

Radio and the Automobile of the Future

Just because people have access to new technology doesn't mean they are going to use it. There are already a lot of tech features in cars that go unused:

The fascinating thing about these connected TVs is that they mimic the icon/app-driven interfaces and functionality of the tablet and smartphone. The apps for Netflix, YouTube, Amazon, Pandora, even maps and shopping services often take their cues from touchscreens. In fact, the handful of Google TV users out there can enjoy some of their Android apps on the TV screen. And then, of course, there are the ubiquitous Web browsers that are on almost all of these units as well as the over-the-top (OOT) boxes and game consoles. Even the Wii U and many Blu-ray disc players have serviceable browsers.

And the overwhelming majority of owners just don't care. According to the latest research from NPD Connected Intelligence, most of these alternative applications of the TV screen are not being used by the overwhelming majority who have them. In its survey of connected owners, NPD found that generally 5% or fewer were using their TV applications to access Twitter, video calling, shopping or Facebook. Only about 10% are using the TV for Web browsing. The only non-video application that appears to be gaining any traction is music. For obvious reasons (the TV is connected to the home theater in many cases), about 15% are accessing music via their TV in apps like Pandora. NPD Director, Devices John Buffone suggests that with so many inputs bringing connectivity to the TV, consumers are struggling with (or just avoiding) a complex experience

Radio will soon be just one of several entertainment and information options to the U.S. driver

Posted by: [Paul Maloney](#)



Thursday was the second half of Arbitron's Client Conference, and two topics that emerged of interest to RAIN readers: in-vehicle Net radio and the importance of mobile to radio's digital strategy (as Tom Taylor Now reported on Friday).

It's clear the day is coming that broadcasters will be competing head-to-head with Internet-delivered entertainment and information in the car. [Valerie Shuman](#) (left) is VP/Industry Programs for the [Connected Vehicle Trade Association](#). She told the conference we'll soon see, as Taylor reports, "a virtual dashboard and software-defined radio" (think of a device where its capabilities are easily updated and enhanced, as opposed to being limited by whatever "hardware" it uses).

Jacobs Media consultant Fred Jacobs (also pictured left) spoke too. He recommended radio programmers to go and get the same in-car experience your audience will soon have, with a test drive of a car equipped with a connected dashboard system.

"You need to understand what the consumer is going through, to be an effective programmer," he said. That's one point, by the way, of his five-point plan for radio programmers, managers, and owners to make sure they're ready for the "connected car revolution," which he offers in his blog.

"Radio needs to understand what the automakers – and aftermarket companies – are thinking, and how it will impact the listening experience – or should I say – the audio consumption experience," Jacobs writes, [here](#).

Even out of the car, mobile is becoming the heart of digital radio listening. Clear Channel President of Digital Brian Lakamp (right) revealed to the conference audience that more than half of iHeartRadio usage is now mobile (that number is now 77% for Pandora). His company's research shows users of iHeartRadio's "custom radio" feature (its "personalizable" streams) "spent more time with live radio than they did two years ago... digital is 'in addition to,' not 'instead of' broadcast radio."

L.A. Auto Show primes the pump for more HD Radio rollouts. "I Love L.A." may be the tune they're humming at iBiquity this week after a number of car companies announced at last week's L.A. Auto Show new models hitting showrooms complete with HD Radio. The list includes the 2014 Ford Fiesta, the 2014 Subaru Forester and three Mazda models – including one where digital radio becomes standard. Hyundai said its 2013 Santa Fe SUV will become the first model with iTunes Tagging, while Mitsubishi became the first to integrate HD Radio-based traffic services. iBiquity COO Jeff Jury predicts 2013 will be another year of "tremendous growth" for HD Radio. "Los Angeles is a high profile stage to kick off the auto show season and car makers increased their commitment to HD Radio technology by including us in many important product announcements," Jury says. There are 29 automakers that have publicly committed to HD Radio

STRUBLE SAYS 2012 WAS A BIG YEAR FOR HD

12-13-2012

iBiquity Digital President & CEO Bob Struble updated the industry on the 2012 accomplishments and general progress of HD Radio which was highlighted by a slew of announcements at the LA Auto Show this month. About 10 million HD radios are now in the marketplace and 2,100 radio stations broadcast in HD. Here's Struble's update to the industry on where HD stands today.

- Acura announced that HD Radio Technology will be standard on the 2014 RLX.
- Ford showcased the launch of the 2014 Fiesta with MyFord Touch and HD Radio Technology.
- Hyundai highlighted the all-new three-row 2013 Santa Fe SUV, which will be the first Hyundai vehicle with the HD Radio iTunes Tagging feature.
- Mazda revealed three new vehicles, all to include HD Radio Technology. The 2013 CX-9 is the first Mazda vehicle to come standard with HD Radio Technology.
- The 2014 CX-5 and all-new Mazda6 will also be available with HD Radio Technology.
- Mitsubishi made a big splash by becoming the first automaker to announce HD Radio delivered real-time traffic information to the dashboard. Mitsubishi becomes the 29th automaker to include HD Radio receivers in the upcoming 2014 Outlander.
- Subaru previewed HD Radio Technology availability on the 2014 Forester.

Here is a quick update of the basic facts about the status of HD Radio Technology:

- Nearly 10 million HD Radio receivers are now in the marketplace.
- A total of 29 automakers have now publicly announced their plans to incorporate HD Radio Technology in over 150 models by year end with more than 75 featuring HD Radio receivers as standard equipment.
- Over 2,100 HD Radio stations have converted to HD Radio Technology.
- Over 1,400 new HD2/HD3/HD4 multicast channels are currently on the air.
- Over 10,000 brick-and-mortar stores and online outlets offer HD Radio products.
- Nearly 100 different HD Radio receivers are available at retail.
- The HD Radio Alliance continues to promote HD Radio Technology on over 600 stations across the U.S. Commercials are available at hdradioalliance.com.

HD Radio gets its first traffic pickup from Mitsubishi. **Better sound quality may be attractive to listeners, but for broadcasters the potential to monetize digital radio is even more important.** HD Radio is taking a step in that direction as Mitsubishi becomes the first carmaker to integrate a digital radio-based traffic service into its dashboard. The 2014 Outlander will be the first model to receive real-time traffic information integrated into its navigation system. The content — supplied by the Broadcaster Traffic Consortium (BTC) and Clear Channel's Total Traffic Network — will piggyback on digital radio signals under a deal with navigation system manufacturer Nokia. **example of how automakers are leveraging our technology to offer new services to their customers,"** iBiquity COO Jeff Jury says. **Mitsubishi drivers will also have access to the other programming features of HD Radio, including iTunes Tagging.** **Ibiquity says there are now more than 10 million digital radio receivers in the market, with growth driven by automotive sales**

2020 vision: connected cars predicted to reach critical mass within a decade. Fasten your seatbelts: within the next 5-10 years, the majority of cars on the road will be connected vehicles, equipped with digital dashboards like Ford's Sync, Toyota's Entune or a similar infotainment system. Connected Vehicle Trade Association VP of industry programs Valerie Shuman made that forecast yesterday at Arbitron's client conference. Pre-loaded with Pandora, Spotify and the like, connected cars mark the end of radio's last sanctuary. But they also afford a rare opportunity to reinvent the radio listening experience for a new generation of drivers. "You've owned that driver for a long time but the in-vehicle platform is changing and it spells opportunity for you," Shuman told the conference. Several industries see the digital dashboard as a new profit center, from consumer electronics manufacturers to content providers to the companies that build the infrastructure. "There's a whole new community interested in car connectivity and encouraging that to happen," Shuman said. It's not just automakers eager to keep up with changing consumer behaviors that are accelerating the trend. Insurance companies want to use the technology to monitor driving habits and use the data to determine which of their policyholders merits a discount. But the real demand is coming from consumers. **More than half of the five million people that bought Sync-enabled Ford systems say it was a major reason they bought the car. The future is arriving fast. Four in ten cars sold last year were connected to wireless networks and 50 car models have web radio integration.** There are 11 million streaming-capable cars on the road today and 90 million cars with auxiliary jacks. Consumer electronics manufacturers are working to standardize the interface in dashboards. "The dashboard looks different and it's changing every year," Shuman said. "It's giving drivers new options."

Next generation Sync will make changing stations easier. **If you think radio listeners are scan-happy today, imagine when all they have to do is yell out “FM 104.1” at their dashboard. That’s all it will take when the updated Sync with MyFord Touch rolls out into additional models in 2014. The automaker says the Ford Fiesta will become one of the first cars to get the new “flattened” audio command structure. Ford says drivers can say the station frequency, “AM 760,” or the official name of the station, like “Z-100,” to tune in. They no longer need to say “radio” or “Sirius” if they’re seeking out a satellite radio station. Other features will also be simplified while the LCD touch screen will be expanded from 4 inches to 6.5 inches. “Technology features are important to all of our customers, including small car buyers,” Ford cross-vehicle marketing manager Michelle Moody says. The automaker says MyFord Touch consistently ranks among the top 10 purchase considerations for new owners, with 65% of consumers planning to buy a Ford saying Sync plays a role in their decision. “We expect the same trend for Fiesta,” Moody says. “We expect the same trend for Fiesta.”**

Toyota makes HD Radio standard on its Yaris line. **Buying a new car with an HD Radio automatically built-in is getting easier — more than 70 models now offer digital radio technology as standard equipment. The latest to join the list is Toyota’s Yaris brand, starting with the 2013 model year. HD Radio will be offered as part of a dashboard entertainment upgrade on Toyota’s 14 other models. The carmaker also offers HD Radio as standard on all five models under the sister Scion brand. Ibiqurity says drivers can get digital radio as a factory-installed feature on 28 brands**

In-Car Internet Impact

Have Internet Access in Car: What Do You Listen to Most?

AM/FM on the Radio	70.3%
Local AM/FM Stream	4.6%
Distant AM/FM Stream	4.0%
Other – CDs, MP3, etc.	12.6%
Personalized Music Stream	8.5%



In-Car Internet Impact

What do You Most Listen to in Your Car?

	<u>Internet in Car?</u>	
	<u>No</u>	<u>Yes</u>
AM/FM Radio	77.7%	70.3%
<u>AM/FM Local Stream</u>	-	4.6%
Total Radio	77.7%	74.6%



Spends 80% or More of In-Car Time With AM/FM

Those With In-Car Internet	47.8%
Those Without	<u>54.8%</u>
	-7.0%



- **HD-equipped Santa Fe goes on sale.** Hyundai already announced that it would install HD Radio on the 5-passenger 2013 Santa Fe Sport SUV and those cars are now on dealer lots. **The Santa Fe is the first Hyundai vehicle to offer the iTunes Tagging feature which allows listeners to tag songs for later preview and purchase through iTunes.** A larger model Santa Fe with HD Radio will go on-sale in January. HD Radio developer iBiquity — which will feature the Santa Fe in its Radio Show booth this week in Dallas — says 150 cars are now equipped with HD Radio. The company says every 15 seconds a car with a built-in HD Radio receiver is sold. “HD Radio adoption continues its acceleration,” CEO Bob Struble says. Ibiqity will also be showcasing the new Insignia HD-RAD, which is the first tabletop radio that sells for less than \$50.

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- **Inside Radio News Ticker...Lexus expands HD Radio options...**The 2013 Lexus LS will include HD Radio as standard equipment. That brings the total number of Lexus models that will offer the iBiquity technology to five. The car also includes the Lexus Enform digital dashboard that offers app-access to iHeartRadio and Pandora. The Toyota brand also offers HD Radio Technology on most cars and all Scion models include HD Radio as standard equipment...

- Chrysler is teaming up with Sprint to upgrade the maker's Uconnect infotainment system, adding embedded features that will turn the vehicle into a "hot spot on wheels."
- The U.S. automaker was one of the first to offer telematics technology but, in recent years, slipped behind competitors such as Ford with its popular Sync technology. The new Uconnect system will add a variety of features, including voice-operated texting and the ability to connect a laptop computer or smartphone to the vehicle's built-in WiFi hotspot.
- "When we look at the car, we see another smartphone," said Matt Carter, president of wholesale and emerging solutions at Sprint. "And what we're really good at is really innovating customer experiences, devices, underlying platforms and bringing all of those together to create the kind of customer experience that we hope leads toward responsible driving for the passenger and driver."
- Virtually every major automaker now offers some form of telematics system. The challenge is to add features while also simplifying operation – which is why most makers are adopting advanced voice-control technologies. That's also a plus as the industry comes under increased scrutiny from federal safety regulators worried about distracted driving – which is blamed for roughly one of every 11 U.S. traffic fatalities.
- The new Uconnect upgrade permits a motorist to send a text message by speaking in a natural voice while also simplifying the process of entering an address into the navigation system, minimizing the number of prompts required.
- The vehicle also can tap into the Sprint data network and allow passengers to tie in multiple devices, such as laptop computers or smartphones, via WiFi.

- “It is basically providing a hot spot on wheels,” explained Matt Zenios, head of Chrysler’s Uconnect service.
- The Sprint-based system isn’t entirely unique. It integrates a number of features found in other telematics systems, such as the ability to remotely lock and unlock the doors or have emergency responders automatically notified in the event of a crash – both services first introduced by General Motors’ OnStar.
- The hot spot concept, meanwhile, was earlier introduced on the A7 and other Audi models.
- Some of the basic features of the updated Uconnect will be offered without charge. But the hot spot and more advanced services will carry an additional fee, according to Chrysler.
- Chrysler approached a number of telecommunications companies before agreeing to work with Sprint. The two companies won’t discuss the financial arrangements of the deal, however. Motorists will still be able to link phones from other service providers, such as AT&T and Verizon, to the new Uconnect system.
- The updated Uconnect will debut this autumn in the redesigned 2013 Ram 1500 pickup and new SRT Viper models and then be rolled out in other Chrysler products.
- The maker is hoping to lure in the growing number of young buyers who are more keen on electronic technology than traditional automotive selling points like power and performance. But analysts warn that simply coming up with a high-feature telematics system doesn’t guarantee success.
- Ford, for example, has been repeatedly criticized for problems with the MyFordTouch interface used to control its latest telematics system. It was one reason why the Ford Edge was listed by Consumer Reports as one of “Five Popular Cars to Avoid.”

More HD-equipped cars roll onto dealer lots. Ford, Toyota and Mazda are among nine automotive brands offering HD Radio as standard or as a factory-installed option in 14 new models that recently hit dealerships across the country – or are about to. HD Radio comes as standard equipment on the 2013 Cadillac XTS, 2012 Hyundai Azera, 2013 Lexus GS, RX and LX, 2013 Scion FR-S and iQ and 2013 Subaru BRZ. It's offered as an option on the 2013 Ford Escape, 2013 Toyota Venza, 2012 Porsche Cayenne, Panamera and 911 and the 2013 Mazda CX-5, the first Mazda to offer it. A total of 28 automakers, including Acura, Chevrolet and Lexus, have now publicly announced plans to incorporate HD Radio in more than 140 models by year-end with more than 60 featuring HD receivers as standard equipment. The recently launched Artist Experience feature is gaining traction with Volkswagen, Chevrolet, Buick and GMC launching radios that display artist images and station logos. More are expected.

Survey: Drivers like in-car Internet but worry about safety, privacy

Auto makers are now including more connected services in their vehicles and trying to balance them with safety

By Fred O'Connor | *03 August 12*

U.S. drivers seem to hold conflicting opinions on in-car Internet access, viewing the technology as a driving hazard and even a threat to privacy while praising the entertainment and safety features it offers.

These opinions, presented in a Harris Interactive [poll](#) released Wednesday, come as automakers are seeing increased driver demand for digital technology and are adding more of it to their vehicles.

More than three out of four (76 percent) of the survey's 2,634 respondents answered that in-car connectivity causes too much distraction and is dangerous to have in vehicles. Automakers have gone too far in including this technology in their vehicles, according to 55 percent of those surveyed. U.S. drivers tend to attach strong emotions to their vehicles, and the poll

reinforced that view, with 61 percent of people saying their car is "a haven from the outside world" and they don't always need an outside connection.

The auto industry said it understands the technology's potential safety risks and incorporates it in a way that creates the fewest disruptions. Integrating a smartphone into a car reduces the distractions that would be present if the phone was simply placed in the passenger seat, said Wade Newton, director of communications for the Alliance of Automobile Manufacturers (AAM), an automotive trade group whose 12 members include Ford, Mazda, Toyota and General Motors.

"If the phone rings you have to reach over, grab it and see who's calling," he said. "If it is integrated, with one button they can accept the call, turn down the radio and open the speakers."

Integrated mobile phone use was an early example of in-car connectivity. Now the technology can turn vehicles into wireless hotspots, allow people to search the Web from dashboard touchscreens and connect to roadside assistance services by pressing a button.

All auto makers have introduced in-car connectivity features in some degrees and promote them on their websites. When asked to comment on the survey, though, some of the manufacturers declined to comment and others did not respond to interview requests by deadline.

BMW USA did reply to an interview request but could not comment on the survey. However, in an emailed statement, the company said that interest in safe motoring "is a healthy sign that consumers are concerned about distraction while driving, and we consider that a big success."

The statement added that BMW uses "science-based analysis" to incorporate smartphones and other in-car technology into its vehicles. "We have 5 driving simulators that are constantly evaluating the driver experience, plus we do mobile driver clinics in Europe, the U.S., and the Far East to assess driver reactions," the company said.

Car connectivity could provide companies with too much information on a person's location and how they drive, according to 61 percent of those

polled. The survey showed 41 percent of respondents believe insurance companies would raise rates based on driving habits.

Car makers only share data if drivers opt in to such services, said Mark Boyadjis, an industry analyst at IHS Automotive. Auto makers' legal departments understand that sharing driver data without consent is illegal, he added.

Those who sign up for safety services, such as General Motors' OnStar, and question why they're being tracked miss the point of such systems, he said.

"If you sign up for stolen vehicle location and you don't want to be tracked, that's the whole idea behind the system," he said. "It's to make sure you can find your car when it's stolen."

Car manufacturers started offering [connectivity features](#) a few years ago, in some cases partnering with technology companies to develop the systems.

Ford turned to Microsoft to develop its Sync platform, which debuted in 2007. Among other functions, certain Sync packages include an in-car wireless router and let drivers use voice commands to control selected mobile phone apps.

At the Apple Worldwide Developer Conference in May, Apple revealed that vehicles from nine automakers will incorporate the Siri voice command system found in its [iOS 6 mobile platform](#). According to Apple, the Eyes Free feature will allow drivers to use the voice command button on their steering wheels to ask for Siri's help with getting directions, playing music, writing text messages and placing calls in addition to other functions.

Other consumer-focused applications and Web services are also making their way into cars. Toyota's Entune system, launched last year, brings mobile applications including the Bing search engine, Pandora and the OpenTable restaurant reservation service to a range of its vehicles. Honda's recently revamped car connectivity platform, HondaLink, uses cloud computing to stream music, news and entertainment content to drivers.

While drivers harbor concerns about the effect of Internet access on road safety, the survey indicated that they enjoy the features it offers. Nearly 60

percent of those polled (58 percent) said these technologies make driving more enjoyable. Almost the same percentage (57 percent) said in-car connectivity makes them feel safer.

Technology has changed how people connect, and this extends to their autos, the AAM's Newton said.

"Drivers have this expectation of what it is they're going to do in a vehicle," he said. "It's our job to provide ways for them to do those things in a way that is safe as possible and keeps the eyes on the road."

As better user interface technologies make their way into cars, auto makers are better able to meet these expectations, said Boyadjis. Car companies long wanted to include the Pandora music streaming service in their vehicles, but its "setup requires more than a basic display" and developing the proper interface proved challenging, he said.

Now, with touchscreen displays and voice recognition appearing in cars, those technology integration hurdles have diminished. The interface required to use Pandora "is no different from what you would have on any other touchscreen navigation system," he said.

Drivers both embrace and fear in-car connectivity systems, because current cars offer technology not found in recent models and this presents a learning curve, Boyadjis said.

Cars from the 2000s had "rotary knobs and basic controls," he said. "That doesn't exist anymore. We've reached a level where we've got a more complex system that has software elements to it and a more complex user interface that people have to learn."

To help educate people, vehicle makers are now including car tech tutorials at their dealerships, Boyadjis said. Ford, for example, teaches buyers how to use the Sync system. Cadillac is offering courses on its new Q system and Lexus is following suit, he said.

Regardless of a driver's technology comfort level, everyone needs to take the time to understand their car's technology.

"It doesn't matter if you are an expert or a novice. There is still a learning curve," Boyadjis said. "Getting into a vehicle is no longer about buckling your seat belt."

7/12 "In the next year or two we're going to see cars with services that redefine technology," GigaOM comments.

But connecting to the web may be a problem. Most car systems now rely on smartphones, but others take a different approach. The Tesla Model S (pictured above), for example, connects directly to the web -- no smartphone required. It will also come with TuneIn's web radio directory built in to the dashboard's whopping 17" touchscreen (and also happens to be TuneIn's 200th distribution platform).

Still, such systems -- regardless of how they get online -- run into the same issues of data costs and network capacity. While "the jury is still out" on such issues, GigaOM writes ([here](#)), "it's clearly a platform of interest to carriers."

Toyota Entune upgrade to put iHeartRadio in more cars. Several months after Toyota was to have updated its Entune dashboard system, allowing drivers with earlier versions of the infotainment system to use iHeartRadio, the upgrade is now promised to arrive by summer's end. Drivers of a larger selection of Toyota cars will also be able to access the MovieTickets.com and OpenTable apps that were also promised for Entune, as well as new voice control functions. Drivers are already able to use the Pandora and Bing apps. Toyota first announced in January 2011 that it would begin phasing iHeartRadio into its digital dashboard system. "The ability to bring more music choice to Toyota owners with iHeartRadio is one of the reasons for the wide appeal of Toyota Entune," VP of advanced technology Jon Bucci said last fall as it was announced the radio app would be in 2012 Camry and 2012 Prius V models.

PERCEPTION #4: Consumers will want more pre-sets with in-dash systems

Finally, we addressed the common perception that consumers will want to program many more channels on their dashboard as more and more choices are made available there. To test this proposition, we presented streamers with a mock dashboard that might appear on a new factory-installed system. It provided ten “slots” to be programmed. We asked them to select the ten inputs they would program if they had this system installed in their car.

The choices presented included a phone input, a dozen or so local radio stations, a continuous traffic channel, a continuous weather channel, input for your iPod or digital music library, Pandora, iHeart radio and a Facebook feed.

Interestingly, most selected only about five options. That is, when presented with ten positions to program, most only cared about enough sources to fill five of those positions. These findings are consistent with research conducted on consumer interest in programming FM pre-sets in the 1980s concluding that most consumers only had interest in programming five FM stations.

When we aggregate the selections of today’s streaming radio users, we see that the most common choice is the phone and one FM radio station. That’s followed by an input for the consumer’s digital music library, a second FM station and Pandora.

The picture that emerges is that consumers are only likely to program five positions on a new in-dash system, despite the availability of many more choices and programmable positions. Furthermore, there only appears to be interest in one or two FM radio stations. Terrestrial broadcasters who do not want to be crowded out of the new connected dashboard should work extra hard at building their brands now and fight for position.

4/12 J.D. Power: More than half would purchase HD Radio in their new vehicle. A new J.D. Power and Associates survey turns up a high degree of purchase intent for HD Radio in the car — if the price is right. More than half (52%) of vehicle owners surveyed said they “definitely” or “probably” would purchase HD Radio as a feature in their next vehicle, according to the research firm’s latest survey of interest and purchase intent for emerging

automotive technologies. That places HD Radio at the top of the survey, which measures interest in a feature after the price is revealed. In that category, HD out-performed other higher-ticket features, such as a \$750-priced enhanced collision mitigation system (46%), a \$300 wireless connectivity system (45%) and a surround-view rear-vision camera (44%), going for \$550. HD Radio didn't rank in the top five when the price of the feature wasn't revealed. Fielded in March, the survey covered 23 technologies and is based on responses from more than 17,400 vehicle owners

7/12 **HondaLink: New Infotainment System to be Introduced in 2013 Honda Accord**

We recently caught a glimpse of the 2013 Honda Accord, which led us to believe the next-gen car would feature a new infotainment system. The [spy shots revealed Pandora radio](#) and new controls, but Honda just revealed HondaLink, its new cloud-based infotainment system.

Co-developed with Aha by Harman, [Honda says the new system](#) provides all the benefits of a smartphone without the distractions. Through the use of what it calls an intuitive interface, HondaLink's setup brings a variety of apps such as Yelp and Slacker Radio, as well as audio books, podcasts from NPR, and destination-oriented content to the cockpit. Through the use of steering-wheel-mounted controls, in-dash controls, and voice commands, drivers can have their Facebook and Twitter feeds read aloud so they're always in the know while they're on the go. HondaLink will also incorporate Pandora and the voice-to-text SMS texting that was introduced in the 2012 CR-V.

Although the Fit EV is essentially the first Honda to use the new telematics system, that low-volume hatch uses an embedded telematics control system. The upcoming 2013 Honda Accord plug-in hybrid will also feature a version of the HondaLink EV, which the automaker says will allow drivers to remotely view the car's state of charge and initiate charging. The latest version of HondaLink, which will appear in the refreshed Crosstour after the 2013 Accord, works via tethered smartphones. Drivers with iPhones can connect through a USB port, while Androids use [Bluetooth](#). Honda also says the system requires few software updates, and that drivers may soon have the ability to connect an iPad in their vehicles. It's not clear whether HondaLink will come standard in the new Accord; we'll just have to wait to find out.

More HD-equipped cars roll onto dealer lots. Ford, Toyota and Mazda are among nine automotive brands offering HD Radio as standard or as a factory-installed option in 14 new models that recently hit dealerships across the country – or are about to. HD Radio comes as standard equipment on the 2013 Cadillac XTS, 2012 Hyundai Azera, 2013 Lexus GS, RX and LX, 2013 Scion FR-S and iQ and 2013 Subaru BRZ. It's offered as an option on the 2013 Ford Escape, 2013 Toyota Venza, 2012 Porsche Cayenne, Panamera and 911 and the 2013 Mazda CX-5, the first Mazda to offer it. A total of 28 automakers, including Acura, Chevrolet and Lexus, have now publicly announced plans to incorporate HD Radio in more than 140 models by year-end with more than 60 featuring HD receivers as standard equipment. The recently launched Artist Experience feature is gaining traction with Volkswagen, Chevrolet, Buick and GMC launching radios that display artist images and station logos. More are expected.

Apple wants automakers to add Siri "Eyes Free" button to steering wheel.

by [Paul A. Eisenstein](#) on Jun.11, 2012

More and more [cars](#) now work with iPhones. Now Apple wants to do more work inside the car.

It's hard to find a [new car](#), these days, that doesn't offer a USB port. Make that a USB port specifically equipped with the specific cord designed to link an iPhone or some other Apple device to your vehicle infotainment system.

Based on plans announced by Apple at its annual software developer's conference it appears Apple wants to grab a spot on the steering wheel, as well.

While your recent-model car likely already has a button to activate its voice command system its replacement might very well feature a second button to wake up Siri. That's Apple's proprietary voice command system that can help you do anything from plug a destination into your [navigation system](#) to find the best synonym for "corporate arrogance."

In the Know!

Apple is calling the button "Eyes Free," according to the tech website Engadget. And it appears the button would only operate an iPhone or another Apple device equipped with Siri – which is soon expected to include an update version of the Apple iPad.

Cadillac's new CUE system already uses some of the basic software as Apple's Siri system.

Tapping the Eyes Free button would allow you to access all manner of apps and functions directly on your i-device, rather than the car's infotainment controls – but because more and more [vehicles](#) are tightly paired with

iPhones that might allow you to load a music service like Pandora or some other app. It would certainly help you find the nearest Apple store or Starbucks.

According to Engadget quoting Scott Forstall, the czar of Apple's iOS operating system, a long list of manufacturers have already signed on, including Audi, BMW, [Chrysler](#), General Motors, Honda, Jaguar, Land Rover, Mercedes-Benz and Toyota, and Eyes Free could start showing up in some vehicles by about this time next year, most likely making it the big technology news for the 2014 model-year.

What about folks using Blackberrys, Androids or Microsoft-powered phones? They'd likely be out of luck unless automakers opt to make the Eyes Free button serve a dual purpose – something that the demanding Apple is not likely to accept without a fight.

Significantly, the list of maker's opting in does not include Ford which turned to Microsoft to develop its popular Sync technology. Also absent is Kia, which also is running a Microsoft-powered infotainment system.

Hyundai, meanwhile, is also off the list, apparently focused on expanding the market for its Blue Link system.

But more surprising is the fact that GM is pairing up with Apple despite the potential conflict between Siri and the OnStar system. Meanwhile, Cadillac is just launching a high-function infotainment system, dubbed CUE, that happens to incorporate some of the basic Siri software. The big difference is that CUE does not reach out to the "cloud," but is a fully self-contained system – though, like Siri, it is able to respond to common language commands, rather than requiring users to learn strict command trees that might require four or five steps to do something as simple as pairing a Bluetooth-equipped phone.

Another new feature is the addition of handsfree tweeting, which Apple explains as being able to "tweet just by talking to your phone." That's being introduced alongside a new [Eyes Free](#) feature, which places a button on car steering wheels to let you activate Siri without having to hunt around for your phone. Nine car companies' logos were flashed on the screen behind the stage: BMW, Mercedes-Benz, GM, Jaguar, Land Rover, Toyota, Audi,

Honda, and Chrysler. The new cars featuring this Siri button are expected to be available within the next year.

And if all that's not enough, Apple's newly introduced [turn-by-turn navigation](#) will integrate Siri commands as well, including the eternally-popular "are we there yet?"

4/12 Automakers signal need for radio to keep pace with evolving digital dashboard. With 28 automotive brands covering 142 models committed to installing HD Radio, the technology built to move AM/FM radio into the digital era is finally pulling out of the driveway. According to iBiquity estimates, 10% of new cars sold last year included HD, 20% will have it this year and the percentage will grow to 40%-50% of new cars sold by next year.

More automakers expected to integrate Artist Experience. With Chevrolet and Volkswagen committing to install Artist Experience-enabled radios in their cars, broadcasters are beginning to incorporate the technology. More than merely displaying visual elements tied to programming and commercials, the technology, when paired with an ISP back channel, can allow consumers to get a discount or coupon, access directions or participate in a text to win contest. Greater Media and Clear Channel have agreed to add Artist Experience, with Clear Channel committing hundreds of stations.

4/12 J.D. Power: More than half would purchase HD Radio in their new vehicle. A new J.D. Power and Associates survey turns up a high degree of purchase intent for HD Radio in the car — if the price is right. More than half (52%) of vehicle owners surveyed said they “definitely” or “probably” would purchase HD Radio as a feature in their next vehicle, according to the research firm’s latest survey of interest and purchase intent for emerging automotive technologies. That places HD Radio at the top of the survey, which measures interest in a feature after the price is revealed. In that category, HD out-performed other higher-ticket features, such as a \$750-

priced enhanced collision mitigation system (46%), a \$300 wireless connectivity system (45%) and a surround-view rear-vision camera (44%), going for \$550. HD Radio didn't rank in the top five when the price of the feature wasn't revealed. J.D. Power executive director of global automotive Mike VanNieuwkuyk says drivers remain "very interested" in technologies that make their car safer, but he says they're turning their attention more toward features and technologies that "allow them to be productive, connected and entertained while in their vehicles." Not unexpectedly, purchase interest declines across all features when a price is introduced. For example, 68% indicated intent to buy a wireless connectivity system pre-price but the percentage dropped to 45% after the market price was revealed. Fielded in March, the survey covered 23 technologies and is based on responses from more than 17,400 vehicle owners

4/12 HD: There are about 7 million radios in the marketplace, mostly in cars, and 2,100 radio stations in 250 markets now on the air in HD. In another first, 2013 will be the first model year that Ram has offered HD Radio to its customers. Chrysler will carry the new radios exclusively for a year

Another pair of vehicles add HD Radio to their head units. Another automaker is giving HD Radio the opportunity to compete in the digital dashboard. Mazda's 2013 CX-5 will be the first model from the Japanese automaker with HD technology as an option. Mazda brings to 23 the number of automotive brands where HD Radio is or will be available as a factory installed feature. Others include Audi, BMW, Ford, Jaguar, Kia, Lexus, Lincoln, Mercedes-Benz, MINI USA, Subaru, Toyota, Volkswagen and Volvo. Meanwhile Hyundai announced this week that HD Radio will be offered as standard equipment in its 2012 Azera model. Available in dealerships 2012, the new Azera joins the Equus, Genesis and Sonata, which already offer HD Radio.

HD penetration into auto market is expected to be 20-30% by 2012 and 40% by 2013. HD will really ramp up in 2012 with Ford, Toyota, GM launching. Chrysler will launch in 2013. Coming soon- Live pause and bookmarking where you can store info on music products or info heard.

iBiquity says digital radio is or will be available as a factory-installed feature on 23 brands.

New HD Radio Technology is or will be available on these models in 2011:

AUDI	FORD	JAGUAR	LINCOLN	MINI	VW
A4	E-Series	XJ	MKS	Cooper	CC
A5	Edge	XK	MKT	Clubman	Eos
A6	Escape	XF	MKX	Convertible	GTI
A8	Explorer		MKZ		Jetta
Q5	Expedition		Navigator		Passat
Q7	F-Series	KIA		ROLLS ROYCE	Ghost
	Flex	Optima		Phantom	Tiguan
	Focus	Sorento	MERCEDES-BENZ		Touareg
BMW	Fusion	Sportage	C-Class		
1 Series	Mustang		CL-Class	SCION	VOLVO
3 Series	Super Duty	LAND ROVER	CLS-Class	xB	C30
5 Series	Taurus	LR2	E-Class	xD	C70
6 Series		LR4	GL-Class	iQ	S40
7 Series		Range Rover	G-Class	tC	S60
X3	HYUNDAI	Range Rover Sport	M-Class		S80
X5	Equus		R-Class	SUBARU	V50
X6	Genesis	TESLA	S-Class	Forester	XC60
Z4	Sonata	Roadster	SL-Class		XC70
			SLK-Class	TOYOTA	XC90
				Vehicles to be announced	



Please visit your local auto retailer for specific model/availability information.

Approximately 50%-60% of autos sold today have RDS capability. The digital messaging is displayed concurrently on the radio display with the airing of the commercial. RDS has a 64 character capacity (about ½ of Twitter) to send text such as advertisements. At the time it was first introduced, this was thought to be too short for useful messages, but in the modern era of “Tweeting” this is no longer the case

RDS – Combining Sight & Sound

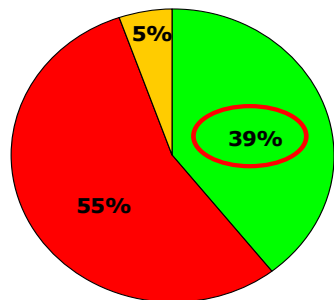


- Custom messaging for in-car Radio Data Systems (RDS) that runs simultaneously with on-air spots featuring the same messaging.
 - E.g. Wawa was promoting hot turkey meals, the RDS Message was: \$2.99 – Hot Turkey – At Wawa
- Combining RDS messaging with on-air messaging increases listener unaided recall an average of +23%.

Nearly 2 in 5 listeners have PAD display in vehicle, with 9 out of 10 paying attention to it at least occasionally



Radio Information Display (PAD) in Vehicle



■ Yes
■ No
■ I'm not sure/Don't currently have vehicle

How often do you notice the information displayed?	
<i>(Base: Among those whose vehicle has capability, n=1,034)</i>	
Regularly or Often	60%
Occasionally	31%
Rarely or Never	9%

Q.12 Does your vehicle's radio/stereo system have the capability to display the artist name/song title/album for a particular song that is playing or other messages from the radio station?

Base: Total Respondents

Q.13 How often do you notice what information is being shown on your vehicle's radio or stereo system's display?

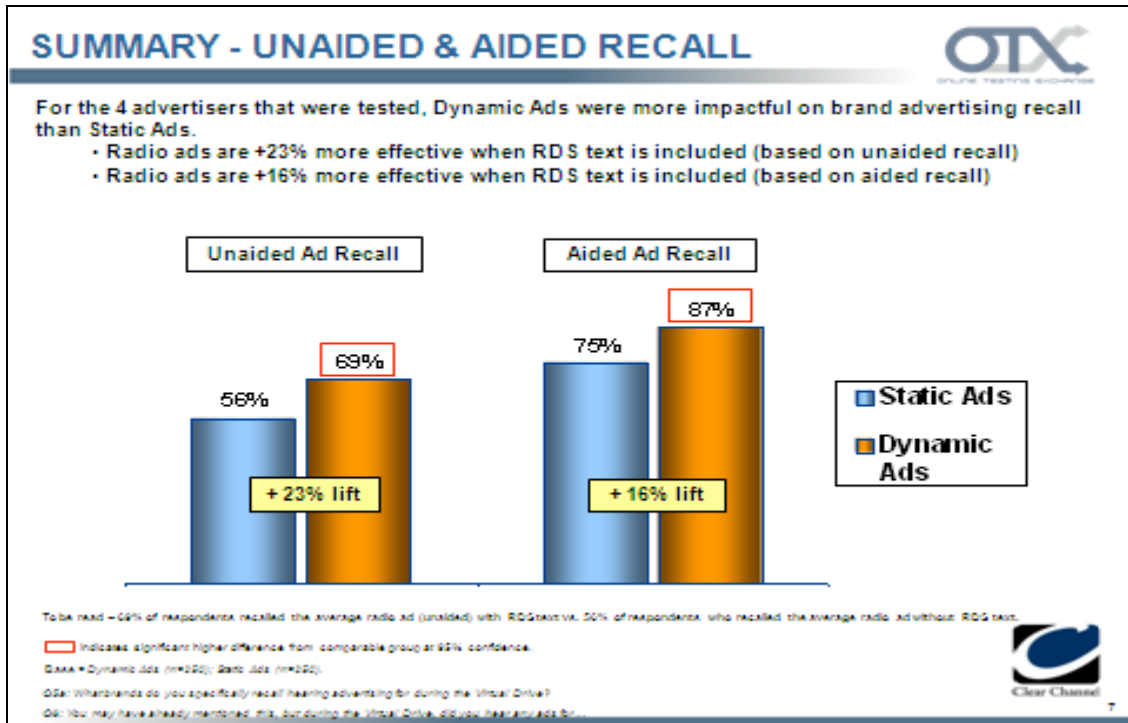
Base: Vehicles Radio/Stereo System Has Capability To Display Artist Name/Song Title/Album/Other Messages (n=1,034)

© 2008 Starcom MediaVest Group

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Source: GM/Starcom Research, 2008.

OTX conducted a study in 2009 that confirmed the added impact of running an RDS message concurrently with the airing of the commercial. It confirmed the results of earlier RDS research conducted by Satellite radio which was also done with OTX---it dramatically enhances recall.



4/12 Jacobs Media survey finds nearly half are plugging their phones into the dashboard. Jacobs Media’s Techsurvey8 found **one-in-ten respondents (9%) drives a car with a digital dash, and among them 48% have connected their smartphone or mp3 player to the dashboard** (equates to 4.5% of U.S.).

Fans of news-talk and sports formats were more likely to turn to their phone seeking streaming content. Those figures may grow with smartphone penetration, which among those surveyed by Jacobs had already reached majority (52%) status. Pandora was the most-used streaming app, followed by iHeartRadio, Spotify, TuneIn and Slacker.

Techsurvey8 results were gathered online from January 31-February 15 from listeners of 170 broadcast stations across the U.S. and Canada, contributing 57,358 total respondents.

Automakers signal need for radio to keep pace with evolving digital dashboard. **With 28 automotive brands covering 142 models committed to installing HD Radio, the technology built to move AM/FM radio into the digital era is finally pulling out of the driveway.** **According to iBiquity**

estimates, 10% of new cars sold last year included HD, 20% will have it this year and the percentage will grow to 40%-50% of new cars sold by next year. Automakers are getting on board. Volkswagen began adopting Artist Experience last fall. Chevrolet announced earlier this month that it will add Artist Experience-enabled HD Radio as a standard feature, starting with model year 2013, on all its vehicles when each undergoes a redesign. During closed door meetings with radio executives at the NAB Show in Las Vegas, iBiquity CEO Bob Struble showed a video of technology executives from major automakers talking about how radio technology needs to evolve to remain in step with consumer expectations of the evolving digital dashboard. The message from automakers has consistently been that digital is becoming the price of entry to the dash, that they're looking for ways to differentiate their products with interactive entertainment that enables consumers to pause, tag, time-shift, and customize content. "The good news is that the automakers we're working with believe that HD Radio checks those [consumer expectation] boxes," Struble says. "These guys believe that radio's local focus and free aspect remains very relevant. They see radio as having huge strengths but see a need to upgrade to meet consumer demand."

More automakers expected to integrate Artist Experience. With Chevrolet and Volkswagen committing to install Artist Experience-enabled radios in their cars, broadcasters are beginning to incorporate the technology. More than merely displaying visual elements tied to programming and commercials, the technology, when paired with an ISP back channel, can allow consumers to get a discount or coupon, access directions or participate in a text to win contest.

Fact: Ford reports brisk sales for cars featuring HD Radio-equipped digital dash. Digital radio may not be the primary reason why sales of cars equipped with Ford's Sync and MyFord Touch dashboard entertainment systems are growing, but the net result is the trend puts more HD Radios on the road.

3/12 Sound quality and data delivery potential drive Toyota to HD Radio. "Data services and sound quality are the two primary reasons why we looking at continuing with the proliferation of HD Radio," says Jon Bucci, vice president of advance technology for Toyota U.S.A. He says the

automaker is looking at digital radio as a way to beam content like weather, sports and stocks into the car — similar to what Sirius XM Radio does today by aggregating various

Consumers That Stream Also Listen To FM In Cars

By Jennifer Lane on February 27, 2012

Nearly 40% of smartphone owners (**16% of U.S.**) have used their device to listen to a streaming music service while in their car, according to new research by NPD Group on automotive connectivity. Devices and ways to connect them have become a serious focus for the auto industry. 79% of car owners are using a digital device in their cars.

It appears at this point that streaming in the car is used to supplement listening to traditional radio – according to **NPD’s Ben Arnold**, seventy three percent of drivers report still using their FM radio “always” or “most of the time” during car trips (supports knowDigital’s findings) while more than half (57 percent) of vehicle owners say a CD player is vital in their decision to buy a car stereo or entertainment system.

Radio’s push button simplicity is looking better and better:

Now Consumer Union takes Ford and the other manufacturers to task in **Connected Cars: A New Risk**. Devoting five pages of their annual car issue to the subject, they declared:

The control systems in many models—the way you operate the audio, climate, navigation, and other systems—are becoming needlessly complicated.

Consumer Reports concluded that:

Any system that requires drivers to take their eyes off the road for too long or engage in unnecessary distractions can be dangerous.

And voice recognition systems don’t seem to be the answer. University of Utah researchers found that even systems using speech increased driver

reaction time by 30 percent

In a side-bar called [Controls Gone Wild](#), Consumer Union points out that for a ***parked*** Ford Focus it took a ***trained*** human-factors engineer six steps and 11 seconds to just launch an iPod.

On a BMW it took the engineer six steps and 10 seconds to manually tune the radio.

On a Hyundai Equus it took the engineer only five steps and 5 seconds to choose a radio station preset.

In other words, the safest audio task you can do with these complicated infotainment centers is tune to one of your regular analog radio stations.

And of course its safer, takes even fewer steps, and less than 2 seconds to do the same thing on a regular radio, a point made by Consumer Reports.

Broadcast Radio's position in the auto is *not* in jeopardy

The math is simple: 12-13 million new cars are sold annually in the U.S., with more than 200 million cars on the road. Strategy Analytics predicts 22 million cars will be Bluetooth-enabled and 17 million will be WiFi-enabled by 2017. This leaves more than 160 million cars on the road that will not be "wired" in 2017 – 5 years from now.

To assume wireless technology will negatively impact listening to broadcast radio is to ignore the lessons of the past and key facts of the present. In-car music alternatives have existed for years. **And radio is already competing -- and winning -- in two highly "wired" environments, the home and the workplace. Broadcast radio dominates both locations with a 50% share of all audio listening.**

Some are also under the impression that all radio streaming is done to the online pureplays. According to Ando Media, approximately **25% of online listening is to broadcast radio streams**, and we expect that to rise as broadcasters refine their digital and streaming offerings for a couple of reasons.

Many Internet audio offerings resemble the automated FM music machines of the 1970s. After some initial success listeners soon wanted more than just one song after another then, no matter how well researched the music might have been.

Broadcasters are now competing in the “custom” arena. CBS, with last.FM allows listeners to create their own stations as does Clear Channel via iHeart.

The CD and Internet pure-plays all provide just one thing -- music. **More than 20% of all in-car audio usage goes to CDs and satellite radio and as a result, we expect CDs and satellite music stations will end up competing most directly with wireless in-car technology.** Over the next five years, it's likely to become increasingly difficult to find two things: cars sold with CD players and those willing to pay for music in a wireless world.

What's more, many of the new audio units being rolled out by the automakers will come with HD receivers. Like satellite radio, HD radio penetration and listening will be driven by the automobile. The technology is now being embraced by 28 OEMs across 142 different models, and the sound is terrific. It's free and provides formats not available on broadcast radio, with fewer ads than Pandora. 2012 will be big year for HD penetration, with 30% of all new cars sold coming equipped with HD. 40-50% of all cars sold next year will have HD.

content partners. Toyota thinks over-the-air broadcasters may be

able to do the same. “We’re in development right now for a future product with those capabilities,” Bucci said.

As digital audio hardware becomes available in the auto we believe that broadcast radio’s listening will actually increase. These projections do not include the positive impact on broadcast radio assets when they begin to compete in the “custom” arena.

2017: Projecting digital audio alternatives impact on terrestrial radio: Using Strategy Analytics Projections for Wireless & Bluetooth Auto Penetration

Audio Results Taken from Nielsen's October 2009 Audio Study

	In-Home		In-Car				At Work		Other	
	Observed Listening Minutes	Current Share	Observed Listening Minutes	Current Share	2017 Projected Radio Share by Device	Adjusted Minutes Based Upon Projected 2017 Share of Listening	Observed Listening Minutes	Current Share	Observed Listening Minutes	Current Share
Broadcast Radio & Streams	17,144	46.4%	25,802	74.2%	74.6	25,953	9,125	53.8%	7,079	23.3%
Satellite Radio (all)	2,668	7.2%	1,929	5.5%	3.5	1,218	2,090	12.3%	2,346	7.7%
CD	7,629	20.6%	5,634	16.2%	14.2	4,940	685	4.0%	5,664	18.6%
Digital Audio Stored on Computer	3,253	8.8%	128	0.4%	0.4	139	847	5.0%	832	2.7%
Digital Audio Streamed on Computer	2,459	6.7%	-	0.0%	0	-	2,137	12.6%	70	0.2%
Portable MP3/Audio via Smartphone	3,178	8.6%	1,252	3.6%	7.2	2,505	271	1.6%	1,185	3.9%
Other Audio (unspecified)	610	1.7%	45	0.1%	0.1	35	1,795	10.6%	13,198	43.4%
[Total Audio]	36,940	100.0%	34,789	100.0%	100	34,789	16,950	100.0%	30,383	100.0%

Total (all Locations)	
Terrestrial Radio Current usage/Minutes	59,150
Terrestrial Radio 2017 Usage/Minutes	59,301
Terrestrial Audience Audience Loss due to WiFi/Blue Tooth by 2017 due to new in-car wireless technology	0.3

Source: Katz Analysis.

A 2011 study from knowDigital, a digital media research firm, finds that 14 percent of Americans listen to streaming radio in their cars on a regular basis -16% in the NPD 2012 study. What's interesting about the study is that it also concludes that streaming radio actually does not constitute a threat to traditional radio in either the short or long term. These "early adopters" are heavy consumers of audio media- The Alan Burns Study, ARB Edison came to the same conclusion. They are listening to broadcast stations as well as streaming ones- supplemental listening. Also of note: In-car streamers aren't necessarily heading for Pandora when they connect. Many are using their cell phones to plug into the internet and stream their **hometown** radio stations, and they're doing so even when they're many miles away from home. It also should be emphasized that the streamers

that were interviewed in this study generally turn on AM/FM radio first when they get in their cars. If media planners and buyers want to find a mass audience they will need to continue to focus on the big brands in the radio space.

Alan Burns released details of his second annual national study of women in 2011. 2,000 females between 15 and 54 were interviewed. The study found that 69% of women who have in-car internet still listen to radio all or most of the time they're in the car. "It's important to note why these women choose radio over non-radio streams in their cars" Burns continued, "and the big reasons are that radio *provides energy, excitement, and local information.*

Daily TSL to Radio

	Total Sample	Broadband in Car
On a Radio	2:00	1:45
Online	:30	:45
On Phone	:15	:30
Total	2:45	3:00