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Dispelling 5 Myths about Broadcast Security

What broadcast operators need to know when upgrading their security platform for the connected future

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INTRODUCTION

Millions of TV consumers enjoy one-way satellite, cable and broadcast services today, and will continue to do so for years to come.

While some say that traditional video services are declining in favor of streaming services, OTT and SVOD don't replace one-way services: they complement them.

The world does not stand still. Recent advancements in technology have enabled new service features, new use cases, and new business opportunities. Content owners are imposing more stringent security standards for premium and UHD content. The vendor community has continued to consolidate.

Operators want to keep set-top boxes in service for as long as possible for the rental income, and would rather refresh them to accommodate new use cases than retire them. With cardless security backed by a modern platform, they can. The industry has become satisfied that cardless conditional access (CA) solutions, integrated with embedded security in the SoC core, not only reduce cost but also position video service providers for future applications.

With all this in mind, network operators are revisiting their service protection and content security platforms. It's a good time to challenge some misconceptions about broadcast security that has accumulated over the years.

This ebook will describe and dispel common myths to ultimately help broadcast operators better understand their security options as they continue to evolve and enhance their networks in a more connected world.

MYTH 1

ONE-WAY TV SERVICES ARE NO LONGER RELEVANT

While many think that one-way or broadcast-only services are an offering of the past, they actually form the core of many of today's hybrid pay-TV services.

Furthermore, one-way services continue to power millions of home TV experiences and operators still depend on set-top box rentals for revenue.

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MYTH

ONE-WAY TV SERVICES ARE NO LONGER RELEVANT

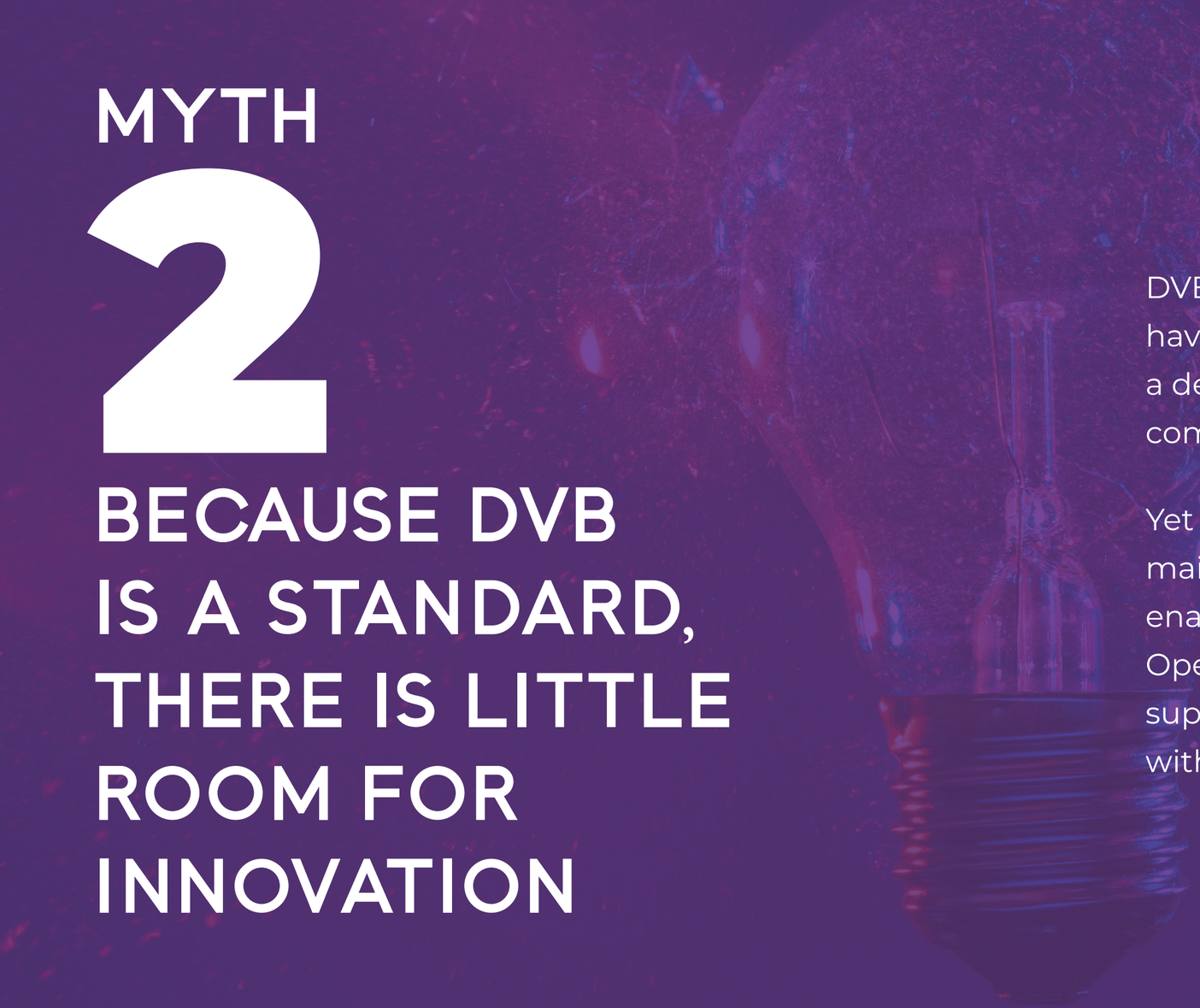
THE REALITY

- Modern cardless security enables operators to **maintain** core one-way services while **minimizing** the expense.
- In the living room, one-way services can seamlessly **co-exist with OTT and SVOD in a single offering** with a unified user experience.
- Today's cardless security enables operators to create harmonized offerings that serve an operator's **set-top box customer base as well as consumer-owned "BYOD" devices.**
- Today's commerce-enabled use cases can now be satisfied using one-way service protection technologies. Historically, video service providers with one-way services lacked any option to pre-equip set-top boxes that are sold at retail with special offers. **But now they can.**

Today's broadcast security technologies that support in-band addressing — together with client call-back capabilities — enable operators to pre-configure free trials and limited subscriptions with purchase incentives before boxes are shipped to the retailer, so the consumer can activate them right away.

MYTH 2

BECAUSE DVB IS A STANDARD, THERE IS LITTLE ROOM FOR INNOVATION



DVB standards for one-way broadcast have been established for more than a decade, and many millions of DVB-compliant set-top boxes are deployed.

Yet today's cardless CA solutions maintain standards compliance while enabling newer features and use cases. Operators can continue to deliver and support traditional broadcast services with confidence.

MYTH 2

BECAUSE DVB IS A STANDARD, THERE IS LITTLE ROOM FOR INNOVATION

THE REALITY

- **Cardless security provides the highest security levels**, including Trusted Execution Environment (TEE), hardware root-of-trust, and support for the latest HDCP connection-level security.

- The **response time to incidents is key** and can only be kept short by incorporating the newest, innovative security hardware technology, which is typically not supported by legacy CA solutions.

- Bandwidth utilization has always been a concern for DVB operators. But today's broadcast security solutions feature **highly efficient Entitlement Management Message (EMM) bandwidth operation,** allowing for entitlement packages to be sent to a large population of subscribers for maximum scalability.

- By providing a backchannel for set-tops, and therefore full connectivity support, operators can experience **instant set-top box key and entitlement provisioning plus recovery,** which is especially important with new subscriber setup or after periods of inactivity.

- Advanced cardless CA solutions also support MovieLabs Enhanced Content Protection specifications for UHD consumption, as **they meet requirements for securing the chipset itself,** including hardware-based watermarking that protects content from capture and production, through distribution, and after its legitimate consumption.

Concerns that vendor support for early versions of the DVB standards may be discontinued are unfounded. Make sure your security vendor maintains support for early releases.

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MYTH 3

CARD-BASED SECURITY SOLUTIONS ARE WORTH THE HIGH COST

For broadcast TV services, some operators rely on set-top boxes that are equipped with hardware-based smartcards, which are expensive to acquire and implement.

What's more, if they are hacked, replacement is a significant operational challenge. With cardless security, these concerns are greatly reduced.

MYTH 3

CARD-BASED SECURITY SOLUTIONS ARE WORTH THE HIGH COST

THE REALITY

- Commercial deployments by video service providers worldwide have proven that **TEEs in the SoC provide a very secure runtime environment** for cardless CA system software.

- Because security is implemented in software, **updates can be made quickly and inexpensively** with no smartcards to replace. The broad acceptance and industry standardization of TEE makes updates **more cost-effective to deploy,** compared with proprietary approaches.

- Cardless security solutions with **broader chipset integration** reduce the likelihood that non-recoverable engineering expenses would be charged back to the operator. **More about this below.**

- With online connectivity support, network operators have an additional **low-cost channel to deliver keys, entitlements and software upgrades.** Because online delivery is “always on,” updates can be scheduled for distribution during off hours.

- Cardless security **reduces the cost of goods for set-top boxes** for markets where monthly revenues are low, by eliminating the need for physical hardware plug-in modules.

Operators that still distribute smart cards may not be aware of how much OPEX they could save by switching to a true cardless solution. Your security vendor should be able to help you calculate total cost of ownership expenses.

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MYTH 4

CARDLESS SECURITY IS TOO LIMITED

Early versions of cardless security were only recommended for operators with a low volume of premium content or a low reach. In addition, previous generations of cardless solutions have had limited chipset integration. But these concerns are outdated.

In today's reality, operators need to maximize their service reach, which means that they must deploy newer boxes with the latest chipsets, while continuing to support older ones.

MYTH 4 CARDLESS SECURITY IS TOO LIMITED

THE REALITY

- Broad chipset support **reduces the number of situations where bespoke integration is necessary,** which in turn reduces time to market by having shelf-ready solutions for operators. When evaluating cardless security suppliers, review the list of silicon vendors and chipset models that have been certified and supported by their platform.

- **Pre-integrated security solutions are now available for rapid certification** by outside technology partners, such as Google's Android TV platform, which also reduces time to market for operators that deploy hybrid-IP broadcast-broadband set-top boxes.

- Modern cardless security solutions are field tested and proven **scalable for large deployments** as entitlement groups are not size restricted, and one key update event can be scheduled for all client devices.

- While older set-tops lack the hardware resources to accommodate software or security upgrades, cardless security, backed by a modern TV security platform, enables operators to adopt a **"cap-and-grow" approach as they deploy new set-tops** in the market.

Today's advanced broadcast security solutions provide operators with unlimited flexibility to define their pay-TV products and services and vendor ecosystems — regardless of their size, reach or content libraries.

MYTH 5

THE COSTS OF MIGRATION ALWAYS OUTWEIGH THE BENEFITS

Switching suppliers is an expensive proposition, both in terms of capital expenditures and in the operational costs associated with a vendor migration.

But the right choice can help operators mitigate these expenses, as well as position them to take advantage of next-generation connected video services.

MYTH 5

THE COSTS OF MIGRATION ALWAYS OUTWEIGH THE BENEFITS

THE REALITY

DVB Simulcrypt can be challenging.

- Integrating subscriber management and customer relationship management systems need to be completely separated as there may be **significant differences in how channels, services, packages, entitlements, etc. are being managed.**
- Head-end multiplexer components are defined by the Simulcrypt protocol, **yet interoperability with the cardless CA should not be taken for granted.** Configurations should support active handling of separate multiplexer-specific characteristics, such as control words and Entitlement Control Message (ECM) management.
- Simulcrypt implementations add bandwidth overhead, which raises **concerns about network utilization.** New cardless CA systems can make the most efficient use of available broadband resources by prioritizing the rapid deployment of keys, entitlements and software updates.

MYTH 5

THE COSTS OF MIGRATION ALWAYS OUTWEIGH THE BENEFITS

THE REALITY

Maintaining service consistency is key.

- The new cardless CA must be able to **effectively support the operator's chosen migration strategy** and integrate existing DVB service information (DVB-SI) between the old and new systems, especially when proprietary set-top features have been deployed.

- When integrating with new set-tops, it is ideal to generate the **same user interface look and feel** so that the user experience is seamless.

- Service outages and black-screens must be minimized. Operators need to **quickly mitigate unexpected outages.**

With new OPEX models for cardless security solutions, operators can balance out upfront CAPEX for integration costs in the short- to mid-term. Subscription-based pricing models vs. perpetual licenses allow operators to leverage usage-based consumption, meaning they only pay for what they use each month. Plus cardless security is inherently bandwidth efficient by nature, which reduces operational overhead.

From a big picture perspective, cardless security migration presents opportunities to accommodate new hybrid services, new forms of content, and new kinds of business rules.

By offering more interactive and compelling service lineups, a modern security platform will reduce the marginal costs of adding new subscribers for more advanced services.

CONCLUSION

While one-way systems are still the most cost-efficient way of broadcasting high-quality video, especially for live events, modern operators need to add OTT and two-way interactive, app-based media services, if they are to maintain a competitive edge.

As operators reflect on how to keep their service lineups relevant and up to date, it can be challenging to easily evaluate security vendors. Costs associated with updates and technology migrations are real, but cardless security is a proven way to reduce capital expenditure while also opening up new revenue models.

In a situation that's complex by nature, it's important to work with a security provider that offers deep expertise and proven cardless CA migration processes to better manage resources and keep the project on track. External validation through reference accounts and recognized testing agencies can also substantiate capabilities.

In the end, the key to successfully achieving business goals is to look past outdated prior assumptions when making strategic and technology decisions.

If you'd like more information about how Verimatrix can help determine the best cardless security migration strategy for your network, visit **www.verimatrix.com/DVB5**

contact us at
info@verimatrix.com