



Overview

Verimatrix is independently acknowledged as the global number one in IPTV content protection. Award-winning products, a global roster of tier one operator deployments and a comprehensive technical vision put Verimatrix at the forefront of the pay-TV business.

Our “3 Dimensional Content Security” approach builds on these firm foundations to address the new challenges facing pay-TV. Service providers need to deliver competitive services that cross the boundaries of network type and device format, and address the full spectrum of content security threats.

We offer a range of solutions built on a common core of modern, software-based security technologies that bring real cost advantages over legacy approaches. Our layered content security approach offers a transparent consumer experience that helps establish the new competitive standard for innovative network operators – Any Screen, Any Network, Any Threat.

Pay-TV Opportunities and Challenges

Video has evolved from a simple service watched on conventional television to a complex offering of services watched “anything, anywhere, anytime.” Legacy content security approaches were developed in a period when video was watched exclusively on television sets, using set-top boxes. Today, however, video is increasingly watched on PCs and mobile devices, as well as televisions, and service providers need a content security solution that can adapt to support all of these platforms.

Software-based security solutions have emerged as a compelling option that offers the flexibility to support set-tops, PCs and mobile devices. While hardware-based solutions are suitable for set-tops, they are impractical for PCs and inapplicable to the diverse range of mobile devices. In the event that the security system is compromised, hardware-based security requires the distribution of new hardware tokens to subscribers, an expensive and time-consuming process, whereas new software can be routinely updated to preempt security challenges. Software-based security has become the choice of the vast majority of IPTV deployments, representing the new wave of pay-TV service providers. For these reasons, software-based security should be the first choice for the evolving multi-device, multi-service, converged service world.

The use of IP at all levels of video distribution networks is set to revolutionize the subscriber experience with a flexible combination of traditional broadcast, network-based video recording and rich Video-on-Demand (VOD). Exploiting the intrinsic two-way architecture of IP delivery, the viewing experience will change even more dramatically. Users will expect smooth interactivity and support for viewer communities – from the living room to the PC and onward to the mobile phone. The new demand is for what they want to watch, when they want to watch, wherever they may be. This new pervasive delivery capability will also mean a change in established business models - especially where advertising technology will offer the ability for narrow and accurate targeting of specific viewer interests.

IP enabled TV provides a unique opportunity to dramatically enhance the entertainment experience, while opening new revenue opportunities for studios, broadcasters and system operators. However, the industry as a whole has been hesitant to embrace new channels of distribution, particularly those that might open up new avenues for content piracy. In particular, the very word “Internet,” as a fundamental component of IPTV, has raised legitimate concerns about perfect digital copies of premium programming being re-circulated across broadband file sharing services.

Fortunately, cryptographic and on-line e-commerce technologies developed for use on the Internet provide some unique advantages for video security and subscriber authentication in these new distribution systems. These technologies enable a more sophisticated level of creative content protection than seen in the prior generations of smart card-based security systems. Verimatrix designed its Video Content Authority System (VCAS) from the ground up for two-way and hybrid networks, incorporating pioneering security features that provide the broadest security perimeter of any content security and revenue enhancement system. From the outset, the company’s design goal has been to provide complete transparency for legitimate content enjoyment while significantly raising the level of protection against all forms of content piracy.

Verimatrix Positioning

Verimatrix sets the standard for software-based content security and revenue enhancement technologies in pay-TV networks with a global customer base of telecommunications providers. Verimatrix offers a suite of next-generation technologies that protect content and enhance revenue streams, while combating digital piracy wherever it occurs within the distribution chain.

The company's content security experts maintain close relationships with major studios and broadcasters to help address the challenges facing the pay-TV networks of today, and those of tomorrow. Verimatrix's customers benefit with most favorable access to premium content, enabling the richest, most versatile viewing experience for their digital video subscribers.

With our 3-Dimensional Content Security vision, Verimatrix's thought leadership extends beyond the technologies of encryption to the opportunities and applications that new pay-TV networks must offer to secure their competitive advantage. With a unique exposure to the value chain of content creation and distribution, the Verimatrix team addresses vulnerabilities of current systems with tools such as VideoMark™ forensic watermarking and GeoAuthentication™ clone detection while seeking to extend the range of devices and content revenue sources within an operator's network.

The Verimatrix product roadmap is continuously refined through analysis of these current and future network challenges, helping our customers anticipate and respond to an evolving world. The company's content security experts maintain close relationships with the major Hollywood studios to anticipate and respond to the widest range of security concerns. From the camera to the couch, system network goals are matched to the Verimatrix product roadmap, ensuring the best access to premium content and revenue enhancement opportunities.

Our track record of delivering and deploying innovative content security technology is enhanced through our extensive Partner Ecosystem, which enables the widest system choice and flexibility in the industry. The result is a rich and versatile viewing experience for network subscribers.

Company Highlights

Verimatrix has delivered an impressive record of growth and competitive success. The company can now claim

- 280+ deployments in more than 37 countries globally, including multiple tier 1 operators
- More than 12 million screens protected worldwide
- 70+ employees worldwide
- ISO 9001:2000 certified
- Committed investor backing from Goldman Sachs, SunAmerica Ventures, JK&B Capital, Crescendo Ventures, Mission ventures and Cipio Ventures

Verimatrix Video Content Authority System (VCAS™)

VCAS offers an advanced suite of technologies that address content security challenges for the networks of today, and those of the future. Traditional conditional access systems are architected around one-way communications, while Verimatrix has designed its solutions from the ground up using the power and integrity of modern two-way IP infrastructure. Cryptographic and e-

commerce technologies proven on the Internet, including PKI and X.509 certificates, enable VCAS to offer a more sophisticated level of content protection than traditional smart card-based systems.

The key features of VCAS include:

- Best-of-breed encryption and subscriber key management for IP multicast, DVB broadcast cable, satellite, terrestrial or mobile, and Video-on-Demand systems.
- Independently-audited security architecture.
- Primary and backup security system – provides fast failover and countermeasure capability.
- Incorporation of advanced, patent-pending GeoAuthentication™ and QuantumID™ clone detection techniques to help operators eliminate theft of service.
- A hardened, downloadable Verimatrix ViewRight™ software security core for client devices – no smart cards required.
- Unique Verimatrix VideoMark™ forensic watermarking – each client device is capable of adding a user-specific digital watermark to decoded content.

VCAS incorporates pioneering features that provide the broadest security perimeter of any content security and revenue enhancement system. This enables complete transparency for legitimate content consumption while significantly raising the level of protection against content piracy.

VCAS security has received very favorable results in independent audits and is the approved security choice in pay-TV operator deployments worldwide. As the global leader in software-based security, VCAS offers flexibility in the choice of client devices, broad middleware interoperability, and proven scalability.

The People behind Verimatrix

Tom Munro, Chief Executive Officer - Tom Munro has served as CEO of Verimatrix since April 2005. Earlier, he was President of Wireless Facilities, Inc. (WFI) a global leader in the design, deployment, and management of wireless mobility and broadband wireless networks. He served WFI as CFO from 1997 to 2000, through the company's successful IPO, and as President from September of 2000 until his retirement in January, 2003. Prior to joining WFI, Tom was founder and CEO of @Market, an online sporting goods retailer. Earlier, he was CFO of Precision Digital Images, an image processing technology firm in Redmond, Washington, after leaving MetLife Capital Corporation, a leading commercial finance company. At MCC from 1981 to 1994, Tom held a series of analytical, financial, and sales responsibilities including CFO of the company. Tom holds a bachelor's degree in business administration and an MBA from the University of Washington. Tom sits on the boards of Airgain Technologies, CommNexus, the Digital Watermarking Alliance, and Kineticom.

Petr Peterka, Chief Technology Officer – Petr joined Verimatrix in 2010 from a role as a Distinguished Member of the Technical Staff in the CTO's office at Motorola's Home and Networks Mobility Team. His background includes an extensive familiarity with CA/DRM systems, including work on platforms combining IPTV, DVB-H, iPhone and Android. He has been active with standards organizations including DECE, DLNA CPS, ATIS, SMPTE, Coral, DVB, ITU-T and others, and has worked with Hollywood studios, CableLabs, and the MPAA on content security topics. He previously worked with NextLevel Systems and General Instrument. Petr holds Master's degrees from both UCSD and the Czech Technical University. He holds 7 issued US patents and has over 25 additional filed patent applications.

Steve Oetegenn, Chief Sales and Marketing Officer - Steve Oetegenn's career in the Information Technology industry spans 25 years. He has a wide range of experience in international business, having launched numerous high tech products to the global marketplace. He began his career with Burroughs Corporation (now UNISYS) as a specialist for Optical Character Recognition Systems. He has specialized in Digital Security and Anti-Piracy since 1998, working with Government agencies, Fortune 500 companies and Major Hollywood studios. Prior to joining Verimatrix, he was COO of MediaSec Technologies LLC, a pioneer and leader in the field of digital watermarking, COO of Argus Systems Group, a leading provider of Internet server security software, and CEO of DCE Communication Ltd, a world-wide provider of business messaging systems. Mr. Oetegenn has spoken at numerous global digital security conferences and he also speaks fluent German.

Tim Driscoll, Chief Finance Officer - Tim Driscoll has 15 years of experience in financial and operations management at technology-focused organizations. Prior to Verimatrix, he consulted with clients in the areas of corporate finance and marketing, including TelASIC, a semiconductor and radio systems company, DispenseSource, a logistics technology company, and the Engineering School at the University of California, San Diego. Previously, Mr. Driscoll was at Mission Ventures, a \$500M venture capital partnership, where he managed direct investments and provided operational support to early stage communications technology companies. Prior to Mission Ventures, he served as a Captain in the U.S. Army's Aviation branch, where he was involved in managing development and deployment of new technologies. Mr. Driscoll has a BS in Computer Science from the U.S. Military Academy at West Point, and an MBA from UCLA's Anderson School of Management.

Subrata Datta, Vice President of Engineering - Subrata Datta has more than 20 years of development and management experience within the data communications, cable, and telecommunications industries. Most recently, he was the CTO of Sorrento Networks, Inc. (NASDAQ: FIBR), where he helped to build one of the leading companies in developing metropolitan Optical Networking products focusing on DWDM and CWDM transport technology. He arrived at Sorrento Networks through the acquisition of DSI, Inc. where, as a founder and VP. of Engineering, he helped develop Gigabit Ethernet switches and adapters as well as ANSI FDDI and FDDI-II software, network components, and systems. He was an active member of the IEEE Gigabit Ethernet standards committee, helped to develop the FDDI and FDDI-II protocols within the FDDI standards committee, and has co-authored a book on the FDDI protocol. Prior to DSI, he has had extensive design experience at AT&T Bell Laboratories and IBM Research at Yorktown Heights. He has a BS and an MSEE from the Cooper Union School of Engineering and post-graduate work at the University of Wisconsin.

Neerav Shah, Vice President Business Development – Neerav Shah has over 15 years experience in the high-tech software and semiconductor industries. Prior to joining Verimatrix, Neerav led Intel's corporate IPTV Strategy and Content Protection efforts, interacting frequently with major Hollywood studios, broadcasters, CE manufacturers and regulatory and standards bodies. In addition, Neerav served as President of DCP, LLC, where he grew the HDCP (High Bandwidth Content Protection) technology into an industry-leading standard while improving operations and management of the organization to meet industry demands. Neerav also has held strategic management positions within Intel's Communications and New Business Initiatives Groups. At Xerox Corporation, Neerav helped drive new business growth for its Channels group and advised the company on its \$950MM acquisition of Tektronics's printer division. In addition, he has held engineering and management positions at Adobe, Blue Cross and Xerox. Neerav graduated from Northwestern University with a bachelor's degree in computer science and has an

MBA in Strategy & Marketing from Yale University's School of Management. In his spare time, he enjoys golfing and coaching his two sons' soccer teams.

Steve Christian, Vice President, Marketing - Steve Christian has a wealth of experience in the digital media and Internet technology space. At Verimatrix he is responsible for product strategy, communications and systematic management of brand equity. Prior to joining Verimatrix Mr. Christian was Marketing VP at Nine Systems, Inc – a world class provider of streaming media services. He has also run his own technology marketing consultancy, contributing "virtual VP" expertise to a variety of software, wireless and security organizations. His background includes product and services management at Wind River, ST Microelectronics and Raytheon. Mr. Christian has a 1st class degree in Physics from the University of Bristol and an MBA from the Open University in the UK.

Company Milestones

The following is a selection of significant milestones in the company's growth:

- 2009 – MRG reports Verimatrix global leader in content protection for 7th consecutive period. Passes milestone of 10m screens protected.
- 2009 – Verimatrix reveals profile of 3rd generation VCAS solutions with a focus on revenue security for pay-TV customers
- 2009 – IPTV Services Launched for Bharat Sanchar Nigam Ltd. (BSNL) Customers with Verimatrix Content Security System
- 2009 – Bouygues Telecom Deploys Verimatrix Content Security for IPTV Service for BBOX services
- 2008 – Completed series C funding round lead by Goldman Sachs with SunAmerica Ventures and JK&B Capital
- 2008 – Launches VCAS for DVB solution addressing full range of security needs for hybrid and broadcast networks
- 2008 - MRG ranks company in top position in IPTV content protection for unprecedented fifth consecutive period.
- 2008 – TeliaSonera chooses Verimatrix for leading IPTV deployment in Scandinavia and Baltic regions
- 2008 – Verimatrix announces first large scale ViewRight PC Player deployment - IOL Netcom in India.
- 2008 - Verimatrix extends premium video delivery options with next-generation ViewRight PC Player. The industry's first secure PC Player now offers full DVR capabilities.
- 2008 – Passes 4 million client license or “screens protected” milestone, with 107 operator deployments in 32 countries worldwide.
- 2007 - MRG recognizes Verimatrix as global number one for third time. Triple-Play for Verimatrix in IPTV Content Security Market Analysis.
- 2007 – TelecomView recognizes Verimatrix as global leader in IPTV content protection – over entire 2006-2012 analysis period.
- 2007 – Launches VCAS for Cable IPTV – a fully integrated DOCSIS bypass solution for IP video delivery over cable networks.

- 2007 – Passes milestone of 2 million set-top boxes deployed worldwide in more than 80 operator installations.
- 2007 – Achieved ISO 9001-2000 certification.
- 2007 – Verimatrix receives Notice of Allowance for patent on key aspects of the VCAS technology portfolio.
- 2007 – Received “Best IPTV Content Security Solution” at the IPTV World Forum event and InfoVision award in the category of Content, Entertainment, Applications and Services.
- 2007 – VCAS receives China Outstanding IPTV Solution Award at “IPTV in China” Summit Forum 2007.
- 2007 – For the second consecutive analysis period, MRG names Verimatrix the world’s most widely deployed IPTV content security solution.
- 2006 – Relocated headquarters to a new dedicated facility with more than double the space.
- 2006 – Introduces ViewRight PC player, offering operators and consumers more viewing choices.
- 2006 – Named by MRG analyst report as the global leader in IPTV content security.
- 2006 – Extends content security support to hybrid broadcast and broadband networks with VCAS for DVB.
- 2006 - Verimatrix closes \$8 million major funding round lead by Crescendo Ventures.
- 2006 – Passes milestone of 1 million set-top boxes deployed worldwide in more than 70 operator installations.
- 2006 – Verimatrix introduces VCAS 2.0 featuring upgraded revenue enhancement capabilities with GeoAuthentication and QuantumID.
- 2006 – Avail Media (*formerly Auroras Entertainment*) first to deploy combination of VCAS content security and VideoMark forensic watermarking.
- 2005 - Verimatrix signs a worldwide OEM agreement with Siemens AG to integrate VCAS into its SURPASS® Home Entertainment portfolio.
- 2005 - Versatel Telecom International NV deploys VCAS to protect its IPTV service, which includes exclusive live Dutch national football.
- 2005 - Verimatrix introduces VideoMark™, the industry’s first digital forensic watermark that can trace piracy to the source.
- 2005 - Verimatrix closes \$5 million round of funding with co-lead investors Siemens Venture Capital GmbH and Mission Ventures, along with existing investors. Tom Munro joins management team as CEO.
- 2004 - Verimatrix is the first digital content protection provider to offer a solution fully integrated with the Myrio IP Video Platform v3.5.
- 2002 - Verimatrix wins first two contracts for IPTV deployments in Asia.
- 2001 - Verimatrix opens sales office in Tokyo, Japan to take advantage of the emerging IPTV market.
- 2000 - Verimatrix becomes incorporated and closes \$1.3 million as seed round of funding with Serome Ventures as the lead investor.

- 1999 - Verimatrix files first two patent applications for Secure Content Distribution and Secure Video Conferencing.
- 1999 - Ross Cooper and Bob Kulakowski develop initial concept of Verimatrix and content security business plan.

Key Partnerships

The Verimatrix business strategy includes building and sustaining a network of strategic alliances with a broad range of the most significant pay-TV technology providers. These relationships, which emphasize seamless technology integration, ease of operation and extended value, enable Verimatrix to offer best-of-breed, advanced solutions to our customers.

The range of established partnerships is very wide and includes companies that offer:

- Content aggregation
- System Integration
- Reseller channels
- OEMs
- Access equipment
- Head-end equipment
- Monitoring equipment
- Splicing equipment
- VOD servers
- Set-top boxes
- Middleware
- Browser software
- CODECs

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