quite concerned that we are afraid that radar isn't perfect and I'm sure it isn't perfect, and yet we trust our whole defense of this country, the navigation of ships and airplanes and just about everything we do to the exactness of radar. So I think that Senator Hoagland's idea is a good one. Thank you.

SPEAKER MARVEL: Senator Chambers.

SENATOR CHAMBERS: Mr. Chairman, members of the Legislature, this that we are going into now relates to the technical aspects of radar and is what the state patrol tries to avoid because they can't cope with it and it destroys them. First of all, radar as used in a police vehicle is not even radar. Radar tells you, not only the speed at which an object is moving, but the distance from you and, Senator Kahle, the radar used in the military is known as pulse radar. It sends out bursts of energy and each time the burst hits the target if the target is closer, then the amount of time it takes that burst to come back will let the radar know how much distance that particular target has moved and lets you calculate the distance but police so-called radar sends out a steady stream of radio microwaves and it cannot tell you the distance. It can only tell you the rate of speed assuming that it is accurate. So we're not even talking about the kind of radar that you make weather predictions or that you use in the military. As a matter of fact, the weather people have a term something like propagation of echoes or echo propagation which means that false readings are occurring. There is no target that causes the radar to read even in weather situations. It will show clouds or storm centers that do not exist because there are many factors that can cause a reading on radar. As far as trying to use radar to determine out of a string of ten cars that the tenth car may be speeding, that is an absolute impossibility with police radar because if more than one target is giving a reading nothing will show on the screen at all. And if you look at any manual it will show you that you cannot try to pick one car out of a group because you cannot aim radar like you do a rifle. A radar beam may be spread several hundred feet wide by the time it is a hundred yards from the transmitter. So if an officer has told you that he can aim a radar device four hundred yards down the highway, he is probably encompassing every field that you can see with your eye. So he is not measuring what is coming to him in a lane of traffic. Anything that will reflect a radio microwave will have some bearing to some extent on what the radar may read. So the further away the targets are the more likelihood there is that you are not going to read the correct target. What I am telling you is based, not only on my research, but on the manuals that are pre-