

ESTIMATING THE AD AWARENESS BUILDUP FOR RADIO SCHEDULES AT VARYING GRP LEVELS

Since we are unaware of any significant analyses in the U.S. on the question of how radio ad campaign awareness levels develop over time at various GRP levels, we have taken it upon ourselves to examine this subject using a mathematical approach in conjunction with some key assumptions. What follows is an evaluation of a hypothetical advertiser's four-week radio campaign and how it develops its media reach and frequency patterns at different rating levels, and the effects this has on ad awareness.

As shown in Table I, the advertiser's radio schedule generates a total four-week reach of 34.5% with 200 GRPs and, of course, considerably less reach at lower GRP levels. The important aspect is the structuring of the campaign's frequency patterns as GRPs are added and more reach is attained. For example, the first 50 GRPs yield proportionately more reach than the next 50 and so on, due to increasing audience duplication. By 50 GRPs, reach has built to 17.8%; however, fully one-third of those exposed to the ad message (6.4%) have had only one opportunity to hear it. In contrast, the 34.5% reach of a 200 GRP schedule includes only 1.4% that was exposed only once, while the vast majority has had five or more chances to hear and heed the advertiser's message. Obviously, the latter are far more likely to be aware of the ad campaign than those with a single exposure.

The appropriate reach and frequency projections can be obtained from regular industry sources, but the problem is how to translate such data into advertising-relevant parameters—in this case the proportion of listeners who are aware of the advertiser's campaign. Certainly it is unrealistic to assume that every "exposure" really represents a consumer paying attention to the commercial, let alone recalling it days or weeks later.

So how many listeners are paying attention to an average commercial when it blares out from their radio? And how many will remember the campaign later?

For the purpose of this hypothetical exercise, we are going to make some assumptions. First, with regard to actual commercial exposure, rather than claimed station listeners (which is what the rating studies give us), our guess is that only 35-45% of the "audience" is fully or partially attentive when the commercial is on. Of this, 80-90 (about 35%) of the listeners should be able to recall the experience providing there was a way to conduct a study *immediately after the event*. As a rule, this is impossible, so most researchers must settle for a time lag that lowers commercial recall considerably, even when various prompts are offered to stimulate the respondent's memory.

The time lag variable between commercial exposure and the awareness measurement is critical and must be accounted for in our model. Say a member of the advertiser's target group is reached only once during the month. If the awareness survey was conducted promptly at the end of the schedule

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on the first day of the following month, this means that the single exposure listener's first, last and only contact with the ad campaign probably occurred about *15-16 days prior* to the interview. In contrast, a listener exposed 10 times to the schedule may have heard at least one of the advertiser's messages only *3 days earlier*. Clearly, this disparity will have an effect on the two listeners' ad awareness claims, when they are finally interviewed.

To summarize, we need to account for two variables in estimating the probable results of an end-of-the-month ad awareness study. One is the beneficial effects of frequency; the other is the detrimental effects of the time lag between last exposure and the awareness measurement itself (in other words, memory loss).

Table II presents such an analysis. The first column (A) shows how ad awareness rises at successive frequency levels. If we start with a 35% awareness immediately after a single exposure, we theorize that the corresponding level after 5 exposures would be 68% higher (168 index), and at a 10+ frequency level it would rise to almost double the single exposure figure (110 index). The second column (B) takes into account the time lag/memory loss variable described earlier. Here we estimate that a person reached only once will lose 30% of his/her ad recall in the time between the commercial being originally "exposed" and the ad awareness survey 15-16 days later. In contrast, we foresee virtually no time lag effect for those exposed 10+ times in the month (100 index).

The third column in Table II multiplies column 1 by column 2 to create a combined frequency and time lag adjustment factor (C) that is applied to the estimated average exposure's immediate recall figure of 35%, postulated earlier in this analysis. As a result, we speculate that a person exposed to the campaign only once will have a 25% likelihood to claim ad awareness in the follow-up study (35% x 70%), while someone "reached" 5 times has a 51% chance of recall and one exposed 10+ times has a 67% recall probability.

The resulting ad awareness estimates from Table II were applied to each frequency level from Table I, to produce Table III. This gives us a projection of the reach and frequency of the advertiser's schedule at varying GRP levels, based on conventional media audience measurements and, in the last column, an estimate of the percentage of the same target group that will probably be aware of the ad campaign at the end of the month. Since our readers may be curious, we have extended the table beyond 200 GRPs to 1,000 GRPs. As can be seen, at 200 GRPs the estimated ad awareness level is 18.2%, which means that approximately half of those reached by the schedule will recall it. Not surprisingly, ad awareness will continue to build up if more GRPs—and reach and frequency—are added. Extending this effort from 200 to 1000 GRPs will provide the advertiser with a 53% gain in reach, but an 82% lift in ad awareness.

As we noted, this "mathematical" approach to predicting ad awareness at various GRP levels rests on the various assumptions described above. Readers are invited to create their own estimates or, if they wish, they can come up with entirely new models. In all cases, it should be remembered that the methods used to measure ad awareness, as well as the time lag element, are important determinants. If the researcher merely asks whether any ads for the product class have been heard in the past month, and if so, for which advertisers, much lower results may apply. On the other hand, if respondents are

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given memory stirring prompts and are asked to listen to the commercials as a final memory aid, much higher awareness levels can be expected. Obviously it is important to account for the timing factor. Conduct your study a month after the campaign ends and you will probably get a lower awareness level than if the survey was fielded a day after the last commercial aired.

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TABLE I

HYPOTHETICAL RADIO SCHEDULE'S MONTHLY REACH AND FREQUENCY BUILDUP BY GRP LEVELS

GRPs	% OF TARGET GROUP REACHED BY FREQUENCY LEVEL										TOTAL
	1	2	3	4	5	6	7	8	9	10	
10	4.4	1.6	.8	—	—	—	—	—	—	—	6.8
25	6.7	2.8	1.4	1.0	.9	—	—	—	—	—	12.8
50	6.4	3.4	2.7	1.7	1.5	1.1	1.0	—	—	—	17.8
75	5.2	4.6	4.0	2.3	2.1	2.0	1.7	.4	—	—	22.9
100	4.2	5.1	4.8	3.2	2.7	2.6	2.1	.9	.6	.2	26.4
125	3.4	4.2	5.9	4.1	3.7	3.1	2.4	1.3	.9	.7	29.7
150	2.8	3.6	5.7	4.9	4.1	3.4	2.7	1.8	1.4	1.3	31.7
175	1.9	2.6	4.8	4.7	5.4	4.0	3.3	2.4	2.0	2.1	33.2
200	1.4	2.2	4.1	4.4	5.8	4.8	4.0	2.9	2.4	2.5	34.5

Source: Media Dynamics, Inc.

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TABLE II

MEMORY LOSS FREQUENCY ADJUSTMENT IN AD AWARENESS LEVELS BY FREQUENCY OF EXPOSURE

Frequency	A. FREQUENCY FACTOR INDEX	B. TIME LAG ADJUSTMENT FACTOR	C. ADJUSTED AWARENESS FACTOR (A x B)	ESTIMATED % ABLE TO RECALL AD ¹ (C x 35%)
1	100	70%	70%	25
2	128	76	97	34
3	148	81	120	42
4	160	84	134	47
5	168	87	146	51
6	174	90	157	55
7	177	93	165	58
8	179	95	170	60
9	181	97	176	62
10+	190	100	190	67

¹At the end of the month. Assumes that immediately after each ad exposure, 35% of the audience could have recalled the ad.

Source: Media Dynamics, Inc.

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TABLE III

HYPOTHETICAL REACH/FREQUENCY AND AD AWARENESS BUILDUP FOR RADIO SCHEDULES AT VARYING GRP LEVELS

GRP	REACH	AVG. FREQUENCY	AD AWARE
25	12.8%	2.0	4.4%
50	17.8	2.8	6.7
75	22.9	3.3	9.0
100	26.4	3.8	11.3
125	29.7	4.2	13.4
150	31.7	4.7	15.1
175	33.2	5.3	17.6
200	34.5	5.8	18.2
300	40.2	7.5	22.1
400	44.1	9.1	25.0
500	46.3	10.8	27.1
1000	52.9	18.9	33.2