Patent Law as a Complex Adaptive System

Kristen Osenga
University of Richmond

Problems with the patent system are numerous and well known; not surprisingly, it seems that everyone has an idea of how to fix the patent system. Many proposals seek coherent, overarching changes to the patent system—either generally or with particular application to certain technologies (e.g., software) or constituents of the system (e.g., patent holding companies). But patent law is not a coherent system. It involves a conglomeration of disjointed constituents—courts, the legislature, wide-ranging industries, detractors—each providing some level of input into the system. Because of this diversity of inputs, coherence is not possible and attempts at fixing the patent system (as a coherent system) from the top down are unlikely to be successful. Moreover, this approach is likely to create unexpected and unwanted trickle-down effects.

Instead of approaching patent reform with coherence in mind, we should instead view the patent system as a complex adaptive system. Thinking about the patent system in this way allows us to recognize that incoherence is not fatal and, in fact, can prove beneficial. Complex adaptive systems take advantage of the diversity of constituents in the system. Rather than being driven from the top-down in a typical hierarchical fashion, complex adaptive systems behave based on the cumulative actions of constituents from the ground up, with elements behaving in response to feedback received from other constituent. There is no controlling constituent or ruling body, and yet, in these systems, the behavior of the system as a whole may be greater than the sum of its parts.

After explaining why a complex adaptive system provides a useful lens for viewing the patent system, the article will examine some of the more recent changes in the patent system through this lens and explain why patent reform continues to fail. The article concludes with suggestions for reforms that take advantage of the patent system as a complex adaptive system.