

Poster : Consent conditions compliant with GDPR from the viewpoint of data subject

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Abstract— As the GDPR is applied to all companies that provide services to EU citizens, it is becoming increasingly important to process data compliant with GDPR. This preliminary work analyzes the consent condition, which is one of the legitimate grounds for data processing. From the viewpoint of data subject, the consent condition which is ambiguous in GDPR was analyzed and experiment was conducted through 44 participants. The presence of the consent button and whether the privacy policy was directly visible were found to be significant by the Mann Whitney u test.

Keywords—Privacy Policy, General Data Protection Regulation, GDPR, Consent, Usable Privacy

I. INTRODUCTION

The EU General Data Protection Regulation (GDPR) [1] was introduced in May 2018, and many companies are very interested in GDPR. Because the general regulation applies within its own territory, the GDPR actually affects the entire world, as it applies to all companies that serve European citizens. In addition, it is important for companies to comply with GDPR, since it is possible to impose penalties up to 2% of global sales for violations of lower level and 4% of global sales for breach of upper level.

In the GDPR, the controller (i.e. the organization that determines the purpose and means of processing personal information) refers to the consent as the primary legitimate basis for processing personal information. Moreover, there is an article on the consent itself in the GDPR, and there is a guideline on the consent. However, there are ambiguous expressions such as 'unambiguous indication' and 'clear affirmative action' among many things that consent should be kept to be used as a legitimate basis. Therefore, this preliminary work suggests a consent condition that could be problematic due to the ambiguous expression of the consent of the GDPR. And through the user study, we analyze which consent condition is close to GDPR.

II. SUGGESTED CONSENT CONDITIONS

There are various expressions about consent in GDPR, but in the end, the data subject understands the contents of the privacy policy and consents to the processing of the personal information at will. However, data subjects generally do not read or understand privacy policies [2]. In the GDPR, there are many consent conditions, but in this study we focus on the data subject's behavior to read the privacy policy and present two consent conditions as follows.

A. Presence of consent button

Some services receive a consent to the privacy policy through the button during sign up. However, as shown in Fig. 1, some services receive a consent to the privacy policy



Fig. 1. Example of presence of consent button

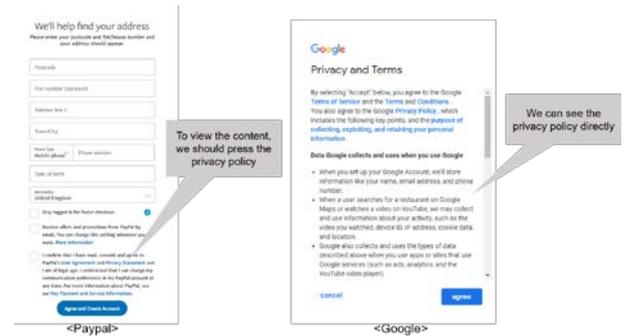


Fig. 2. Example of directly/indirectly visible privacy policy

through the sign up button. In Article 7 of the GDPR, the request for consent is clearly distinguishable from other matters. In other words, if we receive consent as an act of pressing the sign up button, it can be interpreted that consent to the privacy policy and service use are not clearly distinguishable. Fig. 1 shows the difference graphically.

B. Whether privacy policy is directly visible

Since the guideline of GDPR states that sufficient information should be provided to the data subject, visible privacy policy is effective. Although we can see the privacy policy through links, but directly visible privacy policy is different from taking one more step to view the privacy policy. Fig. 2 shows the difference graphically.

III. METHODOLOGY

It is possible to confirm that the data subject has read the privacy policy through the consent time in the prior study [3]. Therefore, we divide the participants into two groups, and the first group differentiates the presence of the consent button to use the two services and measures the time taken for the consent. The second group measures the amount of time it

Fig. 3. Consent forms for group 1 (Directly shown privacy policy)

Fig. 4. Consent forms for group 2 (Consent button)

takes for the two services to use and consent, by differentiating whether the privacy policy is directly visible or not.

At this time, in order not to cause a privacy salience to the participants, this experiment is to investigate the experience of using the service, and to notify the user that the service should be used to use it. Participants of the first group receive privacy policies of Fig. 3 sequentially. Participants of the second group receive privacy policies of Fig. 4 sequentially. For the second group, we check to see if they click on the privacy policy link as well as the time it takes for the consent. And Mann-Whitney U test is used for statistical analysis. This is because the sample size of the group is less than 30 and does not satisfy the normality.

IV. RESULT

We recruited 44 participants. Participants were informed to use two SNS services after signing up for the service, and the survey is about the experience of using the services. In other words, the participants knew that they used two services through two sign-ups before the experiment.

44 participants were divided into two groups to be distributed evenly considering age and gender. Participants were aged between 20 and 36 years of age. Group 1 and Group 2 each have 22 participants. The age mean of Group 1 is 26 years old and the standard deviation is 6.2. The mean age of Group 2 is 24 years old and the standard deviation is 4.9. The proportion of men in Group 1 is 54.5% and the proportion of women is 45.5%. The proportion of men in Group 2 is 59% and the proportion of women is 41%.

Group 1 used services that directly show privacy policy during sign up and services that do not directly show privacy

policy during sign up. In this case, the presence of the consent button made the privacy policy feel more important. Group 2 used the service with the consent button during the sign up and the service without the consent button during the sign up. In this case, the privacy policy was made directly visible so that the consent button felt more important.

Participants were aged between 20 and 36 years of age. Group 1 and Group 2 each have 22 participants. The age mean of Group 1 is 26 years old and the standard deviation is 6.2. The mean age of Group 2 is 24 years old and the standard deviation is 4.9. The proportion of men in Group 1 is 54.5% and the proportion of women is 45.5%. The proportion of men in Group 2 is 59% and the proportion of women is 41%.

The mean time taken for the participants in Group 1 to agree on a consent form without a consent button is 89 seconds, and the standard deviation is 66.9. Nine of the 22 participants clicked on the privacy policy link. And the mean time taken for the participants to consent in the consent form with the consent button is 102 seconds, and the standard deviation is 48.1. Mann whitney u test was significant ($Z = -2.08, p < 0.05$).

The average time taken for the participants in Group 2 to agree on a consent form in which the privacy policy is not directly visible is 75 seconds and the standard deviation is 87.5. Five of the 22 participants clicked on the privacy policy link. And the average time taken for the participants to agree on the consent form in which the privacy policy is shown directly is 119 seconds and the standard deviation is 49.5. Seven of the 22 participants clicked on the privacy policy link. Mann whitney u test showed significant results ($Z = -2.56, p < 0.01$).

V. CONCLUSION AND FUTURE WORK

The consent clauses of the GDPR are ambiguous, and we found parts of the consent conditions that is actually used on the website. We also analyzed the presence of consent button and whether privacy policy is directly visible from the data subject's point of view through Mann Whitney u test. As a result, both things show significant results, so many companies may need to improve their consent conditions. However, this preliminary work is not sufficient because there is a limit to experiment with a small number of participants. Thus, as a future work, we can increase participant and further consent conditions to provide better improvement to companies.

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