

# Open Internet Label Study

Transparency Working Group

Open Internet Advisory Committee  
Federal Communications Commission

Released August 20, 2013

[Full Annual Report of the Open Internet Advisory  
Committee available here](#)

# Open Internet Label Study

Transparency Working Group  
Open Internet Advisory Committee  
Federal Communications Commission

**The Transparency working group has proposed a system to label Internet service with information that consumers may find useful when selecting a provider, including speed, price, and other metrics.**

The Transparency Working Group of the Open Internet Advisory Committee (OIAC) was formed to provide advice to the FCC on the transparency of offerings from Internet Service Providers (ISPs). In particular, the Open Internet Order [1] says:

“Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services”

The Transparency Working Group has studied the way that ISPs present performance characteristics and pricing of their service offerings to consumers, coming to the conclusion that presentation consistency would benefit consumers. The Transparency Working Group recommends the adoption of a voluntary open Internet labeling program as a means of helping consumers more easily compare and select Internet service offerings.

## **Motivation for an Internet Service Labeling Program**

Some consumers are not able to easily compare Internet service offerings. Organizations such as the National Hispanic Media Coalition have conducted focus groups that show that some consumers are confused when choosing an ISP. Many articles have been written to highlight that some consumers are confused when choosing a wireless service provider [2][3][4][5].

A simple and consistent label will enable consumers to make apples-to-apples comparisons when considering an Internet service selection or when considering a change.

Once the consumer has made a selection, and at any time afterwards, the label provides the information that could be used by the consumer when accessing a test site to confirm that the service is performing roughly as expected. In addition, third parties can provide consumers with performance parameters that help the consumer in determining whether their existing service fully meets their needs.

While mobile data networks are rapidly evolving, fixed and mobile connections are both a significant part of today's network experience. For this reason, service providers that do not provide access to the entire public Internet should not make use of the label at all.

## **The Proposal – A Label Similar to the Nutrition Label**

The FCC could promote a labeling program for both mobile and fixed services. Such a label program would provide the following information:

## Open Internet Advisory Committee - 2013 Annual Report

- Performance: upload speed and download speed
- Price (monthly fee averaged over three years)
- Usage Restrictions (any points at which the terms of service that apply change)

These numbers are very far from a complete picture of an Internet service offering, yet they seem to be the right level of detail for most consumers. These numbers do not capture important technical factors such as jitter, latency, and impacts of over provisioning. For this reason, the ISP might also provide a much more complete disclosure like the one recommended by BEREC [6]. These details are vital for expert analysis and service offering comparison.

### **Methodology**

To participate in the label program, ISPs self-report three pieces of data: upload speed, download speed, and price. In addition, if there are any usage restrictions, including data caps, ISPs need to report them as well.

The label data is made available for each active service offering. If a service offering is a legacy service and no longer available to new customers, the ISP can determine whether they want to report current data for the legacy service; however, ISPs are encouraged to report data for both active and legacy services.

### ***Upload and Download Speed***

The upload and download speed numbers are meant to reflect the performance delivered by the ISP to a consumer's broadband modem. Yet, it is recognized that upload and download speeds vary greatly from consumer to consumer since they depend on several factors such as geographic location, home network configuration, and time of day. These complexities are well known, and they have been discussed in the context of the FCC's Measuring Broadband America (MBA) program, which compares an ISP's advertised speed with a measured speed. It is important that the terminology and methodology used for the label program be consistent with the MBA program, allowing the two programs to reinforce and supplement each other.

It is envisioned that the label data would include the upload and download speed as determined by lab testing. ISPs measure the maximum ("up to") speeds achievable, within statistical bounds, over a segment of the access network closest to the user (e.g., DSL-capable copper loop segment, or shared DOCSIS channel).

In the near term it is not feasible to base the reported data on large-scale customer measurements. Currently, this type of data reporting is not usually available at scale due to a lack of measurement standards in deployed equipment. In order to establish the labeling program, the FCC will need to work with industry to define a measurement process for the data to be reported by ISPs. Since the upload and download speed numbers are meant to reflect the speeds that consumers can expect to receive, ISPs should take into account any short-term traffic management loads that impact consumer experience as well as long-term capacity management processes when reporting the data for the label.

## Open Internet Advisory Committee - 2013 Annual Report

Please note that outside of the label, the Open Internet Order obligates ISPs to provide relevant information about their service (e.g., upload speed, download speed, usage thresholds, latency, and price). ISPs provide this information today in a variety of ways, including their web sites. Currently, the data used for the upload and download speed inputs for the label is often the same data that the ISPs disclose on their corporate websites. Publication of label data is discussed further below.

### ***Price***

Price is an important aspect of a consumer decision. Initial price for Internet service often reflects a discount or promotion as a purchase incentive. As a result, to reflect the long-term cost to the consumer, an average monthly price reflected for 36 months is proposed. In addition, the prices should reflect all taxes and fees. Since the label shows the monthly average, this will take into account any sign-up discounts, promotions or incentives for new customers, and it reflects any rate adjustments following the expiration of any such incentives.

The price is based on a geographic location, such as the zip code or census block for each service offering. Since pricing often varies by location, it is not usually possible to provide one price for the entire country.

Bundling is a popular practice for ISPs. Bundling refers to giving a price discount to Service A if a consumer purchases both Service A and Service B from the ISP. While regional discounts are reflected in the price, the label only reflects the price for the Internet service offering. Consumers may receive a lower price for the Internet service if they choose additional services from the same ISP. The ISP can make this obvious by providing two labels, one for Service A by itself and another one for Service A and Service B together. When the consumer purchases the Internet service on an ISP's website, the label could reflect the actual price, including any bundle discounts of all of the items in the consumer's shopping basket.

If an ISP has many different service offerings, with and without bundling, in many different geographic locations, then the publication of all of these labels might become unwieldy. However, presentation on a website can be straightforward if the consumer provide their location and then the applicable labels are displayed.

At least one ISP has reservations about the inclusion of price data in the label. This ISP is concerned about the potential to increase customer confusion rather than reducing it.

### ***Publishing the Label Data***

Three alternatives were considered for ISPs to make the label data available:

- 1) The ISP posts the label data on its own web site
- 2) The ISP provides an API to obtain them
- 3) The ISP periodically files them with a third party

Choices (1) and (2) offer the opportunity to be dynamic. That is, when the ISP adds a new offering or makes a change to a current offering, the information is available to the consumer almost instantly. Further, these choices can be driven by a back-end provider database, which

## Open Internet Advisory Committee - 2013 Annual Report

allows the potential customer to provide a location (e.g., a street address) and learn the label data associated with each of the service offerings that are available.

Choice (2) is the easiest for third parties to facilitate comparative shopping using very current information.

Choice (1) is easiest for small ISPs. Choice (3) may also be acceptable for small ISPs, but a periodic filing process could be more cumbersome for consumers and analysts to obtain timely information.

The Transparency Working Group recommends that the FCC pursue choice (1).

### ***Other***

In addition to self-reporting upload speed, download speed, price, and if applicable, usage restrictions for each service offering, ISPs can provide links to the appropriate page on their company website for each offering so that customers can find additional information.

### **Complexities**

There are a number of complexities that must be taken into account when evaluating the label program. Complexities encompass service offerings, customers, and companies. Consideration of these complexities is necessary for a successful label program.

### ***Service Offerings***

Bundling: It is common for ISPs to bundle services. Often bundles provide a price benefit for customers, where the cost of the bundle is less than each service individually. The price discount in a bundle may not be broken out by service. As a result, this adds a layer of complexity when participating in the label program since the price benefit of the bundle is not easily reflected in the price data.

Promotions: Throughout the year, ISPs may choose to run promotions for new and existing customers. These promotions are often limited to a certain time period and may include restrictions such as customers committing to a certain length of service contract. The promotion is reflected in the average, but the initial lower price followed by a subsequent higher price is not reflected on the label itself.

### ***Customers***

Location: Actual download speed and upload speed will vary based on consumer location. The ISP needs reasonably accurate data for each location where the service is offered. Of course, there will be variability within the region. Measuring each zip code, for example, is not practical. Yet, the ISP needs to provide label data that will be close to the actual performance delivered to the consumer's broadband modem in that geographic area. Reasonable estimates can come from laboratory testing.

Variability: Internet usage is not constant throughout the day or week. Similar to highways or air travel, there are peak usage periods during specific times of the day or on specific days of the week. For example, Internet usage is often high during special events like the Super Bowl.

Also, Internet usage is higher between 3pm and 9pm EST than at 3am EST. As such, it is difficult to capture one download speed and upload speed to display to consumers given the variability throughout the week.

Thresholds: The label reports download speed, upload speed, price, and if appropriate usage restrictions. There is a risk that customers will look for service offerings with the highest speed numbers, perhaps greatly exceeding their needs. There is a threshold where the customer will not see a speed difference between two offerings. So, even though an ISP may offer the fastest speeds, the difference between that fast speed and a lower speed may be undetectable for the average consumer. The lack of education in the market on how much speed is sufficient may confuse some consumers.

Other Contributing Factors: Many factors contribute to end-to-end broadband performance that are beyond the control of the ISP, including the specific user application, server capacity, aged equipment, and home network configuration. If a consumer does not get the advertised performance due to these factors, this may lead to confusion and increased customer care costs for the ISP.

### ***Companies***

Beyond Speed, Price, and Usage Restrictions: The label takes into account upload speed, download speed, price, and if appropriate usage restrictions. While each of these elements of a service offering is important for consumers, these elements are not a complete picture. Key factors that also impact consumers but are omitted from the label include, but are not limited to, quality of customer service, ease of use, setup time, jitter, and latency. By not including all the factors in the label, there is a risk that ISPs will start to de-emphasize these essential factors. Creating a market where ISPs are evaluated only by the numbers included in the label may not be a market improvement.

### **Potential Benefits**

The proposed label has the potential to:

Raise Awareness: A well-branded label would raise an average consumers' awareness about the performance and cost of the Internet services that they purchase. The basic information provided in the label would help consumers perform cost-benefits analyses and make good choices based on their needs and budgets.

Reduce Consumer Confusion: The standardization provided by the label would make it easier for consumers to compare services. The simplicity of the label would help reach even the least tech-savvy consumers. In addition, a label with numbers is much easier for non-English speakers to understand than a lengthy explanation of services in point of sale contracts, bills, or advertising materials.

Promote Competition: Internet service providers, in vying to put forward the most favorable label, would be compelled to provide the fastest and most affordable service to an open Internet. Attaching speed, price, and if needed, usage restrictions in a simple and consistent label format that is easily comparable across ISPs will enhance competition.

## Open Internet Advisory Committee - 2013 Annual Report

Incentivize Open Internet Practices: The label will likely become a symbol that the provider, regardless of whether they provide fixed or mobile services, offers access to the entire open Internet. In fact, the lack of a label could be an indication that the provider is not providing access to the entire open Internet.

Marketing Tool: The label may make it clear how the selection of a service bundle impacts the price of the open Internet service.

Improve Consumer Loyalty: A label may improve consumer experience by managing expectations and building trust.

Global Applicability: If the FCC encourages the adoption a label, it could lead to an international standard for rating open Internet services. A label with numbers that are easy for non-English speakers to understand will be more palatable for global adoption.

### **Potential Concerns**

The proposed label could:

Mislead Consumers: A label does not cover all aspects of a service that a consumer might consider in selecting a service. The label does not capture the whole picture, and it might omit an attribute that is important to a particular consumer.

Government Cost: The FCC program will require a design team for the label and the development of guidance on its use. A team will be needed to manage the program over time.

Slow Adoption: The benefits will only be achieved once all ISPs embrace the label program. In addition, promotion is needed for all consumers to be aware of the label and its use.

### **Long-term Future**

The Internet Engineering Task Force (IETF) has developed a set of standard metrics that can be applied to the quality, performance, and reliability of Internet data delivery services. Network operators, end users, or independent testing groups can use these unbiased quantitative of performance measurements.

The Broadband Forum has an initiative underway to bring advertised “up to” speeds to be more in line with real-life speed data.

Specific metrics and procedures for accurately measuring and documenting these metrics are under development. Once these metrics are in widespread use, the FCC should consider migrating from service provider estimates of their offerings to actual measurements.

### **Conclusion**

The Transparency Working Group recommends that the FCC work with the industry to develop a voluntary labeling program, in which ISPs would disclose in a simple and consistent manner, relevant information about their broadband Internet access services.

## Open Internet Advisory Committee - 2013 Annual Report

The next steps in establishing the labeling program:

- Establish technical definitions for upload and download speed metrics that are consistent with the definitions used by the FCC's Measuring Broadband America (MBA) program. It is important that the terminology and methodology used by the labeling program be consistent with the MBA program so that the two programs reinforce and supplement each other. If necessary, the FCC should convene a group of subject matter experts to define the upload speed and download speed performance metrics.
- Select a measurement program that will be used in the near term while comprehensive measurement standards are developed and deployed.
- Confirm that publication of the labels on ISP websites is viable.
- Confirm that price should be a part of the label program.
- Get input from the ISP industry.
- Get input from the public and interested organizations, such as the Electronic Freedom Foundation, the Center for Democracy and Technology, and the National Hispanic Media Coalition.
- Design a proposed label as well as HTML assets for use on the ISP websites and marketing documents.
- Implement a pilot with a small number of ISPs to refine the label design, the label presentation, and the methodology. During the pilot, get feedback from consumers as well.

The Transparency Working Group is confident that the Label program will make it easier and less confusing for American consumers when choosing an Internet Service Provider.

### References

- [1] [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-10-201A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-201A1.pdf)
- [2] <http://www.billshrink.com/blog/press-releases/americans-overpay-336-a-year-on-wireless/>
- [3] <http://readwrite.com/2013/03/27/smartphone-data-plan-comparison-chart>
- [4] [http://news.cnet.com/8301-30686\\_3-20088415-266/ask-maggie-help-these-data-plans-are-too-confusing/](http://news.cnet.com/8301-30686_3-20088415-266/ask-maggie-help-these-data-plans-are-too-confusing/)
- [5] [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-298516A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-298516A1.pdf)
- [6] [http://bereg.europa.eu/doc/bereg/bor/bor11\\_67\\_transparencyguide.pdf](http://bereg.europa.eu/doc/bereg/bor/bor11_67_transparencyguide.pdf)