## Connected Car Conference Convenes

A wide variety of industries—including radio broadcasters—met at the second annual DASH Conference in Detroit last week, to discuss the rapidly changing world of "in-vehicle infotainment" (IVI). Produced by Radio INK magazine, Jacobs Consulting and the Shuman Consulting Group, the conference's approximately 250 attendees experienced a fast-paced series of panels and presentations at the two-day event.

Among the interesting takeaways from the conference for radio technologists was the latest in the ongoing debate on whether the connected car will use the driver's smartphone to connect to wireless broadband (the so-called "tethered" approach), or whether the car will have its own dedicated connectivity via an LTE modem (the "embedded" method). Some now refer to this more straightforwardly as "brought-in" vs. "built-in," and one presenter remarked that tethered arrangement has resulted in the car becoming the world's heaviest smartphone accessory. Another commented that the car is fast becoming a self-propelled computer, while presenters universally referred to the car's electronic user-interface bundle in the dashboard as "the center stack."

The pros and cons of tethered vs. embedded were considered, with the embedded side citing its easier use, broader integration into vehicular systems, and greater personalization potential. From the broadcaster perspective, the embedded style keeps the AM/FM radio at closer parity with other competing content delivery services, and it might provide a better platform for hybrid radio to flourish. Recent aggressive pricing trends for large "family data plans" may also reduce consumer resistance to adding the car as another user on an account. Meanwhile, an embedded data modem in the car will make it a part of the Internet of Things (IOT), and it also allows easy provision of automotive WiFi—a feature that Rich Martinek, Senior Manager for General Motors' Global Connected Consumer organization said that GM is strongly embracing across all its product lines.

On the other hand, the tethered approach is supported by those like John Ellis, head of Ford's Developer Program, who feels the smartphone is actually a digital manifestation of the user's life and preferences—terms like "linchpin of your existence" and "digital life signature" were used—so there should not be any attempt to disintermediate smartphones from their users while in the car.

It is possible that both approaches will be offered in new vehicles, in which some form of tethered interface is provided as a standard feature, with activation of an embedded system as an option.

## Hybrid Radio and Other Emerging Services for the Car

Emmis CTO Paul Brenner and iBiquity CEO Bob Struble described their recent collaborations on bringing *NextRadio* to the connected car. They discussed work being done on development of APIs for various user-interface methods (touchscreen, voice-activation, or steering wheel controls), and the concern for driver distraction from hybrid radio displays, as well as addressing the embedded vs. tethered debate and how both methods require differing solutions for hybrid radio implementation. They cited other variations—different users' needs, different automakers' methods or preferences, and different countries' established practices and regulations—as further complicating the landscape. Nevertheless, they reported much learning and some early progress toward the goal of broadly deploying automotive hybrid radio.

Another trend involves an increase in dedicated communication channels (e.g., *OnStar*) for road assistance and concierge services. The convenience of a dedicated button used to reach a human operator has become quite popular among car owners, who enjoy these services' "one press or less" functionality (the service automatically calls the car when certain events are reported automatically by the vehicle, such as airbag deployment, so zero button presses are required in such cases by users).

Automakers also expect to employ greater automatic adaptation to personalized user preferences using proximity-sensing of key fobs or other wireless identification devices carried by drivers and passengers. Coupled with predictive algorithms, vehicles could present appropriate options to their occupants based on personal preferences, the current route (e.g., recognizing frequently traveled roads such as those on a daily commute) or vehicle status. Hybrid radio might leverage this capability by adjusting its presentation of enhancement content to current conditions.

A representative of Pandora spoke of the Internet radio's service striving for "the FM experience," which includes the attributes of instant-on and immediate tuning to a channel, remaining on that channel when you turn the car off and on again, and the overall ease of use associated with broadcast radio. This clearly indicates that some of the capabilities that broadcasters have always had—and may have taken for granted—are viewed by others as competitive advantages to which they aspire.

There was considerable discussion on another synergistic axis of radio and cars—the traffic report. Technical solutions that provide text or graphic traffic information delivered by radio were characterized as far more listener-friendly than the traditional spoken traffic report. The on-demand and more timely nature of the new approaches make the old ways seem truly outdated to today's audiences—and some broadcasters showed how these new approaches have considerable appeal to sponsors, equal to if not beyond that of traditional traffic reports.

## Numerous Challenges Remain

And lest radio broadcasters feel singled out in being threatened by the connected car, the auto manufacturers and dealers present at the conference listed an array of challenges they too confront, such as:

- Millennials—the youngest of whom are now reaching driving age, while the oldest are approaching their 30s—are not much into cars; how to attract them? They are also not big

users of traditional media delivery. Could the properly equipped and well-priced car of the future appeal to this increasingly important market segment?

- Automakers need to start thinking more like consumer electronics and software companies. Platforms must be frequently updated over their lifespans. For recent vehicles, this requires a visit to the dealership. Soon these updates will be pushed directly to the car via wireless connectivity.
- There is so much more automotive technology requiring explanation to the new car buyer, but so little time to provide it. This can result in reduced customer satisfaction ratings for automakers, even while they provide many more potentially useful or enjoyable features in their vehicles.
- A key challenge for the tethered connectivity model arises from the fact that replacement cycles for cars are typically far slower than that of smartphones, so how can the car anticipate all the phone-interfacing needs across its lifespan?
- Automakers are feeling increasingly less in control of their destiny as third-party IVI software vendors, platforms and alliances emerge (e.g., Google's *Android Auto*, Apple's *CarPlay*, AT&T's *Drive Studio* initiative, and the GENIVI Alliance). A major concern of vehicle manufacturers is losing their ability to differentiate among different brands and vehicle lines in the highly competitive IVI space. An example cited at a recent car show: A $100k Porsche and a $20k Kia both had exactly the same center-stack contents.

Finally, it was broadly acknowledged that compelling content remains the "driver" of the IVI trend. Marketing departments may call this trend the "connected car," but the connectivity is pointless in itself, and only presents as much value as the content to which it connects the user. Combining the connected car with hyper-localization services and location-aware software in a moving vehicle can offer some powerful business opportunities, but consultant and author Valerie Geller reminded the conference not to leave quality content out of the mix, and to keep making good radio for the car. Geller quoted Neil Young, who said, "I love listening to music in cars...because the scene is always changing. It's the world's greatest video."

# NAB Labs Futures Park Solicits Exhibitors

Know someone who might be interested in exhibiting their media-related technology R&D projects at the 2015 NAB Show? NAB Labs is now accepting applications to participate in the 2015 NAB Labs Futures Park at the Las Vegas Convention Center, Las Vegas, Nev., April 13-16, 2015.



NAB Labs Futures Park is a reserved area of the NAB exhibit floor that exclusively features media-related technology R&D efforts in progress around the world. For a quick look at last year's Futures Park, visit  nablabs.org/projects. The Park is a popular venue for both exhibitors and attendees, and receives considerable press attention every year.

NAB supplies complimentary exhibit space to all organizations accepted for participation in Futures Park. Expressions of interest or questions should be directed to Katy Armstrong at karmstrong@nab.org. Applications for exhibition space must be received on or before December 5, 2014.

## Important Dates and Upcoming Events

**CCW+SATCON**

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New York, NY