply record the internet traffic through VPNs or NVMs and block certain web servers one can access. Filtering however, can be easily bypassed by the user, and therefore is not the best method of removing tempting content from smartphones.

SafeTelecom distinguishes themselves from other similar companies by going beyond web filtering. The following interview was conducted on March 3rd, 2021, with SafeTelecom's senior developer. We have somewhat condensed and paraphrased the material for clarity.

Q: Can you tell us about the history behind your KosherOS product?

A: I attended rabbinical seminary in New York who are pretty religious Orthodox Jews that believe in restricting internet access. The school that I attended wanted to make a smartphone product available for students to communicate with their loved ones, book flights, and manage their banking. I knew android was open source and we could modify it for our specific needs, so I sought out to put in place the stuff we were looking to have, and make sure we don't have what we shouldn't have.

Q: Can you tell us about the design and implementation of KosherOS?

A: Most products that are used currently are filters. I wanted to strip everything out of the phone, so our phones don't use any filtering. The phone is basically a pure android implementation and there is no browser at all. My "whitelist" of what you can access is only apps, but there is no Google play store as we have developed our own special app stores. Organizations and schools choose which apps they want their people to have available.

Q: How do you go about determining which apps are kosher and go in your app store?

A: I am not a rabbi and I do not want to make the religious decisions, so I consult with rabbis if I have a question about an app. The checklist is there is no browser. There is in-app browsing in a lot of apps which we engineer out in the OS level. A lot of times the apps use browsing for the Terms of Service because they want the most updated version and don't want to embed it into the app, so they send you to a website. Sometimes the way the app is set up, you can then just click around and end up on Google.com and then you're fully on the Internet! There are no games in these products as part of the aim of the phone is to help with productivity, not to create distraction; though, there is talk about making a kid-friendly product. Some apps are offered on a school-by-school basis like sports apps. So, to some level I give customers some leeway, but some apps are just impossible. Some people come in and request a product like Spotify, for example, which has a lot of Jewish music, but some of the album art and music videos are inappropriate so I reject that request.

[Note: on the KosherOS website there are seven app stores to choose from. Three options are general ("Basic", "Plus", and "Premium") app stores, and four options are specifically designed for Jewish schools and seminaries.]

Q: Are there any hardware requirements or platform integration restrictions to your OS?
A: In theory any android, open-source product could run KosherOS. Motorola is a bit more open with their proprietary code and licensing, as well as coming factory unlocked and allowing bootloader unlocking. The first step is to make sure you can unlock the bootloader to be able to go in and customize the OS. With Motorola I found a way, there

is a special code that is generated off of the phone and then they provide me a code to unlock the bootloader.

Q: Is KosherOS open-source?

A: The parts that have to be open sourced are, for example our kernel modifications, but I don't publish the parts that do not. It depends on the license that you are using. We have to release the Kernel source, but we are under a license that doesn't require full publishing.

Q: Do you have a special Sabbath mode?

A: In the circles that we work (myself also) with we are fully Sabbath observant, so a phone doesn't fit in. There is no need of a Sabbath mode, we shut off all our devices from sundown on Friday until sundown on Saturday.

Discussion Questions

1. Consider the "blacklist" and "whitelist" approaches to filtering content on smartphones. Which strategy do you think is more effective? Which do you think is more user-friendly? Do you think these two goals are compatible?

2. Suppose you are part of an Orthodox Jewish community that wants a bit more flexibility. How might you extend the technologies behind the "Kosher Phone" to be more *content*- and *context*-sensitive?

3. The purpose of a Kosher Smartphone is to minimize the distracting potential of smartphone technology. Would you give up control of your smartphone to eliminate temptations and distractions? Would you be willing to trust someone else to decide what is "tempting" and "distracting" for you?

4. Do you have any religious or lifestyle requirements that could be met with software or other kinds of engineering? How would you "culture" or reshape a technology to fit with your ideals and beliefs?

References

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