

Android Permissions: User Attention, Comprehension, and Behavior paper summary

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1 Summary

This paper examines whether the android permission system is effective (in informing users about the capabilities their applications have) or not. Their study is based on two usability studies. One of which is an internet survey of 308 android users and second is the laboratory study in which they interviewed (and noticed their behavior) 25 android users. From both of those survey's they found that, 17% of the users paid attention to the permissions during installation. Participants demonstrated very low rates of comprehension. Only 3% of internet survey participants could respond correctly to the 3 comprehension questions asked. Only 20% of the laboratory participants showed permission related awareness ("they provided details about times that permissions caused them to cancel installation" [1]). Based on their study authors claims that most of the users ignore android permission warnings. They suggested, that the categories should be re-organized and re-named to shape the user expectations more appropriately, permission warnings should mainly focus on risks, rather than resources, more permissions should be classified as non-dangerous, permission warnings should be paired down ("to a set that is small enough for users to look up and remember with accuracy" [1]). Also, they suggested that, the users should not be given grant to deny individual permissions, as this gives users a false gained control over the resources (which the app's using).

2 Contribution

Paper evaluates whether android permissions are effective in informing users about the potential permission risks. The authors studied whether the users ignore the permissions warnings, and find out that most of the users do ignore the permissions. They also given few suggestions to remedy.

3 Strengths

I like the thing that the researchers considered a lot of factors to make this survey effective. for e.g. not revealing them the fact that the researchers are security specialist, considering 'Westin index' and many more.

4 Limitations

Although their internet study is based on 308 users and laboratory study is based on 25 users. I believe that these numbers are not enough. Also, for the laboratory study, all the invited users were from San Francisco Bay area. I believe people from different locations should have been invited for this important study.

5 Future Work

The authors only considered android play store for this study. This type of survey can be done on other markets (such as amazon). Also, these surveys can be done by inviting more number of people (in thousands, not hundreds).

References

- [1] Adrienne Porter Felt, Elizabeth Hay, Serge Egelman, Ariel Haney, Erika Chin, David Wagner *Android Permissions: User Attention, Comprehension, and Behavior*, SOUPS, (2012)