

Destroying the Distinction Between Explicit and Implicit Geological Modelling

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ABSTRACT

Mathematically and topologically there is a clear distinction between the terms explicit and implicit surface modelling. In the mining and financial industries, however, these terms have come to represent something else. To some people, they represent a divide, a division, a hard boundary (to use a geostatistical term) that is considered the border between good and evil. The misconception that a geological model made with the assistance of a so called implicit modelling tool is either better or worse than a model made with a so called traditional or explicit tool or methodology needs to be destroyed.

The same divide existed during the change over from sectional pencil and paper modelling to sectional computer based modelling and that was overcome (eventually).

Implicit models still require significant amounts of “manual” input before they are fit for use. They still require the same levels of geological, volumetric and statistical validation. They still require peer review. The primary advantage of implicit modelling methods is speed, not accuracy, not unbiasedness, not detail, but speed. Speed leads to the ability to test multiple scenarios and models and allows for modelling by trial and error. Think – model – examine – accept / reject – modify – repeat until happy.

This presentation examines some history of methods of geological modelling, the origin of the term “implicit” in this context and proposes that there is not much that is implicit about “implicit” modelling.