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Teresa Maria Przytycka* (przytyck@mail.nih.gov), National Center of Biotechnology Information, NIH, 8600 Rockville Pike, Bethesda, MD 20894. *Choral Graphs and Evolution of Hard to Gain and Hard Lose Character Traits.*

A taxon (an organism, genome, etc) is typically described by a set of its attributes. In this talk we will assume that these attributes are binary that is each unit has or not a give attribute. Given a set of such described biological unit we define the attribute overlap graph to be a graph whose node corresponds to attributes and there is an edge between two such nodes if both attributes occur together in one taxon. Can such graph tell us something about the evolution of these characters? I this talk we demonstrate connections between properties of the attribute overlap graph most notable its chordality and certain variants of Dollo parsimony models. We show that the attribute graphs for hard to gain and hard to lose character traits are (or are approximately) chordal. (Received June 30, 2005)