

Preview Systems Competitive Analysis

Company Background

Preview develops and markets infrastructure software that allows its customers to implement Internet-based networks for the electronic distribution and licensing of digital goods. Their solution provides publishers, distributors, OEMs, and resellers the ability to implement and maintain common networks that allows them to conduct business with each other electronically and seamlessly. The Preview solution is flexible and compatible with a diversity of business and technical requirements and provides a common technical infrastructure that uses the Internet to link participants engaged in the electronic distribution of digital goods and associated licensing.

Product and Service Offerings

Preview offers a flexible, secure and scalable infrastructure solution for electronic distribution of digital goods. Their solution is specifically designed to meet the needs of each participant in the distribution chain. The table below describes each component of the network and includes product names, and key features of their solution as well as target users.

Components	Key Features	Target Users
Digital Packaging (Vbox and ZipLock Builder)	Encrypts products for digital distribution and offers several options to protect intellectual property and licensing rights	Publisher
Inventory and License Management System (ZipLock System)	Manages the database of digital goods, inventory and provides secure, automated and reliable fulfillment of licenses and products, records transactions and exchanges information with other servers	Publisher Distributor
Merchandizing and License Selling System (ZipLock Gateway)	Adds digital goods shopping cart functionality to Internet storefronts and enables electronic delivery of digital inventory and licenses	Publisher Reseller
Off-Line Storefront (PortableStore)	Provides a software storefront using CD, DVD or hard disk storage media that delivers encrypted digital goods ready for online licensing	Publisher Reseller OEM
Rights and Delivery Client (Vbox Client)	Manages the secure download and the usage rights of digital goods on the user's computer	End customer
Interactive Communications Agent	Monitors software use and hardware configuration, displays targeted messages within the publisher's applications and collects customer's responses	Publisher Reseller End customer

Preview has developed a set of technologies for the establishment of channel neutral, flexible, scalable and secure networks for the electronic distribution of digital goods. These technologies include server components, components for integration with shopping catalogs, databases and web browsers, management and audit tools. They include tools for encryption of digital goods, and client software for the reliable delivery of digital goods and management of digital use rights. They also include agent software for monitoring usage and personalized marketing.

The Preview solution employs a distributed server architecture. Their inventory license and management system is typically operated by large publishers, service providers and distributors. Servers can be operated by resellers who

can choose to run their own inventory and license management system or simply integrate into their web site a gateway component connected to a distributor. Distributors can add additional gateways to support increasing numbers of connected electronic resellers. Publishers, distributors and resellers, have real-time control over the management of distribution rights and the issuance of licenses to end-users. Upon completion of a license transaction by a reseller, an electronic transaction is automatically recorded in the databases of the relevant distributor and publisher, creating an audit trail for each participant in the sale. Thus, immediately following the completion of a license transaction between a reseller and a customer, the distributor can directly and electronically deliver the purchased digital goods to the customer. This distributed architecture of their solution contributes to its flexibility, security, reliability and scalability.

The architecture of the Preview network separates the issuance of electronic licenses from the delivery of digital goods. The distributor can provide electronic delivery directly to all of the customers of its resellers. Their solution integrates with standard web server technology for which highly scalable solutions are readily available from third parties. Their solution is capable of addressing high-bandwidth requirements associated with multiple simultaneous downloads of large electronic files. Their solution can be deployed on the Microsoft Windows NT and Sun Solaris operating systems. Customers can support modest transaction volumes on a single inexpensive computer server while multiple load-balanced servers can support higher transaction volumes. Their solution can be integrated with industry standard web storefronts such as Microsoft Site Server, Open Market and BroadVision and databases such as Microsoft SQL Server, Oracle, and Sybase. Their solution allows their customers to use their existing web storefronts and databases for processing and storage of digital goods transactions, as well as to employ customary techniques for data replication and load management.

The Preview solution encrypts digital goods using their builder tools and records the encryption key, distribution rights and licensing options in the database of a computer server. The server has network administration functions that enable electronic distribution to other networked servers, and each server can support multiple gateways. Each gateway controls the pricing, branding and purchase processes and communicates securely with servers to initiate the electronic transfer of digital goods and/or licenses to end customers. Their solution automatically provides an electronic audit trail with each transaction recorded on servers in the distributed network.

The Preview client software allows the end customer's personal computer to communicate reliably and securely with the network to manage downloads of goods and licenses. Their client software employs various encryption and tamper resistant techniques to enforce rights even when the end customer's computer is not connected to the Internet. In addition, their interactive communications agent can enable the automatic flow of usage and marketing information with customers, whether or not there is a continuous Internet connection.

Communications between servers, from gateways to servers, and from client software to servers and gateways are secured using standard encryption techniques. Security is achieved through 90+ bit symmetric session keys and 1024 bit RSA keys for authentication and session key exchange. Their builder tools use 90+ bit symmetric keys for the protection of digital goods from the point of introduction to the network until their delivery to the customer.

By employing a distributed architecture and by interfacing with standard technologies where appropriate, Preview has designed a highly scalable and robust network solution to enable secure and automated digital goods commerce and real-time information flow between multiple business entities. They have also enabled seamless communication and rights management with customers both when connected and when disconnected from the Internet.

Key Capabilities

Channel neutral.

The Preview solution is designed to support direct, 2-tier and 3- tier models for the electronic distribution of digital goods. They do not compete directly with channel participants but instead can electronically connect them to one or more of their publisher, distributor or reseller channel partners. Thus, their solution enables rather than limits their customers' business choices and market reach. They have established relationships with Ingram Micro, the leading worldwide wholesale distributor of computer-based technology products and services, as well as several large software publishers such as Macromedia, Mattel, through The Learning Company and other divisions, and Symantec. They are pursuing similar relationships in the music industry. (Note: The company Supertracks is founded by the the founders of Preview and they are using Preview technology to setup an end to end digital distribution process for the music industry)

Integrates with existing systems

The Preview solution supports a variety of leading hardware and software platforms, including: Microsoft, Sun and Apple operating systems; BroadVision, Microsoft and Open Market e-commerce systems; and Microsoft, Oracle and Sybase database management systems. Thei solution is designed to be deployed across large and technically diverse distribution channels. It provides a common network for electronic distribution and licensing of digital goods and exchanging information. The Preview solution can be used to allow existing e-commerce websites to sell and distribute digital goods electronically. Finally, customers can implement the Preview solution directly or outsource operations to a service provider.

Enables many simultaneous distribution methods

The Preview solution enables publishers to supply multiple distributors electronically, while simultaneously selling directly to end customers. Similarly, resellers can connect electronically to multiple distributors and sell digital goods from each distributor's inventory of digital goods on a single integrated web site.

Supports multiple licensing models

The Preview solution separates the delivery of digital goods from the associated licensing rights, ensuring that access and use of the digital goods complies with the license terms. For example, digital goods can be stored in an encrypted format on hard drives of newly purchased personal computers but cannot be accessed by customers until the associated license rights are purchased online. Thus, software, music or video content can be sold without having to actually download the content. Their solution enables a variety of licensing models, such as selling perpetual licenses prior to download, granting of limited time trials prior to sale and other licensing models that may be requested by their customers.

Enables international distribution

Preview designed their solution to support global networks. They have localized their client software interfaces in the following 14 languages: Chinese (simplified and traditional), Dutch, English, Finnish, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Spanish and Swedish. They have obtained export licenses for components of their solution that use U.S. government regulated encryption technologies. When required, they have obtained approval to use their encryption systems in other countries.

Automates communication among network participants

The Preview solution automates the flow of digital goods, license rights, distribution rights, inventory tracking data, branding and other information. Information for each transaction is automatically transmitted to network participants. This means that a publisher that uses their solution can automatically receive information in real time about the sale of its products. Their solution can collect data from multiple distribution channels as transactions in a single database, consolidating direct and indirect sales information. In addition, they have developed an interactive communications agent that can facilitate the flow of information to and from the end customer.

Secures digital goods and licenses

The Preview solution uses sophisticated encryption techniques to maximize the security and integrity of digital goods and licensing rights in a variety of secure licensing and distribution models. Their solution provides secure communications between participants, produces auditable transaction records, controls user access, and in general ensures that agreed business rules are respected by all parties in the distribution chain. Their solution can also

provide persistent protection to enforce license rights on an ongoing basis after delivery of software to the end customer. They use secure protocols for communication among their servers, client and gateway software modules. They also signed an agreement with Intel to license its content protection agent system and to incorporate it into their solution for secure distribution and licensing of digital music.

Scalable

The Preview solution employs a distributed network architecture. Their solution is designed to allow customers to support modest transaction volumes on a single inexpensive computer server and higher transaction volumes on multiple load balanced servers. Customers that operate high volume e-commerce web sites can deploy their solution on multiple servers to distribute the data and processing more evenly, creating redundancy to protect against failures.

Competitor Profile

Preview seeks to establish their solution as the de facto standard infrastructure software for electronic distribution and licensing of digital goods.

Key elements of Preview's strategy are to:

- **Target and secure the support of leading software publishers and distributors.** They have established relationships with Ingram Micro, Macromedia, Mattel, through The Learning Company and other divisions, and Symantec. They have worked closely for over two years with large publishers and distributors to understand and solve their business and technical requirements. They intend to maintain and build relationships with the publishers and distributors that control the majority of software industry revenues.
- **Expand the number of participants using digital goods networks.** Preview believes the benefits of digital goods networks increase as a network gains additional participants. They intend to leverage their relationships with leading publishers and distributors to add more resellers to distribute digital goods electronically. They are working directly and through third parties with manufacturers of personal computers, such as Packard Bell NEC, to bundle encrypted digital goods for online licensing with its computer products. They intend to expand their relationships with service providers such as NetSales and ReleaseNow.com to enable publishers to outsource their direct sales and accelerate their time to market. They also intend to expand into new geographical markets. They have a marketing and distribution partnership with Sony Marketing of Japan. Sony Marketing has licensed our solution to several Japanese companies. In Europe, they have a number of customers, including Prisma, Softline, Softway International, Somm.com and TrustMarque International.
- **Extend the Preview solution into other digital goods markets.** To date, Preview has focused predominantly on the software market because they believe it is the largest and most commercialized market for digital goods. As electronic distribution of other digital goods such as music develops commercially, they intend to build a presence in these markets. They believe the security, distribution and piracy concerns of these markets are similar to those of the software industry and that their solution will allow them to address these needs successfully. **They have an agreement with Intel to incorporate its content protection agent system into our solution for secure electronic distribution of digital music.** They are currently pursuing relationships with leading companies in the music industry. In addition, they intend to leverage their relationships with customers who have a presence in multiple markets by offering a convenient means to distribute music and software through our future integrated solution.
- **Expand our solution to support volume licensing for organizations.** Organizations frequently acquire software through volume licenses and require licensing support to adjust the number of authorized users. Currently, license distribution and management is often a burdensome manual process for distribution channels. The Preview solution allows their customers to automate aspects of the license distribution and management process. They intend to work with their customers to enhance their volume licensing and software asset management capabilities.
- **Enhance our solution with value-added services.** As digital goods networks using the Preview solution grow, they intend to develop and provide value-added services that provide additional marketing and sales benefits to

their customers. They have also begun to offer a service based on their interactive communications agent that enables software publishers to tailor product testing, marketing and support to the needs of their individual customers.

Partner/Market Focus and Coverage

Business Type	Direct Relationships	Indirect Relationships
Publishers	Macromedia Mattel Broderbund and The Learning Company) Symantec	Intuit INXight NetObjects
Service providers	Chargenow.com Digital Square ECdirec NetSales ReleaseNow.com Scot Crest Group Trustmarque	
Distributors	Ingram Micro Softway	Navarre
Resellers and OEMs	Dustin e-academy.com Packard Bell NEC Prisma Softline Somm.com	Beyond.com Vector

Preview has the following strategic relationships:

Ingram Micro.

Preview has have been working with Ingram Micro on electronic software distribution since August 1998. On June 30, 1999, they signed an agreement with Ingram Micro to use their solution and to sublicense appropriate components to Ingram Micro's resellers. They anticipate that revenue from Ingram Micro may represent a significant portion of their business although there can be no assurance in this regard.

Sony Marketing of Japan.

In September 1998, they signed a three-year agreement with Sony Marketing of Japan, granting it the exclusive right to use and sublicense their solution in Japan, including future upgrades, enhancements and new products. They received a non-creditable, upfront payment for the license, training and support. Beginning April 1999, Sony Marketing has agreed to pay Preview network transaction fees based on a percentage of the revenue it receives from distributing their solution and providing related services. The exclusivity under this agreement means that they cannot compete with Sony Marketing by offering their solution in Japan.

Intel Corporation.

In September 1999, Preview signed a non-exclusive agreement with Intel Corporation to license Intel's content protection agent system and to incorporate this technology into Preview solution. The objective of this agreement is the development, sales and marketing of the Preview solution for the digital music market.

Virgin Holdings, Inc.

In October 1999, Preview entered into an agreement with Virgin Holdings, Inc., pursuant to which EMI Recorded Music, an affiliate of Virgin, selected Preview as its preferred, first choice technology provider for the digital distribution of music and agreed to recommend the Preview solution to EMI's worldwide channel partners. Preview agreed to cooperate closely to develop the emerging market for digital music distribution.