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# Enhancing VoIP Security and Efficiency using VPN

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1. This paper, *Enhancing VoIP Security and Efficiency using VPN*, focuses on securing VoIP information. In doing so, the authors have created a mobile app for Android that utilizes OpenVPN, Linphone, and Asterisk in order to use the VoIP protocol with the anonymity features of a VPN. The tests shown display 0 negative impacts of using the increased security measures of a VPN despite the expected outcome of increased dropped packets.

Similar experiments have not been as successful as this one. For example, a SIP proxy server to secure VoIP has been tested but experienced dramatic drops in the server’s performance. Also, a SRTP approach has been tested and saw an increased Jitter in the messages as well as the whole packet not being able to be encrypted. This new approach using a VPN allows for full encryption of the packets with the hypothesized impact on the amount of Jitter and dropped packets.

2. This paper very effectively describes the intentions of the project as well as the process of performing the tests. Additionally, the test results have a significant amount of analysis included with them which describes the use cases and future implications of this new design style.

A weakness of the paper is that it does not necessarily describe how this new version of using VPN’s over VoIP is different from previous trials, but rather they only show the improvements. Another weakness is that the paper doesn’t really describe how a VPN produces more security for VoIP, however it can be implied through other uses of VPN’s.

3. One major improvement that I would recommend is not necessarily about the paper, but the application. Despite only being for Android, it relies on a standalone phone service rather than the built-in phone application on most devices.

Another improvement would be to include general observations or baselines for VoIP performance so that the reader can compare the data collection themselves. Giving more information in this case would provide a drastically better argument for this new application.

Lastly, describing how this new technique of using VPN’s for VoIP differs from anything used previously would be greatly beneficial. As it seems, they just layered another technology on top of a VPN for Android and ran some tests with good results, but not much reasoning was given as to why the results are drastically better.

4. Is using a VPN for VoIP security something that should be standardized with enough research behind it? Why or why not?

Long term, it would be good to see more security measures put into all aspects of mobile devices. VoIP is something that many people use daily and protecting users is always a good goal to have. With the drastic amount of personal information available on mobile devices, these sorts of threats are growing exponentially. With enough solidified background research and proof of effectiveness, VPN’s for VoIP will hopefully be used by everyone in an effort to take care of their personal data.