

Personalize, Monetize in-Dash Content

12 April 2022

Report Snapshot

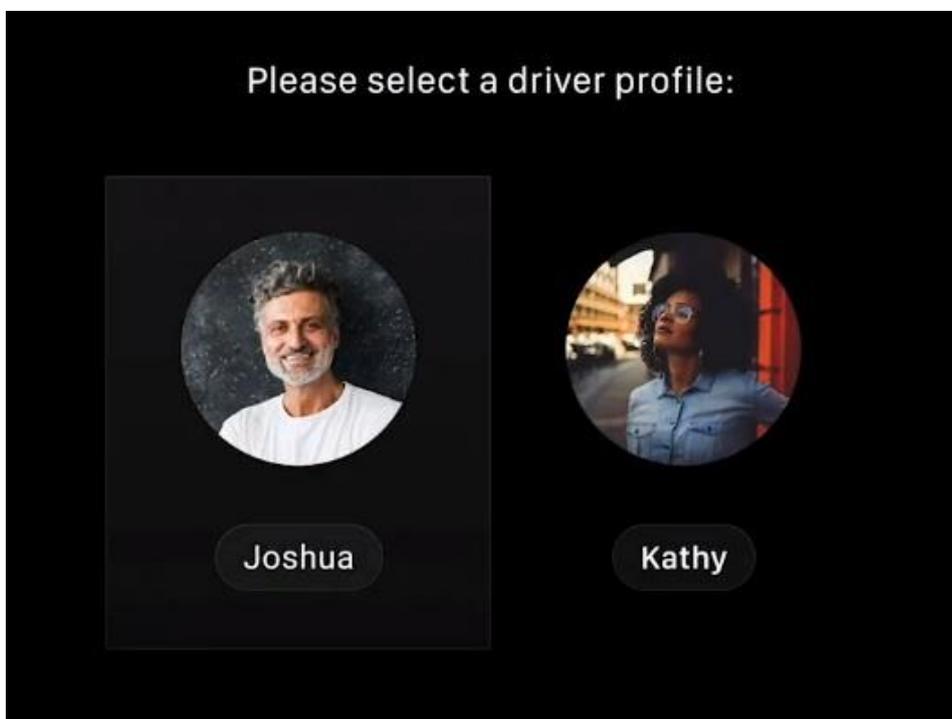
Car companies are being forced to come to terms with the evolving nature of this unique content consumption experience as drivers fumble with phones or fiddle with a diminishing assortment of knobs trying to find the entertainment or information they desire. DTS AutoStage provides the tools to enable the creating of branded in-vehicle experiences intended to strengthen customer ties and preserve access to data.

1. Analysis

Driving a car is a lean-in experience demanding attention and focus from the driver. For that reason, it presents a unique content consumption environment requiring timely alerts to driving hazards along with unencumbered access to sources of audio. Auditory interactions are the preferred medium — capable of delivering non-distracting experiences in the car where safety is paramount. The cabin of the car is a content-first world. DTS AutoStage from Xperi is the platform to manage it.

DTS AutoStage simultaneously provides an interactive environment tuned to the demands of safe driving while enabling almost unlimited access to content. DTS AutoStage provides all of the contextual awareness that users of smartphones, PCs, and connected televisions have come to expect and refined them into an automotive-grade safe-driving solution.

Exhibit 1-1 Autostage User Preferences



Source: Xperi

DTS AutoStage is capable of learning user preferences, delivering recommendations, and curating content in an intelligent manner that is empowering without being distracting. Accessible within this Xperi offering is everything from artist and station metadata, including lyrics, genre, background, and events — along with marketing messages and monetization options and the potential for audience measurement.

At the same time, DTS AutoStage safely integrates familiar elements from social media including likes, shares, and favorites. Perhaps most important, DTS AutoStage integrates broadcast radio sources — worldwide — with sources of streaming content including everything from Apple Music and Spotify to podcasts and station Webcasts.

Perhaps most important, DTS AutoStage integrates broadcast radio sources — worldwide — with sources of streaming content including everything from Apple Music and Spotify to podcasts and station Webcasts.

Exhibit 1-2 DTS AutoStage Social Media Integration



Source: Xperi

The broadcast radio industry has long taken the car for granted. It was not that long ago that the typical new car buyer’s access to content in a car was limited to an AM radio controlled by two knobs and five or six buttons — for presets.

Today’s new car buyer not only has access to both AM and FM, but also, in the U.S. SiriusXM satellite radio and all the streaming content enabled by

smartphone mirroring solutions from Apple (CarPlay) and Google (Android Auto). Multiple automakers have gone even further, adopting Google's Android Automotive operating system and, in some instances, Google's Automotive Services (GAS) cloud resources.

Amazon's Alexa is also making its way into cars around the world just as Apple is seeking to expand its own iPhone-based CarPlay dashboard beachhead. In the midst of this evolution of the in-vehicle experience, automakers sense they are losing control of or even access to their customers and their content consuming preferences.

Just as in the days of AM-only in-car experiences, automakers have the power to define and refine automotive-centric content consumption. It is the responsibility of automakers to anticipate and respond to the changing tastes and behaviors of drivers and passengers. DTS AutoStage provides the creative palette for new uniquely automotive interactions.

Radio broadcasters, too, see that they are getting lost in the mix as in-car content consumption becomes increasingly fragmented and commandeered by high tech rivals. In the end, the ubiquitous radio, reliably built into nearly every car manufactured around the world, is getting lost in the midst of new forms of dashboard connectivity and the emergence of new sources of digital content.

There is no reason for radio to be put at a disadvantage in the dashboard. If anything, the digital radio enabled by HD Radio technology creates new opportunities. Digital metadata resources enable search, content alerts, and the leveraging of driver and passenger preferences along with recommendation engines. All of which adds up to an interactive experience with a wide range of latitude for innovation and differentiation.

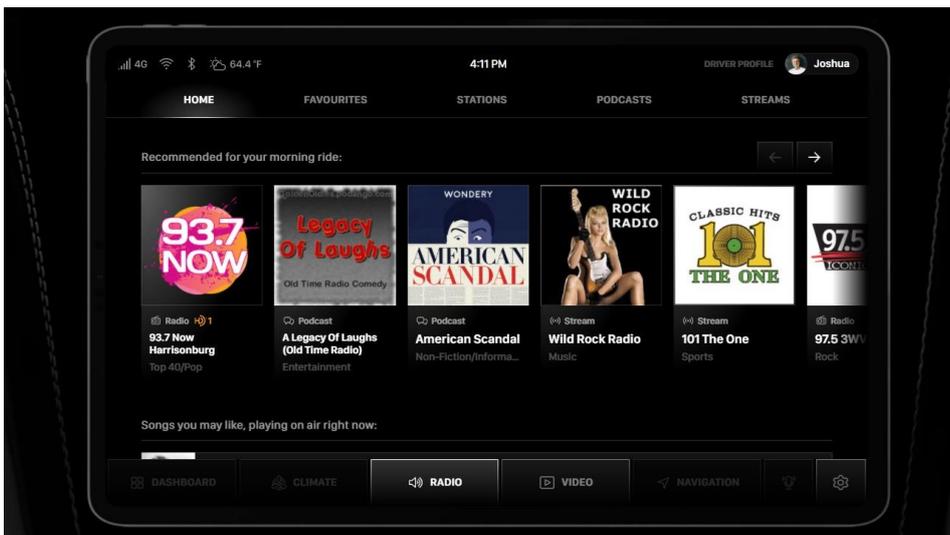
The good news is that car makers, radio broadcasters, and advertisers all recognize that they have common cause to build a new in-vehicle customer experience. DTS AutoStage is the rock upon which these industries can build their new content consumption and management "church."

In the end, the ubiquitous radio, reliably built into nearly every car manufactured around the world, is getting lost in the midst of new forms of dashboard connectivity and the emergence of new sources of digital content.

The lean-in proposition distinguishes cars from mobile phones, desktop computers, and televisions. Automotive content consumption has historically prioritized physical/manual interfaces. The digitization of content sources and integration of wireless technology and sensors has opened the door to touch screens, voice, gestures, and facial recognition for managing the in-vehicle information flow.

In the car, radio alone can deliver an eyes-free and hands-free experience. Information and entertainment content can be consumed aurally while commands are issued orally. The proposition is uniquely tuned to the car where different audio zones can be defined and visual exchanges can occur in a controlled manner.

Exhibit 1-3 DTS AutoStage Home Menu



Source: Xperi

The key objective is to deliver contextualized experiences. Cars have become externally and, increasingly, internally barnacled with sensors enhancing location and situational awareness of the driving environment and the driver, respectively. This has also opened the door to an entirely new experience of content relevance driven by context. In a word, the car has become a browser with every turn and brake application acting as a query and an indication of intent.

The in-dash system is now able to anticipate information needs in real-time while adding unique elements to a car-centric recommendation engine enabled by Xperi's DTS AutoStage. The result is a content-first lean in experience unique among all user interaction scenarios, infused with the capabilities of other familiar environments — televisions and smartphones — yet entirely new.

Car companies are being forced to come to terms with the evolving nature of this unique content consumption experience as drivers fumble with phones or fiddle with a diminishing assortment of knobs trying to find the entertainment or information they desire. Sources of content include broadcast, streamed, and pre-recorded material which may arrive via satellite, cellular, or digital radio transmissions.

The information itself might be traffic or weather information — or even road hazard alerts. Cars are even alerting drivers — these days — to vehicles in blindspots and dangerous lane drifting.

All of the content in new cars arrives from digital sources. As such it is searchable and sortable via voice and other interfaces thereby creating an interactive experience crafted with distraction mitigation in mind.

While drivers may make or receive phone calls in the car or access navigation applications, the car is first and foremost a content consumption proposition. More than any other environment, it is content first.

Unique to the driving experience, the driver is actively listening. We like to think of driving as a relaxed or relaxing proposition — an escape. The reality is that driving requires full, active engagement. In fact, regulators and vehicle designers are increasingly requiring driver monitoring systems to ensure drivers are paying attention.

Most of the time spent behind the wheel revolves around visual and audio inputs to the driver. It makes sense for car companies to focus on delivering a top-notch content-first experience. Xperi's DTS AutoStage helps make that happen.

Car companies are being forced to come to terms with the evolving nature of this unique content consumption experience as drivers fumble with phones or fiddle with a diminishing assortment of knobs trying to find the entertainment or information they desire.

DTS AutoStage transforms the in-dash system in a car into a multi-layered content engagement system with built-in distraction mitigation. Drivers can safely drill down into content sources or the content itself or request similar types of content — all while keeping hands on the wheel and eyes on the road.

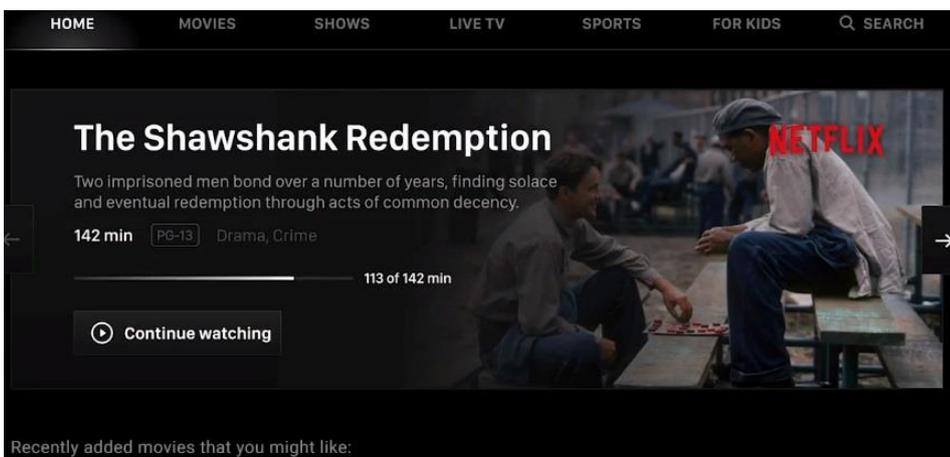
The digital sourcing of content means that DTS AutoStage can break down the linear audio consumption experience familiar to radio listeners and identify favored artists currently playing on different stations. Metadata links enable access to artist-related information ranging from song lyrics to upcoming concerts.

At its core, though, DTS AutoStage presents a personalized experience tuned to individual users and poised to deliver related and recommended content. The process of content discovery is no longer a process of knob turning or button pushing. DTS AutoStage can automatically locate relevant broadcast content or podcasts from a variety of sources.

DTS AutoStage is also transforming the advertising experience in the car. Previously an audio-only proposition, with DTS AutoStage in-dash systems can now integrate audio with visual content and metadata along with relevant calls to action and interaction.

At its core, though, DTS AutoStage presents a personalized experience tuned to individual users and poised to deliver related and recommended content.

Exhibit 1-4 DTS AutoStage Video Content Example



Source: Xperi

In essence, DTS AutoStage is a palette for automotive engineers to create new branded engagement opportunities. An in-dash system enabled with DTS AutoStage unleashes the creativity of automakers to define new customer experiences with new ways to interact with customers.

DTS AutoStage also enables measurement of the effectiveness of these new interactive experiences. In time, automakers can learn and evolve their in-vehicle solutions to serve customers more optimally.

At the same time, DTS AutoStage creates a collaborative opportunity between the broadcast and creator community to identify successful moments of customer engagement and interaction. It is no exaggeration to suggest that broadcasters, creators, automakers, and, of course, advertisers may someday leverage DTS AutoStage assets to identify elusive points of attribution where customer interactions produced positive real-world outcomes.

In these ways, DTS AutoStage is a tool to empower multiple industries to redefine the nature of in-vehicle content consumption and re-monetize a platform once exclusively defined by audio ads broadcast via AM channels. DTS AutoStage is unlocking a new frontier characterized by an expanding array of content sources and a digitally infused, contextually aware, and customer conscious advertising experience.

DTS AutoStage is a global digital metadata platform supporting:

- Radio station identification
- Artist, track, genre information
- Metadata and artwork
- Advertising feeds
- An interactive back end
- Recommendation engine + search

DTS AutoStage delivers:

For automakers:

- A platform for brand building and customer engagement
- Brand defining user experience opportunities
- Revenue generating, advertising, and audience measurement opportunities
- Distraction mitigation
- Content management – searching, sorting, discovery, recommendations

For broadcasters:

- A platform to enhance content delivery to cars (and other platforms)
- Enhanced and interactive advertising
- New revenue opportunities from in-vehicle interactions
- Audience measurement
- Attribution

For advertisers:

- New interactive and contextually aware advertising
- Audience measurement
- Attribution

In addition, at a time when tech industry titans from Apple and Facebook to Google and Amazon are seeking to dominate all forms of content consumption and advertising, DTS AutoStage helps automakers preserve their independence and control of their customer relationships and platforms. DTS AutoStage provides the tools to enable the creating of branded in-vehicle experiences intended to strengthen customer ties and preserve access to data.

The implementation of DTS AutoStage – which is steadily gaining traction throughout the industry – enables new opt-in experiences including sponsored content, subscriptions, and subscription bounties. The bottom line is DTS AutoStage enables differentiation, not homogenization. DTS AutoStage fosters customer retention and monetization and platform ownership.

2. Conclusions

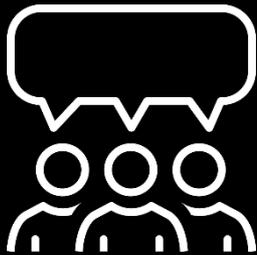
Connected content experiences in the car call for DTS AutoStage as a global, immersive, personalized, content-first platform compatible with all other platforms and integrating all content sources. DTS enables differentiation and customer retention with a wide range of unique capabilities and global access.

3. Analyst Contacts

The author of this Insight, **Roger Lanctot**, can be reached at rlanctot@strategyanalytics.com, or by using the following telephone number: **+1 617 614 0714**.

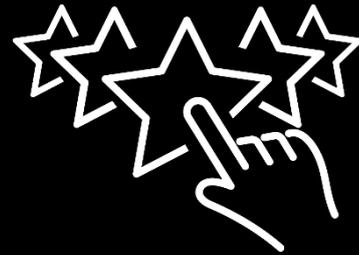
Get help from Strategy Analytics

Working with Strategy Analytics gives you the knowledge you need to succeed.



| Understand your customer

Business opportunities abound. But which ones are right for you and your customers? Which will give you the advantage?



| Optimize your user experience

Optimize your product to give your users the best experience and you the market advantage.



| Analyze the market

Understand the size of the opportunity and where your product fits using our unrivalled knowledge and world class data analysis techniques.



| Explore your future

Working with us will focus you. With our insight and forecasting expertise you'll make confident strategic decisions that drive success.

Please contact us at custom@strategyanalytics.com with any questions and for further details and solutions on how we can work with you on creating a custom solution to address your specific needs.