Surf Communication Solutions OnSurf and IBM BladeCenter using advanced DSP for video delivery to mobile devices

Highlights

- ***Surf Communications Solutions can provide real-time video adaptation to maximize device capabilities to increase service adoption and usage***
- ***Simplified Content Management maintaining a single copy of video content (file or live stream) leading to a more cost-effective content management solution***
- ***IBM BladeCenter family provides a scalable, open standards based platform for next generation network applications***

The success of many wireless service providers can be seen with many wireless markets reaching saturation and in some cases even exceeding 100% mobile penetration. This increasing competition among wireless providers has lead to declining ARPU in many regions. Mobile video represents a huge opportunity for wireless service providers to differentiate their offerings and counter this declining ARPU trend by stimulating use of higher-ARPU services by subscribers.

To take advantage of this opportunity, service providers need to be able to deliver attractive content to their subscribers similar to what is available in any other channel, whether it be cable, satellite, TV or the Internet. However, the majority of video content has been specifically optimized for television or PC viewing and typically not optimized for mobile usage with limited available bandwidth. Successful deployments of mobile video requires the adaptation of video content to ensure compatibility across various different devices.

Surf Communications Solutions has developed OnSurf a carrier-grade, high-density and scalable video delivery platform featuring streaming with real-time content adaption to deliver any video content to any handset. By utilizing the IBM BladeCenter and the IBM PCI Expansion Unit, OnSurf performs real-time video content adaptation with high efficiency. It delivers superb video quality and avoids the need to duplicate the source content off-line in different formats to match different handsets. The dynamic bit rate adaption process handles fluctuating mobile network conditions while maintaining service continuity.

OnSurf can provide unique real-time video enhancement to overlay the original video source with banners, logo, text, alpha-blending and video in/on video. Video content can originate from websites in HTTP or RTSP formats, from local or network storage, from Content Delivery Networks (CDNs) or live video sources. OnSurf can optimize the transport protocol, video codec and format/size to improve the subscriber's experience based on the capabilities of the mobile device.

"OnSurf provide our customers the opportunity for new and increased revenues streams by diversifying their offerings with innovative video services. Running on the IBM BladeCenter means our customers have the performance, high-availability and scalability required for carrier-class, mission critical service delivery."

— Ilan Weizman
Vice President, Marketing
Surf Communication Solutions

This combined solution enables the delivery of many advanced video capabilities, including:

- *Superb video quality: Utilizing advanced, real-time video encoding technology, such as H.264 and MPEG4.*
- *Realtime transcoding and resizing from supported formats and codecs such as WMV, H.264, MPEG4 and other popular codecs to 3GP standard, while matching the best video capabilities of any handset.*
- *On-the-fly bit rate adaptation to accommodate handset capabilities and fluctuating mobile network conditions.*
- *Real-time protocol conversion from the source network to the delivery network.*
- *Simplified content management: Only a single copy of content (file or stream) need be maintained, as media is manipulated on-the-fly to match different handsets.*
- *Innovative video toolbox: Enables any type of overlay on video in real-time (logo, banners, text, etc.) and support for pre, mid and post-roll ad insertion.*
- *Service personalization and targeting capabilities: Serves different ads to different users watching the same content*
- *Flexible integration: OnSurf uses industry standard scripting language to allow easy integration with external services, such as subscriber repository, billing systems, content management systems and application/ad servers.*
- *Best price-performance ratio: 10 times the performance as compared to common software based solutions (x86 architecture) at the same power consumption and rack space*

By harnessing the power of the OnSurf solution and IBM BladeCenter rich telecommunications features and functionality, any mobile operator offering streaming content can enjoy additional revenue streams quickly and cost effectively by delivering mobile-ready, premium video content and targeted, interactive advertising to thousands of viewers simultaneously.

IBM BladeCenter family — the IT and network convergence platform

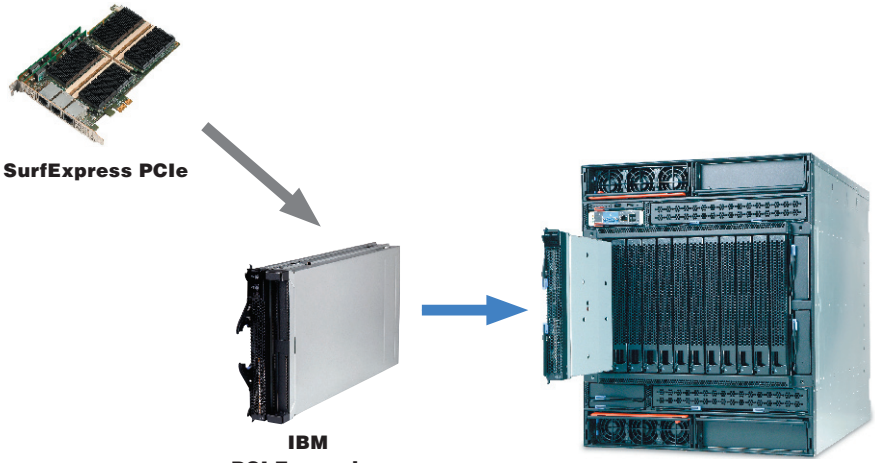
The IBM BladeCenter T chassis provides hardware redundancy (power supply, I/O modules, management modules, L2 switching, mid-plane, etc.) thereby reducing potential points of failure in the solution.

The IBM BladeCenter is an advanced blade system which integrates servers, storage and networking into a single chassis — yielding significant simplification, improved density and potential TCO savings . A single family of common server blades, storage, I/O, switches and networking modules are fully supported and interchangeable across the family of BladeCenter chassis. The IBM BladeCenter chassis is designed as the ideal solution for data center deployments. The IBM BladeCenter H is for high performance computing platform, while the IBM BladeCenter T chassis is specifically designed for telecom central office deployments.

The new, IBM BladeCenter HT — a new, telecom optimized version of the BladeCenter H — opens new market opportunities with a new and powerful NGN platform ideally suited for telecom equipment and service providers.

The SurfExpress/PCIe is a modular PCI Express form factor DSP multimedia processing board providing a complete media processing solution for audio, video, modem and fax.

A paired blade server and PCI Expansion Unit can accommodate 2 SurfExpress boards with up to 16 DSPs and support up to 1000 concurrent video sessions



Source: Surf Communications Solutions

The IBM BladeCenter T and BladeCenter HT deliver rich telecommunications features and functionality, including fault-tolerant capabilities, hot-swappable redundant DC or AC power supplies and cooling, and built-in systems management resources. The rigorous Network Equipment Building System (NEBS) Level 3 and European Telecommunications Standard Institute (ETSI) outline requirements typical of telecom central office environments in the areas of electromagnetic compatibility, thermal robustness, fire resistance, earthquake and office vibration resistance, transportation and handling durability, acoustics and illumination, and airborne contaminant resistance. The IBM BladeCenter T and BladeCenter HT chassis meet the NEBS Level 3 / ETSI requirements[1].

Surf Communications Solutions and IBM: a powerful combination

The combination of Surf Communications Solutions and the IBM BladeCenter family delivers the performance, reliability and affordability demanded by mission critical telecommunications applications. The IBM BladeCenter is the ideal platform for the deployment of these services providing a single platform to help reduce operating costs and complexity.

For more information

Learn how IBM Systems can help your company achieve more revenue and reduce your costs, while helping you keep your profitable customers.

Have questions? Contact the IBM Telecommunications team today on how we can help you take advantage of our extensive industry expertise. Please visit us on the web at:

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For more information about Surf Communications Solutions, visit:

Surf-com.com

IBM Systems and Technology Group
Department XVXA
3039 Cornwallis Road
Research Triangle Park, NC
U.S.A., 27709

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[1] For additional details, please refer to Underwriter's Laboratory (UL) certified NEBS Level 3 / ETSI test report.

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