

Introduction to PlayStream®

Streaming Content Technology and Services



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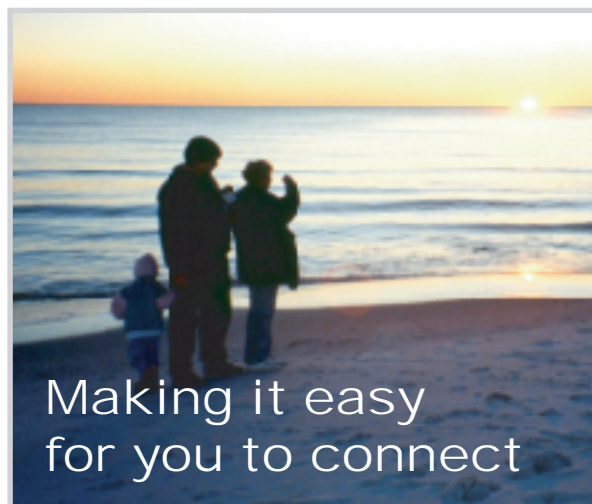


Powering The Way You Communicate

Company Overview	3
How It Works	3
Who Uses PlayStream?	4
Why Use PlayStream?	4
Program and Service Offerings	5
On-Demand Media Delivery	5
Live Streaming Media Delivery	5
Media Security	6
Media Encoding	6
Media Reporting	6
About PlayStream Technology	7
PlayStream Structural System Diagram	8
Conclusion	9
Summary of Benefits and Features	9
Want to Learn More?	9
Contact	10

TABLE OF CONTENTS

COMPANY OVERVIEW



PlayStream 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 sited planned for Europe, PlayStream provides media delivery services for thousands of businesses and organizations.

By integrating popular media formats with PlayStream'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 PlayStream's technologies and its benefits, as well as our services and programs:

On-Demand 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.

In addition to streaming media, PlayStream 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. We use a "progressive download" option to accomplish this function for our customers.

Live Streaming Media Delivery

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

Digital Rights Management

Protect your material from unauthorized access by using Microsoft's® Windows Media Player® Digital Rights Management 9 series technologies to encrypt your content. You decide who gets to see it, who gets to save it and how often it's viewed.

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.

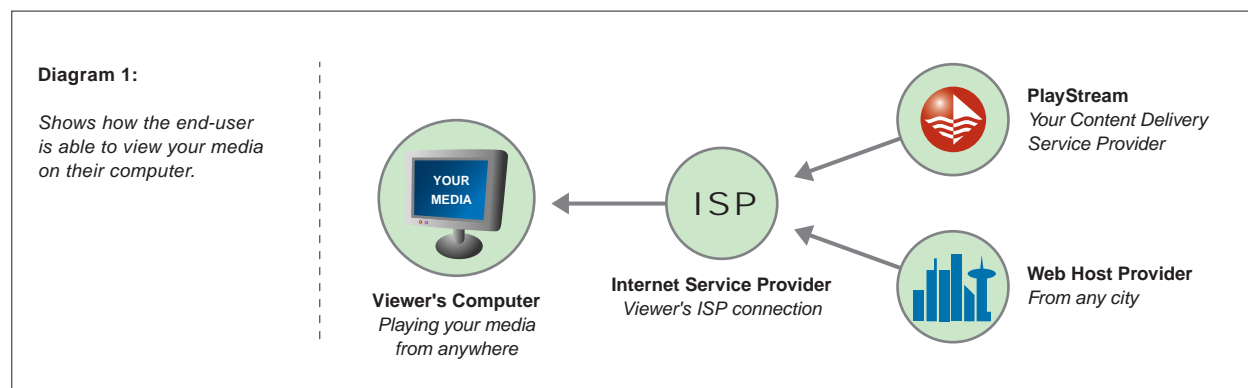
Media Reporting

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

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

HOW IT WORKS

PlayStream 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. (See diagram 1).



COMPANY OVERVIEW

WHO USES PLAYSTREAM

Anyone with a Web site can become a PlayStream customer. Thousands of businesses, organizations and consumers use PlayStream 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 PLAYSTREAM

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.
- Use a digital "movie" to illustrate and promote your organization's products and services.

Improve your return on investment

- Upgrade your technology, maximize uptime, and optimize the integrity of your service by outsourcing to a high-quality, core competency streaming media service provider.
- Through outsourcing, keep up with the latest technologies and leverage the benefits of cutting-edge technologies at a fraction of the cost of deploying and managing such services internally.
- Protect your investment with Digital Rights Management. Prevent unauthorized distribution of your media. Ensure that only the people you want to use your content can access it.

Generate revenue

- Become a PlayStream Affiliate and re-brand PlayStream's services for your benefit.
- Sell and integrate streaming advertising with your streaming content.

Universal Compatibility

PlayStream's services use all of the streaming media industry's most popular formats:

- RealNetworks' RealMedia®
- Microsoft's Windows Media®
- Apple's QuickTime® Media
- MP3/MPEG
- Java player free streaming

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

Superior Technology

PlayStream's technology includes many features and benefits:

- PlayStream's online management system enables customers to manage and deliver virtually any media type through a single account.
- PlayStream's linking technology (patent pending) provides a foundation for simplifying online content delivery by not having to learn each format's proprietary linking method.
- Microsoft's® Windows Media Player® Digital Rights Management technologies allows PlayStream to provide security solutions for On-Demand and Live Streaming. Protect your content with just a few mouse clicks.
- PlayStream employs intelligent routing through its distributed Network and routing technology partners that 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 network architecture of PlayStream's Streaming Operations Center places media on a system that enables maximum uptime through the use of fully replicated hubs, Global DNS routing, and load-balancing technologies.
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- PlayStream's data storage systems operations are based upon multiple, multi-terabyte scalable Storage Area Networks (SAN) incorporating Fibre Channel architecture and robust data backup systems, which maximizes data transfer speeds while preserving high levels of system integrity.
- The modular architecture of PlayStream's system enables us to scale easily 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 & SERVICE OFFERINGS



At the core of PlayStream 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.playstream.com.

ON-DEMAND MEDIA DELIVERY

PlayStream On-Demand delivery lets your customers view streaming content whenever they choose, at the click of a button on your Web site. This is PlayStream's most popular service, and the cornerstone of our online streaming media services.

To make this service as powerful and easy-to-use as possible, PlayStream 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 PlayStream On-Demand delivery include:

Universal format compatibility

PlayStream supports the following streaming media types from one account: RealMedia®, Windows Media®, QuickTime®, Java player-free, & MP3/MPEG.

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

PlayStream's knowledgeable team is available to help you with your media management needs. Anytime you have questions, feel free to call us at (206) 404-7900, 1-800-874-8855 (U.S. only), E-mail support@playstream.com or visit our Support section online at www.playstream.com.

Digital media reporting

Each PlayStream account includes our advanced media report, which lets you see how much data has transferred, which clips are popular and average packet loss and buffer times. The previous three months, broken down by month, are available online for viewing.

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 PlayStream Live Web Casting, brings your live content instantly and affordably to many viewers. Using this service, you can broadcast new product or service announcements, 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 PlayStream, and are available in RealMedia® and Windows Media® formats. All events include a media report.

Live teleconference

PlayStream 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.

PROGRAM & SERVICE OFFERINGS

MEDIA SECURITY

PlayStream helps you protect your work and investment with password protected account management, secure network facilities and the integration of Microsofts® Digital Rights Management (DRM) with all of our Windows Media® accounts.

Windows Media DRM 9 series technology enables you to control access for all of your media content. PlayStream's Digital Rights Management (DRM) system allows its members to encrypt their Windows Media content. Once the files have been encrypted, consumers of the media file will need to acquire a license key before being allowed to play and view the media content. The license key is unique to each consumer and their computer. All the rules and restrictions are contained in the license key. This will enable you to set up different levels of access, allowing you to secure distribution, promotion and sale of your content. All the rights for the license are set in the subscription which you define. You can then associate content and permissions with the subscription.

MEDIA ENCODING

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

PlayStream offers encoding services in all formats (RealMedia®, Windows Media®, QuickTime® & 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 PlayStream account.

MEDIA REPORTING

PlayStream currently offers an advanced reporting. These reports provide useful metrics that help our customers to more effectively manage their media assets.

With Media Reporting, you can also view graphical charts featuring hourly breakdown and overall traffic patterns for your account. (See diagram 2).

TOOLS AND TECHNOLOGIES

Easy link technology

PlayStream'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 PlayStream's easy link technology, PlayStream has eliminated the largest obstacle for its streaming media clients, while preserving the full functionality of each format's linking method.

Digital Rights Management

PlayStream, in conjunction with Microsoft®, allows you to encrypt your Windows Media® 9 series content using Digital Rights Management (DRM). PlayStream includes this tool with all accounts. Both On-Demand and Live Streaming can be protected.

Pre-clip and post-clip editing

A component of PlayStream'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

PlayStream 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 PlayStream package best suits you. Our free streaming calculator can be downloaded directly from our Web site.

DIAGRAM 2:

This table is a sample media report, providing an overview of activity for a streaming media account.

GENERAL STATISTICS	
Date & Time this Report was Generated	Tuesday August 14, 2001 - 16:15:48
Time Frame	08/05/2001 00:00:00 - 08/11/2001 23:59:59
Number of Successful Clip Requests	709
Total Packets Sent	76,067
Total Packets Resent	761
Total Packets Resent By Percentage	1%
Total Bytes Sent	790,602KB
Number of User Sessions	298
User Sessions from United States	9.39%
International User Sessions	2.01%
User Sessions of Unknown Origin	88.59%
Average Number of Clip Requests per Day	101
Average Number of User Sessions per Day	42

TECHNOLOGY



PlayStream'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 PlayStream technology.

Distributed Network

Our Global DNS network distributes your end-viewers to the hub best positioned to maximize the quality of their playback. 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. For example, in the event that one hub shuts down, traffic is automatically routed to the other hub.

PlayStream currently operates two fully replicated hubs: one on the US West coast in Seattle, and the other on the US East coast in Atlanta. A European hub is currently in development.

Intelligent Routing

Through PlayStream's relationship with our technology partners, our customers realize the most advanced technologies in intelligent routing. In addition to our distributed Network, PlayStream's technology partners enrich our delivery services through their measuring agents located throughout the Internet that send data back to their routers, providing instant data re-routing capabilities. This provides timely snapshots of the Internet, enabling your content to bypass Internet congestion.

But a Distributed Network and smart routing services are 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 PlayStream, each of our hubs are directly connected to nearly every major backbone carrier, providing a wide range of options to accelerate playback performance of your content, and thereby significantly improving performance.

Load-Balancing Technology

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

Storage Area Network

To maximize data transfer speeds within our systems, as well as to optimize data uptime and data integrity, PlayStream deploys Fiber-channel Storage Area Network (SAN) technology at each of its hubs. These hubs use RAID 5 security and high powered disk drives with rapid seek-times and can easily scale 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 and reducing bottlenecks.

Data Backup & Recovery Systems

PlayStream maintains automated robotic systems that self-manage data backups across many archival digital tapes. We use fiber-channel technology to increase throughput and expedite backing-up and restoring our data. Should a catastrophic failure occur, PlayStream can move its backup SAN online to provide temporary service while the tape backup libraries are restoring data to the main systems under repair.

Link Servers

To overcome the difficulty our customers experienced in linking their media, PlayStream 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.

PLAYSTREAM'S STRUCTURAL SYSTEM

Diagram 3:

PlayStream is located in Seattle and has a data center in both Seattle and Atlanta.

Content Delivery Network

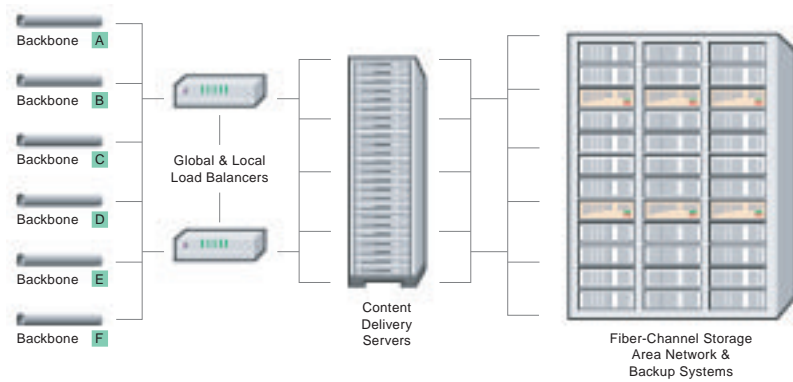


- Home Office and Data Center
- Data Center
- Backbones

Diagram 4:

PlayStream's infrastructure of our data center for both Seattle and Atlanta.

Data Center Infrastructure (Seattle and Atlanta)



CONCLUSION

Our technologies and services make PlayStream 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 capability
- Media reporting statistics available online
- 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-data (Players pausing to buffer data before resuming playback)
- Quicker start-times for media playback
- Easy media deployment
- Digital Rights Management (DRM) allows you the ability to protect your content against unauthorized usage by allowing copyrighted material to be encrypted using Microsoft's™ DRM technologies.
- Pre-clip/Post-clip auto-insertion capability for advertising

Easy-to-Use

- 24/7 online account access and management
- FTP and Web access capabilities
- Free specialized technical support
- Standard service level agreement providing 99% guaranteed uptime to all customers (with optional 99.9% available)

WANT TO LEARN MORE?

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

The 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 our free evaluation, visit our web site at www.playstream.com.

You can contact PlayStream by phone for a consultation: (206) 404-7900 or 1-800-874-8855 (U.S. only).





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