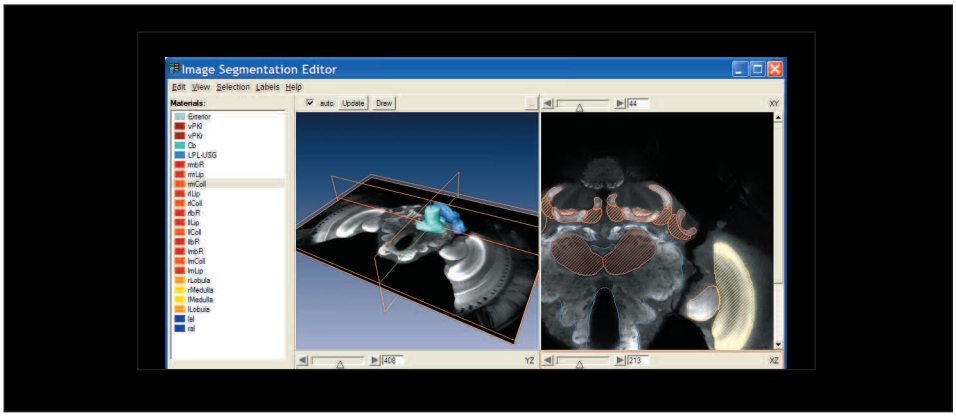
Application Brief

SGI® Visualization Solutions



Amira is developed using Qt by Trolltech.

Silicon Graphics Prism™ Visualization System and Qt® by Trolltech:

Delivering a Groundbreaking Application Development Framework

TROLLTECH®

The Silicon Graphics Prism™ visualization system together with Qt® open source and commercial software by Trolltech delivers a world-leading solution for developing cross-platform visualization applications. With Qt and Silicon Graphics Prism, developers can write robust applications that run natively on Windows®, Linux® and UNIX® with X11, Mac OS X, and Embedded Linux all from a single source code base.

You should consider this solution for your organization if:

- You need to natively target multiple platforms and don't want to have to create and maintain multiple source code bases.
- You want to focus on adding value and innovation to your visualization application instead of spending time and resources on GUI development.
- You want access to the source code to speed up complex debugging processes.
- You want a development framework that supports virtually any X11 system.

A Powerful Team for Application Development

Qt software from Trolltech and Silicon Graphics Prism visualization systems together help you turn your application development processes into a strategic competitive advantage.

Utilizing Qt is the fastest, most powerful way of creating powerful, C++-based cross-platform applications running on Silicon Graphics Prism and other Linux systems. Qt software has been used to build thousands of successful commercial applications worldwide, and is the basis of the open source KDE desktop environment. Trolltech has a dual licensing strategy, offering both commercial and open source software licensing options to developers. The commercial support and the backing of a commercial development organization ensure predictability, risk reduction and product development momentum.

Development teams using Qt experience a boost to their productivity. Qt does not require any additional graphical layer above X11, neither Xt, nor Motif®, nor win32 emulation libraries. It is highly optimized native code that

runs directly on top of the lowest graphical layer, Xlib.

- Qt/X11 fully supports the X Clipboard, X Session Management, remote and multi-head displays. It enables you to write applications that spawn over different physical screens.

- Qt/X11 supports the XDND drag'n'drop protocol, is ICCCM compliant and has basic support for the extended window manager specification.

- Qt/X11 composes virtual Unicode fonts in the common case where no real Unicode fonts are available on a system.

- Qt/X11 ships with a variety of GUI styles including Motif, CDE, MotifPlus, SGI®, and Windows.

- Qt/X11 supports the AT-SPI accessibility API, ensuring usability for users with special needs and Section 508-compliance for Qt applications.

- If available on the target system, Qt/X11 can make use of the following X-Extensions:
  - XSM – X Session Management
  - Xinerama – support for multi-head dis plays with one big virtual screen
  - XRender – the X11 render extensions for advanced features like alpha blending
  - XftFreeType – anit-aliased font support
  - XKB – the X KeyBoard extension

Enabling Platform-independent Development

Qt is a comprehensive C++ application development framework, which includes a class-library and tools for cross-platform development and internationalization. The intuitive Qt API and tools are consistent across all supported platforms, enabling platform-independent application development and deployment.

Supported Platforms

The following platforms are supported by Qt:

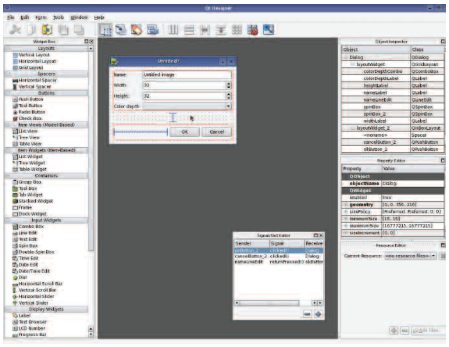
X11
- IRIX® - 6.5.x
- Linux
- AIX® - 5.1 or later
- Embedded Linux
- FreeBSD® - 4.11 RELEASE
- HP-UX® - B.11.xx or later
- OpenBSD®
- Solaris® - 9 or later

Windows
- Windows 98 and ME
- Windows NT (4.0 or later), 2000, and XP

Mac OS X
- Mac OS X (10.2.8 and later)

Configuration Recommendations:

The Silicon Graphics Prism visualization system is based on best-of-breed industry-standard components including 64 bit Linux, Intel® Itanium® 2 processors, and ATI® FireGL™ graphics integrated into the high bandwidth, shared memory, SGI



NUMAflex™ architecture. Silicon Graphics Prism systems are highly scalable so that you can increase your system capabilities to match your requirements. Silicon Graphics Prism systems scale to 16 graphics pipelines, 256 processors, and up to 3TB of shared memory for addressing the largest visualization challenges.

Your ideal Qt and Silicon Graphics Prism development system will depend on your workflow. For most developers, the Silicon Graphics Prism™ Deskside system is the preferred configuration. It offers full binary compatibility with the scalable Silicon Graphics Prism and the SGI® Altix® systems. The entry deskside configuration offers 1 CPU and 1 GPU, and is scalable to 2 CPUs, 2 GPUs, and up to 24GB of memory. Dual Monitor and Dual User configurations are supported in the Deskside system.

For more information:
See Silicon Graphics Prism at
www.sgi.com/products/visualization/prism

See Qt at
www.trolltech.com

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