1077-D5-2616 **Daniel J Gries*** (dgries@hopkins.edu). *Communicating calculus concepts using graphically presented functions in Adobe Flash applets embedded in WeBWorK.*

We will present a collection of applets created in Adobe Flash, and embedded into WeBWorK problems, which allow for the exploration of calculus concepts using functions which are defined only in terms of graphs. The applets allow for graphical communication of functions in both directions: students see functions only as graphs, while also being asked to draw functions by hand which satisfy certain criteria. This approach allows for a greater conceptual focus by removing algebraic tasks from the assessment of student understanding, while also getting away from the notion that all functions need to be defined by algebraic formulas. We will talk about some of the different techniques for randomly generating a sufficiently rich collection of well-behaved functions, along with some of the computational care required in finding features such as extrema and inflection points. This work has been supported by the NSF-CCLI grant DUE-0941388. (Received September 22, 2011)