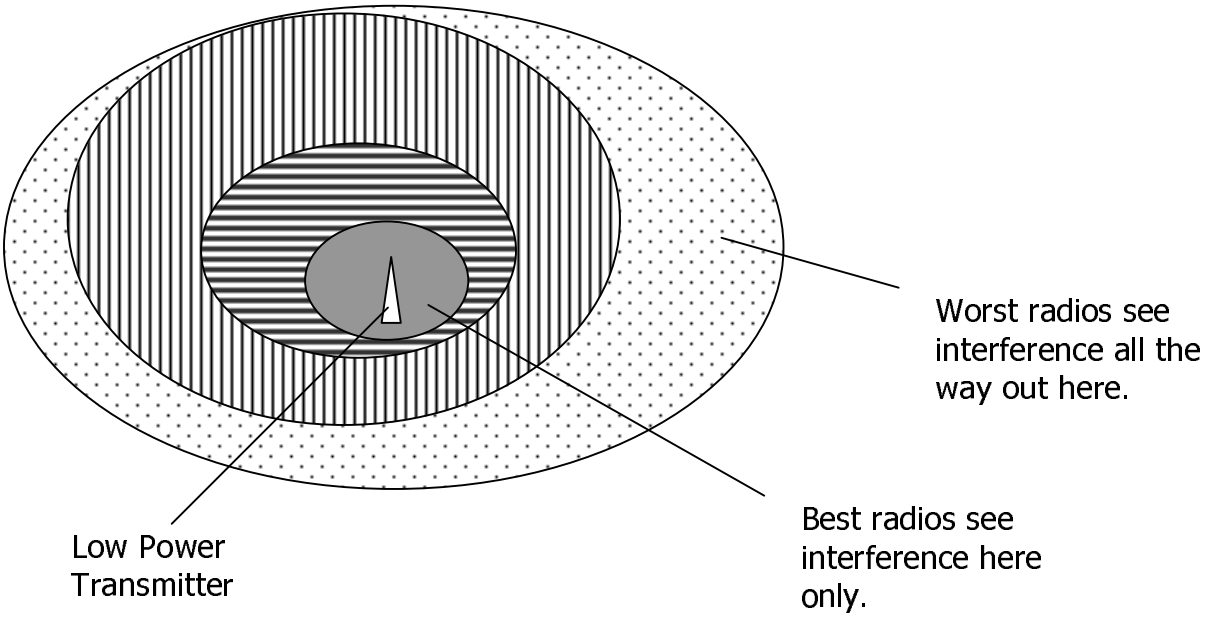
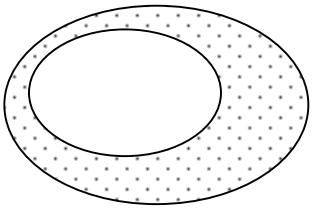
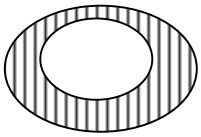
The NAB Double and Triple Counted Listeners Experiencing Interference

The NAB mapped the interference areas produced by potential low power radio stations for 4 different categories of radios. Because each category has a different capability for rejecting interference, the size of the interference areas is different. Poorer radios will be affected at a further distance from the interfering station than better radios. This means the interference areas are nested around the interfering station, like this:

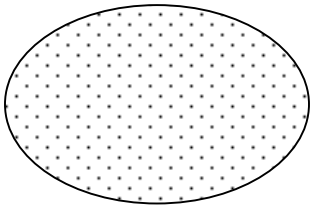
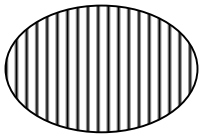


The NAB counted the number of people enclosed by each area, probably assuming a uniform population density. Everyone in the whole diagram was affected once, but the NAB's methodology resulted in them being counted multiple times. When totaling the number of listeners, they *did not subtract* the listeners located in the inner circles from those in the outer circles.

Here's what they should have done:

Outer =  ; Second = 

Here's what they did:

Outer =  ; Second = 

The NAB's counting method assumes that the people in the innermost circle should be counted four times -- once for each type of radio that is affected by interference. People in the second to largest band are counted both for the worst radio category and again for the next-worst category. In order for the NAB's count to be accurate, people in the second band would have to use 2 radios simultaneously. Even if they did use two radios at the same time, the table was labeled as "population", not "people-radios" affected by interference.