

The missile knows where it is

The missile knows where it is at all times. It knows this because it knows where it isn't. By subtracting where it is from where it isn't, or where it isn't from where it is - whichever is greater - it obtains a difference or deviation. The guidance subsystem uses deviations to generate corrective commands to drive the missile from a position where it is to a position where it isn't, and arriving at a position that it wasn't, it now is. Consequently, the position where it is is now the position that it wasn't, and it follows that the position that it was is now the position that it isn't. In the event that the position that it is in is not the position that it wasn't, the system has acquired a variation. The variation being the difference between where the missile is and where it wasn't. If variation is considered to be a significant factor, it too may be corrected by the GEA. However, the missile must also know where it was. The missile guidance computer scenario works as follows: Because a variation has modified some of the information that the missile has obtained, it is not sure just where it is. However, it is sure where it isn't, within reason, and it knows where it was. It now subtracts where it should be from where it wasn't, or vice versa. And by differentiating this from the algebraic sum of where it shouldn't be and where it was, it is able to obtain the deviation and its variation, which is called error. In this way, it can determine its current position in space and time, its new position, its position in time, its new position in space and time, and so forth. This mathematical process is performed in a number of stages. If the error should exceed some figure of merit, the stage-1 and stage-2 part of the process change according to the figure of merit. A temperature of 4 degrees above zero Celsius is considered to be high. So the stage-1 part of the system now is included in a correction, to obtain a low point in the system and one in the error. Then when the system reaches a stage-2 part, the stage-1 part is deleted from the corrective stage-2, to obtain a zero error stage. This is where the discrepancy between where the missile is and where it should be can now be compared with its destination, by simply adding the two figures of merit. Correcting error may produce higher speeds and greater accuracy than conventional anti-ballistic missiles.