

# Next Generation Infotainment Design—The Birth of the Open Architecture

By Richard Robinson, Principal Analyst

## Forecast

### Frequency, Time Period

- 3-year historical data
- 7-year annual forecasts

### Measures

- Revenue
- Units

### Regions, Markets

- Americas
- EMEA
- China
- Japan
- Rest of Asia Pacific

### Applications/Products Covered

- OEM and Aftermarket Infotainment design
- Infotainment Semiconductors
- Infotainment Systems
- Navigation
- Telematics
- Connectivity
- Audio and Video media support

### Technologies Covered

- Silicon: ASIC/ASSP/MCUs, DRAM, Flash, Power, Optical, Sensor, etc.)
- Systems: Headunit, Navigation, Telematics, Connectivity, Digital Terrestrial and Satellite Radio

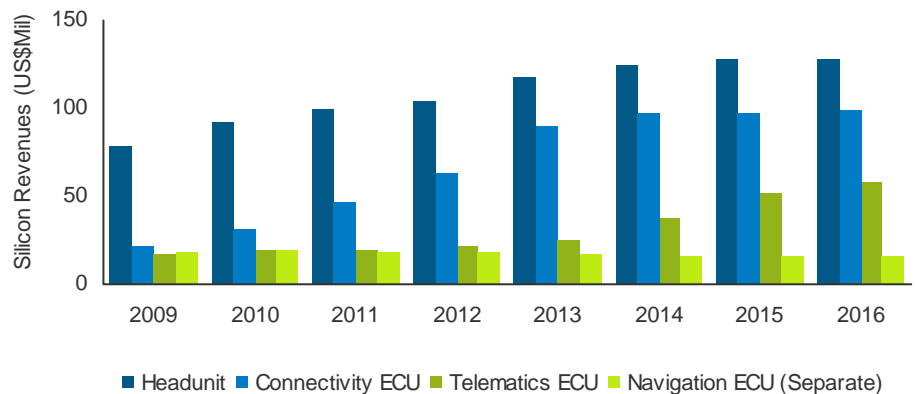
This report focuses on the emerging trends in infotainment design and looks at the changing requirements and new responsibilities for the supply chain.

With the launch of next-generation infotainment architectures, the important questions facing the supply chain are:

- Does the total available market for Tier 1 suppliers and semi suppliers grow, shrink or stay the same?
- Is the same size (revenue) cake simply being cut into smaller slices?

This report will look at the roles of the vehicle OEMs, as well as the Tier 1 suppliers and infotainment semiconductor manufacturers; to identify how much these changes will effect the future supply chain in a highly competitive industry that is still struggling with high-costs and significant oversupply into the market due to the economic downturn in 2008 and 2009.

Navigation/Multimedia Application Logic – OEM Detail



### Key Issues Addressed:

- How should vehicle OEMs add value to their infotainment design in next-generation systems?
- What are the system revenues and unit volumes on next-generation infotainment systems?
- What are the changing roles and expectations of the consumer on next-generation infotainment architectures?

### Applicable To:

- EMS / OEMs / ODMs / Software Developers
  - Planning
  - Procurement
  - Engineering
- OEMs / EMS / ODMs / Component Suppliers
  - Marketing

**Lead Analyst****Richard Robinson, Principal Analyst**

Richard Robinson moved to iSuppli from his previous position at Alpine Electronics where he led Infotainment, Navigation and Advanced Research Projects in Europe, Japan and North America.

Richard initiated iSuppli's Automotive Semiconductor research in 2006, and he has the primary responsibility of providing vendors with actionable advice and insightful analysis of the increasingly complex Automotive Infotainment value chain. This value chain analysis has allowed iSuppli to develop forecasts on the production of automotive electronic equipment, and the corresponding demand created for electronics components including highly detailed views of the Infotainment semiconductor market.

Richard is an expert in car-navigation and Human-Machine-Interfaces (HMI). He has lead interface design breakthroughs including the world's first production automotive-interface using Macromedia Flash (New Jaguar XK/XF, Freelander) He has also been a key HMI consultant on several award winning OEM navigation systems for Honda and Acura. (JD Power No.1: 2001-2005).

Richard has Bachelor of Arts from the University of Natal in Durban, South Africa.

**Table of Contents**

- Introduction
- Executive Summary
- Findings and Implications
- Infotainment Evolution: The Changing Role and Expectations of the Consumer
  - Second Gen Design: Cost as Value Add or System Killer?
  - Third Gen Design: The Headunit Fights Back
  - 4th Generation Design: Beyond the Headunit to the 'Open' Platform
  - The Rise of the Display
- 4th Generation Architectures
  - Identifying the Tier1/OEM Value Add
- 4th Generation Value Adds
  - Wireless Opportunity
  - Broadcast Opportunity: Mobile TV
  - Broadcast Opportunity: Digital Radio
- 4th Generation Design: Software/OS Issues
  - From AUTOSAR to GENIVI
  - Android and AutoLinQ, Microsoft and QNX
  - Infotainment Software Platform Impact
  - Auto App Store Perspectives
  - Infotainment Software Platform Conclusions
- Special Analysis
  - MyFord Touch
  - AutoLinQ
  - Terminal Mode: Improving In-vehicle Device Control?
  - Intel with Tunnel Creek and Queens Bay
  - Netlogic Microsystems
- Semiconductor Market Opportunity
  - Multimedia/Navigation Application Processing: OEM and Aftermarket
  - Navigation/Multimedia Application Logic—OEM Detail
  - Navigation/Multimedia Application Logic—Aftermarket Detail
  - Wireless and Broadcast Opportunity
- Conclusions
- Appendix A: Assumptions
- Appendix B: Definitions
- Appendix C: Research Methodology

**Figures**

- Infotainment Architecture Evolution
- Infotainment System Development Frontier: OEM vs. Consumer
- 4th Generation Infotainment: Identifying the Value Add
- Wireless—Auto Technology Migration

- Mobile TV—Auto Technology Migration
- Digital Radio—Auto Technology Migration
- Auto Software Standard Landscape
- MyFord & MyLincoln Touch Architecture
- MyFord & MyLincoln Touch – Weaknesses?
- Intel's IVI Platform Evolution—Atom into Tunnel Creek
- In-vehicle Compute Module—Block Layout
- Multimedia/Navigation Application Processing: OEM and After Market
- Navigation/Multimedia Application Logic—OEM Detail
- Navigation/Multimedia Application Logic—Aftermarket Detail
- Wireless and Broadcast: Semiconductor Opportunity

**Tables**

- Display Evolution: 1st to 4th Generation Features
- Infotainment Software Platform Summary
- App Stores for Cars
- Keys to a Successful Auto Apps Community
- Terminal Mode: Strengths and Weaknesses
- Netlogic Microsystems - Design Wins and Manufacturing Status
- Alchemy 1300 Processor Family: Features and Specs