

Data Analysis "Game"

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About the Game

This presentation is styled as a game in which the delegates at the ARMMS meeting are asked to participate. Their task is to act as data analysts by visually inspecting three sets of data.

The data are all complex numbers and are analogous with data produced by vector instruments, *e.g.*, vector network analysers, reflectometers etc. As such, the data is presented in two-dimensional form as points in the complex plane (*i.e.*, like the polar presentations available on vector network analysers).

The Game - Its origins

The inspiration to stage such a game came about after sustained periods of anguish experienced by the authors during their analysis of measurement comparison data produced by the comparison exercises organised by ANAMET (see previous paper in this Digest).

This Game is an attempt to raise the level of awareness and appreciation of some of the difficulties experienced by data analysts in such a measurement comparison and by microwave metrologists in general when dealing with multiple measurements of complex (vector) quantities.

The rules of the Game

For each of the three data sets, each member of the ARMMS audience will be asked to choose a summary value (a point which best represents the data set) from a selection of three options, *A*, *B* and *C*, for each data set. Choices will be indicated by a show of hands.

Participants can vote for more than one of the summary options if they think that more than one of the options provide suitable summaries.

The election results

The votes (show of hands) for each summary value for each of the plots will be counted on-the-spot and recorded on a flip-chart table (and by you, if you wish, in the Table overleaf).

Revealing the candidates

Having voted for the different summary estimators, their identity will be revealed immediately afterwards!!

The game will be followed by a discussion period to review the implications of the election results.

¹ Mr Ridler is employed by Assessment Services Ltd and works under contract to NPL.

Data Analysis Game - the Results

The votes

Record below the number votes obtained by each summary estimator for each data set.

	Option <i>A</i>	Option <i>B</i>	Option <i>C</i>
Data set 1			
Data set 2			
Data set 3			

Identity of the estimators

Record below the identity of the summary estimators.

Option *A*:

Option *B*:

Option *C*: