Vector Image Processing

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This talk will describe a project to convert a static PDF map of a university campus into an interactive SVG map, using *R*.

The conversion involves three steps: importing the original map into *R*, using the **grImport** package; processing the map contents to identify important features; and using the **gridSVG** package to add interactivity to the map and export it in an SVG format.

Both the import and export steps depend on some recent improvements in the handling of lines and text in the **grImport** and **gridSVG** packages, plus the introduction of a new "path" primitive in the **grid** package. These new graphics features and enhancements will be described and demonstrated.

There will also be a discussion of the image processing step and the addition of interactivity to the map. The former will demonstrate the usefulness of treating an image as a source of data, which can be manipulated using the standard data processing tools in *R*, and the latter will demonstrate a way to add simple interactivity to the SVG output that is produced by the **gridSVG** package.

References

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