

# Mobile and Embedded Test Tools and Vendors (reference lists)

Linked from <http://breakingembeddedsoftware.com>

This portion of my Web site lists common mobile and embedded software test tools, vendors, and resources which a group looking for “help” in testing might leverage. I do not claim that this list is complete or up to date. The world of tools and companies, particularly in the mobile test spaces, is very fluid.

Most of the companies listed here provide tools, staffing, and test services. Some are more heavily weighted towards one or the other of these aspects. Some have labs and facilities in the mobile or embedded space, where they will actually take the software under test and install it on systems they have available. This is particularly true these days in the mobile app world. A few tools and companies do have significant embedded software support, either by staff or services, though typically most embedded software test efforts are specialized enough where they are done in house or through a specialized contract group e.g., IV&V.

This Web page is always changing and efforts will be done to keep it up to date. Readers and vendors are encouraged to submit input, ideas, and comments. The fact that a tool or company is here should not be viewed as an endorsement and likewise a tool’s absence from mention on this site just means that I have not heard of the tool/company. This is particularly true in the consulting service company space where worldwide there are hundreds of companies providing testers “for hire”. I just cannot list them all at this time.

As I state in my book, a tester or project in the mobile and/or embedded space should conduct their own research, trade studies, analysis and selection. There is no one “best” tool, idea, company, or tester. You should view this list a starting point only. The information in my book can also be of help since it covers tools, labs, and testing concepts at a generic level (Have you read my book yet?). Of course, you can contact me for help and questions. I may be able to provide assistance, if I have the time and depending on the depth of the request.

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### ***General info sites and resources on mobile and embedded (including conferences)***

These are general test information sites and not vendors per se, although there are companies or organizations behind them. They are resources I use and recommend to testers. They often have information on mobile and

embedded.

Web Site	Description
<a href="http://www.google.com">www.google.com</a>	Search Google with "mobile software testing". You will get millions of hits (many of the ones below) to get started. Do the same for embedded.
<a href="http://www.qatestingtools.com/mobile-testing-tools/list">http://www.qatestingtools.com/mobile-testing-tools/list</a>	Tests tool info site. I am not sure who exactly sponsors/supports this site, but it is useful and lists many of the tools I define below in more detail. You can use these two lists (the first one and this one) to get your trade study started.
<a href="http://www.stickyminds.com">www.stickyminds.com</a>	This is the SQE and Techwell general information site. I use this site a lot. It has papers and tool list (vendors provided). These groups run the largest test conferences in the world.
<a href="http://www.ubmdesign.com">http://www.ubmdesign.com</a>	Designwest (and other) conferences on embedded systems (used to be embedded system conference (ESC). Embedded systems is a strong focus at this conference.
<a href="http://www.qatest.org/en/">http://www.qatest.org/en/</a>	QA&TEST Conference on Software QA and Testing (usually in Europe). It has strong mobile and embedded focus.
<a href="http://www.associationforsoftwaretesting.org/">http://www.associationforsoftwaretesting.org/</a>	A test industry group (not a company) focused on the context-driven view of testing. It offers general training and conferences.
<a href="http://www.stpcon.com/">http://www.stpcon.com/</a>	This group runs at least 2 conferences per year on testing. They usually have sessions on mobile and embedded. There are also publications and other Web sites offered.

There are, of course, other sites or groups such as IEEE and ACM, which is recommended for researchers and academic people but, the table above lists my "favorites." Bear in mind that this list will change over time.

### ***Mobile and Embedded Test support tooling***

These vendors are more "specialized" to the mobile space (and a little in embedded). Most of these vendors offer GUI, capture-playback, scripting, and/or test execution automation tools, as well as ALM support. These tools support the mobile domain and to a limited degree embedded.

Web Site	Company	Tool(s) name	Notes
<a href="http://www.zaptechnologies.com/">http://www.zaptechnologies.com/</a>	ZAP technologies	ZAP-fix and ZAPGen	Mobile coverage
<a href="http://smartbear.com/">http://smartbear.com/</a>	SmartBear	A suite of tools including mobile support	Has "Freeware" and costed tools (worth a look)
<a href="http://www.froglogic.com/">http://www.froglogic.com/</a>	FrogLogic	Squish	GUI testing tool
<a href="http://applitools.com/">http://applitools.com/</a>	Appitools	Appitools Eyes (several)	Automating visual software testing
<a href="http://www.ranorex.com/">http://www.ranorex.com/</a>	Ranorex	Ranorex suite of tools	Mobile coverage
<a href="http://www.jamosolutions.com/">http://www.jamosolutions.com/</a>	Jamo Solutions	M-eux and	Mobile coverage

Web Site	Company	Tool(s) name	Notes
		performance tools	
<a href="http://www.impetus.com/automated_testing_framework">http://www.impetus.com/automated_testing_framework</a>	Impetus	mAutomate	Automated Mobile App Testing
<a href="http://www.gorillalogic.com">http://www.gorillalogic.com</a>	Gorilla Logic	Monkey test	Mobile coverage
<a href="http://www.testplant.com/">http://www.testplant.com/</a>	TestPlant	Eggplant	Mobile and embedded coverage
<a href="http://testdroid.com/start-testing-your-mobile-apps-now">http://testdroid.com/start-testing-your-mobile-apps-now</a>	Testdroid company	Droid test	Andriod test support

### ***The Big Players (companies)***

These vendors offer suites of tools including ones that cover (at least in part) the mobile and/or embedded space.

Web Site	Company	Tool(s) name	Notes
<a href="https://developer.apple.com/">https://developer.apple.com/</a>	Apple	xcode, unit test, UI automation	Part of development environments
<a href="http://www.ibm.com/us/en/">http://www.ibm.com/us/en/</a>	IBM	<a href="#">Search on test tools (rational)</a>	Part of development environments
<a href="http://www.microsoft.com/visualstudio/en-us/visual-studio-testing-tools">http://www.microsoft.com/visualstudio/en-us/visual-studio-testing-tools</a>	Microsoft	many tools within visualstudio	Part of development environments
<a href="http://www8.hp.com/us/en/software-solutions/software.html?compURI=1170256#.UlBm59LvWHc">http://www8.hp.com/us/en/software-solutions/software.html?compURI=1170256#.UlBm59LvWHc</a>	HP	Suite of tools	Mobile support available
<a href="http://www.borland.com/products/silktest/default.aspx">http://www.borland.com/products/silktest/default.aspx</a>	Borland	suite of tools	Mobile support available
<a href="http://www.compuware.com/en_us.html">http://www.compuware.com/en_us.html</a>	Compuware	Numerous	Big and small tools including mobile support
<a href="http://www.turnkeysolutions.com/">http://www.turnkeysolutions.com/</a>	TurnKey Solutions	NA	Minimal mobile support

### ***Vendor provided test labs and services***

There are literally hundreds of these companies around the world. The fact that one is listed here or not should not reflect they are good or bad. What I list here are tools that I have run into during work, conferences, and consulting.

Company Name	Area of Expertise	Web Site
PROTOTEST	Mobile test lab and services	<a href="http://www.prototest.com">www.prototest.com</a>
QLab	IV&V, labs, and test services	<a href="https://foursquare.com/v/q-lab-malaysian-software-testing-board/4c60fe0c12e5c928fa9d204c">https://foursquare.com/v/q-lab-malaysian-software-testing-board/4c60fe0c12e5c928fa9d204c</a>
XBOsoft	test services	<a href="http://www.XBOsoft.com">www.XBOsoft.com</a>
LogiGear	test services	<a href="http://www.logigear.com">www.logigear.com</a>
Mobilelabs	mobile app testing lab and servies	<a href="http://www.mobilelabsinc.com">www.mobilelabsinc.com</a>
Keynote DeviceAnywhere	mobile app testing lab and services	<a href="http://www.keynotedevicewhere.com/">http://www.keynotedevicewhere.com/</a>
Perfecto mobile	mobile app testing lab and services	<a href="http://info.perfectomobile.com">http://info.perfectomobile.com</a>
ValueMomentum	V&Vand test services	<a href="http://www.valuemomentum.com/site/">http://www.valuemomentum.com/site/</a>

Company Name	Area of Expertise	Web Site
Sauce Labs	cloud resource labs for mobile	<a href="https://saucelabs.com/">https://saucelabs.com/</a>
InfoStretch corp	test services	<a href="http://www.infostretch.com">www.infostretch.com</a>

Note: test services usually mean the company provides consultants and contract workers.

### ***Crowd Source companies***

Mob4Hire <http://www.mob4hire.com/>

Utest <http://www.utest.com/>

### ***Embedded Unit, integration ALM and System level tests tools***

Web Site	Description
<a href="http://www.vectorcast.com/">http://www.vectorcast.com/</a>	VectorCAST (unit test tool) and others in the suite
<a href="http://www.ldra.com/">http://www.ldra.com/</a>	LDRA(unit test tool) and a suite of others including mobile/embedded
<a href="http://www.windriver.com/">http://www.windriver.com/</a>	WorkBench suite from Wind River Systems offers an integrated suite of tools
<a href="http://neweagle.net/">http://neweagle.net/</a>	MotoHawk by New Eagle Distribution, model-based tooling in the automotive industry
<a href="http://www.polarion.com">http://www.polarion.com</a>	Polarion tools, Medical industry (very limited embedded)

### ***Static Code Analysis Tools for mobile and embedded (with support areas)***

A key developer-level attack that I recommend is static code analysis (SCA). Here are some candidate tools I am familiar with (tool name and Web site).

Name	Description
Klockwork	<a href="http://www.klocwork.com">http://www.klocwork.com</a>
Parasoft	<a href="http://www.parasoft.com">http://www.parasoft.com</a>
Grammatech	<a href="http://www.grammatech.com">http://www.grammatech.com</a>
Coverity Scan	<a href="http://www.coverity.com">http://www.coverity.com</a>
Atlassian scan	<a href="http://www.atlassian.com">http://www.atlassian.com</a>
Polyspace	<a href="http://www.mathworks.com/discovery/static-code-analysis.html">http://www.mathworks.com/discovery/static-code-analysis.html</a>

### ***Math-based Test Tools (primarily combinatorial test tool unless otherwise noted)***

To find these tools, since most are free, you should do a Web search to find “local” copies. Commercial tools can be found by searching on the vendor name.

Tool	Source	Costs
TCG (Test Case Generator)	NASA	Free
AllPairs	James Bach (Satisfice)	Free, GPL
Jenny	Bob Jenkins	Free, public-domain

<b>Tool</b>	<b>Source</b>	<b>Costs</b>
Test Vector Generator		free
PICT	Microsoft Corp.	Free
rdExpert	Phadke Associates, Inc.	Commercial
ACTS	NIST	Free
Hexawise	Hexawise	Web-based, free & commercial
Opal-RT Technologies	Timing tools	Commercial
Tool set 6-sigma	Air Academy Association	Commercial (timing and others)

***Security tool (specialized) and companies (can be useful to the mobile and embedded tester)***

<b>Company</b>	<b>Web site</b>	<b>Type</b>
beSTROM (tool)	<a href="http://www.beyondsecurity.com">www.beyondsecurity.com</a>	Fuzz Testing tool
Peach (tool)	<a href="http://peachfuzzer.com/">http://peachfuzzer.com/</a>	Fuzz Testing tool
Thawte Inc. (now part of Symantec)	<a href="http://www.thawte.com/">http://www.thawte.com/</a>	Security testing
Kaspersky Lab	<a href="http://usa.kaspersky.com/user">http://usa.kaspersky.com/user</a>	Security testing

***Open Source tools (consistently changing)***

You should do a search on these tools since they move around on the Internet and some may be semi-commercial.

- Selenium
- Monkey Talk
- FoneMonkey
- Robotium
- monkeyrunner
- Cucumber