## Customer Profile

One of the world's oldest and most respected communication technology companies – with thousands of software development professionals and a range of products that serve consumer and business needs.

## Customer Challenges

This company has accumulated a "great wall" of source code through a multitude of projects and company acquisitions. The code has been produced by a number of methodologies using a variety of languages and lifecycle management tools. Internal studies have indicated that a significant amount of functional replication occurs (i.e. teams build components because they are ignorant of existing components). Management has launched initiatives aimed at minimizing development of redundant code and increasing the proportion of development work that will result in strategically significant advantages for the company. The key opportunities / challenges to be addressed:

**Difficulty in mining value from existing code.** At a basic level, this organization wants to actively encourage good coding practices by making good code examples more easily accessible to its developers, and by being able to detect poor or prohibited practices. The organization needs to make finding and promoting re-useable code faster, simpler and measureable. It is also important that code dependencies and shared code components can be accurately tracked across the division's active (deployed) code. It is believed that documentation, metadata and other information related to the source code should be accessed and searched alongside relevant code to aid knowledge transfer.

**Managed use of Open Source code.** The organization is moving some of its deployment stack strategies to Linux. As such, Open Source (OSS) projects based on Linux are becoming more interesting and important to overall development strategies. License, security and OSS quality issues are important concerns however. The company needs to deploy Open Source in a manageable and measurable way – and in form that makes OSS code easily discoverable at both the project and code file level. Currently, there is no easy way to do this.

### Key Challenges

» Improve software development efficiencies, drive down development costs

» Achieve maximum advantage from code and related data

» Make valuable code discoverable and accessible

» Simplify working with Legacy code and code that crosses language and technology boundaries

» Safe and sane use of OS software

**Organization wide auditing.** A recent effort to catalog the company's code assets took multiple developers decades of work and 7 months to complete – and much useful information about the code could not be captured by this manual effort. An important objective is to maintain a unified, comprehensive and readily accessible library of code for appropriate development and management use.

# Why Krugle Enterprise

The company faced several important  technical, process and personnel issues in addressing the challenges listed above.

The code, developers and management are distributed broadly across the planet. A unified, centrally manageable solution is required. Integration with existing development tools and access control methodologies must be seamless and not require changes or maintenance to existing systems.

A number of different development technologies, languages and tools were used to develop the code. Source code management systems include CVS, SVN, Clearcase and in the near future others. It is necessary not only to extract existing code from these systems but also to maintain an accurate point-in-time code inventory "going forward".

Open source code access must be carefully managed to avoid license, quality and stability issues. It must be possible to limit Open Source code access to selected projects and versions. Additionally, it is desirable to monitor which open source projects / files are used and generate appropriate warnings when problematic code licenses are introduced into a project.

### Krugle Enterprise Benefits

» Centralized, searchable access to ALL of organization's code

» Integrated search of code and code related documentation and metadata

» Simple, measurable and controllable access to the most comprehensive and well documented repository of open source code

» High visibility into software evolution across projects

A final, but no less important consideration is that the solution must be easily integrated into the company's developer portal system.

Krugle Enterprise was the only solution that:  could be integrated across the development environment (without any changes to the existing development tools or methodologies), scaled to search all of the organization's code for the large developer population, and provided *accurate* searches on code and code related information.

# Tangible Improvements with Krugle Enterprise

Krugle Enterprise provides unprecedented visibility into the company's code and related information. As a result, developers are able to locate relevant code files for learning and reuse. Utilization of existing code in new development and maintenance activities is increasing significantly.  The company is also starting to use Krugle to identify candidates for component based code methodologies and SOA initiatives.