



MOTIVATION

Blender is a popular open-source 3D editing software, and one of its tools are Node Graphs, a form of visual programming. These Graphs may be the subject of documentation if they are a part of a technical project, but simply taking a screenshot creates a raster image where a vector representation would have been much more appropriate. **This add-on lets the user create an SVG file depicting the Node Graph that they currently see in the editor.**

IMPLEMENTATION

The add-on is implemented as a Python script, for which Blender exposes its runtime through a virtual *bpy* module. Representations of individual Nodes and their mutual links of a currently-displayed Node Graph are retrieved and parsed to produce an SVG file composed of hierarchical elements that keeps the result logically organized.

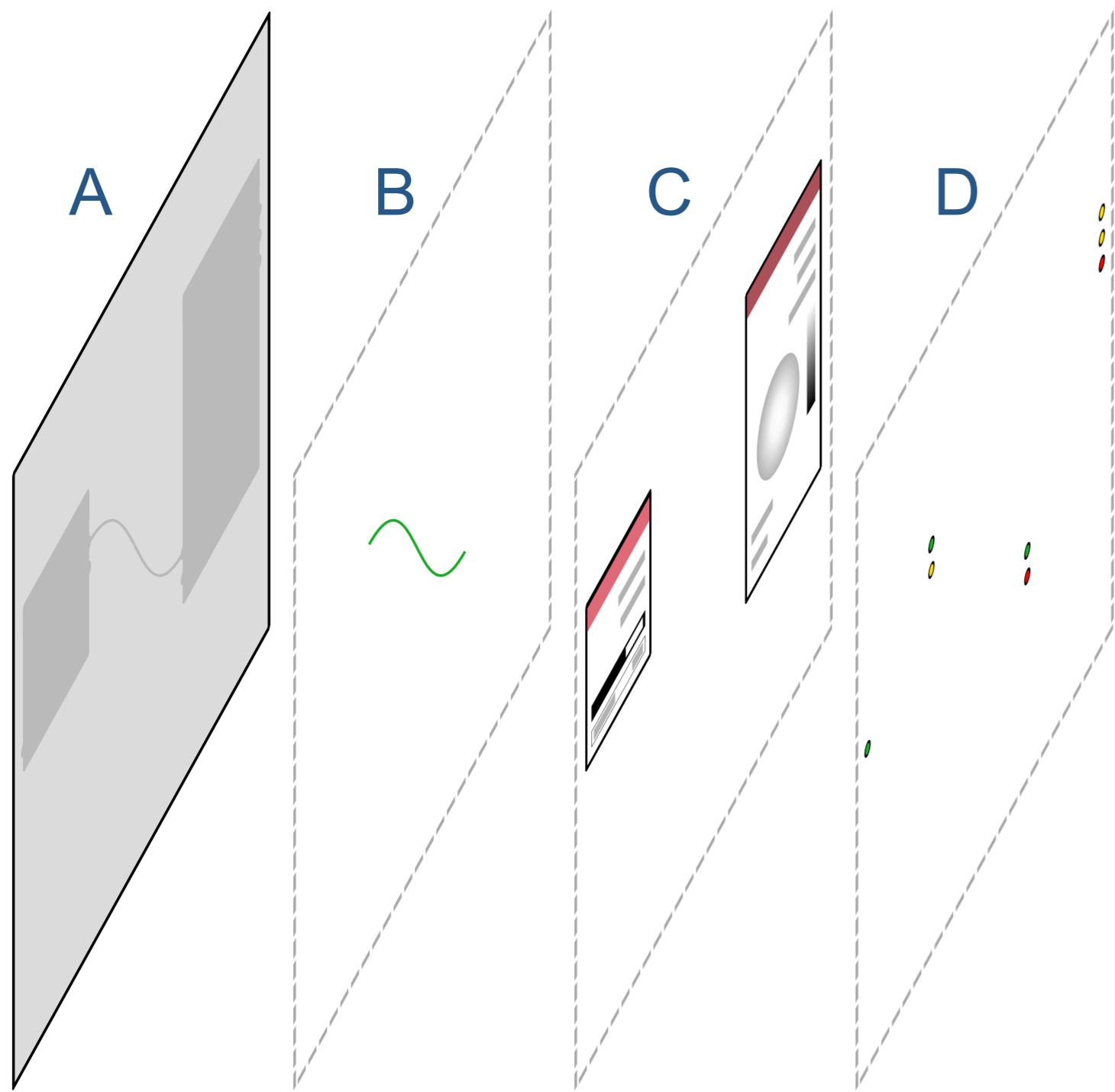
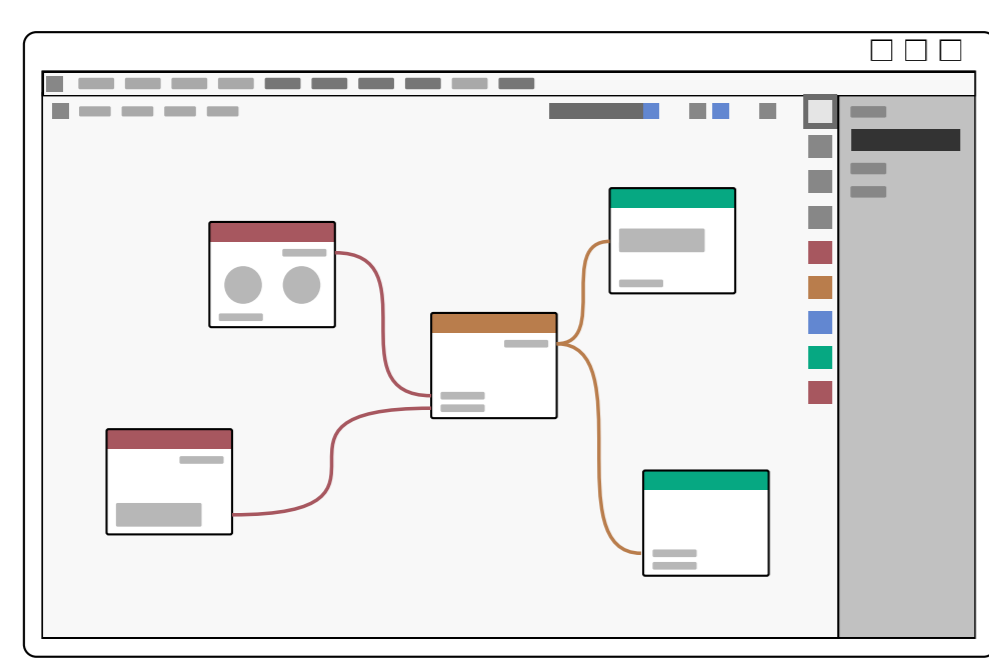
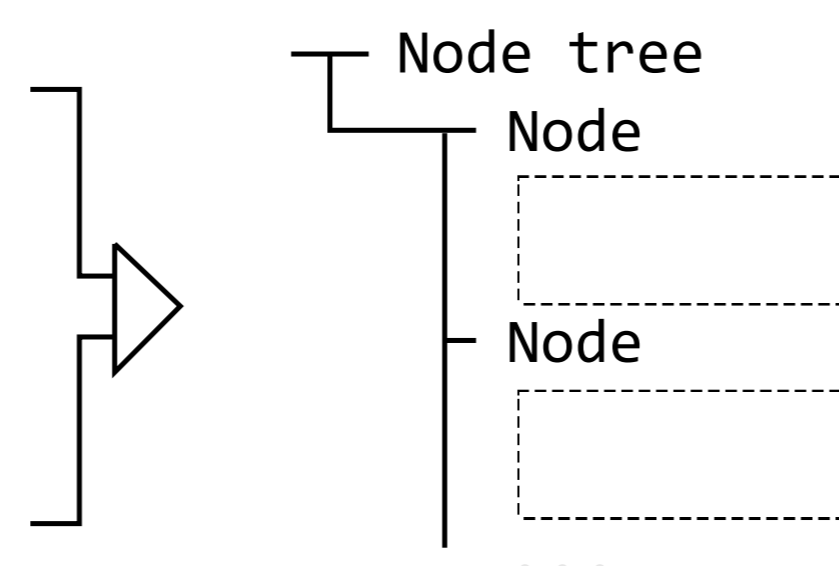


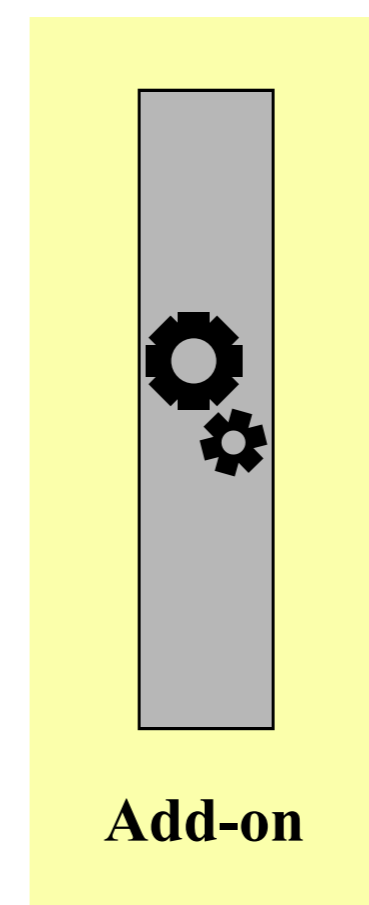
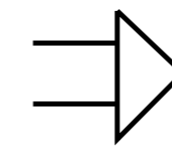
Fig. 1



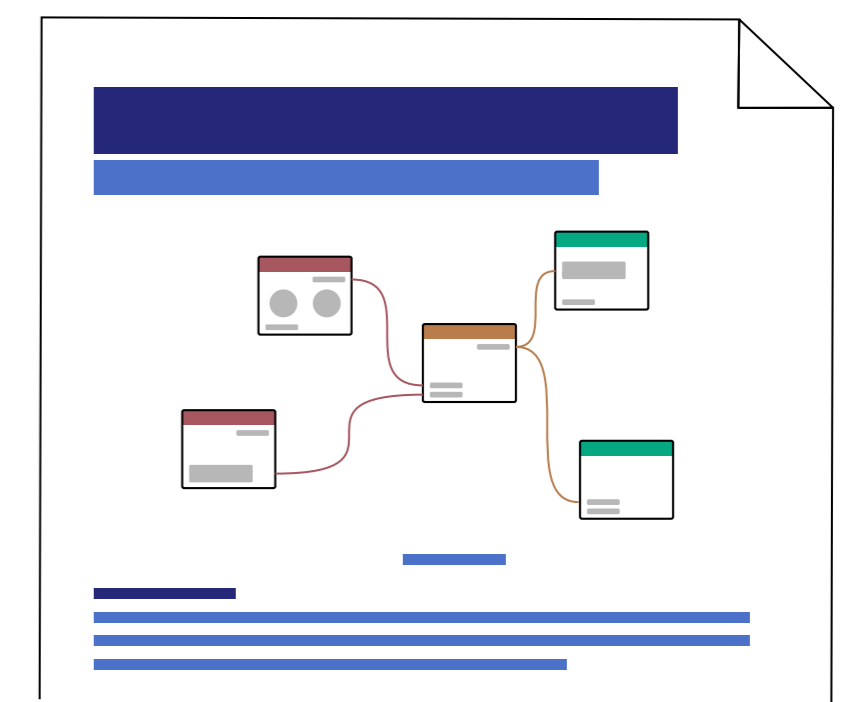
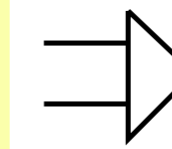
Blender editor



Internal representation



Add-on



SVG image

Fig. 2

USAGE

At time of writing, the add-on is **already being used** for writing Blender-oriented theses and articles, indicating towards the usefulness of such a tool in the academic environment.

While it still requires maintenance as bugs and edge cases show themselves, it is through this usage that the future usefulness of the add-on is secured.

LIMITATIONS

Not every Node is appropriately documented in the *bpy* module, and many need additional specification (part of the add-on) to display properly. Some elements with no informational value have been cut from the visualization entirely.

Conversely, widgets such as the Curve widget don't display all information in Blender, so, for the SVG output, a new look was implemented for them to convey the necessary information.

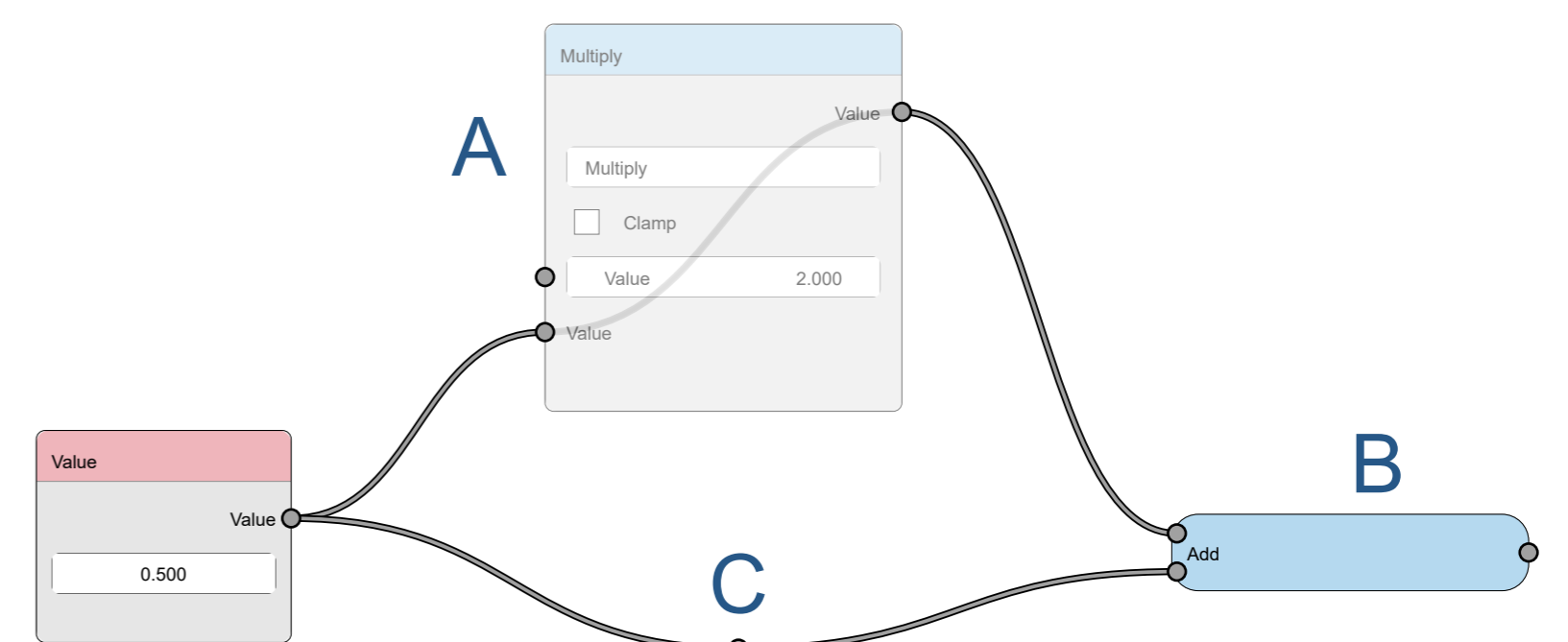


Fig. 3

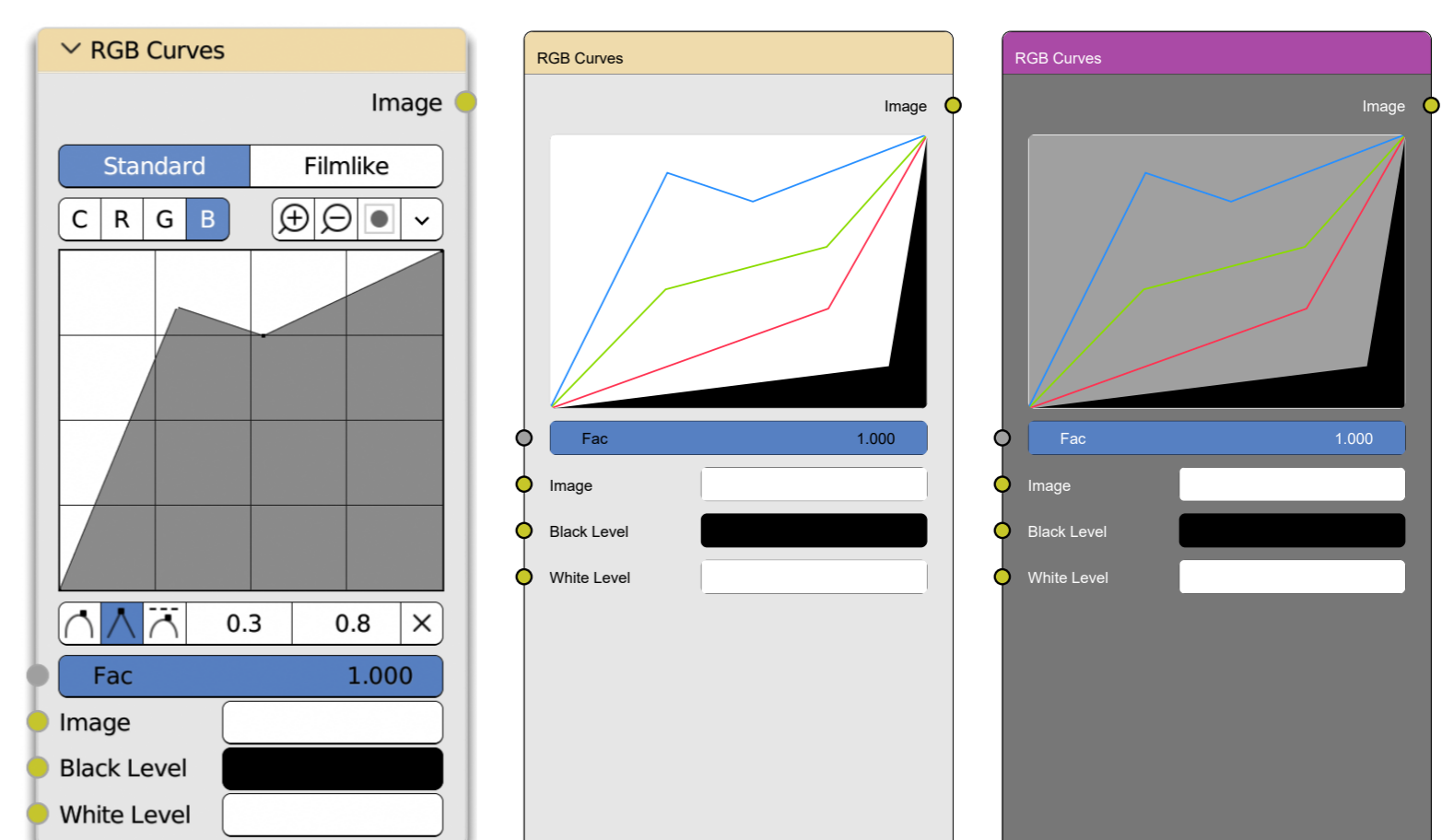


Fig. 4