ILOG Elixir

Georg Sander and The ILOG Elixir team

ILOG SA, 9 rue de Verdun - BP 85, 94253 Gentilly Cedex, France
sander@ilog.fr
http://elixir.ilog.com

1 Introduction

The Adobe technology platform including Adobe© Flex© [2] and Adobe AIR™ [3] deliver portability, high performance and rich graphical UI to internet and desktop applications. ILOG Elixir [1] enhances this platform by adding advanced data visualization displays. It includes ready-to-use schedule displays, map displays, dials, gauges, 3D and radar charts, treemap charts and organization charts. ILOG Elixir is completely integrated with Adobe Flex Builder and fully supports Adobe Flexs data-binding and event models.

Fig. 1. Sample Applications of ILOG Elixir

2   Highlights

Some of the display components are traditional business displays: The charts components display data series in radial or linear manner, optionally with a 3D look. The maps component is suitable for the cartography domain. It allows to import the ESRI Shapefile format, to style the display and to display arbitrary symbols on top of the map. These symbols can be charts, gauges, dials or custom components. The treemap can display large hierarchical data sets for the purpose of detecting data trends and outliers. Treemaps combine data clustering algorithms with advanced rendering techniques to help users identify clusters of particularly significant data. For example, a treemap can be used to depict the health of the global economy with visual attributes tied to a countrys size and gross domestic product (GDP).

Directly related to graph layout technology is the organization chart component. It depicts the interrelationships between people, equipment, or functions. It contains an intelligent tree layout algorithm specialized for this business domain that places the nodes in top-down or tip-over style while optimizing the available space. The component allows zooming, partial views, and dynamic level of details. When changing the partial view or the level of detail, the layout algorithm automatically reorganizes the diagram incrementally to adapt to the new situation.

Furthermore, all ILOG Elixir components display labels and use intelligent label decluttering algorithms to avoid overlaps of labels and to increase the readability of the display. No generic label layout algorithm can be used. Instead, specilialized labeling technology is integrated into the rendering mechanism of the different displays. For instance, the treemap chart allows various label placement options including an automatic visibility control of labels, that is, an optimization algorithm that decides which labels must be displayed depending on the situation.

References

1. Kim, E.: Getting Started with Flex 3, section 7.1: ILOG Elixir. O'Reilly, Sebastopol (2008)
2. Purcell, B., Subramanian, D.: Flex application performance: Tips and techniques for improving client application and server performance, macromedia White Paper (2004)
3. Simmons, A.: Understanding the potential of Adobe Integrated Runtime (AIR). integration New Media, Inc. - White Paper (2008)