Making sense of the differences between audio streaming stats and RAJAR listeners.

As a result of radio services now being available over the internet, audio streaming data has become available providing some additional measure of usage and interaction via this platform.

Many assume that this streaming data is proxy for a measure of listening and from time to time attempts are made to try and compare the two sets of data . RAJAR and online server based stats.

The outcome is invariably two different sets of figures and conclusions. That isn't as surprising as it sounds as these two measures are essentially quite different.

So, why are RAJAR and the figures we get from online measurement different? Which is more accurate? This document is here to help understand what is what.

RAJAR measures people. Computers measure computers.

RAJAR asks over 100,000 people every year about their radio listening habits. From this representative sample, figures for the entire country's listening behavior are estimated.

Online measurement is different. It theoretically measures everyone: it is an absolute number captured, either by using browser based technologies or examining server logs.

RAJAR reports on listening by people aged 15+: but online measurement can't tell how old a listener is. Some broadcasters think that as much as 20% of their online listening is done by people who are under 15.

RAJAR measures individual people: but online measurement can't tell how many people are listening. To online measurement, an internet radio looks the same whether it has one person or ten people listening to it.

RAJAR measures people listening on a variety of devices. Online measurement normally can only tell people apart based on their browser or IP address: so if you listen at work and at home you are most likely to be double-counted.

RAJAR measures real people. Online, some visits to websites are just other computers ('bots', or 'spiders'). Google, Bing and other search engines and systems frequently visit pages and check audio streams. This checking can be recorded as a streaming event even though no one is there!

RAJAR and computers don't always follow the same rules

RAJAR asks respondents to note down when they've listened to a radio station for five minutes or more and filters out people who claim exceptional listening. There's currently no standard minimum, or maximum listening time for online measurement; some broadcasters or online music services use times as low as six seconds to count a listener.

RAJAR's survey only covers people who live in the UK. Normally online measurement covers the whole world. Even if an audio stream is blocked to people outside the UK, the player page may still load, and that visitor may be counted as a listener, depending on the measurement used. Further, it can be difficult to know whether a listener is in the UK or not: the UK offices of some major organizations push all their internet traffic through their headquarters in another country.

To RAJAR, a listener is someone who's actually listening to the radio. If an individual leaves the radio on but nips out for ten minutes to buy a pint of milk, he's been asked to fill in their diary with this in

mind. However, normally a computer doesn't know where the person is, and would think they've been listening all the time. The stream is not intelligent.

Computers don't easily recognise people

Online measurement can use IP addresses to help detect individual users. IP addresses are normally shared between computers in the same network - from the two computers in a household to the hundreds of computers in a work environment. This can make a significant difference to some online statistics.

Online measurement can also use cookies to help detect individual users. Cookies are little files left on a computer - but these can be deleted by the user or their network, so online measurement erroneously sees this user as someone new when they reconnect. This happens more often in corporate networks than on home computers; and online listening is particularly high between 9.00am and 5.00pm.

Additionally, cookies can normally only be used on a device with a web browser, like a computer. Some devices, like internet radios and mobile apps, can't set a cookie at all, so online measurement can't reliably count unique listeners in these cases.

Listening on mobile phone networks - particularly in areas of poor reception - may also appear confusing to online measurement systems, as a listener reconnects on a different IP address after losing their signal.

Finally, some listening is done via a third-party proxy. This allows, for example, the online signal to be produced in a different audio quality for better reception within mobile phone apps.
There could be many people listening to this proxy.

Nobody's perfect

RAJAR is based on a diary, where a listener records (either on paper or online) their radio listening. Sometimes, people may forget the details of their listening, and omit it from their diary.

Online measurement normally captures every piece of data stream (though, as we've seen above, not always perfectly).

RAJAR asks listeners to note down what platform they're listening to: but some people find it difficult to know whether they're listening on FM, DAB or the internet - particularly if they're in the same receiver. Misattribution - where listeners get their platform wrong - is possible.

RAJAR is a survey, and like all surveys it's subject to sample error, where the balance of people taking part is sometimes randomly disrupted, like tossing a coin 5 times and getting Heads every time. This means that RAJAR results are best observed over a period of time. And while RAJAR tries very hard to get a fair representation by age, gender, working status etc. the sample is not controlled by specific device, as this is a dynamic measure that is constantly changing.

What's more accurate?

In reality, neither is 'wrong' and neither is less accurate than the other primarily because they are just different measures.

RAJAR and online measurement are measuring different things. RAJAR is measuring people, and computers measure computers.

If a radio station is doing well, its total RAJAR figures should increase, as should its total figures measured using online measurement. However, since they're measuring different things, as you would expect, these figures will be different.

As we've seen, five listeners online could also appear as anything from one to one hundred listeners on RAJAR. It's not therefore safe to compare actual numbers. It is advisable to check whether figures you see are from RAJAR or online measurement, and be wary of the limitations of comparing the two.