Minnesota Public Library Annual Report, Wireless Sessions

Question P10 on the annual report ask for "the number of wireless sessions provided by the library's wireless service during the year." But what is meant by "wireless session"?

A wireless session is counted every time someone connects to the library's Wi-Fi network using a personal laptop, tablet, or smart phone. It doesn't matter what time of day it is, whether it's during the library's opening hours, what websites the user is accessing, or the length of time the wireless is used. The session doesn't have to occur within the walls of the library; many libraries have extended their Wi-Fi networks to cover parking lots or other areas surrounding the library's property, and that usage should be included in P10.

Methods for Counting Wireless Sessions

It can be surprisingly tricky to find an accurate count of wireless sessions, and there is no single method that will be feasible in every library. Here are the three main methods to count wireless sessions, from the Colorado State Library's *Strategies for Tracking and Reporting Wireless Usage:*

1. **Web Analytics**

   Does your library require users to authenticate to use the public Wi-Fi? Usually this means submitting a username, password, ID, or the like. Other times it is as simple as presenting users with a "splash" or portal page, and requiring them to agree to "Terms of Service" or "Acceptable Use" policies. Either way, if your library requires users to authenticate, then it is likely that you can log or track that activity using a web analytics solution such as Google Analytics. In order to get the most accurate count, **make sure you only include data from successful logins**.

2. **Network Logs**

   Data from your Wi-Fi hardware's log will be the most accurate source for counting usage. **Make sure to set your hardware to log for a minimum of 12-24 hours**. It is important to plan ahead, as it is likely that your Wi-Fi router or firewall won't be able to log a full year's worth of activity, which means you'll have to use data from a typical day or week.

   If you use this method, count the individual sessions of use of your library's wireless service as captured by your library's router software.

3. **Network Scanning**

   If you don't have access to your Wi-Fi hardware and/or network logs, don't worry, **you can still report usage**! Every device that connects to your Wi-Fi network broadcasts a unique

identifier called a MAC address. Because MAC addresses are a) unique and b) visible to everyone on the network, you can use them to count the number of devices using your Wi-Fi service at any given point in time.

Using network scanning software to count usage will be less accurate because you will be limited to periodically logging into your Wi-Fi router(s) and manually scanning and counting each device.

There are several free or low-cost tools that can help with this task (e.g., SoftPerfect Network Scanner or Fing), and higher-cost tools (such as WhoFi) that have additional reporting capabilities.

Public vs. Staff

The intent of this data element is to measure the *public's* use of Wi-Fi at your library. If your library has set up two Wi-Fi networks – one for public or guest use and one for staff use or for library-owned devices that connect to Wi-Fi, such as non-circulating tablets—report usage of the public network only.

Unique Users vs Sessions

Depending on the counting method you use, you may have the option to count unique users rather than number of sessions. Imagine the following scenario: the same person's smartphone connects to the library's Wi-Fi every morning and again every afternoon for five days. That's one unique user (or device); five daily uses from that device; and ten wireless sessions (twice a day over five days).

Counting unique users is a useful metric for seeing *how many people* are using the Wi-Fi network, and you are encouraged to keep track of this in your own library statistics. However, to stay consistent with the way we are counting other usage metrics on the annual report, please report the *number of wireless sessions* (e.g., for the above scenario, report ten sessions).

Using an Estimate

Depending on your setup, and especially if you use the network scanning method, you will need to collect the data for a limited amount of time and then extrapolate to determine an annual estimate. For example, you may need to count the devices logging into your Wi-Fi router at certain times during a typical week and then multiply the count by 52, or the number of weeks the library was open. When estimating your annual usage, be sure to account for holidays and other closures.

Do not attempt to estimate wireless sessions by simply observing people in the library using their own laptops, cell phones, etc. Instead, if you are not able to use one of the above methods, check the "not known" box for P10m.