Summary of the Paper

Link for the paper: - https://ieeexplore.ieee.org/document/6805386

Topic - A Browser Extension for Including Relevant Web Links in Issue Tracking System Discussion Forum

What is the paper about?

* The paper is about a study conducted on the importance and usefulness of web references in comments posted in issue tracking systems like Google Issue Tracker and Bugzilla.

What have they done?

* The study surveyed Google Chromium Developers and conducted a characterization study on an experimental dataset from the Google Chromium Issue Tracking system. The results showed the need for a developer productivity tool to facilitate the organization and inclusion of web links in issue-tracking system comments. Based on this, the authors developed a Google Chromium browser extension called Samekana, which allows annotating, saving, and posting web references as a bibliography in issue tracking system comments. The study found that there is a correlation between the number and types of links with various bug report types and the presence of links and bug resolution time.

What is the result and what they have found?

* The authors of this study analyzed the Google Chromium Browser issue tracking system's data to understand the links (URLs) present in the issue reports and comments. They used Google Chrome's issue tracker API to download 4 years and 7 months’ worth of issue reports and comments. After cleaning the data to remove irrelevant links, they found 113176 links in issue descriptions and 1005928 links in issue comments. The authors then extracted the domain names of all the URLs and analyzed the most frequent domains and domain types. They found 12248 distinct domains in issue descriptions and 9217 distinct domains in comments. The authors also categorized the top 100 domains into 13 predefined categories and found that links to search engines, software repositories, and code development-related sites were the most popular domain types in both the issue descriptions and comments.

Overall Description and what they are working on: -   
  
The authors developed a Chrome Browser Extension called Samekana that is available for free through the Google Chromium Webstore. The browser extension works on Google's Issue Tracker for Chromium and Android projects. Samekana allows users to save and annotate web references relevant to an issue report, organize and search these references using tags and labels, and include these references in Issue Tracker comment posts, including references from browsing history. The authors performed a survey of software maintenance professionals from four open-source projects and an empirical analysis on a dataset belonging to the Google Chromium browser. A limitation of the work is that the results could be biased to the characteristics of the Google Chromium browser as only one project was analyzed, and the number of survey respondents was limited to 14.