Decoding the IVI testing

Testing the future of in-vehicle infotainment.

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PART OF KEYSIGHT TECHNOLOGIES

“

Quality means doing it right when no one is looking.”

- Henry Ford

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Industrialization's roots can be traced to the automotive sector, and the industry continues to be on the forefront of innovation today. Key to these efforts is harnessing the latest technological advances to push the boundaries of what's possible and develop new products, services and offerings. And in order to do this effectively, automotive manufacturers and other industry stakeholders must prioritize the performance of their technology. As Henry Ford, arguably the industry's most famous innovator, put it, [1]**."Quality means doing it right when no one is looking."**

In Ford's era, this meant sourcing the right parts and labor to build automobiles that made transportation faster, easier and more accessible. In today's age of connected technology, automotive development is much more complex and digital, but the importance of quality has only grown more critical. This book will examine the emergence of in-vehicle infotainment, and what the trend means for manufacturers, app developers, network providers and other stakeholders – if these groups can ensure software quality even as new innovations enter the market.

Dashboard 2.0: The new face of automotive displays.

Automotive dashboards are transforming from relatively static driver information centers to engaging, integrated systems that offer a range of services and conveniences for the driver and passengers alike.

Through connected elements and audio/video interfaces like touchscreen displays and voice commands, in-vehicle infotainment systems not only eliminate typical driving challenges – they also stand to make the entire experience more personalized and enjoyable. Sending and receiving texts, getting directions to the nearest pizza restaurant, dialing into a conference call, and placating road-weary kids with a movie are all examples of how in-vehicle technology has revolutionized the driving – and riding – experience. Given these and other conveniences, it's easy to understand why the in-vehicle infotainment system market is estimated to reach nearly $79 billion by 2025.[2]

While the consumer benefits of these innovations are plenty, so too are the challenges associated with their design and development. The success of in-vehicle technology relies upon communicating with nearby vehicles, infrastructure and other systems. How can companies test across this wide array of platforms and connected technologies and realize the promise inherent in in-vehicle innovation?

AI-powered innovation demands AI-driven testing.

AI is a prime driver of in-vehicle infotainment and the technology has also transformed software and application testing. Drawing on AI, companies can expand automation beyond test execution to the entire testing process.

The right AI-driven platform for in-vehicle technology.

An AI-driven approach to testing helps companies reduce errors, free up resources and remedy technology glitches before they impact performance. While these are certainly important benefits, developers of in-vehicle technology also must test the full user experience across all platforms.

That's why Eggplant's AI-driven approach is ideally suited for the intricacies of in-vehicle technology testing. We can test the entire user experience, including functionality, performance and usability, across any technology all via one model.

By continuously monitoring how customers are interacting with the technology, we feed critical intelligence back to development that can be used to drive there lease of higher-quality software.

In addition, Eggplant can test in-vehicle technology's ability to communicate with other connected systems, cars and nearby infrastructure. Through our platform, we're paving the way for continued innovation in the automotive sector and helping companies realize the promise of our connected future.

Driving digital transformation with Eggplant.

Keeping pace with connected cars.

Eggplant's Digital Automation Intelligence (DAI) product uses no-code testing, AI, and analytics to expand automation beyond test execution across the full testing process.

Key benefits include:

Obtain actionable intelligence to optimize the digital experience you deliver

- Test real user journeys by continuously tracking actual user movements through the application
- Apply additional intelligence to your most important journeys and automatically create a model of the application

Access enterprise scale testing capabilities via a single user interface

- Author, schedule, execute and analyze test results via a single modern, intuitive UI
- Easily scale execution, set limits for time and coverage levels and provide actionable insight that moves beyond static pass/fail notices to identify root causes of failures

Test any technology at every layer in any way

- Eggplant's model-based approach allows developers to intelligently understand and control the user interface as a human would

Accelerating innovation.

Mainstream adoption of 5G, advances in autonomous vehicles and other emerging technology trends will only serve to increase the possibilities inherent in in-vehicle infotainment. The potential to deliver live streaming services to vehicles already exists; the challenge now is for the industry to develop, test and deploy fast enough to take this capability to the next level.

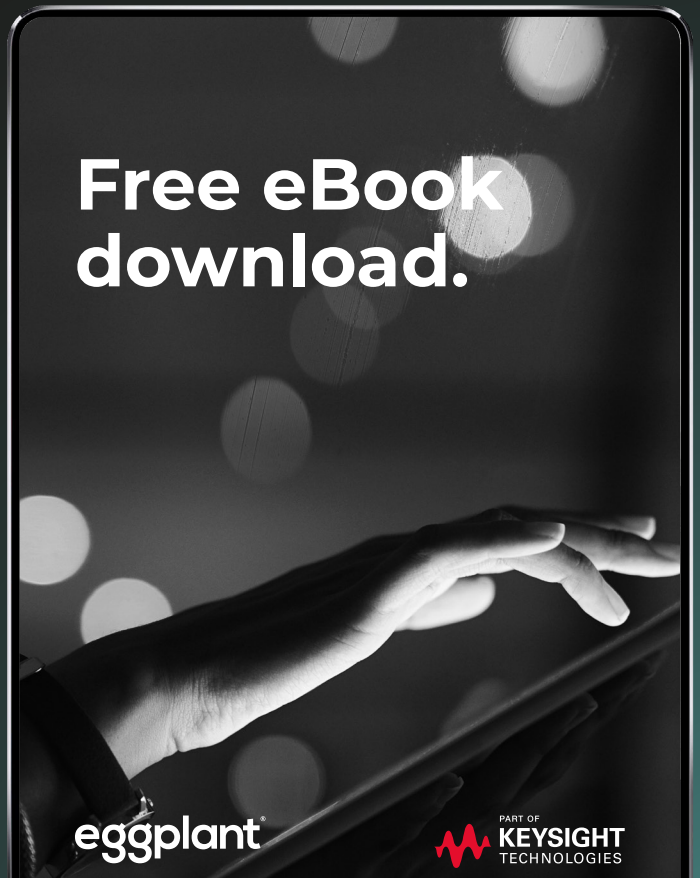
In this environment, it's imperative to modernize testing by focusing on the user experience and availing of AI and analytics to automate this process. Eggplant makes this possible, and paves a path to long-term success for any organization involved in in-vehicle technology development.

Buyers guide:

Evaluating test automation solutions.

This guide comes loaded with key considerations, common pitfalls to avoid and practical questions every business should ask when choosing a test automation solution.

Download now



Eggplant is now part of Keysight Technologies.

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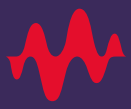

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