

Meeting: 998, Houston, Texas, SS 6A, Special Session on Continuum Theory and General Topology (in Honor of David Bellamy's 60th Birthday)

998-54-272 **Brian Raines*** (brian_raines@baylor.edu), Mathematics Department, Baylor University,
Waco, TX 76798-7328. *Local Planarity in One-Dimensional Continua.*

Let $\{G_i, f_i\}$ be an inverse sequence of finite graphs and maps and let (G_i, f_i) denote its inverse limit. Wayne Lewis posed the following problem at the Second International Conference on Continuum Theory held at BUAP in Puebla:

Problem: Determine necessary and sufficient conditions for (G_i, f_i) to be locally planar.

We discuss our recent work on this problem. We show that for a specific subset, V , of (G_i, f_i) a solution to Lewis' problem requires a characterization of *planarity* in graph-like continua. However, we are able to solve Lewis' problem in the case that $\{G_i, f_i\}$ is a constant inverse sequence and the bonding map satisfies some dynamical conditions. (Received March 01, 2004)