

InterTrust Technologies Competitive Analysis

Company Background

InterTrust has developed a general purpose DRM platform to serve as a foundation for providers of digital information, technology, and commerce services to participate in a global e-commerce system for digital commerce. Protected information can flow from party to party, as it would in normal commerce, and be managed throughout its lifecycle in compliance with specified rules. The InterTrust platform consists of:

DRM Software and Technology

InterTrust licenses platform software and tools to partners that build products and operate commerce services. InterTrust technology is designed to operate on the personal computers, devices, and servers in this global system and to provide the capability to package and publish protected information with rules for use. These rules are designed to be flexible, and can be applied and changed dynamically, enabling InterTrust partners to develop and program their business models easily. The rules are designed to be persistently enforced wherever the content may travel.

MetaTrust Utility Services

InterTrust maintains and administers the specifications that are designed to ensure the interoperability, security, and trustedness of the global digital commerce system being built by its partners. Through their TrustNet clearinghouse, InterTrust also provides an infrastructure for their partners to pilot and test their applications and services. This utility service enables the InterTrust DRM platform to offer a common, neutral basis for publishers, merchants, organizations, consumers, and other participants to conduct business and exchange protected information.

Product and Service Offerings

The InterTrust DRM platform is general purpose and is designed to enable digital commerce to operate in compliance with provider-specified rules through a network of independent, protected processing environments, which are branded as InterRights Points. InterTrust technology is currently implemented as software and includes tools, components, sample applications, documentation, and training that allow InterTrust partners and their customers to build digital commerce applications and services and take advantage of the reusable, common foundation of the MetaTrust Utility.

InterRights Point

The core element of the InterTrust architecture is the InterRights Point, which operates on personal computers and servers in the MetaTrust Utility. DRM processing occurs at InterRights Points. Each InterRights Point acts as a secure virtual machine, a software application acting as a processing device, that is designed to manage each party's digital rights remotely. Each InterRights Point creates a local, secure database that stores the users' rights, identities, transactions, budgets and keys. InterTrust is currently developing different implementations of the InterRights Point for use in other electronic devices. In particular, InterTrust is developing technology for securely managing the transfer of digital information to portable electronic devices like MP3 music players. The InterRights Point can process transactions involving both payment and usage information, for example, special surveys or information on interaction with an advertisement. These transactions could be processed immediately, much like a credit card event, or deferred, much like running up a tab, or any combination of immediate and deferred processing, as specified by the rules. The InterRights Point forwards the transactions in secure DigiBox containers to InterTrust processing partners which ensure that everyone who is supposed to get paid gets paid, that usage information is made available to agreed upon parties, and that the privacy of the individual is protected.

DigiBox Container.

Protected information in the InterTrust system is encrypted and stored in a format called a DigiBox container. Once in a DigiBox container, the information can flow across unsecured networks, and only an InterRights Point can access the information. InterTrust's design permits information in a DigiBox container to remain protected even after a user has accessed it, providing persistent protection of the information and continuing control over its use regardless of where the information travels.

Usage Rules

Content usage is managed by rules, **including price, payment offer, play, view, print, copy, save, superdistribution, and others**. InterTrust offers a variety of tools designed to allow providers to create and change rules and to associate them with digital information. Rules are protected in the same way content is protected. Like content, they are stored in DigiBox containers for distribution. Rules are designed to travel with the information, or separately, allowing our partners the flexibility to change any rule, including rights or price, after content has been delivered. InterRights Points are designed to ensure that applicable rules are followed every time an information usage event is requested.

Transaction Authority Framework.

InterRights Points connect into InterTrust's processing partners' data centers through a communications controller system called the transaction authority framework. The transaction authority framework is designed to receive transaction records from InterRights Points, store the records, and forward them, as specified by usage rules, for further processing, including payment fulfillment. The transaction authority framework is also designed to store messages resulting from this further processing, like payment confirmation, and when the InterRights Point next connects to the data center, send these messages to the InterRights Points. The transaction authority framework includes administrative software, called the **deployment manager**, that is designed to activate InterRights Points and manage them after activation, including fraud detection, revocation, security updates, and back-up services.

RightsWallet Application

InterTrust's client software that manage identities, memberships, budgets, and transactions

Key Capabilities

Robust Security

InterTrust's sophisticated use of multiple layers of security and tamper-resistance techniques are designed to provide varying levels of security depending on the commercial value and nature of digital information consistent with the rights and interests of all parties.

Persistent Protection and Management

The InterTrust platform is designed to allow content providers to protect persistently both the information itself and the rules of use. Persistent protection means that these rules continue to apply even after the information arrives, online or offline, each time the information is accessed, and even when it may be forwarded to other people.

Flexible Business Models

The InterTrust platform is designed to allow content providers to specify and establish their own commercial models with fully programmable rules that manage the use of digital information. These rules can be easily changed, even after content is distributed, for example to permit promotional offers, to accommodate changing commercial circumstances, or to automatically present differing offers under differing circumstances. The InterTrust platform is also designed so that these rules can also adjust themselves dynamically to each consumer's unique identity characteristics and circumstances of access, for example, student or senior citizen discounts, membership in affinity groups, or employment at a specific corporation.

Superdistribution

The InterTrust platform allows content providers to take advantage of superdistribution--allowing and encouraging consumers to become redistributors of content in the system. Superdistribution means that users of content, if permitted by rules, can forward content to others, with persistent application of rules and protection of content. The Intertrust platform is designed to enable providers to get paid and users to act naturally by forwarding content they like to their associates or friends. If these parties are not already part of the digital commerce system, they have an incentive to join so that they may use the content.

Multiple Content and Media Types

Content providers can use the InterTrust platform for multiple content types. Their platform is designed to permit distributors to employ various means of digital distribution, including compact discs, DVDs, the Internet, and broadband. Consumers may sign up to use any one content type, like music, but then can use InterTrust client

software for other content or services in the MetaTrust Utility system. Payment processors can use InterTrust technology both for digital goods transactions and to process payments for physical goods sold electronically.

Efficient Transaction Processing

InterTrust believes that processing partners can take advantage of significant increases in efficiency, including offline processing, immediate payment across all participants in the chain of distribution, and automated application of rules. Their platform is designed to securely store usage and payment transactions that take place offline, accumulate them until a minimum threshold is met, for example 30 days or \$50, and then automatically forward the stored transactions for processing. This allows both micropayments and efficient collection of usage information. In addition, as required by provider-supplied rules, when processing these transactions, immediate payment can be made throughout the distribution chain, eliminating multiple parties handling payment.

New Advertising Models

Today, advertising on the Internet is largely limited to viewing banners and other promotional materials on a web page. InterTrust believes that with their technology advertising can be managed and audited locally on a user's machine every time the user sees the advertisement, whether the user is on-line or off-line. Their platform is designed to allow a rule to be applied to a brief product placement, for example, the appearance of a car within a music video, so that the car company promotes its products and pays for the promotion each time the car is viewed. This feature, combined with InterTrust's ability to operate offline and securely store and later forward collected data, enables new cost-effective ways for companies to price content and generate revenue from advertising.

Personalized Marketing

The InterTrust platform is designed so that marketing organizations can use many different aspects of the platform to identify and profile individual consumers and match content, offers, and ads to specific users or class of users, subject to user consent and privacy rights. Because the InterTrust technology is designed to locally process ads and promotions as easily as digital content, this automated personalization can occur on the network or offline on the consumer's personal computer.

Support for Specific Requirements

Internal tracking and monitoring of complex rights for content properties and brands

Tracking and monitoring of complex rights of content properties and brands for external commerce transactions

Competitor Profile

Strategy

The InterTrust goal is to empower multiple providers of digital information, technology, and commerce services to build a global system for digital commerce based on the InterTrust DRM platform. The key elements of their strategy are:

Expand Key Strategic Partnerships

Intertrust is focused on bringing into the MetaTrust Utility an optimal combination of digital information, technology, and commerce service participants. Through this focus they intend to create mutually-reinforcing

widespread dissemination of their technology, an expanding consumer base, and ever-broader participation by information providers. They are targeting relationships that will establish their DRM platform initially in several large markets, including entertainment, business information, and publishing. They intend to leverage early success in any one market to help encourage adoption and usage in other markets. They encourage potential participants to enter into relationships with them, as well as with their partners, in the following key areas:

- **Content**—They intend to continue entering into direct relationships with premier and emerging publishers, distributors, and packagers of content. They have established strategic relationships with Universal Music Group and BMG Entertainment Storage Media. In addition, they intend to encourage premier content providers to participate in the MetaTrust Utility through their partners.
- **Technology**—They will continue to target leading technology and device companies that can build embed their technology into the infrastructure of several industries, including computers, consumer electronics, the Internet, and communications. They have established strategic relationships with Diamond Multimedia Systems and RioPort to build their technology into portable music devices and software players.
- **Commerce Services**—They are targeting partners with trusted brands and operations, including Mitsubishi Corporation, National Westminster Bank (Magex), and PricewaterhouseCoopers. They believe that these partners' reputations, markets, and customer base will facilitate user acceptance of the MetaTrust Utility.

Promote Widespread InterRights Point Deployment

They have designed their client technology and their licensing structure to achieve efficient and rapid deployment. Their technology is designed so that consumers can conveniently activate it. It is also designed so that it can be flexibly deployed by partners through a variety of means, including digital download, optical disk distribution, and pre-installation. They will also work with our partners to develop business models that promote rapid deployment, for example, superdistribution which allows users to drive InterRights Point deployment through redistribution of content. Through their OpenRights initiative, they will also make openly available select components and application building blocks intended to accelerate the adoption of their DRM platform to developers in various vertical markets.

Leverage the MetaTrust Utility Model

They believe that their neutral utility model is fundamental to achieving widespread adoption of their DRM platform. They believe partners are more likely to participate in building a global commerce system if they perceive that the provider of the foundational technology is unlikely to engage in commercial models that directly compete with them. They intend to provide technology and maintain policies needed for an interoperable, secure, and trusted foundation for all participants in the MetaTrust Utility.

Partner/Market Focus and Coverage

Enterprise: Partner	Market	Entertainment:	Publishing:	Regulated:
. secure document exchange . enterprise information portals . trading/brokering		. music . video . audio books . games	. business information . financial information . traditional media . images	. government . healthcare . education . telecommunications . secure email
X Magex		X	X	X
X Mitsubishi		X	X	X
X PricewaterhouseCoopers		X	X	X
Reciprocal		X	X	X
X Samsung		X	X	X
X SingTel		X	X	X
X ASPSecure.com				X
Bertelsmann		X	X	
Massive Media Group		X	X	
PublishOne			X	
Reuters			X	
Universal		X		
X Computacenter		X	X	X
Creative		X	X	
Diamond		X		

LOAD Media	X			
Mediascience	X			
MusicMatch	X			
RioPort	X			
Spectra.Net	X			
X Wave Systems	X	X		X