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Components of Average Quarter-Hour Audience

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COMPONENTS OF AVERAGE QUARTER-HOUR AUDIENCE

1. Introduction

The previous issue of Research & Evaluation discussed public radio's goal of increasing its average quarter-hour (AQH) audience. This issue carries this theme further by detailing the components of AQH audience.

- What is AQH audience?
- Why is AQH audience an appropriate measure of audience service?
- How susceptible is overall AQH audience to a few very strong or very weak hours in a program schedule?
- How many more AQH persons could be served if each listener's use of public radio were increased in specific ways?
- How can public radio programmers apply forward promotion techniques to increase service to the public?

The most important findings are these:

- ☞ **Pay attention to every quarter-hour.** In order to maximize service to the public, programmers need to pay attention to making each and every quarter-hour accessible. A program providing a station with a couple of hours of large AQH audience is, in itself, not capable

of significantly affecting overall service to the public.

- ☞ **Concentrate on influencing the individual listener.**

The key to maximizing service to the public is to maximize service to the individual. When aggregated, small changes in the behavior of individuals yield significant changes in the station's level of service to the public.

While this report merely outlines the general concepts underlying AQH audience, it should provide a common understanding on which the public radio system can discuss and adopt audience-building strategies.

2. Definition

AQH audience is simply the number of people listening during a defined period of time. It is the best estimate of the number of listeners who have heard (or who will hear) a given program element aired within this period of time.

AQH audience is based on quarter-hour audience. Every 15 minutes during its sweep, Arbitron counts the number of people listening to every radio station in the market.¹

¹ As this report was going to press, it was discovered that Arbitron had provided incomplete data for at least one major market. The result is that the AQH estimates Calculations 1 through 5 on pages 8 and 9 are systematically low.

Quarter-hour audience estimates provide very detailed knowledge about when people are listening. But on an individual station or market level, each quarter-hour's audience estimate is subject to some uncertainty and instability — problems inherent in sampling and in the diary-based method.

To smooth estimates and increase their reliability, quarter-hour audiences are averaged (hence the name average quarter-hour) over larger periods of time — typically dayparts. For instance, an AQH audience estimate for the M-F 6a-10a daypart is obtained by adding together the quarter-hour audience estimates for all 80 quarter-hours in the daypart and then dividing by 80 to get the average number of listeners.² This calculation can be made for any block or blocks of quarter-hours — it is not limited to standard dayparts.

In short, the AQH audience is simply the average number of quarter-hour listeners for any defined daypart.

3. The Effects Of A Few Low Or High Quarter-Hours

When AQH audience is thought of in this way, it becomes clear that **a station's broadcast schedule is strongest when it is serving listeners at all times of the day, every day of the week.** In other words, **a program or programming which serves a relatively large number of quarter-hour listeners for a short period of time has little effect on a station's or a system's overall AQH audience.**

For instance, the system of NPR member stations has some of its most listened-to quarter-hours on Saturday evenings between 6 and 8. Much of this audience is listening to A PRAIRIE HOME COMPANION. While this program serves a large number of listeners while it lasts, it does not last very long, and thereby

has little impact on the station's weekly (M-S 6a-12m) AQH audience.

The lack of its overall impact can be demonstrated by setting up a worst case. As demonstrated in Calculation 3, if all NPR member stations were to go dark during this two-hour period, the SAT 6p-8p AQH audience would decrease from 989,000 to zero persons; yet the weekly AQH audience would drop only 2.9% — from 550,000 persons to 534,000 persons.

The point here is that **programming not only needs to be attractive to many listeners, it also needs to be in large blocks of time (across several days) before it can have a substantial effect on the station's overall weekly audience.** This in no way suggests that the content of A PRAIRIE HOME COMPANION is bad — indeed, it has to be extraordinarily good in order to serve this many listeners during radio's non-prime time. However, because of its limited duration, it does not add significantly to the system's overall AQH audience. This is a function of form — a deficiency inherent to any limited duration program.

On the other hand, the system's weekday morning programming (primarily MORNING EDITION and locally produced classical music) does significantly affect the overall AQH audience — due in great part to its depth and breadth across the schedule (and its availability in radio prime time). Again looking at the worst case: if all NPR member stations were to go dark M-F 6am-10am, this daypart's AQH audience would drop from 740,000 to zero persons. As you can derive from Calculation 4, the weekly AQH audience would drop a precipitous 21.4% to 432,000 persons.

² All calculations in this report are shown in Appendix A, Calculations. Calculation 1 shows how the M-S 6a-12m estimate is derived.

These thought experiments demonstrate that one quarter-hour's level of audience service is just as important as any other's, since it counts just as much in the weekly average. A station's overall service to its audience is not significantly improved by an outstanding program which is available for only a couple of hours per week.³ Indeed, **the accessible programming of quality program elements each and every quarter-hour of airtime is paramount to a station's or system's overall service to the public.**

4. The Power Of The Individual Listener

The number of people listening in any quarter-hour is the sum of the behavior of many individuals. Influencing the listening behavior of the individual is the key to AQH audience building.

There are only two ways an individual can be counted in any given quarter-hour — he can either tune in during that quarter-hour, or he can flow into it from the previous quarter-hour.⁴ Therefore, **AQH audience can be increased by 1) increasing the number of times a listener tunes into the station, and 2) increasing the amount of time the listener spends listening once tuned in.**

5. The Effects Of Small Changes In Listener Behavior

What would happen to public radio's AQH audience if the listening behavior of each of these individuals were slightly changed? Specifically, how would changes in programming which encouraged each of these individuals to use more public radio, and to use public radio more often, affect the overall number of AQH listeners?

The average length of time an individual spends listening to public radio in the course of a week is about 30 quarter-hours. As illustrated in Calculation 5, if every one of public radio's nine million weekly cume listeners could be served by one additional quarter-hour of programming, the M-S 6a-12m AQH audience for the entire system would increase by almost 18,000 persons — an increase of over 3%.

What if public radio programming were improved to the point that each listener stayed tuned one additional quarter-hour each time he tuned in? The average number of times a public radio listener tunes into his public radio station is about five times per week. The average length of tune-in is about six quarter-hours. Calculation 6 shows that if public radio were able to serve each listener one additional quarter-hour longer each time he tuned in, its M-S 6a-12m AQH audience would increase by 75,000 AQH listeners — almost 14%.

Instead of building time spent listening per tune-in, suppose public radio programming encouraged each listener to tune in one additional time per week, for the current average of six quarter-hours. If public radio were to increase its service with this result, its M-S 6a-12m AQH audience would increase by over 93,000 persons — an increase of almost 17% as shown in Calculation 7.

³ Conversely, a station's overall service to its audience is not significantly hindered by a couple of hours per week of not-so-outstanding programming. However, the negative impact of this programming will be maximized if it is broadcast during prime time and/or early in the day, when it will discourage the greatest number of people from listening.

⁴ In public radio's audience, the ratio of "quarter-hours flowed into" versus "quarter-hours tuned-in during" is about five to one.

Now, what if public radio were to do both —

Table 1
Selected Public Radio Station Utiligraphics
Of Listeners By The Number Of Years
Public Radio Has Been Used

YEARS SPENT LISTENING TO PUBLIC RADIO STATION	% CUME AUDIENCE	QUARTER- HOURS/ WEEK	TUNE- INS/ WEEK	QUARTER- HOURS/ TUNE-IN	DAYS/ WEEK
< 2 Years	12%	22	3.5	6.4	2.5
2 - < 4 Years	25%	25	4.8	5.3	3.2
4 - < 7 Years	27%	36	6.0	6.1	3.7
7 - 10 Years	22%	37	5.6	7.2	3.6
> 10 Years	14%	40	5.9	6.7	3.9
Overall Average*	(100%)	29	4.8	6.0	3.1

* From Spring 1984 PRAP study, published by NPR.

SOURCE: PRAP/Arbitron, Spring 1984. Years spent listening ascertained during Audience Research Analysis' callback study of public radio listeners (Public Radio Listeners: Supporters and Non-Supporters, 1985).

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increase its level of service so that each listener were to tune in one more time per week (for an average of six times per week instead of five) and, during each of his tune-ins, he were encouraged to listen seven instead of six quarter-hours. This seemingly minor step forward would yield from public radio's current nine million weekly cume listeners an additional 200,000 AQH persons. In other words, 200,000 more people would hear any piece of

programming produced and aired by public radio, as demonstrated in Calculation 8. This is more than a 36% increase over current levels of listenership. Similarly, this is a 36% increase over current levels of audience service (as the following section demonstrates).

Recall from the last R&E report that the programming techniques which build AQH audience are those which make the station more ac-

cessible; an additional result of this accessibility is an increased cumulative audience for the station. How much cumulative audience might be added by the changes explored in this section is difficult to ascertain. We do know, however, that public radio listeners who have listened for less than a year spend an average of 22 quarter-hours using public radio per week, as illustrated in Table 1 on page 4.

Calculation 9 shows that, translated into AQH terms, this means that **every million new cumulative listeners gained will contribute over 40,000 AQH persons M-S 6a-12m during the first year.**⁵

6. Audience Service—Bound In Time, Bound In Space

This and previous issues of R&E have assumed that a listener's utiligraphically measured reliance on his public radio station is a direct indication of how well he is being served by the station.⁶ In other words, more listening by **more people equals more public service.** There are, of course, other ways to measure a program schedule's service to the public, such as its users' reliance on the accuracy of information, the integrity of the presentation, or the selection of the music; but the very nature of radio defines the fact that **people who do not listen are not being served: no listening equals no public service.**

Given this fact, it becomes evident that **public radio programmers can increase service to the public by making it easier for listeners to listen.** This assertion is based on a property inherent to all broadcast media. This property is clearly demonstrated by comparing how people use a newspaper versus how they use radio.

A person reading a newspaper can skim the headlines, delve into any article of interest, stay with the article for as long as it holds his interest, skim

the headlines for the next interesting article, and so forth. The property of the medium which allows this sort of use is its instant availability, due to its being printed on a page. Print has been said to be "bound in space." Articles are bound in a particular place on the page, but they can be accessed at any time, in any order.

On the other hand, a person listening to the radio does not have the ability to skim programming elements which are not of interest. These elements are presented linearly, sequentially. They can be accessed any place one has a radio, but only at the moment they are broadcast. In this way they are "bound in time."

In the same way that a newspaper's headlines can tell a reader where to read, or a magazine's table of contents can tell a reader on what page to find a particular article, so can on-air promotion inform a listener of elements of interest (a weather report, an interview, a news story, a performance of a work, etc.) which will be broadcast sometime in the near or distant future. This information helps a listener listen to a station; to the extent that it increases his use of the station, it directly increases AQH audience. In this way **audience service and AQH audience are inextricably linked. The size of the AQH audience is a direct measure of audience service.**⁷

⁵ Or, at magnitudes more applicable to individual stations, every 1000 new cumulative listeners gained will contribute over 40 new AQH persons to the overall audience during the first year.

⁶ The utiligraphics most important in this respect are those which report how the station is used (amount of time spent listening, number of days listened, number of times tuned in, etc.) and how much the station is used in relation to the listener's use of other stations (amount of time spent listening to the station as a percent of all time spent listening to the radio, etc.).

⁷ Although not the only measure by any means, as discussed at the beginning of Section 6.

7. Forward Promotion And The Three Types Of Audience Hold

The most efficient way to help the listener use a broadcast service is through forward (on-air) promotion. The result of effective forward promotion is an increase in the “hold” of the listener. There are three basic patterns of listener hold which can be affected by forward promotion:

- Vertical Hold — the time spent listening to the station during any given day. Vertical hold takes two forms: the time spent listening to the station once a person is tuned in (flow), and the return of a listener to the station later in the day (skip).
- Horizontal Hold — the number of days spent listening to the station during the same time period.
- Diagonal Hold — the number of days spent listening to the station at different time periods (a combination of horizontal hold and skip).

There is a definite order of effectiveness for these three types of forward promotion.

7.1. Vertical Hold

There are really two types of vertical hold. The difference between the two is based on whether the listener stays tuned or tunes out. Flow — the first and most important type of vertical hold — is simply the amount of time a listener stays tuned to the station once he is tuned in. Skip is the second type of vertical hold. It happens when a listener tunes in earlier in the day, tunes out, and then tunes in later in the day.

Once a station has the listener’s attention, the easiest way to build AQH audience is to increase the listener’s time spent with the sta-

tion each time he tunes it in. **This fact makes building audience flow the most effective and efficient forward promotion strategy.** Unlike any of the other strategies discussed, the listener is already tuned in and listening. He does not have to tune in again. He can be informed of program elements to come (a news story, a traffic or weather report, a performance of a work, etc.).

For instance, the billboard at the beginning of each half-hour of ALL THINGS CONSIDERED encourages flow; forward promotion within ALL THINGS CONSIDERED and MORNING EDITION tell the listener what is coming up. In this way he is aware of stories (or elements) which are of interest to him, and is much more likely to listen through others of less interest. Any increase in AQH audience gained in this way is a direct measure of the increase in audience service.

Skip, the second pattern of vertical hold, is more difficult than flow to encourage, since it requires that a listener tune back in to the station after tuning out earlier in the day.

During the weekdays, MORNING EDITION and ALL THINGS CONSIDERED encourage skip by bracketing the most important hours of the broadcast day with accessible news and information programming.

7.2. Horizontal Hold

Forward promotion which encourages horizontal hold is not as effective as that which encourages flow, but is probably more effective than that which encourages skip.

Analyses of radio listening data show that a great deal of radio listening is habitual — especially during weekday mornings. Because of this, it is important to audience service to program consistently from day to day. A listener who likes what he hears Monday at 11

am is likely to tune back Tuesday around the same time; but if he hears a very different type of programming, he is not likely to make a habit of tuning into the station at that time. Indeed, he may think he tuned into the wrong station and search elsewhere for something he likes.

The major way in which listeners can be encouraged to tune in horizontally is to program consistently. This is especially critical during the weekdays, when patterns of living are most regular from day to day. (Saturdays and Sundays are different from each other, but not as different as each is to any weekday.)

Horizontal hold can be encouraged through horizontal promotion. In the same way the host can keep a person listening vertically by telling him what is coming up in the next few minutes, the host can keep a person listening horizontally by telling him what is in store at this time tomorrow.

7.3. Diagonal Hold

Diagonal hold is a combination of vertical and horizontal hold; as such, it embodies all of the deficiencies of the two. This is why **diagonal promotion is by far the most ineffective forward promotion strategy**.

The cart machine and a misunderstanding of the relative effectiveness of the three types of forward promotion are the major factors contributing to the overuse of diagonal promotion. For instance, on Tuesday morning a promo may be aired which informs the listeners what is available from the station on Sunday night. Not only will the listener have to tune back in again, but he must also remember the time to tune in (which is not the same time he is now listening) and the day to tune in. The difficulty of encouraging listening in this way is evident.

8. Conclusions and Comments

Every quarter-hour—indeed, every second—of airtime is critical to a station's overall service to the public. A few well listened to hours per week do not a public service make. The selection of program elements (content) clearly affects who and how many will listen; but the presentation, packaging, and form—i.e. programming—of these elements is at least as important to a station's service to the public.

Radio programming is bound in time; because of this property, listeners can be better served when they can choose whether or not to continue listening (or to tune in later) based on knowledge of the program elements to come. This knowledge can be imparted through effective forward promotion.

When implementing these strategies, public broadcasters should not allow promotions to interfere with other program elements, or to create seams. Indeed, promotions should help bridge the inevitable seams between program elements. To be the most effective, they should be done live (not on cart), in the context of other continuity-enhancing elements, and with the same style, sound, or "texture" of the surrounding programming.

These forward promotion strategies require no resources other than the skill of the on-air talent—the person talking to the listener. This may require some training, which might begin by extensive listening to and analysis of a top rated CHR or news station.

APPENDIX A CALCULATIONS

1. M-S 6a-12m AQH AUDIENCE FOR NPR SYSTEM OF STATIONS

$$\frac{\sum_{\text{MON 6a}}^{\text{SUN 12m}} \text{QH PERS}}{504 \text{ QH}} = 277,079,600 / 504 =$$

549,800 AQH PERSONS

2. M-F 6a-10a AQH AUDIENCE FOR NPR SYSTEM OF STATIONS

$$\frac{\sum_{\text{MON 6a}}^{\text{MON 10a}} \text{QH PERS}}{80 \text{ QH}} = 59,182,000 / 80 =$$

739,800 AQH PERSONS

3. GOING DARK SAT 6p-8p: THE EFFECT ON WEEKLY AQH AUDIENCE

$$\left(\frac{\sum_{\text{MON 6a}}^{\text{SUN 12m}} \text{QH PERS} - \sum_{\text{SAT 6p}}^{\text{SAT 8p}} \text{QH PERS}}{504 \text{ QH}} \right) =$$

$269,167,200 / 504 =$ 534,100 AQH PERSONS

4. GOING DARK M-F 6a-10a: THE EFFECT ON WEEKLY AQH AUDIENCE

$$\left(\frac{\sum_{\text{MON 6a}}^{\text{SUN 12m}} \text{QH PERS} - \sum_{\text{MON 6a}}^{\text{FRI 10a}} \text{QH PERS}}{504 \text{ QH}} \right) =$$

$217,897,600 / 504 =$ 432,300 AQH PERSONS

APPENDIX A CALCULATIONS
(continued)

5. INCREASE TSL PER LISTENER BY 1QH PER WEEK

$$9,000,000 \text{ PERS} \cdot 1 \text{QH} / 504 \text{QH} = \underline{17,800 \text{ AQH PERSONS}}$$

6. INCREASE TSL PER LISTENER BY 1QH PER TUNE-IN

$$\frac{5 \text{ TUNE-INS}}{\text{WEEK}} \cdot \frac{1 \text{QH}}{\text{TUNE-IN}} \cdot \frac{9,000,000 \text{ PERS}}{504 \text{QH}} = \underline{75,200 \text{ AQH PERSONS}}$$

7. INCREASE TSL PER LISTENER BY 6QH THROUGH 1 ADDITIONAL TUNE-IN

$$\frac{1 \text{ TUNE-IN}}{\text{TUNE-IN}} \cdot \frac{6 \text{QH}}{\text{TUNE-IN}} \cdot \frac{9,000,000 \text{ PERS}}{504 \text{QH}} = \underline{93,100 \text{ AQH PERSONS}}$$

8. INCREASE TSL PER TUNE-IN BY 1QH AND INCREASE THE NUMBER OF TUNE-INS PER WEEK BY 1

$$\left[\left(\frac{5 \text{ TUNE-INS}}{\text{WEEK}} \cdot \frac{1 \text{QH}}{\text{TUNE-IN}} \right) + \left(\frac{1 \text{ TUNE-IN}}{\text{WEEK}} \cdot \frac{7 \text{QH}}{\text{TUNE-IN}} \right) \right] \cdot \frac{9,000,000 \text{ PERS}}{504 \text{QH}} =$$

$$\frac{12 \text{QH}}{\text{WEEK}} \cdot \frac{9,000,000 \text{ PERS}}{504 \text{QH}} = \underline{200,200 \text{ AQH PERSONS}}$$

9. ADDING ONE MILLION CUME PERSONS AVERAGING 22 QHS OF LISTENING PER WEEK

$$\frac{1,000,000 \text{ PERS}}{504 \text{QH}} \cdot \frac{22 \text{QH}}{\text{PERS}} = \underline{43,700 \text{ AQH PERSONS}}$$