The role of the ISCWSA Error Model Maintenance Group is to define the mathematical framework for modelling the uncertainty in wellbore surveying. This allows different companies to implement a consistent set of algorithms for error modelling.

In general, the ISCWSA does not define or supply the detailed magnitudes, (or error models, tool codes or IPM files) for a particular survey tool. It is our position, that the tool provider is the one who is best placed to assess the uncertainty when using their equipment. Therefore users should request tool codes from their tool provider.

The ISCWSA does not supply, check, certify or warrant the error models created by tool providers.

However, the ISCWSA has specified a generic MWD tool error model. It comes in eight variants for the various combinations of:

i) standard MWD or axially (short collar) corrected surveys
ii) from a fixed or floating platform
iii) with or without sag correction

There have been several revisions of these models and we are now at Rev4 (link).

These are generic tool codes and it is up to users and tool providers to ensure that these models correctly match their situation. Like any error model, the generic MWD model makes several assumptions about tool spec, running procedures and processing standards that must be met for the model to be valid for its application to any particular survey log.

The fact that the ISCWSA provides these does not mean that users are forced to use them; that ISCWSA has defined minimum survey requirements or that tools must be run in this manner. The principle is that any error model applied should correctly match how the tool was used and how it can be expected to perform.

As a separate initiative, the Operators Survey Work Group (OWSG) provides a more complete set of tool codes covering many wellbore survey situations (link). These make use of the mathematical framework defined by the ISCWSA Error Model Group and at Rev2 the OWSG set includes the latest ISCWSA MWD Rev4 models. The OWSG models are simply offered as one possible set of models that are compliant with the ISCWSA framework and are neither formally endorsed nor approved by the ISCWSA Error Model group.