



ACCESS™

THE VIDEO ENTERTAINMENT

REVOLUTION BEGINS



EXECUTIVE SUMMARY

- The growing adoption of Rear Seat Entertainment across luxury, MPVs and taxi/ ridesharing will accelerate as AV enters the market.
- Delivering new video services will take advantage of a combination of IP, cloud and software technologies along with cellular networks to meet consumer demand.
- Innovative middleware and service platforms such as ACCESS Twine™ for Car help OEMs overcome technical and IAM hurdles through extensive support for key operating systems, media sharing protocols and security controls.
- Creating the foundation for video-based services today will help progressive OEMs prepare for wider adoption through BYOD apps and cloud / software updates.

“Are we there yet....?” Parents with children know just how important it is for the back-seat royalty to have access to video and Internet.

It's also important that the people in the front have access to great navigation and location-based services. Imagine you're a visitor to a strange city. Wouldn't you just love to have voice directions to the nearest free parking spot and have the payment handled automatically? And of course, when autonomous driving hits its stride, the front seat passengers will be able to enjoy video entertainment too.

Slow wave quickens

Video in cars is not a new concept. After all, the [first factory installed rear seat entertainment units appeared in the 1990s](#). However, considering that approximately two-thirds of car journeys in major cities such as [London](#) and New York involve just a driver and no passengers, the demand for these systems has remained relatively low.

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Nevertheless, Rear Seat Entertainment (RSE) has proven popular within the Sport Utility Vehicle (SUV) / minivan / Multi-Purpose Vehicle (MPV) segment, where [reviewers](#) of models such as [Chevrolet Tahoe and Chrysler Pacifica](#) have been vocal as to the benefits, especially for inter-state journeys with kids in tow.

High end luxury vehicles such as [Mercedes-Maybach](#) – which come at a sticker price in excess of \$200,000 – tend to easily upsell RSE packages that may cost a couple of extra thousand dollars. Yet, [China](#) seems to be the growing epicentre of factory installed RSE that is now common on premium models.

However, the market with potentially the biggest growth is within purpose-built taxis and vehicles which are increasingly designed to serve as ridesharing services. Uber, and its rival service Ola, have already trialled RSE services in [India](#) while in the US, a growing number of third parties are offering [rideshare advertising](#) services.

Yet, with the majority of RSE installed privately through DIY kits, there are very few accurate statistics around the number of vehicles with this capability and by extension, access to video-based services. However, industry analysts Market Study Report LLC suggest the automotive display market is expected to surpass [USD 30 billion by 2025](#).



Fully autonomous vehicles shift the market

By law, front seat video systems are deemed as illegal in most jurisdictions as they are considered a driver distraction. Yet demand for RSE is growing, and this position is likely to accelerate over the next decade as fully autonomous vehicles start to enter the market. Innovators such as Tesla already allow drivers to access video content on the front screen when the vehicle is parked within a charging station.

Part of this growth is due to consumer electronics commoditisation that has reduced the cost of factory installed RSE. The rise of low-cost tablets has led to a reduction in the optional RSE systems with \$1000 the starting point for OEM branded packages. Factory installed options tend to be more reliable and integrated than BYOD equivalents and have safety benefits compared to the possibility of handheld tablets becoming dangerous projectiles in the event of a crash.

The physical aspect and economics of RSE, either as standard or as optional extra, is still an evolving landscape. In general, almost every major brand has several models that have this capability. Perhaps the biggest challenge is to ensure that every passenger can enjoy a video experience that is at least comparable to the at-home equivalent.

IP, cloud and software centric

Irrespective of which business model OEMs decides to adopt, the video content service delivery method is likely to rely on IP-based streaming via cellular networks. This approach overcomes the limitations of technologies such as DVB – although that could potentially change over the next decade – while allowing service delivery to be handled through software, either in the car or from the cloud. This offers a major benefit by allowing cars to be manufactured in any market, and exported to any market, with the IVI and RSE configured by remote software update and configuration.

The analogy would be the smartphone; on first use, it can connect to the local carrier and ask the user for their account details, which in turn builds the GUI and app profile based on the supplied information.

As cars change owners in the secondary market, the IVI and RSE resets and the process starts again – as it did when the vehicle left the dealer showroom – and the connection between driver and the OEM is extended to the entire lifecycle of the vehicle!

Video – delivering quality, flexibility and profit

When it comes to the user experience, the IVI has a critical role to play in ensuring popular video services are seamlessly enabled. This starts with handling the Identity Access Management (IAM) layer to ensure secure and trusted access to subscribed services. This single sign-on process simplifies the user experience and is linked to additional features such as parental control and billing management for payment services.

Consumers that already have active subscriptions are unlikely to want to pay for a separate RSE package. However, when bundled with 4G/5G connectivity and sold as a package upgrade, this business model offers a tantalising glimpse into the potential of untapped video service revenues that OEMs could unlock.

ACCESS Twine™ for Car (Twine4Car) enables OEMs to integrate all kinds of content sources, be it public, private or premium content. Sitting as a middleware layer, Twine4Car enables OEMs to define look, feel and style of the UI while the platforms handle the technical enablement of providing secured media access and enabling secured multiscreen media sharing to any head unit within the vehicle along with BYOD devices.

Additionally, by pre-integrating IAM, Conditional Access (CA) and Digital Rights Management (DRM) solutions, OEMs can both simplify the consumer experience and meet the security requirements of the SVOD and broadcaster community. ACCESS Twine™ is CA/DRM technology agnostic and is open to be integrated with any of such systems, including Microsoft PlayReady®, Verimatrix VCAS® and ViewRight™ technologies, and to provide great support for further solutions like Google Widevine® and Apple FairPlay Streaming™.

For OEMs with multiple brands, Twine4Car can help optimise costs by overcoming the issue of device fragmentation. This is because its SDKs are available for all major operating systems, along with integration with leading in-car systems such as GPS, Bluetooth, Wi-Fi, 4G/5G, DNLA and key automotive software technologies such as Apple CarPlay and Google Auto. Additionally, operators benefit from ACCESS' wide experience of the consumer electronics market having deployed on more than 1.5 billion devices.