

MARKETING WHITEPAPER:

Introduction to [Company][®]

Streaming Content Technology and Services

Prepared by:

Robert Heuer, Consultant
Studio1312.com

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Contents

- Company Overview 3
 - How It Works 3
 - Who Uses [Company]? 4
 - Why Use [Company]? 4
- Program and Service Offerings 6
 - On-Demand Streaming Media Delivery 6
 - Live Streaming Media Delivery 7
 - Digital Media Encoding 8
 - Media Reporting 8
- About [Company] Technology 9
- Conclusion..... 9
 - Summary of Benefits and Features11
 - Want to Learn More?11

Company Overview

[Company] is a leading provider of online streaming media hosting and delivery, content encoding, and related services. Located in the heart of Seattle, with a new mirror site in Atlanta and a second mirror site planned for Europe (11/02), [Company] provides media delivery services for over 2,000 businesses and organizations.

By integrating popular media formats with [Company]'s proprietary technologies, we empower our customers with advanced capabilities to play and manage audio, video and multimedia content over the Internet.

This document describes [Company]'s technologies and its benefits, as well as our services and programs:

On-Demand Streaming Media Delivery

Let visitors to your web site view product and service demos, training and informational videos, or any other streaming content you choose to make available.

Live Streaming Media Delivery

Broadcast meetings, presentations, concerts, and other live events to your online community.

Non-Streaming Media Delivery

In addition to streaming media, [Company] can host and deliver high-speed content access to your users in virtually any other format, including image files or any other file types you want to deliver.

Digital Media Encoding

Send us content you want to stream but don't have available in a stream-ready format, and we will help make the translation.

Content Management Reporting

Receive regular, detailed updates about the traffic on your site as it relates to streaming content: what is viewed, how often, how many times, what percentage per clip, and other helpful online business planning metrics.

Affiliate and Referral Programs

Become a [Company] affiliate or referral partner and leverage our technology by rebranding it for your own site, or enhance your revenue by referring your visitors to sites that use our services.

These elements combine to make [Company] the right choice for meeting your online media delivery needs.

How It Works

[Company] hosts all of its streaming media services and other content delivery services on an array of streaming servers and Storage Area Networks (SAN). When you open an account and upload your media to our servers, all streaming traffic through your web site is routed through us, and delivered rapidly back to each visitor who initiates a request.

ART

Who Uses [Company]?

Anyone with a web site can become a [Company] customer. Over 2,000 businesses, organizations and consumers use [Company] to deliver a variety of content to their online communities, from educational seminars and sporting events to Web-based live and on-demand entertainment.

Our customers range from Fortune 100 companies to non-profit organizations and hobbyists.

Why Use [Company]?

BUSINESS BENEFITS

Depending on the nature of your business, you can benefit from our services in multiple ways:

Improve the Visibility of your Web-based offerings:

- Offer live-motion training classes to your employees, customers or partners.
- Generate more visual excitement from your existing web site and its services.
- Encourage more community participation in your web site through streaming services.
- Host online meetings, live announcements, or other events that will promote better awareness of your service or product offerings.

Improve Your Return on Investment:

- Upgrade your technology, maximize uptime, and optimize the integrity of your customer service by outsourcing to a high-quality, core competency streaming media service provider.
- Through outsourcing, leverage the benefits of cutting-edge technologies at a fraction of the cost of deploying and managing such services internally.

Generate revenue:

- Cultivate new revenue streams for your business by charging customers to stream or download content from your web site.
- Host films, concerts or other events that will command an "admission" price.
- Use a digital "movie" to illustrate and promote your organization's products and services.
- Become a [Company] Affiliate and re-brand [Company]'s technology for your benefit.

UNIVERSAL COMPATIBILITY

[Company]'s services use all of the streaming media industry's most popular formats:

- RealNetworks' RealMedia
- Microsoft's Windows Media
- Apple's QuickTime Media
- MP3
- ClipStream (Java player free streaming)

These formats are integrated with [Company]'s proprietary linking technology and online management tools to provide customers with easy, reliable streaming services and online content management.

SUPERIOR TECHNOLOGY

[Company]'s technology includes many features and benefits:

- [Company]'s **online management system** serves as its core service offering, which enables customers to manage and deliver virtually any media type through a single account.
- [Company]'s **linking technology** (patent pending) provides a foundation for simplifying online content delivery by not having to learn each format's proprietary linking method.
- Working with InterNAP's network, we use an advanced "**Synchronous-When-Optimal**" **routing service** to deliver media around the congested public and private exchange points on the Internet, with "one-hop" connectivity to nearly every major Internet backbone in the world.

- The **modular architecture** of [Company]'s Streaming Operations Center places media on a system that enables maximum uptime through the use of multiple replicated hubs, Global DNS routing, and load-balancing technologies.
- [Company]'s streaming operations are based upon multiple, multi-terabyte **scalable Storage Area Networks** incorporating Fibre Channel architecture and robust data backup systems, which maximizes data transfer speeds while preserving high levels of system integrity.
- The **automation** of [Company]'s system enables us to serve large volumes of customers with minimal cost, thereby empowering small businesses with accessibility to high quality content delivery services at affordable prices.

Program and Service Offerings

At the core of [Company] are the services and programs we offer to our customers, and the benefits we provide around these business elements to help make your content delivery successful. The following sections describe these programs and services in detail. To learn more, visit us at [www.\[Company\].com](http://www.[Company].com).

On-Demand Streaming Media Delivery

[Company] On-Demand Delivery lets your customers view streaming content whenever they choose, at the click of a button on your web site. This is [Company]'s most popular service, and the cornerstone of our online streaming media capabilities.

To make this service as powerful and easy-to-use as possible, [Company] provides advanced capabilities and robust online management tools. From a single account, you can deploy your on-demand streaming solution, as well as manage and track performance for both streaming and progressive downloads.

The many features of [Company] On-Demand Delivery include:

Universal format compatibility.

[Company] supports the following streaming media types from one account: RealMedia, Windows Media, QuickTime, Java & MP3.

Java streaming ability.

Java Streaming enables viewers to watch your media without having a media player installed. Viewers are able to listen and watch media that plays in their Web browser.

"Progressive download" option.

Progressive downloads provide an alternative way to deliver media types like MPEG, Flash, QuickTime, RealMedia, Windows Media and digital images over the Internet. With Progressive Downloads, the media is downloaded by the viewer with playback occurring while the media is being downloaded.

24x7 Account Access.

Customers can manage their media account online, including upgrade, downgrade, content management, support and online media reports. Customers have both Web and FTP access for their content.

Free technical support.

[Company]'s knowledgeable team is available to help you with your media management needs. Anytime you have questions, feel free to call us at 206-709-2394, e-mail [support@\[Company\].com](mailto:support@[Company].com) or visit our Support section online at [www.\[Company\].com](http://www.[Company].com).

Digital Media Reporting.

Each [Company] account includes our basic and monthly media report, which lets you see how much data has transferred, which clips are popular and how long people are viewing your clips. The previous three months, broken down by month, are available online for viewing. For more robust reporting, we offer several advanced reporting options.

TOOLS AND TECHNOLOGIES

[Company] Easy Link Technology

[Company]'s easy link technology enables customers to link to all major streaming media formats through a single, simple hyperlink without sacrificing quality in delivery, features or capability. With [Company]'s easy link technology, [Company] has eliminated the largest obstacle for its streaming media clients.

Pre-clip and post-clip editing

A component of [Company]'s easy link technology allows you to easily insert pre-clips and post-clips into streaming media files, even if the media files reside in different accounts. Currently, this capability is only available for Windows Media.

Streaming Calculator

[Company] media accounts include a Streaming Calculator to assist you in formulating the size of your media files. The Streaming Calculator will help you decide which [Company] package best suits you. Our free streaming calculator can be downloaded directly from our web site.

Live Streaming Media Delivery

Imagine being able to stream live content to your web site's customers, everywhere at the same time, all around the world. Broadcasting live on the internet using [Company] Live Streaming Delivery brings your live content instantly and affordably to all viewers. Using this service, you can conduct multi-site corporate meetings, broadcast live concerts, host your own radio or TV stations, or any other live content stream.

Most Live Media Delivery services are focused on the following service types:

Live events.

Corporate meetings, concerts and product releases can all be delivered using [Company], and are available in RealMedia and Windows Media formats. All events include a media report.

Live teleconference.

[Company] enables you to Web cast your telephone conference calls over the Internet. Use this service type for streaming company events, such as earning reports, news, marketing, and more.

24/7 delivery.

Whether it is your primary means of delivery or secondary to expand your current coverage, broadcasting live 24/7 is a cost effective solution to reaching large audiences worldwide. Broadcast your radio station or even a web camera using our 24/7 package.

Live 24/7 packages are available in Windows Media only. All packages include media reports.

SOFTWARE REQUIREMENTS

To broadcast live, your audio signal is fed to an audio and/or video capture card on the encoding computer. Next, the encoding software compresses this digital signal into a live stream for immediate broadcast. The compressed audio/video is sent to [Company] via the Internet, and is then accessed by multiple end-users from their personal computers or other personal electronic devices.

REQUIREMENTS

Hardware, software, and encoding requirements:

- Encoding tools - can be downloaded for free from various software companies:
 - Microsoft - Windows Media Tools (free)
 - RealNetworks - RealProducer basic (free) & RealProducer Plus (fee-based)
- Operating System Windows 95, 98, 2000, ME (only when used with a video capture card)
- Processor Pentium III 300 Mhz
- Memory 32 MB RAM
- Video capture card

Connectivity and transmission requirements:

- Secure bandwidth (dedicated line)
- Static IP address (recommended)
- Access through firewalls using a Network Administrator-assigned port
- Appropriately sized point-to-point internet connection (recommended)
- Upstream bandwidth of sufficient secured connection speed to send the encoded stream

Note:

If your environment does not meet these minimum requirements, contact [Company] Professional Services Division at (206) 709-2394 to request this service using [Company] engineers and equipment.

Digital Media Encoding

Before you can stream your content, it must be encoded in a stream-ready format. This is a straightforward process that requires special software, which you might or might not elect to keep and perform in-house.

[Company] offers encoding services in all formats (RealMedia, Windows Media, QuickTime, Java & MP3) for all bit rates. The source can be an analog or digital tape, live feed or a file on a CD, DVD or hard drive. We will encode your media at the optimal bitrates and place the encoded media in your [Company] account.

The following sections provide details on some special; considerations for digital media encoding:

CAPTURING A TAPE

If the source you are encoding is a cassette tape or an audio CD, it must be captured onto your hard drive before it can be encoded. Capturing a tape requires capture software and hardware for the audio and video. When capturing media, it often needs to be "cleaned up." Sometimes audio will need to be normalized and the video will require adjustments such as inverse-telecine, de-interlace or gama correction. Once the media is captured, adjusted and saved into a digital format, it can be encoded.

CONNECTION SPEEDS

When encoding, you need to know what your target audience's connection speed will be. Many attributes of your encode will depend on your target audience's connection, such as bit rate, frames per second (fps) , frame size, key frames and codecs. Bit rate is usually measured in kilobits per second (Kbps) and is the data rate of the file. The slower the connection, the lower the bit rate your encode needs to be.

Bit rates typically range from 20Kbps for a 28.8 modem to 350-450Kbps for high end broadband connections. Frames per second is the frame rate of your movie and only applies to video. For low bit rate encodes, the frame rate is reduced to maintain image quality since you are working within a limited data rate. Frame size is the height and width attributes of your movie and only applies to video. Generally, a smaller frame size is used for lower bit rate encodes to maintain the crispness of the images.

KEYFRAMES AND CODECS

Keyframes are specific frames in the movie that refresh all the details of current image. Keyframes are used because encoding codecs perform part of their compression by only changing the pixels that change over time and ignoring the ones that don't. The codec is the compression/decompression algorithm used to compress the audio/video.

If you expect your audience to have older media players, you might choose older codecs. If you do choose the latest codecs, it will require your audience to have the latest players/codecs installed.

Media Reporting

[Company] currently offers four reporting packages: Basic, Month-to-Day, Monthly, and Monthly Plus. These reports help you quantify and adjust your web site's streaming-based traffic.

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About [Company] Technology

[Company]'s technology builds the foundation for our high performance and great value. We use the industry's most advanced technologies, combined with a high-performance infrastructure managed by our highly trained technical staff.

The following sections describe the various components of [Company] technology.

GLOBAL DNS DISTRIBUTED NETWORK

Our Global DNS network distributes your end-viewers to the hub best positioned to maximize the quality of their playback. Also, as your content is fully replicated on multiple hubs (not temporarily stored in cache servers as many competing services will do), service integrity is optimized: In the event that one hub shuts down, traffic is automatically routed to the other hub.

[Company] currently operates two fully replicated hubs: one on the US West coast in Seattle, and the other on the US East coast in Atlanta. Our fully-replicated European hub is slated for operations later in 2002.

INTELLIGENT ROUTING

Through [Company]'s relationship with InterNAP, our customers realize the most advanced technologies in intelligent routing, including InterNAP's Dynamic Symmetric-When-Optimal routing, managed through its Assimilator technologies. InterNAP operates multiple measuring agents throughout the Internet that send data back to its routers, providing instant data re-routing capabilities. This provides timely snapshots of the Internet, enabling your content to bypass Internet congestion.

But a Global Distributed Network is of little value if each hub is only connected to the Internet through a few backbones, as is the case with some of our competitors. At [Company], each of our hubs are directly connected to nearly every major backbone carrier, providing a wide range of options for InterNAP's data routing technologies to accelerate playback performance of your content, and thereby significantly improving performance. Through InterNAP, [Company]'s services have accessibility to the industry's largest managed hubs on the Internet, enabling us to easily increase data transfer capacity upon demand.

LOAD-BALANCING TECHNOLOGY

Not only does [Company] operate multiple hubs, but each hub operates multiple servers of each format that are load-balanced to optimize service uptime. If a server fails or its processors become overburden, our load-balancers route traffic onto other servers better optimized to provide content playback. [Company] load-balances not only our content servers, but also our data and Web servers, improving the accessibility of supplementary information and supporting services.

FIBER-CHANNEL STORAGE AREA NETWORK

To maximize data transfer speeds within our systems, as well as to optimize data uptime and data integrity, [Company] deploys Fiber-channel Storage Area Network (SAN) technology at each of its hubs. These hubs also use RAID 5 security and high powered disk drives with rapid seek-times. These sophisticated systems mean that [Company] can easily scale its data storage capabilities simply by dropping in trays of disk drives when needed. The separate SAN system frees our servers from having to extrapolate data, enabling them to focus their CPU processing power on serving their main applications, thereby improving performance.

REDUNDANT FIBER-CHANNEL STORAGE AREA NETWORK

Have you ever tried to perform a data restoration from tape backup systems? When you manage terabytes of data, even the most sophisticated data libraries can take days to restore this kind of capacity. As a result, [Company] operates a redundant SAN that provides data replication at certain timed frequencies. Should a catastrophic failure occur, [Company] retains the ability to move its backup up SAN online to provide temporary service while the tape backup libraries are restoring data to the main systems under repair.

DATA BACKUP LIBRARIES

[Company] maintains automated robotic systems that self-manage data backups across many archival digital tapes.

ONLINE ACCOUNT MANAGEMENT

[Company] enables customers to manage and deploy their streaming media from an online console control panel. This control panel empowers customers with many features and capabilities to manage and modify their account and content data.

MEDIA REPORTS SYSTEM

Streaming media data is logged quite differently than Web site traffic data, and each streaming media format logs its data differently. As a result, [Company] enables customers to have media reporting data consolidated from all formats into easy-to-read, online reports. Many options are available to sort and filter reporting data through a variety of factors to provide quality statistics of content served.

LINK SERVERS

As the streaming media industry evolved, each streaming format developed its own proprietary linking methods. These methods require the creation and management of separate reference files that reside on Web servers. This process also requires Internet Service Providers (ISP) to properly configure the MIME types on their Web servers. As a result, linking became a difficult, hit-and-miss process for all involved.

To overcome the difficulty our customers experienced in linking their media, [Company] created a robust new patent-pending technology that now simplifies the linking process. Our easy link technology provides customers with a standard, simple hyperlink for linking their streaming media to Web pages and e-mail, while preserving the full integrity for each media format.

Conclusion

Our technology and services make [Company] the right choice for your online media delivery requirements.

Summary of Benefits and Features

FLEXIBLE OFFERINGS

- Works with all web sites
- Both LIVE and ON-DEMAND streaming media delivery available
- Universal format compatibility: RealMedia, Windows Media, QuickTime, Java and MP3
- Progressive download and other non-streaming options
- Full media reporting services
- Continual service enhancements

COST-EFFECTIVE SERVICES

- Wide range of packages
- Easy account upgrade/downgrade ability
- Flexible billing options
- No setup fees

POWERFUL TECHNOLOGY

- Distributed network
- Intelligent routing
- Direct connectivity to most major Internet backbones
- Scalable architecture
- Load-balanced servers
- Less rebuffering of media
- Easy media deployment using [Company] easy link technology
- Pre-clip/Post-clip auto-insertion

EASY-TO-USE

- 24/7 online account management
- FTP and Web access options
- Free specialized technical support
- Optional service level agreements

Want to Learn More?

[Company] offers a FREE 15-day evaluation account. This evaluation allows you to stream QuickTime, RealMedia, Windows Media, Java and MP3 from one account.

Your free evaluation account includes:

- 50 MB of media storage
- 400 MB of data transfer*
- Web-based account management
- Online media reports
- Free technical support
- Automatic expiration

To sign up for your free evaluation account, visit our web site at [www.\[Company\].com](http://www.[Company].com).

You can also contact [Company] by phone for a consultation: (206) 709-2394.