CSE 534 Summary 2

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The research paper written by the professor was based on the performance of SPDY. It introduced that when comparing with HTTP, SPDY achieves faster web, however, its performance was worse than HTTP, finding by several white papers. There are three factors would affect the performance of SPDY, which includes network parameters, TCP settings, and web page characteristics, page load time and dependencies between network activities and browser computation. In order to fully evaluate this issue, the author build a tool named Epload to control the variability by recording and replaying the process of a page load at fine granularity, and use a controlled network environment. Also, the author’s group isolates the different factors that affect PLT with reproducible experiments that progress from simple but unrealistic transfers to full page loads.

In terms of the approach used by the group, it separates the various factors that affect SPDY and study them in isolation. This method allows group to control and identify the extent to which these factors affect SPDY. For the Epload part, it introduces that Epload was used to emulate page loads, and key idea is to decouple network operations and computation in page loads. By using this design, it allows Epload to simplify computation while scheduling network requests at the appropriate points during the page load. This design records the process of a page load by capturing the dependency graph using the previous work,Wprof.

For the conclusion, the author’s group shows that SPDY can help or hurt the load times of real Web pages by browsers when compare with using HTTP. The author starts with a simple page loads and slowly add important features of the real page load process.

To analyze the paper, I would say that I gained knowledge more about SPDY. By reading this research paper, I have the chance to get to know more about SPDY. Not only know this new concept, but also I learned an experimental way to analyze the unknown part. Firstly, you need to know the background, then, design an approach by yourself, and put this approach into practice, finally get a result and analyze the result you get. However, there still something I think they need to improve in the paper. For example, for figure 12, it shows SPDY performance using emulated page loads, and the part(b)shows a convergence trend for the algorithm. However, in the figure b, the line does not converge very tightly, we can say that it still has the possibility that it may diverge or not converge to some point as the figure goes further. This kind of problem also exists in other parts of the paper. I think what I mentioned above is the parts that the author can review and edit.