

INEFFECTIVENESS OF DOMAIN HIGHLIGHTING AS A TOOL TO HELP USERS IDENTIFY PHISHING WEBPAGE

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Domain highlighting has been implemented by popular browsers with the aim of helping users identify which sites they are visiting. But, its effectiveness in helping users identify fraudulent webpages has not been stringently tested. Thus, we conducted an online study to test the effectiveness of domain highlighting. 320 participants were recruited to evaluate the legitimacy of 6 webpages (half authentic and half fraudulent) in two study phases. In the first phase participants were instructed to determine the legitimacy based on any information on the webpage, whereas in the second phase they were instructed to focus specifically on the address bar. Webpages with domain highlighting were presented in the first block for half of the participants and in the second block for the remaining participants. Results showed that the participants could differentiate the legitimate and fraudulent webpages to a significant extent. When participants were directed to focus on the address bar, correct decisions were increased for fraudulent webpages (unsafe) but did not change significantly for the authentic webpages (safe). The percentage of correct judgments for fraudulent webpages showed no significant difference between domain highlighting and non-highlighting conditions, even when participants were directed to the address bar. Although the results showed some benefit to detecting fraudulent webpages from directing the user's attention to the address bar, the domain highlighting method itself did not provide effective protection against phishing attacks, suggesting that other measures need to be taken for successful detection of deception.