

Intel® Software Development Products
for Intel Platforms and Technologies

Making Webcasts to a Broader Audience Possible

“ The Intel® Integrated Performance Primitives (IPP) has enhanced the iVISTA* application to be more in line with customers' expectations. For example, it enables us to dynamically rescale, in real-time, a video stream without loss of performance. This capability would not be possible without IPP. ”

Leo Volfson, President and Chief Technology Officer, Inetcam, Inc.

Going from a few to many

PC users increasingly rely on real-time networked video and audio to communicate and conduct business. As a result, it's important that software applications you're developing maximize the features of today's cutting edge platforms. Inetcam* utilized the Intel Integrated Performance Primitives (IPP) to significantly enhance the performance and functionality of its iVISTA application. They not only increased the number of simultaneous users that could participate in webcasts, but improved the image processing and dynamic scaling capabilities of iVISTA.

Library software makes it happen

The Intel IPP software library enhances application performance by providing programmers with a variety of image, audio, video, and speech functions for solutions running on the latest Intel architectures. Developers write to a single application programming interface (API), which is optimized for processor-specific features of the Intel® Pentium®, Intel® Xeon™, Intel® Itanium®, Intel® StrongARM® SA-1110 microprocessors, and Intel® XScale™ microarchitecture. Developers no longer need to write processor-specific code. When new Intel processors are introduced, developers simply update and recompile.

Intel IPP supports applications running on Windows* and Linux* operating systems and consists of over 3,000 functions. The ease with which developers can access and incorporate value-added features and performance into their applications significantly reduces engineering costs while speeding up time-to-market. Intel IPP enhances the flexibility of your business.

THE CHALLENGE

Inetcam needed to boost performance

The mission of San Diego-based Inetcam, Inc. (www.inetcam.com) is simple: enable everyone to benefit from personal webcasting technology. Since the introduction of their first product in 1998, Inetcam has been working towards this goal by perfecting their iVISTA software. iVISTA converts any PC equipped with a PC webcam into a “webcasting system” that can produce live broadcasts, peer-to-peer webcasts or be used for video monitoring. The resulting images can be viewed in real-time on virtually any Internet-enabled device: PC, Unix*, Linux*, PocketPC*, Palm*, WAP, i-mode or BREW platform. There are no players or plug-ins to download. And no adjustments that need to be made to viewing devices.

Inetcam wanted to make their solutions as accessible as possible by enabling people to view, hear and share live content from anywhere at anytime by simply typing a URL or personalized web address

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into a web-enabled device. Depending on the application, users could either view a constant or "on-demand" video stream that had been processed and stored as Java® applets.

Inetcam faced several application challenges. Challenge one was enabling the iVISTA software—running on an Intel Pentium III processor-based system—to support considerably more simultaneous user "sessions" across a wider variety of devices.

Challenge two, Inetcam wanted to utilize the new Intel Pentium 4 processor's capabilities without having to rewrite a great deal of processor-specific application code.

Challenge three was to more efficiently handle the innovative yet compute-intensive aspects of iVISTA, which establishes a personal Web server on the host PC for processing, storing and streaming video content.

“The Intel IPP provided a 300% improvement in the number of users who can simultaneously participate in a webcast. In addition, the migration from the Intel Pentium III to the Intel Pentium 4 took only a day.”

Leo Volfson, President and Chief Technology Officer, Inetcam, Inc.

THE ANSWER

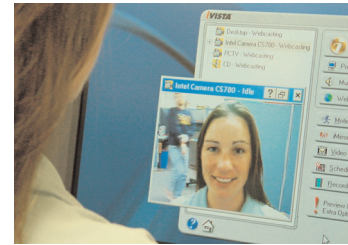
A combination of factors made the difference

In March 2001, Inetcam began incorporating Intel IPP into their iVISTA webcasting and security monitoring solutions. Intel IPP increased the number of possible concurrent users by a factor of three. Five to eight people could participate in a webcast using an Intel Pentium III processor running at 500 MHz. The same software running on a faster 1.5 GHz Intel Pentium 4 processor increased

the number of concurrent users to 15. When the Intel IPP was applied, the number of users jumped to 40 or more.

Inetcam's initial concerns about having to revise application code to support the Intel Pentium 4 processor quickly disappeared. It took only one day for Inetcam to adapt their code for the Pentium 4 processor, then begin testing and analyzing its performance.

Upon the implementation of the Intel IPP, the amount of processing power needed to run the compute-intensive aspects of iVISTA on a host PC significantly dropped, making it possible to multi-task while also using iVISTA.



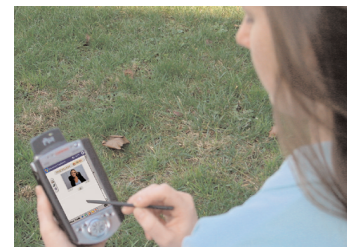
iVISTA webcasting solutions are optimized for Intel Pentium 4 processor multimedia capabilities.

THE ADVANTAGE

Exceeding user expectations

This dramatic performance improvement is opening up new opportunities for Inetcam. The company is developing solutions to network hundreds of cameras together that would enable hundreds of people to interact in real-time at once.

Inetcam President Leo Volfson and his team of developers have recently optimized iVISTA to run on the Intel StrongARM® SA-1110 processor and Intel XScale architecture, which were developed for use in handheld and wireless communication devices such as cell phones, smart PDAs, and web tablets. Using common web viewers, iVISTA automatically scales to accommodate the varying screen sizes and communication bandwidths of these devices. The Intel IPP enhanced these capabilities.



Intel IPP made it possible to dynamically scale iVISTA webcasts for viewing on handheld devices.

Whether developing applications for evolving Internet-enabled devices or optimizing the performance of your applications for a specific platform, Intel IPP offers a solution.

Intel provides both the tools and support to enhance the performance, functionality and efficiency of software applications. Compatible with leading Windows and Linux development environments, Intel software development products are the fastest and easiest way maximize the latest features of Intel processors. Designed for use in the full development cycle, Intel software products include Intel software libraries, Intel Compilers (C++, Fortran for Windows and Linux), Intel® VTune™ Performance Analyzer and Intel® Threading Tools (KAP/Pro Toolset, Assure Thread Analyzer).

The Intel Premier Customer Support Website provides expert technical support, product updates and related downloads for all Intel software products.

Try or buy the Intel IPP, visit: www.intel.com/software/products

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Support.



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