



White Paper

The MRT Digital Media Patent and Copyright Portfolio

The MRT Digital Media Patent and Copyright Portfolio enables the effective transmission, protection and monetization of digital content for entertainment, finance, defense, and education in the commercial and personal sectors. It also protects and monetizes royalties for copyright owners such as artists, filmmakers and songwriters, and safeguards the interests of their partners, publishers and broadcasters.

*Method and System for Controlling Presentation of
System and Method for Providing
Computer Readable Global Media Content
Media on a Media Storage Device Delivery
Method and System for Controlled Media Sharing
Method of Controlling
in a Network Recording Media
Preventing Unauthorized
Distribution of
Media Content within a
Global Network
Method and System for Controlling Access of Media on a
Media Storage Device*

The MRT Digital Media Patent and Copyright Portfolio

Background

In 1999 Media Rights Technologies, Inc. (MRT; www.mediarightstech.com) Founder and CEO Hank Risan and his business partner, Bianca Soros, launched the Museum of Musical Instruments (MoMI; TheMoMI.org), America's first virtual musical instrument museum. During its first two years of operation, the MoMI presented multimedia exhibitions in conjunction with national institutions and museums including The Smithsonian Institution, the Museum of Modern Art in New York, the Museum of Fine Arts, Boston. During this period, the MoMI also offered one of the first on-demand music services on the Internet.

In 2003 MRT launched BlueBeat Music (BlueBeat; BlueBeat.com), an Internet music service that transmits sound-alike recordings of previously recorded musical works called "psycho-acoustic simulations," based on a branch of science that studies the psychological and physiological responses associated with sound (including speech and music). The primary goals of BlueBeat were to restore 20th century sound recordings that had degraded due to primitive recording technologies, subsequent re-recordings, and the effects of time using MRT's patent-pending simulation process, and to develop a Serial Copy Management System to protect the simulations from piracy and ensure that artists and composers receive due compensation for their works.

During the Napster era of the early 2000s, no reliable method of protecting digital content existed. The public believed that copyrighted content should be shared freely and was unwilling to download and install 3rd-party software to control content on their computers. Security methods deployed by Microsoft, InterTrust, Real Networks and Sony required complicated locks located on the content itself. These methods were ineffective once the files were decrypted on the client system and disastrous on the server/storage side due to relatively easy access to decryption keys by hackers. In addition, these methods were not interoperable or cross-platform compatible.

To securely distribute the MoMI's original works of authorship and the BlueBeat simulations, Risan, a scientist and mathematician, set out to design, build, and patent a fully secure Content Distribution Network to protect digital content. In 1999 he funded a team of 16 software engineers to embody intellectual property that would enable the effective transmission, protection, and monetization of digital content for record companies, Hollywood studios, financial services companies, and other digital content owners and providers.

In 2001 Risan filed the first of more than 125 domestic and foreign patent applications to protect his innovations, which would ultimately comprise the MRT Digital Media Patent Portfolio.

The MRT Digital Media Patent Portfolio

The MRT Digital Media Patent Portfolio revolves around a patented and copyrighted computer network architecture concept called the Controlled Data Pathway. MRT's patented and copyrighted Serial Copy Management System utilizes the Controlled Data Pathway to resolve persistent real-world challenges in computer networking such as securing user data during storage, transmission and presentation in the context of a Content Distribution Network.

The MRT Digital Media Patent Portfolio also includes over 500 inventions that compliment and extend the Controlled Data Pathway concept.

The methods described in the MRT Digital Media Patent Portfolio are pervasively used by major U.S. and international companies to achieve, among other goals, the following:

- **Deliver multimedia files to players.**
On-demand video streaming services, music storage lockers, end-to-end music delivery systems, and Internet radio.
- **Secure content on network servers by hiding or changing the location of the data.**
Financial services, social networking, online broadcast services.
- **Safeguard core data.**
Cloud storage, media delivery services, financial services, social networking, government, and defense.

The Controlled Data Pathway

The core invention in MRT's Digital Media Patent Portfolio is the Controlled Data Pathway, which ensures secure content storage, transmission and presentation.

In general, the Controlled Data Pathway inventions describe: (1) activating a compliance mechanism on the client system where the media is being received to be displayed; (2) controlling a data output path of the client system by diverting a commonly used data pathway to a Controlled Data Pathway monitored by the compliance mechanism; and (3) directing the media content to a custom media device for selectively restricting output of the media content.

One embodiment of the Controlled Data Pathway involves the downloading of a Web page with an embedded media player from a media broadcaster, secure online banking service, or e-commerce website. The Web page would ordinarily be displayed on a user's computer or mobile device via a commonly used data path with no associated compliance mechanism for enforcing restrictions on copying or use.

Security is accomplished by diverting and routing data via the Controlled Data Pathway. In addition, the address and location of the data are time-sensitive and constantly shift and change. The result is maximum speed, flexibility, and utility in all manner of digital distribution. Importantly, this is the most cost-effective means of securely storing and transmitting digital data.

After login, a compliance mechanism is automatically installed on the user's computer and the data is transmitted to the user's display via a Controlled Data Pathway monitored by the compliance mechanism. The compliance mechanism enforces the usage restrictions prescribed by the content owner and can also employ preset usage controls, such as session timeouts.

Exemplary Application of the Controlled Data Pathway

Following is real-world example of use of the Controlled Data Pathway method to facilitate secure digital content transmission by media broadcasters, online financial services, and e-commerce providers.

A User goes to an online banking site to access public information via a common pathway. Upon request for personal records (login and site key verification), the requested content is redirected to a Controlled Data Pathway, which enables the secure display of the information on any device authorized by the bank. After 10 minutes, the secure banking session expires.

Disclosure of the Controlled Data Pathway

The Controlled Data Pathway was disclosed and published internationally by the Recording Industry Association of America and International Federation of the Phonographic Industry in 2003. Since that time, use of the Controlled Data Pathway has become a standard method for secure content delivery and

has been universally adopted by the largest U.S. and international companies in a broad array of industries.

Industries/Technologies			
Identity Protection	e-Commerce	Government Databanks	Social Networks
Online Banking	Operating Systems	Insurance Services	Credit Services
Online Broadcasting	Storage Mediums	Medical Services	National Defence
Cyber Security	Telecommunications	Pharmaceutical Privacy	ISPs

Origin of the Controlled Data Pathway

In the late 1970's, then double-PhD candidate Risan was conducting research in the fields of neurobiology, mathematics and computer science at the University of California at Berkeley and Santa Cruz, which involved significant use of the UC's mainframe computers and networks. Risan contemplated how the brain organizes and unlocks information in networked corridors, preventing the intermixing and garbling of ideas and instructions. He realized that the networked corridors are controlled pathways that are monitored by the central nervous system, which secures both thoughts and autonomic functions.

Risan used this model to design and patent an interoperable Content Distribution Network that incorporates a computer network's ability to create monitored connections, which securely store, transmit and present any content to networked devices. While all other solutions require cumbersome locks on the transferred data, the Controlled Data Pathway creates a pathway through which encrypted or unencrypted data is securely transmitted.

During the last decade, over 200 domestic and worldwide examinations conducted by United States Patent and Trademark Office of Controlled Data Pathway yielded no prior art.

Controlled Data Pathway Patent Claim

The Controlled Data Pathway method is described in Claim 1 of the MRT patent, "METHOD OF CONTROLLING RECORDING MEDIA" (see MOMI-008, below).

1. *A method of preventing unauthorized recording of electronic media comprising:*

activating a compliance mechanism in response to receiving media content by a client system, said compliance mechanism coupled to said client system, said client system having a media content presentation application operable thereon and coupled to said compliance mechanism;

controlling a data output path of said client system with said compliance mechanism by diverting a commonly used data pathway of said media player application to a controlled data pathway monitored by said compliance mechanism; and

directing said media content to a custom media device coupled to said compliance mechanism via said data output path, for selectively restricting output of said media content.

Conclusion

Methods described in the MRT Digital Media Patent Portfolio have been pervasively adopted by major U.S. and international companies in a broad array of industries to successfully deliver multimedia files to

players, secure content on network servers by hiding or changing the location of the data, and safeguard core data. MRT's patented and copyrighted Serial Copy Management System utilizes the Controlled Data Pathway method to resolve persistent real-world challenges such as securing digital content during storage, transmission, and presentation in the context of a Content Distribution Network. Without the MRT IP, Internet security would not be able to meet the demands of modern industry.

The MRT Digital Media Patent and Copyright Portfolio

Allowed and Pending U.S. and Foreign Patents

- MOMI-002: METHOD AND SYSTEM FOR PROVIDING LOCATION-OBSCURED MEDIA DELIVERY ([United States Patent: 8,090,659](#))
- MOMI-002.CON: METHOD AND SYSTEM FOR PROVIDING LOCATION-OBSCURED MEDIA DELIVERY ([United States Patent: 8,160,963](#))
- MOMI-003: SYSTEM AND METHOD FOR PROVIDING GLOBAL MEDIA CONTENT DELIVERY ([United States Patent: 7,721,103](#))
- MOMI-005: CONTROLLING INTERACTION OF DELIVERABLE ELECTRONIC MEDIA ([United States Patent: 7,578,002](#))
- MOMI-006: PREVENTING UNAUTHORIZED DISTRIBUTION OF MEDIA CONTENT WITHIN A GLOBAL NETWORK ([United States Patent: 7,584,353](#))
- MOMI-006.DIV1: PREVENTING UNAUTHORIZED DISTRIBUTION OF MEDIA CONTENT WITHIN A GLOBAL NETWORK ([United States Patent: 8,112,810](#))
- MOMI-006.DIV2: PREVENTING UNAUTHORIZED DISTRIBUTION OF MEDIA CONTENT WITHIN A GLOBAL NETWORK ([United States Patent: 8,112,815](#))
- MOMI-006.DIV3: PREVENTING UNAUTHORIZED DISTRIBUTION OF MEDIA CONTENT WITHIN A GLOBAL NETWORK ([United States Patent: 8,122,248](#))
- MOMI-006.DIV4: PREVENTING UNAUTHORIZED DISTRIBUTION OF MEDIA CONTENT WITHIN A GLOBAL NETWORK (Pending)
- MOMI-007: REPORTING INFORMATION ABOUT USERS WHO OBTAIN COPYRIGHTED MEDIA USING A NETWORK IN AN UNAUTHORIZED MANNER (Pending)
- MOMI-008: METHOD OF CONTROLLING RECORDING MEDIA ([United States Patent: 7,316,033](#))
- MOMI-010.CIP: METHOD FOR REDIRECTING OF KERNEL DATA PATH FOR CONTROLLING RECORDING OF MEDIA (Pending)
- MOMI-011: METHOD AND SYSTEM OF DETERRING UNAUTHORIZED USE OF MEDIA CONTENT BY DEGRADING THE CONTENT'S WAVEFORM (Pending)
- MOMI-012: METHOD AND SYSTEM FOR CONTROLLED MEDIA SHARING IN A NETWORK ([United States Patent: 7,426,637](#))
- MOMI-012.DIV1: METHOD AND SYSTEM FOR CONTROLLED MEDIA SHARING IN A NETWORK (Pending)
- MOMI-012.DIV2: METHOD AND SYSTEM FOR CONTROLLED MEDIA SHARING IN A NETWORK (Pending)
- MOMI-012.DIV3: METHOD AND SYSTEM FOR CONTROLLED MEDIA SHARING IN A NETWORK (Pending)
- MOMI-013: METHOD AND SYSTEM FOR CONTROLLING ACCESS OF MEDIA ON A MEDIA STORAGE DEVICE ([United States Patent: 8,161,562](#))
- MOMI-014: METHOD AND SYSTEM FOR CONTROLLING PRESENTATION OF MEDIA ON A MEDIA STORAGE DEVICE ([United States Patent: 8,250,663](#))
- MOMI-015: METHOD AND SYSTEM FOR SELECTIVELY CONTROLLING ACCESS TO PROTECTED MEDIA ON A MEDIA STORAGE DEVICE ([United States Patent: 7,904,964](#))
- MOMI-015.CON: METHOD AND SYSTEM FOR SELECTIVELY CONTROLLING ACCESS TO PROTECTED MEDIA ON A MEDIA STORAGE DEVICE ([United States Patent: 8,132,263](#))
- MOMI-016: METHOD AND SYSTEM FOR CONTROLLING PRESENTATION OF COMPUTER READABLE MEDIA ON A MEDIA STORAGE DEVICE ([United States Patent: 7,870,385](#))
- MOMI-016.CON: METHOD AND SYSTEM FOR CONTROLLING PRESENTATION OF COMPUTER READABLE MEDIA ON A MEDIA STORAGE DEVICE ([United States Patent: 8,108,671](#))
- MOMI-017: PROTECTING COPYRIGHTED MEDIA WITH MONITORING LOGIC (Pending)
- MOMI-017.PRO: PROTECTING COPYRIGHTED MEDIA WITH MONITORING LOGIC (Pending)
- MOMI-018: METHOD AND SYSTEM FOR PREVENTING UNAUTHORIZED RECORDING OF MEDIA CONTENT ON A MACINTOSH OPERATING SYSTEM ([United States Patent: 7,802,095](#))
- MOMI-018.CON: METHOD AND SYSTEM FOR PREVENTING UNAUTHORIZED RECORDING OF MEDIA CONTENT ON A MACINTOSH SYSTEM ([United States Patent: 8,438,656](#))

- MOMI-019: METHOD AND SYSTEM FOR PREVENTING UNAUTHORIZED REPRODUCTION OF ELECTRONIC MEDIA ([United States Patent: 8,087,091](#))
- MOMI-019.CON: METHOD AND SYSTEM FOR PREVENTING UNAUTHORIZED REPRODUCTION OF ELECTRONIC MEDIA (Pending)
- MOMI-020: METHOD AND SYSTEM FOR CONTROLLING VIDEO MEDIA (Pending)
- MOMI-020.PRO: METHOD AND SYSTEM FOR CONTROLLING VIDEO MEDIA (Pending)
- MOMI-022: METHOD AND SYSTEM FOR PROVIDING A MEDIA CHANGE NOTIFICATION ON A COMPUTING SYSTEM (Pending)
- MOMI-023: METHOD AND SYSTEM FOR AUTOMATICALLY EXECUTING AN OPERATION AFTER A MEDIA EVENT (Pending)
- MOMI-023.PRO: METHOD AND SYSTEM FOR AUTOMATICALLY EXECUTING AN OPERATION AFTER A MEDIA EVENT (Pending)
- MOMI-024: METHOD AND SYSTEM FOR AUTOMATICALLY DETECTING MEDIA AND IMPLEMENTING INTERACTION CONTROL THEREON (Pending)
- MOMI-024.PRO: METHOD AND SYSTEM FOR AUTOMATICALLY DETECTING MEDIA AND IMPLEMENTING INTERACTION CONTROL THEREON (Pending)
- MOMI-025: METHOD AND SYSTEM FOR PREVENTING UNAUTHORIZED RECORDING OF MEDIA CONTENT IN AN ITUNES™ ENVIRONMENT ([United States Patent: 7,570,761](#))
- MOMI-029: METHOD FOR PROVIDING CURRICULUM ENHANCEMENT USING A COMPUTER-BASED MEDIA ACCESS SYSTEM ([United States Patent: 8,255,331](#))
- MOMI-029.PRO: METHOD AND SYSTEM FOR CUSTOMIZING MEDIA FILES INTO AN EDUCATIONAL FORMAT IN A NETWORK ENVIRONMENT (Pending)
- MOMI-029.PRO.2: METHOD AND SYSTEM FOR PROVIDING A MEDIA CHANGE NOTIFICATION ON A COMPUTING SYSTEM (Pending)
- MOMI-032: METHOD AND SYSTEM FOR PROTECTING CHILDREN FROM ACCESSING INAPPROPRIATE MEDIA AVAILABLE TO A COMPUTER-BASED MEDIA ACCESS SYSTEM (Pending)
- MOMI-048: METHOD AND SYSTEM FOR CIRCUMVENTING USAGE RESTRICTION APPLICABLE TO ELECTRONIC MEDIA (Pending)
- MOMI-048.PRO: METHOD AND SYSTEM FOR CIRCUMVENTING USAGE RESTRICTION APPLICABLE TO ELECTRONIC MEDIA (Pending)
- MOMI-055.PRO: UTILIZING X1 WITHOUT COMPROMISING SYSTEM SECURITY (Pending)
- MOMI-057: ENHANCING COPYRIGHT REVENUE GENERATION FOR A COPYRIGHT PROTECTED FRAME-BASED WORK ([United States Patent: 7,720,768](#))
- MOMI-058: USING A CUSTOM MEDIA LIBRARY TO SECURE DIGITAL MEDIA CONTENT (Pending)
- MOMI-059: SECURE MEDIA COPYING AND/OR PLAYBACK IN A USAGE PROTECTED FRAME-BASED WORK (Pending)
- MOMI-060: STANDALONE SOLUTION FOR SERIAL COPY MANAGEMENT SYSTEM COMPLIANCE (Pending)
- MOMI-063: SECURE TIME AND SPACE SHIFTED AUDIOVISUAL WORK (Pending)
- MOMI-064: SECURITY THREAD FOR PROTECTING MEDIA CONTENT ([United States Patent: 8,407,808](#))
- MOMI-065.PRO: SIMULATION PROGRAM (Pending)

Copyrights in Use

In 2009 MRT CEO Hank Risan was issued a copyright registration by the U.S. Copyright Office for the BlueBeat.com audiovisual material. ([Reg. #PAu003407524](#))

In 2012 MRT CEO Hank Risan was issued a copyright registration by the U.S. Copyright Office for the Controlled Data Pathway. ([Reg. No. TX 7-580-669](#))

In 2013 MRT CEO Hank Risan was issued a copyright registration by the U.S. Copyright Office for the IsRecorderPresent. ([Reg. #TX0007714608](#))