How could they have been so wrong?

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Congress chartered the National Research Council as a private and nonprofit institution to advise the federal government on issues of science, technology and health.

In 1980, the Department of Justice requested the National Research Council to review the methodology of BB&N and W&A. The council formed a Committee on Ballistic Acoustics, commonly known as the Ramsey Panel, who ignored the ballistic and acoustic evidence and reviewed technical aspects of the DPD radio system. This panel concluded:

"(iv) the conclusive acoustic evidence on the Dictabelt itself that the cross talk recordings were made through a radio receiver with automatic gain control (AGC). These different forms of evidence are all compatible with the recordings being made at the same time, and some are incompatible with the hypothesis of later superposed recordings by audio or direct electrical coupling."

The fundamental problem with this conclusion is the presented evidence does not show that the cross talk recordings were made through a radio receiver. Although the Committee on Ballistic Acoustics should have tested heterodynes for frequency modulation as conclusive evidence of the by−radio nature of the cross talk, they pursued fallacious arguments. In fact, a quantitative detail provided by the committee showed AGC acted on audio. Even worse, they concentrated on attack characteristics that are ambiguous evidence of AGC action and misinterpreted the decay characteristics, which showed AGC acted at two or more places within the system. Not surprising the Committee on Ballistic Acoustics began by confusing the subject that provided a technically correct method of showing by−radio nature of the cross talk.

"The by−radio nature of channel II cross talk is demonstrated by its detailed behavior in the presence of channel I heterodynes when another channel I transmitter is keyed on with a more powerful carrier signal. The frequency offset between the two carriers gives rise to a heterodyne tone in the channel I recording."

In all receivers the presence of two radio signals of nearly equal and different frequencies produce a beating of signals at an audio rate. The trigonometric identity for the addition of cosines (1) illustrates this process.

$$\text{Cos}(bt) + N\,\text{Cos}(ct) = (N-1)\,\text{Cos}(bt) + 2\,\text{Cos}[(b-c)\,t/2\,]\,\text{Cos}[(b+c)\,t/2\,]$$

The N coefficient of the Cos (ct) term represents a radio signal whose amplitude is N times the other. Since the two radio frequencies, b and c, are nearly equal, the Cos [(b−c) t/2] term describes the only audio frequency. The absence of N as a factor preceding this audio term shows that the weaker of the two