A visualization framework can be seen as a solution to a specialized data flow problem. Spiegel (Spiegel is the German word for mirror) is constructed out of small, simple components which are easy to understand and to communicate with. The qwerty keyboard and a mouse are still the main input devices used today. The last upgraded mouse was introduced by Apple in 2009; the Magic Mouse. The Magic Mouse is a multi touch mouse and can be used to recognize simple gestures. Computer games and visualization environments are typically played out in a 3D world projected on a 2D screen, or a 3D environment. A 2D mouse is not very useful in a 3D environment. On July 2013 Leap Motion released a device which can be used as a 3 dimensional mouse. The question is how can gesture recognition be used to control a visualization environment.

A visualization program in Spiegel is constructed out of small, simple components which communications endpoints are connected to. The components represent the data types of the visualization system. For example, an input component might represent an incoming 3D data set with a particular coordinate system, while an output component might represent a 2D output display. The components are connected together to form a directed graph, where each component is a node in the graph and each connection between components is an edge. The data flow model is used to implement visualization systems. Spiegel is extremely flexible and allows one to visualize data in any way.

In practice the problem of visualizing high-dimensional data is a very difficult problem. A visualization program is a highly complex application which integrates many different components. It is therefore important to be able to change the visible aspects of an image dynamically. Transparency and color of the object, camera position, camera focus point, camera up-vector, and surface luminance; in other words every visual attribute is controlled by a program. This language, although it has the ability to control all of these components, is not very flexible. The group has developed a language and visualization environment which allows modifications to the visualization parameters. This language, although it has the ability to control all of these components, is very flexible. The result is that it is possible to create a visualization program which is tailored to the needs of a specific application.

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The Ligo Scientific Collaboration (LSC) is a well-organized collaboration of approximately 760 scientists worldwide who have joined together in the search for gravitational waves from the most violent events in the universe, such as the merger of black holes and neutron stars, the explosion of supernovae and the Big Bang.