Executive Brief for
The Global Market for
Automated Testing and Verification Tools

Strategic Insights 2013, Software and System Lifecycle Management Research Program:
Track 3, Topic 3

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Inside this Report

This report analyzes the emerging trends for commercially available testing tools, including static analysis, dynamic, and model-based tools. It also covers the previously mentioned tool types used for general software quality testing and defect detection as well as those used for application security testing and vulnerability management.

What questions are addressed?

- Can traditionally embedded software testing tool vendors adequately service the IT domain?
- Will the proliferation of model-based testing solutions cannibalize the market for unit test tools?
- How is the adoption of iterative design methodologies impacting the use of static analysis tools?
- Will HP’s renewed focus on the developer spell greater success within the embedded market?
- In what ways is the growing use of open source software impacting test tool use?
- What are the leading commercial test tool adoption drivers and inhibitors?
- How does demand for automated test and verification tools differ by regional market?
- How does demand for automated test and verification tools differ by vertical market?

Who should read this report?

This report is for those making critical decisions regarding product, market, channel, and competitive strategy and tactics. Roles that could benefit from reading this report include product management, marketing and strategy executives at OEMs, tools suppliers, investment firms, and associated roles and organizations.
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About this Report
Executive Brief

Summary

[Data available in full report] The global embedded automated test and verification tool (ATVT) market will grow to $XX in 2015 from $XX in 2012, a compound annual growth rate (CAGR) of XX%, VDC Research predicts. Meanwhile, the enterprise ATVT market will reach $XX in revenues in 2015, expanding from $XX in 2012, a CAGR of XX%. Trends that will foster growth in both markets include time-to-market requirements, development budget pressures, greater awareness of the risks from software vulnerability, increased regulatory requirements, and the accentuation of more collaborative system development practices such as Agile, DevOps, and engineering domain integration.

Key Findings

- Growth of static analysis revenue in the IT and systems development realms will significantly outpace that of dynamic test tools due to static analysis’ lower penetration rate, and thus more room to grow, and the realization that introducing quality control earlier in the development lifecycle is beneficial.

- However, this expansion in static analysis use does not pose a threat to dynamic or model-based test revenues; these tools play complementary roles.

- Free or very low-cost tools do threaten static analysis revenue, forcing prices down on commercial test solutions, particularly in the enterprise market.

- OEMs are looking to combine multiple test tools and tool types into a comprehensive testing regime to help align with safety-critical process standards while meeting design specifications and performance requirements.

- Several leading test tool suppliers are already expanding their tooling portfolios or the functionality of their offerings to include some combination of static analysis, unit, and dynamic testing in response to this trend.
Global Market Overview and Forecast

Global Market at a Glance

Four-Year Forecast (2012-15), Global Automated Test & Verification Tool by Type (US $M)

Four-year forecast: ATVT demand grows as pressures mount

The global automated test and verification tools (ATVT) market will grow to $X.XXB in 2015 from $X.XB in 2012, a CAGR of X.X%, VDC Research forecasts. The market had moderately strong growth in 2012, increasing X.X% from 2011 revenue of $X.XXB. The increased adoption of formal software development solutions as a means to accelerate the design and creation of software and systems while controlling development budgets is among the recent growth drivers. OEMs and enterprises across the global are increasingly aware of how automated testing can improve code quality and uncover vulnerabilities earlier in the software development lifecycle when it has the least financial impact.

Companies that fail to understand that their processes, and often their culture, must evolve in order to take full advantage of the potential of development testing will continue to hamper the expansion of formal ATVT use. Reductions in defense budgets in America and across Europe as well as a very weak European automotive market will restrain ATVT revenue growth in these
embedded markets as OEMs reduce or delay tooling investments. Free or very low-cost tools offering much of the functionality of formal static analysis tools will continue to threaten revenue growth in the segment, thus forcing prices down on commercial test solutions, particularly in the enterprise market. More suppliers will provision services to demonstrate the value of their offerings over the no- and low-cost options. Look to LDRA’s establishment of a branded services division focused on safety-critical (FAA/EASA) certification solutions as an example of this approach.

Notwithstanding these impediments, the commercial ATVT market will surpass many of the software and system lifecycle management (SSLM) tool categories in revenue growth, with opportunities for sustained expansion through 2015. This is due to a number of pressures facing software developers that will require these tools, chiefly the following:

- Code bases expanding in size and complexity
- Reduction in time-to-market windows
- Growing use of third-party software
- Diversity of and changes in software language use
- High-visibility cases of software vulnerabilities
- Standards and regulation compliance requirements
- Enhanced collaboration practices such as Agile, cross-domain engineering integration, DevOps, and continuous deployment
- Lower relative penetration of static analysis tool use
- Fading cultural opposition to external software tools.

These factors are particularly acute given the clear trend that software is accounting for a greater proportion of functionality, emerging as the primary agent for differentiation and resource investment for many organizations. In the coming years, embedded OEMs and IT organizations will continue to be tasked with delivering more advances through software and to do so faster. As this accelerated pace of development opens the door for increased risk of defects that affect the quality and security of software code, ATVT revenue will grow through 2015 and into the foreseeable future.
About this Report

VDC Research’s i2: ideas & insights reports provide clients with deep insights into product, market, channel, and competitive strategies and tactics. Using deep and rich datasets based on extensive primary research, the i2 reports provide clients with the insights they need to make strategic decisions for their business about the markets they are in and the markets they want to be in. Coverage includes a combination of market sizing, segmentation, forecasting, end-user requirements analysis, competitive analysis, and more.

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