**Review 1:**

*S. Sundaresan et al., “Broadband Internet Performance: A View From the Gateway,” in*

*Proceedings of ACM SIGCOMM, 2011.*

This paper is good, solid and with good examples and use of data acquired. It provides good understanding of how end-host networks should be measured and gives sound analysis of the network access link’s performance. Good focus on the different factors that affect this performance and measurements.

The paper presents a study of network access link performance that is measured from home gateway devices. It shows that there are many factors to be considered when benchmarking home internet performance and therefore it requires more extensive and continual measurements to be done in order to achieve accurate results. The three main points of this paper are: measurements are not universal and are dependent on traffic management and policies of the ISPs; there are different performance dimensions (throughput, latency) to be considered when choosing an ISP; user’s home network infrastructure affects performance significantly (modems can introduce latency).

This study tackles a problem that is of big importance to ISP’s, Policymakers and users. Its goal is to introduce a new way of benchmarking home internet performance and therefore achieving less biased results than previous methods. It also shows the factors that affect different aspects of the performance. The paper is significant to an extent. The measurements are taken from the home gateways and therefore removing factors that might affect the results (cross traffic and wireless effects). It also considers continual and longitudinal measurements, different hardware configurations (modems, DSL, cable), peak hours, PowerBoost implementations. It also considers the importance of throughput and latency and evaluates them separately for different ISP’s modems. Overall considering all these factors affecting internet performance provide a good way of benchmarking it and thus providing valid and robust results since it also considers a large dataset.

The research presented in this paper is in very good matter. First a large dataset is considered when evaluation was done. Second it shows the advantages of this method of retrieving the data( gateways) comparing it to others. A good introduction and good style of presenting the information obtained. Figures and tables have their appropriate legends and are referenced correctly over the paper. The approach taken for this research is considering many different elements that might affect the Internet’s performance. The measurements are taken over an extensive period of time, a large dataset is used and different access links, ISP’s, modems, hours of the day are taken into account when evaluating was done. Good emphasis is done on the importance and variation of the throughput and latency. This provides a robust and appropriate way of benchmarking.

As a conclusion I would like to say that the paper is well-written and shows a good way of benchmarking internet connections. The lessons learnt are explained well but the importance of the research is not emphasized well enough in the end and more examples of how to use it can be presented.

**Review 2:**

*I. Canadi, P. Barford and J. Sommers, “Revisiting Broadband Performance,” in*

*Proceedings of Internet Measurement Conference, 2012.*

This paper should not be published since it is neither elegantly written, nor useful in any way. It does not present a better approach of measuring broadband performance. It is filled with assumptions, redundancies and descriptions of previous work.

The point of this paper is to use “speednet.com”‘s data to reconfirm prior results and evaluations on broadband performance in the US, to expand them and also to investigate broadband performance on a more global scale. For instance the data consists of speed tests that have been performed in 59 metro areas around the world over the period of 6 months. This is a large scale data and therefore should give performance evaluations globally. Other methods of evaluating broadband are also described in this paper but other than the size of the data nothing else points that this method is better or that useful.

The goal of the paper is to introduce a global broadband performance evaluation. This goal is significant in itself but the way it is achieved and described in the paper is neither definitive nor coherent. There is no concrete evidence that the data is not biased by different factors. The abnormalities are in some cases ignored and in most parts of the paper the results are just compared to other research without proving to be a better solution for evaluation.

The author’s way of presenting his idea is chaotic. There are many unnecessary repetitions and redundancies in the beginning of the paper. The plots and figures are unordered, scattered along the paper and also some of them are not explained why they are significant to the paper. The accuracy of the conclusions is highly doubtful since in most cases that are observed there the author gives assumptions and no definite reason. Because of the nature of the data the scale of the research can be global but also the negative side of that is that there are no certainties that the data has not been collected from users that test their internet connection because they are experiencing problems (as mentioned in the paper). Most of the paper consists of explanation of previous work and stating results of research but no proper deductions are made.

My conclusion is that this paper should not be published because it provides no new concept, it is colloquial and the author is highly verbose in presenting an already known idea and description of data. It also contains many explanations of other people’s work and contains many assumptions.

**Review 3:**

*M. Dhawan et al., “Fathom: A Browser­based Network Measurement Platform,” in*

*Proceedings of Internet Measurement Conference, 2012.*

This paper yields good results with significant contribution to the area. The software they are introducing provides a rich set of APIs for measurements. It is flexible, easy to use and a different and portable approach for tackling the internet diagnostic and benchmarking problems. It has some limitations like it is only for firefox and users with other browsers would not be able to use it.

In the paper a browser extension is introduced. It uses web browsers APIs as a measurement platform. It provides an approach for broadband and page-load measurements that is independent of OS and does not require hardware installations. It has <3.2% runtime overheads for popular websites and has many functionalities for analysis of the network. It can be used by ISPs and users and is easy to use. Its functionality is described in detail and also three case studies are demonstrated to ensure its effectiveness and usefulness. More specifically its network characterization tool, the debugging of web access failures and the enabling of websites to diagnose performance problems that a user might be experiencing.

The significance of this paper in the area of the end-host based measurements of Internet performance is high. It is a portable OS independent method for measurement. It provides an incentive for end-users, researchers and web operators with its troubleshooting capabilities and other functionalities. It also has support for long-running measurements which in the end would provide a more accurate and less biased results. It has good privacy, security and client policies. It is not groundbreaking since other similar technologies exist like it but has some additional features than them (eg. switch between passive or active measurements). The arguments and research provided in the paper are valid and not misleading.

The organization of the document is very strict and clear. Good introduction, research and conclusion. The accuracy and quality of the measurements is good and unbiased, but it is limited to the end user’s view point so it does not take into account modems, home cross-traffic, so some measures might not be very accurate. The presentation is very thorough and informative but still the text and format look elegantly.

I would accept this paper to be published since it provides a new product that has promise to be very useful for end-host measurements. Its implementation can also be achieved globally and is not as expensive as using some special hardware.

**Review 4:**

*Y. Xu et al., “Video Telephony for End­consumers: Measurement Study of Google+,*

*iChat, and Skype,” in Proceedings of Internet Measurement Conference, 2012.*

I would say that this paper may be published since extensive experiments have been done and many conclusions have been drawn. The overall significance of the paper though in my opinion is minor since in it the authors are trying to reverse engineer and understand three existing technologies for video telephony. This might be helpful for people who are trying to develop another method since it contains some conclusions that may or may not be correct as to how these existing technologies work. It has some observations that make sense but nevertheless it is uncertain that the derivations are not just speculations.

In this paper the authors study the video telephony technology’s architecture and existing technologies. More specifically Skype’s VoIP, Google +’s hangouts and Apple’s iChat. Active and passive tests are conducted in detail with many figures and tables showing the derived statistics for how these technologies work. The authors test these technologies in virtual environments with data loss and observe how they behave under different broadband conditions. As a conclusion from these experiments some of their inner workings are unveiled. These deductions however have no proof to be accurate.

The significance of the paper is doubtful since none of conclusions are proven in it. Nevertheless the idea researching the video telephony technologies is good because user’s interest and demand in it has been increasing over the past years. The experiments and statistics however can prove useful for someone that is trying to understand the inner workings of these technologies or for someone that is trying to develop an alternative to them. It can be useful to the extent that they have some experimentation values and good points are made. The validity of the paper is uncertain. A reader that does not know whether or not the assumptions in the paper are true can be misled to believe so. It is partially valid since the experiments are extensive and informative, and some good observations about the video telephony architecture are made.

The methodology that is presented in the paper is good. The techniques are highly experimental and speculative. More individual work and suggestions should have been made using the acquired data for a new approach maybe. More emphasis could have been done on strengths and weaknesses of the researched technologies. The accuracy of the conclusions and test results are uncertain. The way the paper is presented is not bad, there are many graphics representing the extrapolation of the data and its plot but there are some faults within the arrangement of the sections. For instance the introduction section seems too long and overly detailed. It could have been split in 2 or more depending on how the subtopics in there should be arranged.

In conclusion I would not recommend this paper to be published since it may have contributions in the researched area but they are at most minor.

**Review 5:**

*S. Sundaresan et al., “Measuring and Mitigating Web Performance Bottlenecks in*

*Broadband Access Networks,” in Proceedings of Internet Measurement Conference,*

*2013.*

This paper yields very significant results. Not only good observations are made and great conclusions are derived from experiments but a suggestion of improvement is given. It is well-written, informative and novel.

In the paper web-performance bottlenecks in broadband access networks are studied with respect to 9 popular websites. The performance is being assessed with the help of a router-based web measurement tool – Mirage. Web-page loading time is thoroughly inspected. Through experiments the author derives that load time stops improving after 16 Mbits/s throughput and hence attention is given to reducing latency. There are experiments and observations made about a home caching, which is a technique that can be used to mitigate latency bottlenecks. This home caching considers caching and prefetching DNS and TCP within the home network. An observation, that this technique is complementing the optimizations that are already done by the browser and ISP, is presented.

In this paper very significant observations and suggestions are made. The experiments and deductions are highly relevant to the field that this paper is addressed to. It is considering webpage load times from broadband access links and quantifies the extent to which latency becomes a bottleneck on high-throughput access links, which are innovative and highly significant approaches.

In my opinion this is a high-quality paper. It’s arranged very well and the experiments are done with great consideration to how relevant they are to the problem addressed. The structure, plots and figures are all straight forwards and well explained. Different approaches for measuring broadband performance are mentioned and a new one is presented. With good deductions from experiments about throughput and latency the author derives that there is more need for reducing page load time latency than throughput beyond a throughput of 16Mbits/s. The paper is well constructed, accurate. No errors that the author might have made are visible and the style of presenting the goal of the paper is clear.

I think that this paper is worth publishing because it provides good experiments and deductions, presents a novel approach to improving webpage load time, it is well-written and robust.