

Rocket guidance

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 where 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 maybe corrected by the GEA.

However the missile must also know where it was. The missile guidance computer scenario works as follows: Because of variation has modified some of the information 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 outer break sum of where it shouldn't be and where it was it is able to obtain the deviation and its variation, which is called R.