

Securing DVB and Hybrid Networks

The Right Way to Protect Your DVB One-way & Hybrid

Alexandre Guitine

Sales Director, Russia/CIS & E. Europe

Verimatrix



Verimatrix and VCAS for DVB

Topics

- ❑ Verimatrix Snapshot & Security Strategy
- ❑ One-way Network Solution and Components
- ❑ Hybrid Networks Solution and Components
- ❑ Combined One-way and Hybrid Solutions

Verimatrix Snapshot



Founded	2000
Scope	Content and Revenue Security for multi-network, 3-screen applications: IPTV, DVB one-way, DVB Hybrid & Over-the-Top to STBs, PCs & mobile devices
Headquarters	San Diego, California, with satellite offices in USA, People's Republic of China, Singapore, The Netherlands, France, Russia, Argentina and Colombia
Customers	300+ operator customers in 40 countries, including 20 Tier 1's and 2's – protecting more than 12 million screens for IPTV, DVB, DVB Hybrid and PCs
Partners	Over 100 ecosystem channel & integration partners Ericsson, Huawei, Nokia Siemens Networks, Thomson and ZTE
Investors	Goldman Sachs, Mission Ventures, Crescendo Ventures, Cipro Partners, JK&B Capital and SunAmerica Ventures



CIPRO PARTNERS

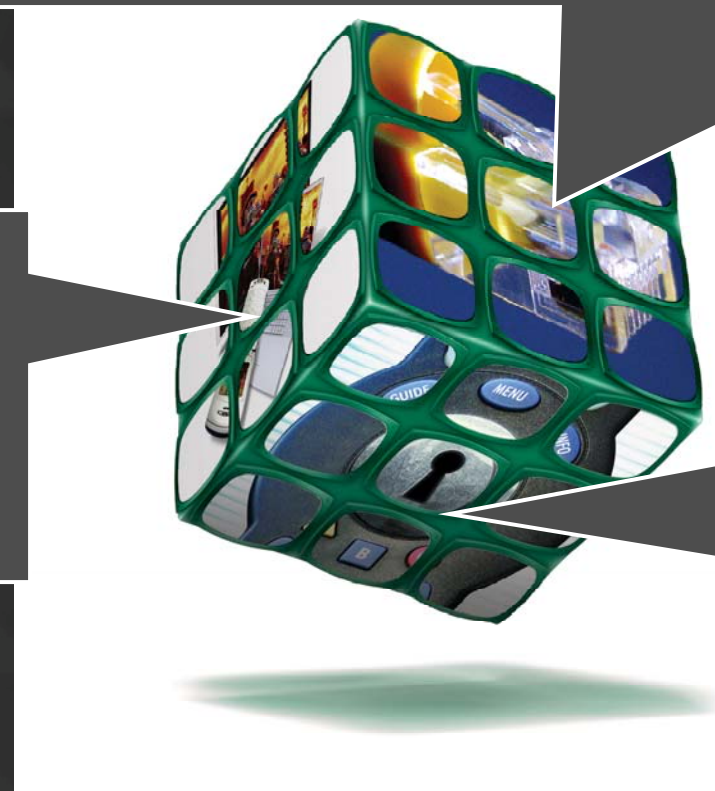


3-Dimensional Content Security



Network Dimension – beyond broadcast, cable, telco, mobile network distribution silos, leveraging advantages of proven IP technologies

Device Dimension
Portability & transparency with network-centric key management for flexible mix of devices



Protection Dimension
Multi-layer security to enable rich business models, copy traceability and combat theft of service

VCASTM 3

Video Content Authority System

Content Security for DVB One-way Networks




verimatrix

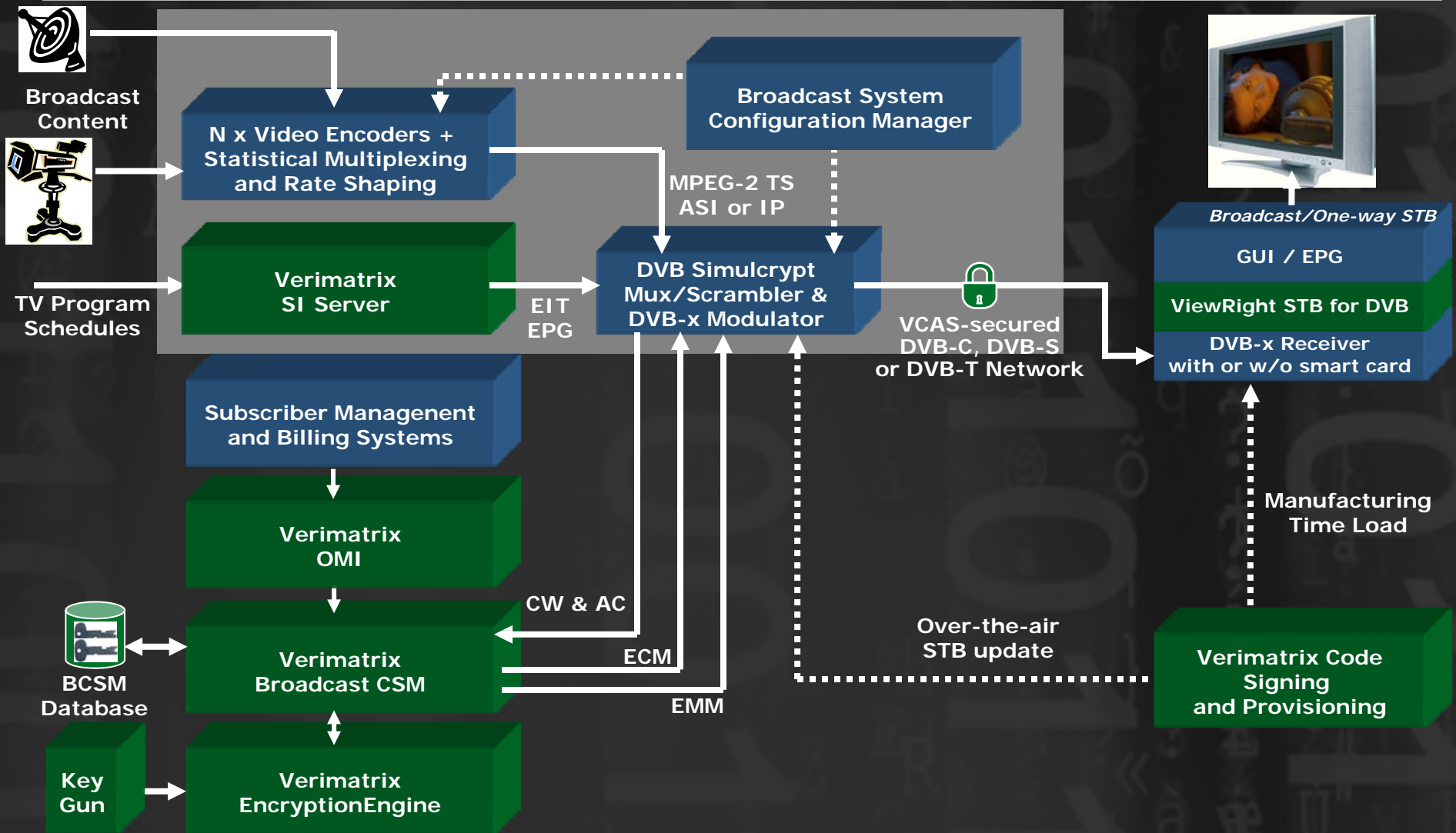
VCAS for DVB – Key Benefits

Cost-effective and Fully Scalable Solution

- High-end, cost-effective pay-TV security
 - All pay-TV business models , incl. token-based IPPV & Push VOD
 - Very efficient EMM mechanism incl. instant EMM transmission
 - Self-provisioning via mobile phone/web, incl. prepaid vouchers
 - Middleware-independent SI Server for EPG data feed
 - Efficient form factor: Up to 1 million STBs in 2 RU; very scalable
 - Unified head-end for DVB, Hybrid and IPTV services via OMI

- Multi-level client security and upgrading
 - SW-based client, secure SOC, removable HW-based client

VCAS for DVB – One-way Context



Solution Components

- ❑ Head-end Components
 - Operator Management Interface (OMI)
 - Broadcast Content Security Manager (BCSM)
 - Verimatrix EncryptionEngine with Key Gun
 - Verimatrix SI Server (option)
 - Mobile Phone & Web-based Self-Provisioning (option)
 - Video Pre-Encryptor (option for Push VOD)
- ❑ STB Components
 - ViewRight STB for DVB featuring a choice of:
 - Software-based Client
 - Secure SOC implementation
 - Hardware-based, removable security (smart card)
 - ViewRight CI for DVB - Common Interface module
- ❑ Verimatrix Code Signing & Provisioning

VCAS for DVB - Overview

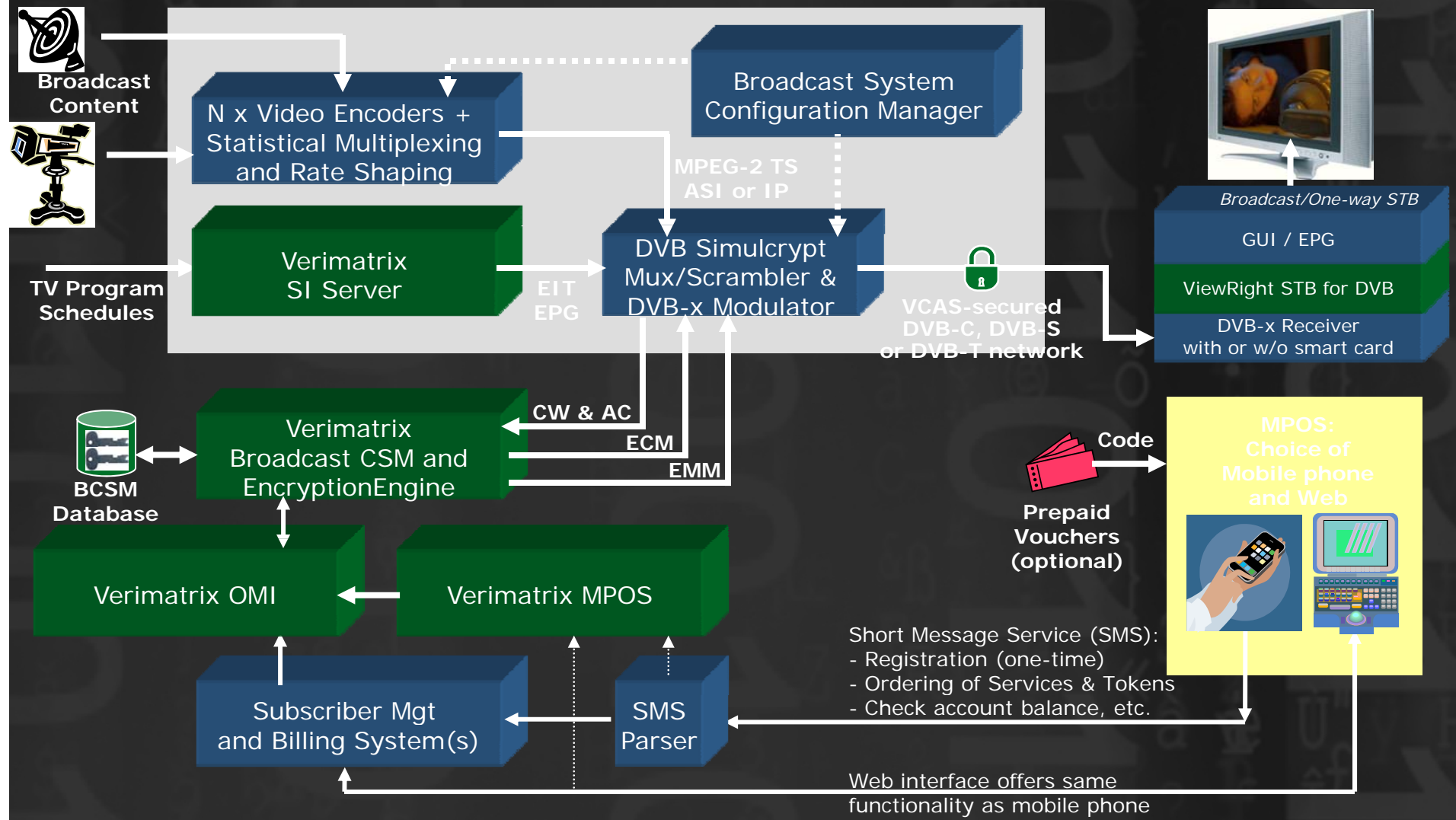
High-end Pay-TV Security in Cost-Effective Format

- ❑ Advanced System Functionality and Features
 - ❑ Compact, Scalable and Upgradeable
 - ❑ Choice of SW- and HW Based Clients
 - ❑ Multi-Level Client Security and Upgrading
 - ❑ Middleware-Independent EPG Data Play-out
 - ❑ QuickStart Solution for Fast Service Launch
- ➔ An integrated component of a multi-screen solution with single content authority support

VCAS for DVB – Self Provisioning



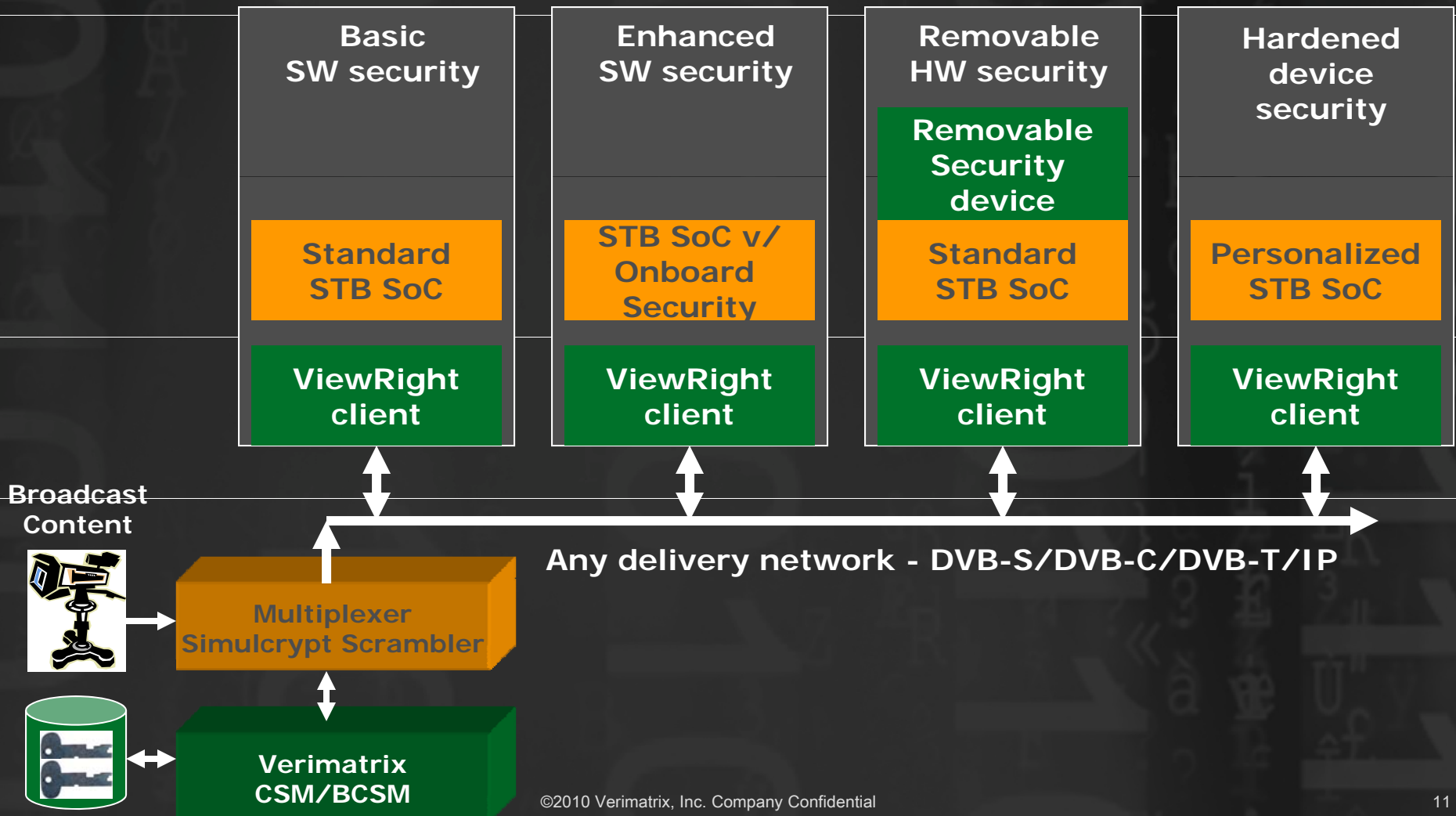
MPOS in Context: Mobile Phone or Web Interface



Security Models and Options



Multiple Models Supportable in a Single Head-end



VcasTM 3

Video Content Authority System

Content Security for DVB Hybrid Networks

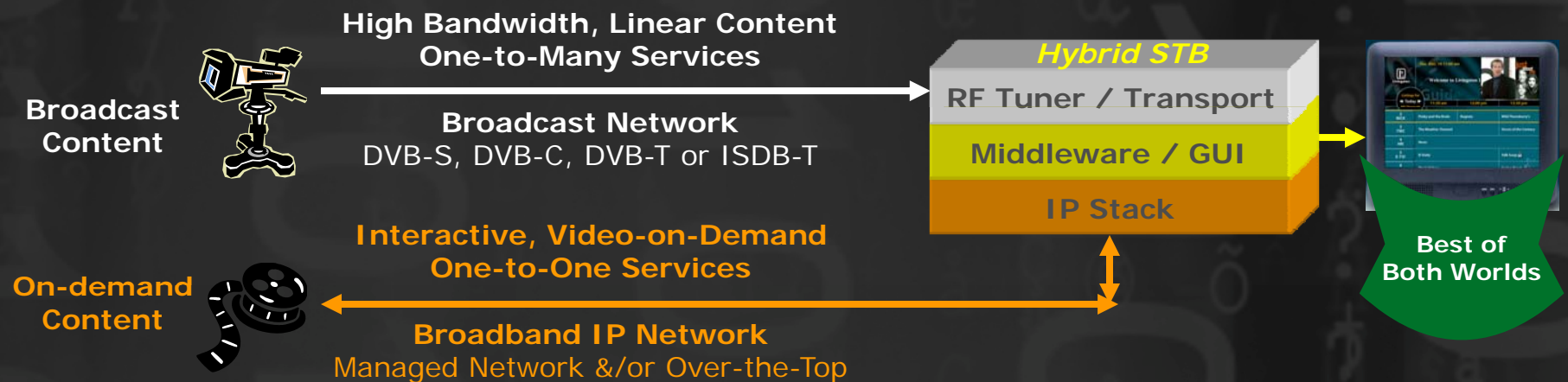



verimatrix.

Hybrid Networks



Combining the Advantages of Broadcast and IP



- ❑ **Cable, Satellite & Terrestrial operators:**
 - Augment one-way services with IP-based VOD and OTT services
 - Add interactive program guide and transactional services
- ❑ **IPTV operators:**
 - Add high bandwidth, linear programming incl. HD to IPTV services
 - Use IP network for VOD and OTT services

Content Security Evolution

Hardware vs. Software-based Security

- **Broadcasting = One-way Network**
 - HW-based security using Smart Cards
 - Cards may be subject to hacking and piracy
- **IPTV = Two-way Network**
 - SW-based security - no need for smart cards
 - Rapid renewability in case of suspected piracy
- **Hybrid = Two-way Network**
 - Transition from legacy CA/cards to SW security
 - Single SW-based CAS for both broadcast and IP

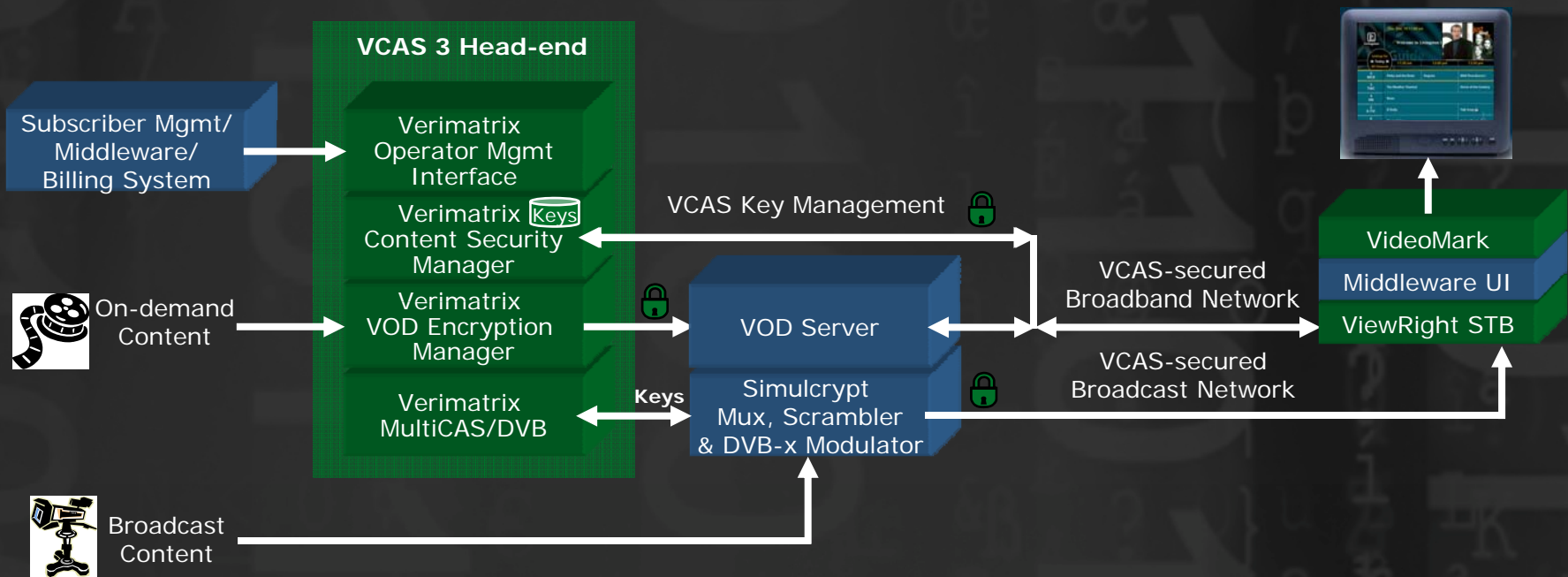
Video Content Authority System (VCAS™)

- ❑ **SW-based revenue security for hybrid services**
 - Replaces smart card-based, legacy CA
 - Simplified operations and logistics; lower total cost
- ❑ **Entitlements sent point-to-point over IP**
 - Less complex, more secure and saves bandwidth
- ❑ **ECMs in broadcast mode – DVB Simulcrypt**
 - Transparent deployment alongside incumbent CAS (if any)
- ❑ **VideoMark – User-specific Watermarking**
 - Enables Forensic Tracking to last authorized recipient
- ❑ **Independently audited – zero exposures**
 - Approved by all major studios and broadcasters

VCAS for DVB Hybrid

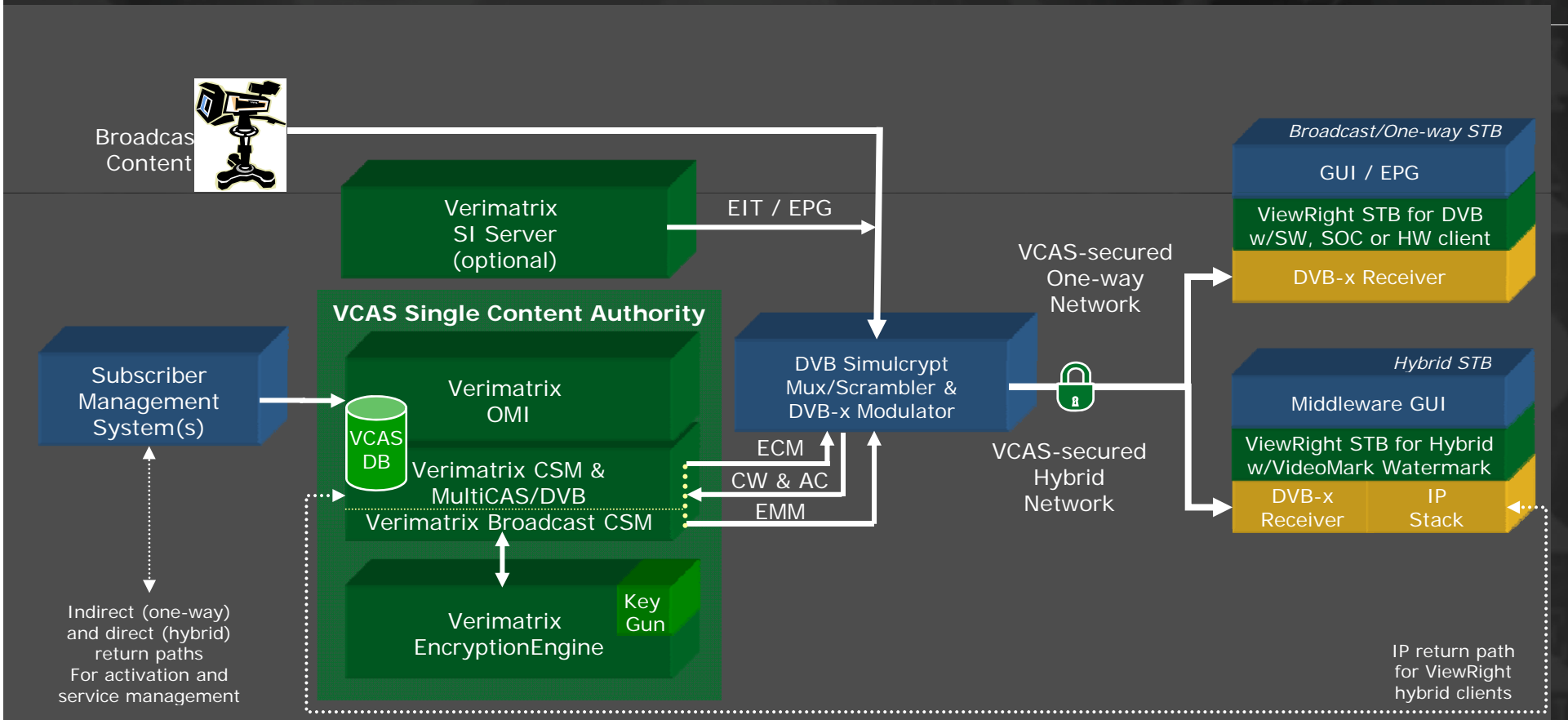


SW-based DVB-IP Hybrid Solution



VCAS for DVB: One-way + Hybrid Solution

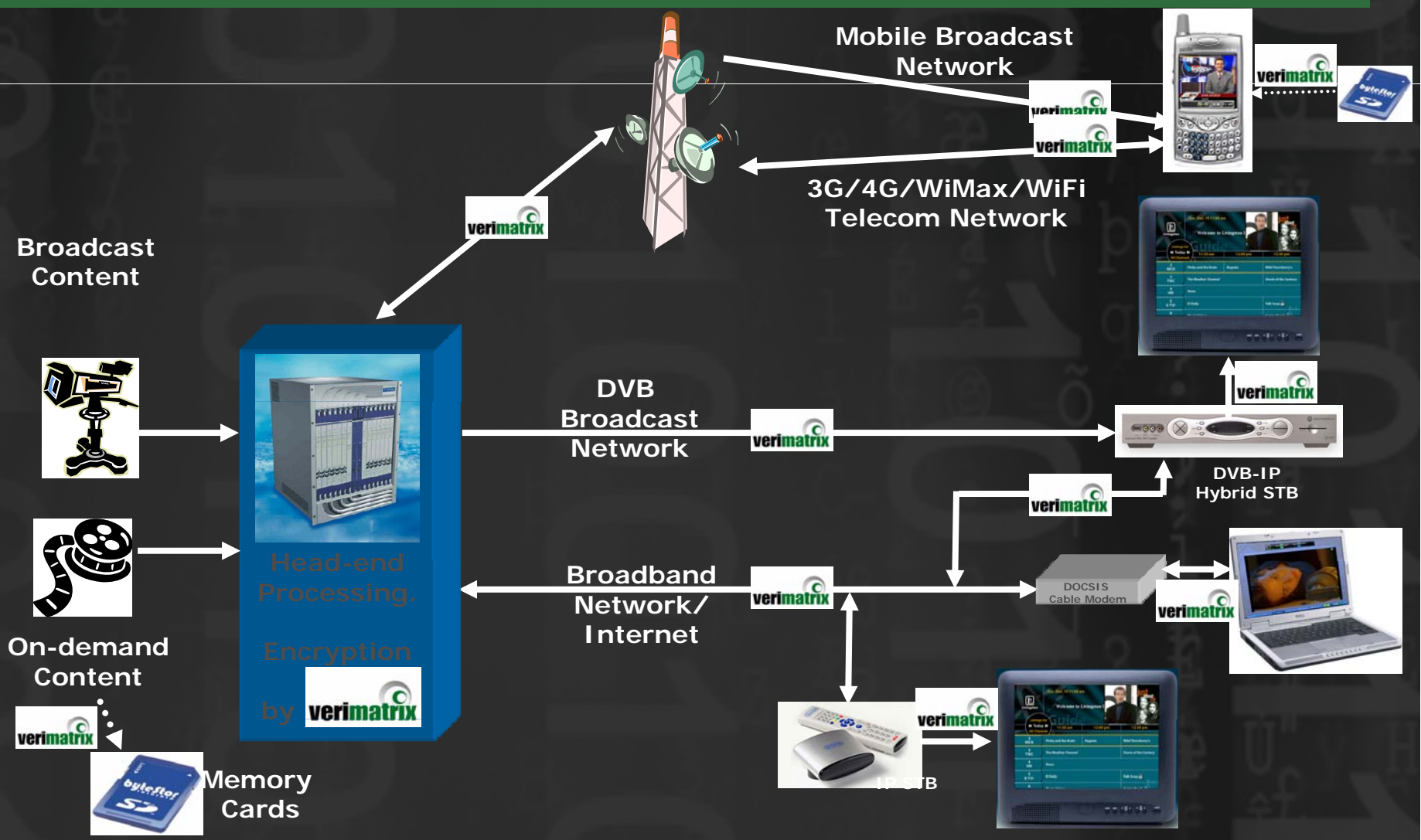
Single Content Authority for Multiple Network Support



VCAS Multi-Screen Support



Broadcast, Broadband, Mobile & OTT Networks



Converged Services: A Win-Win Opportunity

- ❑ **Verimatrix VCAS 3 SW-based revenue security**
 - Multi-network, multi-screen support from unified head-end
 - More ways to monetize content
- ❑ **Simplified operations and logistics; lower total cost**
- ❑ **User satisfaction – “Prime Time on My Time”**
 - Increased “stickiness” & ARPU = Higher profits
- ❑ **Subscriber self-provisioning and account mgt**
 - Reduced cost for call centers / customer care

Thank You

aguitine@verimatrix.com

www.verimatrix.com



VCASTM 3

Video Content Authority System

**Next Generation Security
for
Multi-Network, Multi-Format
Digital TV Services**