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Software Compliance Management

Automating License Compliance in the New, Mixed-IP Development World

Executive Summary

The software development industry is undergoing a profound transformation. Over the last ten years new technologies and business models like the Internet and open source software have fundamentally changed how companies develop software.

Increasingly, globally distributed teams of developers are collaborating to assemble software from reusable components and their own proprietary code rather than building applications entirely from scratch. In this environment of composite, mixed intellectual property (IP), or 'mixed-IP', companies are increasingly concerned with keeping control of their own IP and properly managing the origins and obligations associated with the components that they reuse.

Manual methods for managing IP are quickly proving to be insufficient, so leading enterprises are turning to new, automated IP management platforms – called software compliance management systems. These systems help ensure enterprises achieve the business acceleration they want from software reuse, while meeting the stringent requirements of shareholders, regulators, and customers for proper management of company assets and obligations.

To stay competitive in today's software market, or to stay cost-effective in enterprise IT, companies must adopt these new methods for software development. Software compliance management systems are helping to unlock the potential of modular, collaborative development to significantly enhance profitability, reliability and ROI. This allows companies to maximize the value of their intellectual property portfolios, while minimizing the risks of exploiting mixed-IP software development.

Software Compliance Management

- Know what is in the code base
- Control the introduction of licensed materials
- Understand and manage fulfillment of license obligations
- Identify compatibility and collective obligations of combined components
- Establish and manage IP policy across software lifecycle and global teams

A Profound Transformation

Several major trends have enabled companies that develop software to now create their own innovative intellectual property with reusable components rather than on 'reinventing the wheel' each time they develop new applications.

New Internet-based technologies have dramatically accelerated software reuse. Object-oriented languages like Java, highly functional application servers, standard Web browsers and Web servers, interoperability protocols like HTML and XML, and distributed computing infrastructures like Web Services and .Net are enabling development teams to more easily take advantage of the work of others.

Thanks to the Internet, development teams can now be located anywhere in the world. They can both create and publish software components at increasingly low cost and make them available instantly anywhere in the world. And despite being far away, new Internet-based collaboration technologies let them stay in synch, even when working on the same software projects. Companies are taking advantage of these changes to outsource development to where the skills and costs let them maximize their business advantage.

Open Source is Changing the Landscape

The new open source business model is accelerating software reuse by making high quality software building blocks available for "free". Developers are finding advantages in sharing their work with others for the common good. Open source developers are leveraging the Internet to both distribute their work and to provide peer review of the work of others. The result are flexible, high quality software components that can be readily put to use by individuals and companies worldwide.

Because open source software is available in source code, it provides a number of advantages. Developers can customize the work to their own needs and provide their enhancements back to the community. Companies need to rely less on single source software providers for service and can instead fix mission critical bugs themselves or leverage a wide community for support. Finally, because source code is available, developers can study what techniques are used by the experts, and even borrow specific modules or 'snippets' of code to accelerate their own development efforts.

The Open Source Software Revolution

Over the past decade, the proliferation of open source software (OSS), with its distributed, collaborative development processes, has radically changed the way new software is produced. Companies are choosing to incorporate OSS because the model is more effective and efficient than restricting software development solely to in-house staff and proprietary code.

The competitive and business advantages of open source include:

- Extended developer community
- Accelerated product development
- Lower acquisition and support costs
- Faster time to market
- Higher degree of reliability
- Added features and functionality
- Compatibility with industry standards software lifecycle and global teams

Sharing of Intellectual Property Proliferates

As a result of these trends, companies are increasingly working in a mixed-IP environment. Business are seeing significant advantages in sharing software IP and combining their own work with that of others at levels of granularity not previously possible. They are collaborating around common development projects where intellectual property is combined or shared in new ways. And they are increasingly working with other developers that they don't know.

An Explosion in Complexity

So what's the problem? Whether commercial or "free" software, no intellectual property comes without licensing obligations. Companies need to understand and track these obligations when selecting components and throughout the lifecycle of their software assets. Without insight into the composition of software and licensing restrictions, developers, vendors and the enterprise face costly code reviews, redesigns and rework. It can also lead to licensing violations and public and investor relations nightmares.

But with so much reuse going on, traditional procurement methods and development controls are proving to be inadequate to ensure license compliance. Manual methods of tracking software origins and obligations can not keep up with the opportunities presented by rapid application development.

Developers are moving quickly to meet deadlines and are downloading components at record rates. Management and legal review is often an afterthought.

Executives are increasingly asking:

- How can we adopt open source and software reuse methodologies while still retain control of our valuable intellectual property?
- How can we track the origins and obligations of components we use while legally combining with our own IP?
- How can we achieve the benefits of open source and reuse without exposing our company to unnecessary business and legal risks?
- How do we ensure that we meet emerging compliance requirements from customers, regulators and shareholders?

Offshoring and Regulation

These questions become magnified in light of trends towards outsourcing key development activities to external, often offshore, organizations. What's more, in some industries new federal regulations are calling for increased transparency and compliance. The Sarbanes-Oxley Act of 2002, for example, requires

companies to establish and maintain internal controls over the acquisition, use and disposition of intellectual property to satisfy new disclosure standards and reporting requirements.

Industry leaders are finding that "just say no" and "don't ask, don't tell" policies won't win in the long term. They realize that if they are to move quickly to gain the advantages of open source and reuse – and not fall behind more aggressive competitors – they need new automation technologies to help manage software IP and license compliance.

Automating Software Compliance Management

Black Duck Software has pioneered a new category of software called a software compliance management (SCM) system that addresses the licensing and controls needs of companies that are rapidly developing software from open source and commercial components in a mixed-IP environment.

An automated software compliance management process:

- Identifies and tracks open or proprietary software components
- Enables a company to safely embrace open source software
- Sets the proper tone regarding compliance
- Reduces the time and cost of development
- Identifies licensing issues early in development cycle when good options are still available
- Facilitates efficient engagement of legal counsel in review process
- Efficiently tracks compliance all the way through to product deployment or distribution

Risks of Unmanaged Open Source Use

- Loss of control of proprietary IP
- Inadvertent release of proprietary code as open source.
- Exposure to legal action or monetary penalties.
- Unplanned restrictions on distribution and use of software.
- Missed release dates, market windows, or acquisitions
- Costly legal reviews
- Loss of funding or investor confidencesoftware lifecycle and global teams

Software compliance management systems let businesses identify the origins of what is in their code base and control the introduction of licensed materials. They help teams understand the obligations of license materials, and which are compatible, and provides an automated means to manage the fulfillment of those obligations.

Software compliance management systems let enterprises automate license management for all of their software assets – both open and proprietary – for their full lifecycle. They allow companies to establish policies for licensing and reuse, and monitor compliance against those policies by global development teams and outsourcers. These systems provide a platform that enables all the stakeholders – developers, lawyers, executives, product and program managers, and other business decision makers – within a common compliance environment that helps them meet their company's business needs.

Getting Started with Best Practices

A software compliance management program usually begins with establishment of IP management policies and procedures to evaluate code that is acquired from the open source community or licensed from third parties. This is followed by an initial assessment of the current code base and incoming components with subsequent remediation of compliance issues raised in the review.

Once the initial assessment is completed, the real value comes in the implementation of ongoing, automated, auditable controls that enable the company at any time to answer questions regarding the content of its code base and its compliance status.

Black Duck is leading the industry in codifying best practices for software development teams that are concerned with managing intellectual property.

Measurable Business Payback

Software compliance management provides numerous company benefits saving costs, reducing risks, and improving productivity.

Accelerate Software Development – Automated SCM solutions enable developers to safely use open source components on a wide scale, providing quality, highly functional, rich-featured software cost-effectively. With SCM, developers can filter code component selection through established software compliance policies and verify that all code fits corporate licensing guidelines early in the development cycle.

Software Compliance Management Provides Measurable Business Payback.

Accelerate software development.

- Efficiently use resources & assets.
- Mitigate legal, regulatory & compliance risks.
- Avoid costly product delays & rework.

Extensible SCM systems also allow management of in-house and commercial software to enable productive reuse of proprietary software across divisions – while correctly identifying and tracking usage per custom licenses. This can help companies avoid the inadvertent intermingling of proprietary, commercial and open source code.

Measurable return on investment comes from enabling greater developer productivity and software reuse, with payback from reduced development schedules, reduced personnel and development costs, improved time-to-market and predictability of delivery schedules. And by allowing developers to use open source software, there can also be a significant reduction in quality assurance and support costs due to higher reliability.

Efficiently Use Resources and Assets – An automated software compliance management platform allows companies to streamline personnel time and costs for licensing issues and creates a collaborative environment for legal counsel, executives, developers. It enables the maximum reuse of corporate software assets, while eliminating fears of uncontrolled code use, leakage or intermingling.

Software compliance management can simplify due diligence by providing accurate, code provenance, allowing companies to attract funding on the best of terms with a defensible, objective basis for lower investor risk profile. It helps preserve software and company valuations by ruling out hidden obligations, conflicts, and infringements.

Mitigate Legal, Regulatory, and Compliance Risks – Software compliance management enables companies to set and enforce policy consistent with corporate interests. It guides personnel with clearly defined and enforceable policies. With Sarbanes-Oxley regulations and organizations like the the Federal Financial Institutions Examination Council (FFIEC) increasingly recommending documented controls, it is important to build business process substance behind compliance disclosures.

SCM creates an audit trail for legal enforcement and defense and demonstrates a track record that helps validate ownership or proper use. By using SCM platforms, companies can significantly improve confidence in executive disclosures, minimize ‘stop ship’ revenue losses from impaired assets, reduce legal problems, avoid ‘black eyes’ in the press, and maximize shareholder value.

Avoid Costly Product Delays and Rework – By finding and fixing licensing defects early in the development cycle, software compliance management dramatically reduces overall costs. In the traditional manual review process, licensing defects are often found late in the development process resulting in significant reworking and delay. Losses can include additional development

costs and increased time to market, as well as missed market windows. By catching license violations early during development, SCM can eliminate the cost of removing licensing defects at the last minute when products are ready to go out the door.

Develop Software on a Sound Legal Footing

Now with software compliance management technology, companies can achieve the benefits they want from software reuse while ensuring that they properly manage IP origins and obligations. SCM lets developers, marketers, and lawyers collaborate to govern software assets without bogging down development or limiting its possibilities. Whether sourcing components externally or internally, or using open source or commercial binaries, enterprises can be assured that they can know their code and manage compliance on an ongoing basis.

Business can capture decisions they make about their intellectual property in an auditable archive and provide the 'bill of materials' and clean 'bill of health' regarding licensing that their constituents are looking for. Most importantly, they can achieve the competitive benefits of faster, better, cheaper software development – on a sound, legal footing.

Black Duck Software Compliance Management

Black Duck Software is the leading provider of software compliance management solutions that help companies govern how software assets are created, managed, and licensed. Black Duck's protexIP™ software compliance management system helps organizations effectively manage their increasingly complex software licensing obligations. By validating software contents, verifying license compliance, and finding and addressing issues early in the development cycle – or well in advance of a due diligence event – the protexIP platform helps companies manage to IP policies, reduce business risks, complete software projects on time and on budget, and stay on track with their business plans. Black Duck makes the protexIP line available in a suite of offerings on a subscription basis to enterprises, product developers, outsourcers, law firms and other organizations worldwide.

About Black Duck Software

Black Duck Software is the leading provider worldwide of software management solutions that help organizations govern how software assets are created, acquired, managed, and licensed. Black Duck's offerings help businesses take maximum advantage of open source software while at the same time assuring they satisfy the obligations associated with the code used. Black Duck's customer base includes government, military, and commercial enterprises, software developers, outsourcers, law firms, and other organizations worldwide that are concerned with protection of software intellectual property.

Black Duck Software is a global supplier of software management solutions focusing on making code origins and licenses transparent. The company has headquarters in Waltham, Massachusetts has and offices in San Mateo, California; Amsterdam, The Netherlands; London, The United Kingdom; and Hong Kong, China. The company has a global partner network that ranges from the UK, Germany, Sweden and Italy to Japan, Korea, India, Israel, Australia and New Zealand with customers located worldwide.

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