

# TOWARD THE STANDARDIZATION OF SEQUENCE STRATIGRAPHY

Author:  
Octavian Catuneanu

Department of Earth and Atmospheric Sciences, University of Alberta, 1-26  
Earth Sciences Building, Edmonton, Alberta, T6G 2E3, Canada.  
(email: octavian@ualberta.ca)

## ABSTRACT

The lack of formal inclusion of sequence stratigraphy in the current international stratigraphic codes may be attributed largely to trivial differences in terminology and the style of conceptual packaging of the rock record into sequences and systems tracts. The choice of how we name the packages of strata between specific sequence stratigraphic surfaces varies with the model, which is why the systems tract nomenclature becomes less important than the correct identification of the stratal stacking pattern that defines a particular package of strata. Even the selection of surfaces that should define the 'sequence boundary' becomes a trivial aspect, as the correct interpretation of *all* sequence stratigraphic surfaces and of the origin of strata that separate them is far more important to the success of the sequence stratigraphic method.

Irrespective of the model of choice, the 'pulse' of conventional sequence stratigraphy is fundamentally represented by shoreline shifts, which control the timing of formation of all genetic packages of strata (systems tracts) and bounding surfaces. Beyond nomenclatural preferences, each stage of shoreline shift (lowstand and highstand normal regression, forced regression, transgression) corresponds to the formation of a systems tract with unique characteristics in terms of stratal architecture, sediment dispersal patterns and distribution of depositional elements across a sedimentary basin. These fundamental principles are common among all models, and allow for a unified sequence stratigraphic approach. Finding the common ground between the various 'schools' is the key for making real progress toward standardizing the workflow and the concepts of sequence stratigraphy.