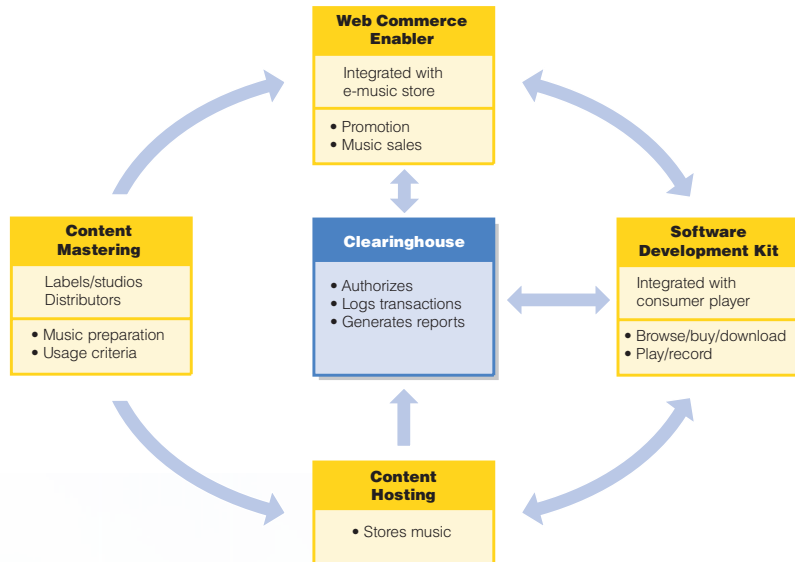IBM

EMMS Clearinghouse Program

Highlights

- Enforces digital rights management controls for electronic content distributed in EMMS formats according to content owners' specifications

- Utilizes secure container technology and strong encryption to protect the delivery of digital licenses

- Authenticates content owners and retailers involved in each download transaction

- Logs and reports all licensing transactions to facilitate royalty payments, account reconciliations and customer service

- Provides credit card transaction processing as an option

Web Commerce Enabler
Integrated with e-music store
- Promotion
- Music sales

Content Mastering
Labels/studios Distributors
- Music preparation
- Usage criteria

Clearinghouse
- Authorizes
- Logs transactions
- Generates reports

Software Development Kit
Integrated with consumer player
- Browse/buy/download
- Play/record

Content Hosting
- Stores music

Overview

The IBM Electronic Media Management System (EMMS) Clearinghouse Program provides digital rights management functions and acts as a central control point for managing, authorizing and reporting download transactions for EMMS-formatted content. It also supports credit card transaction processing as an option.

When an EMMS Clearinghouse receives a consumer's request for a license, the EMMS Clearinghouse Program verifies the authenticity of the license request and its compliance with the usage criteria specified by the content owners. If these verifications are satisfied, the EMMS Clearinghouse Program issues a unique consumer license encrypted and packaged in a secure container. The license includes information needed to download, unlock and manage the licensed content. If the license request is not verifiable or not complete, the EMMS Clearinghouse Program repudiates the request.

The EMMS Clearinghouse Program keeps a record of all licensing transactions, including completed downloads as reported by EMMS content hosting programs. To facilitate royalty payments and account reconciliations, responsible parties such as content owners, retailers and distributors can view and download data pertaining only to their transactions through a secure Web connection. Using this feature, music labels can monitor their electronic music sales and retailers can track electronic deliveries to their customers.

The EMMS Clearinghouse Program automatically notifies retailers of completed download transactions. It also provides customer support and exception processing for transactions such as refunds, transmission failures and purchase disputes. By using the EMMS Clearinghouse Program, Clearinghouse providers can provide additional services to their clients, such as tracking hosting fees, monitoring changes in price data and recovering consumer license databases. They can provide credit card transaction processing and financial reporting for download transactions as required.

All business participants in the distribution value chain obtain unique credentials that identify each participant and their business role in an EMMS distribution system. As the EMMS Clearinghouse Program processes a license request, it authenticates the content owners and retailers involved in the transaction. This enables the EMMS Clearinghouse Program to verify that a valid business relationship exists between a content owner and a retailer prior to issuing a consumer license. This authentication provides further business controls for the content owners. In addition, each consumer application containing the EMMS Player Software Development Kit can be uniquely identified and registered on its first transaction with an EMMS Clearinghouse Program, allowing for transaction reporting based on that identifier. This tracking function can be disabled by the player application.

The EMMS Clearinghouse Program requires the IBM 4758 PCI Cryptographic Coprocessor for encryption and decryption, and for EMMS key transformation. The coprocessor provides the following advantages:

- Additional protection for the EMMS Clearinghouse Program's private keys, which are loaded into the coprocessor
- Reduced CPU load on the host computer because the coprocessor performs the computationally intensive cryptographic calculations

The EMMS Clearinghouse Program uses strong encryption algorithms and has obtained U.S. Government approvals for export.

To further enhance performance and to increase service availability, the EMMS Clearinghouse Program has several scalability options. It can grow individual server capacity by increasing the number of concurrent connections used to serve consumer requests. It can also support the connection of local servers with automatic database propagation across each server. This group configuration can increase the Clearinghouse capacity while providing redundant servers in case of server failure.

The EMMS Clearinghouse Program can be operated as an independent entity, providing a trusted custodian for rights management and metering. It provides authorization controls that enable multiple parties in the distribution chain to promote, transfer, store and access digital assets without compromising or misusing the assets. Working in conjunction with other EMMS security features, it enables a separation of trust where content owners are not dependent on their other business partners to provide a secure environment to protect digital assets. As a trusted custodian, the Clearinghouse provider is responsible for maintaining the integrity of its Clearinghouse services.

Key Features

Security
- Utilizes secure containers and digital credentials to create user-specific licenses that help prevent unauthorized access to license information
- Utilizes the IBM 4758 PCI Cryptographic Coprocessor to protect private keys
- Acts as a trusted custodian that enables separation of trust among the other participants in the distribution chain

Control
- Verifies authenticity of content owner and retailers involved in license requests for digital content
- Verifies that license requests comply with the usage criteria specified by the content owners
- Issues unique consumer licenses so that digital content is unlocked only by licensed consumers
- Verifies that participants in the distribution chain are authorized

Scalability
- Can increase or decrease the number of concurrent connections per server based on workloads
- Can dynamically add multiple servers and automatically synchronize data across the servers to balance or optimize workloads

Tracking
- Tracks status of content transactions and provides information to parties involved in the transactions
- Ensures that only information pertaining to a party is displayed in reports
- Receives and manages price updates in order to reflect the current prices in reports

e-business services

IBM Global Services is ready to assist companies at every stage in the content life cycle. IBM Global Services offers: assessment of requirements, development of a functional specification, execution of any customization or extensions to EMMS Clearinghouse Program, integration with existing applications or systems, network configuration and optimization, and management of the deployment. IBM Global Services also offers managed operations and outsourcing services. IBM Global Services is available to make EMMS an optimized solution for content distribution that meets each company's individual needs.

Minimum hardware requirements
- 500-MHz Pentium® processor
- 512 MB of memory
- 18-GB hard disk
- CD-ROM drive
- 100BASE-T Ethernet adapter
- IBM 4758 PCI Cryptographic Coprocessor

Software requirements
- Microsoft® Windows NT® Server 4.0 with Windows NT Service Pack 4 installed
- CCA Support Program for Windows NT
- IBM DB2® Universal Database™ Workgroup Edition Version 5.2
- Adobe Acrobat Reader 4.0
- A Web browser that supports HTML 4 and Cascading Style Sheet (CSS)
- CCA for DES, 1024-bit RSA Key Management and SET (#5200)

Ordering information for the EMMS Clearinghouse Program

Description	Part Number
EMMS Clearinghouse Program	PRPQ # P91672; 5799-D72
Software Subscription For EMMS	PRPQ # P91673; 5799-D73

For more information

For more information about the EMMS Clearinghouse Program, please contact your local IBM sales representative, or visit our Web site at:
ibm.com/software/emms.