Stratigraphic Relationships in Atlantic Canada

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Stratigraphic units are related in space and time. Absolute ages have previously been used in this project to illustrate the stratigraphic relationships by depicting the units in range-chart format. The charts are a useful synoptic display, but the absolute age ranges ascribed create several problems in relation to the known stratigraphy. The lithologic units of Atlantic Canada are taken from Volume VI of the Lexicon of Canadian Stratigraphy (Williams *et al.*, ed.). A simplified base of standard fields (LEXFILE) was abstracted for computer use.

Spatial relationships are now being compiled in six categories: Conformable; Unconformable; Intrusion; Faulting; Lateral; Equivalent. Each individual relationship is between two units. The last two categories usually represent some sense of synonymy. The first four represent a clear sense of sequence, which relates an "earlier" unit to a "later" one. Preliminary results indicate each unit has been related on average to 3 other units. The network resulting from this degree of branching is complex, and we are examining the significance. Sub-networks for local regions or terranes may be a way to simplify the results. If so, the spatial charts may illustrate the reported stratigraphy in a topological sense, resolve some of the problems of the age-range charts, provide more detail and point to future stratigraphic problems.