

Facies Models Revisited: The Change from Static to Dynamic Modelling

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The concept of *facies* goes back to Armand Gressly (1830), who used the term to designate rocks of different aspect within a particular stratigraphic unit. The idea of *facies sequences* was emphasized by Johannes Walther (1896), and since about 1965, facies sequences of various types have been a standard part of sedimentological interpretation.

Interpretation of depositional environments involves measuring sections and defining facies sequences. Lateral correlation of sequences has added a three-dimensional aspect to facies studies. Interpretation also involves comparison of ancient rocks and recent sediments. The synthesis of ancient and modern data has given rise to *facies models* for particular environments.

The volume "Facies Models" (1979) presented some of the first syntheses, but the models were "static", and did not address the problems of facies preservation related to relative sea level fluctuation and sediment supply. The second edition of Facies Models (1984) incorporated the rapidly expanding data base, but not until the third edition (1992) was there an attempt to address the problem of dynamic rather than static environments, and the preservation of the various components of modern environments.

The session "Facies Models Revisited" will examine the changes in the way in which models are constructed and used over the last ten years. Have we now learned so much about various environments that attempts at synthesis are doomed to oversimplification? Or is there still a need for synthesis so that new areas can be interpreted by reference to standard dynamic facies models?