APPLAUSE
WINNING APPS GET IT

APPLAUSE

360° APP QUALITY

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1   Quick Introduction – Company

2   In-The-Wild testing concept
Test-processes and structure of cooperation

3   Security measures and statistics

4   Case Studies

Company overview

- o **2007 –** Founded

- o **200 –** Employees

- o **Two years** in a row on the Forbes list "Most Promising Companies". This year #7 von 100

- o **#16 of 5.000** on the Inc. List of the fastest growing companies in 2012 and #300 in year 2013

- o **80 Million USD** Funding

- o **Various Analyst-Reports** validate ROI and concept of IN-THE-WILD testing - IDC, Forrester, Gartner

- o **Google, Facebook, BMW, Deutsche Telekom and Adidas** work with Applause since multiple years

- o **Formed Alliance with IBM** for Technology-solutions

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Successstory of the IN-THE-WILD Concept

- o **140.000** prof. Tester worldwide

- o **500** Tester in Baltic region

- o **150** active countries

- o **300.000** registered devices

- o **40.000** builds tested

- o **1.000.000** Bugs uncovered

- o **2.000** Companies worldwide have integrated the IN-THE-WILD Testing concept into their development processes

adidas

T··

BMW

axel springer

amazon.com

APPLAUSE®

Retail	Media	Travel	Navigation

Applause

In-The-Wild testing
Test-processes

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360° APP QUALITY

FOR APPLICATIONS ON
WEB, SMARTPHONES, TABLETS, SMART TVs, WEARABLES

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1 — Testing-Services

Fn Ld Ln Ux Sc

140.000

2 — SDK-
Crash and Bugreports

Latest Crashes   view more ▾

Build version:	New version (89)		15
Device:	GT-P1010, Android (2.2.1 (XWKB8))		occ
Last occurence:	18 Apr, 2014	Anonymous	

⚠ java.lang.NullPointerException -> Test crash

Build version:	New version (89)		53
Device:	GT-P1010, Android (2.2.1 (XWKB8))		occ
Last occurence:	27 Feb, 2012	Anonymous	

⚠ java.lang.IllegalArgumentException -> No files specified for upload

3 — Appstore-Analytics

Attributes

Privacy — Even the perception of privacy issues can cause alarm. Do you ask for more information than you need? Does the app link to questionable external content or appear to be fraudulent or deceptive?
Based on 233 reviews

Satisfaction — Your app may be fast, reliable, and secure, but does it make people happy?
Based on 942 reviews

Elegance — The elegance of an application's UX is very important on mobile. Take a look at top apps that score high in excellence such as Path and Google+
Based on 308 reviews

Stability — If your app crashes, especially if that freeze or hang results in the user losing data or time, it can be a huge detriment to your reviews. Crashes and hangs are often caused by networking or unusual usage paths in the product.
Based on 647 reviews

Interoperability — Interaction with the device, camera, other apps, or audio and video output issues can be frustrating to users. Test how your app interacts with everything outside of your app.
Based on 648 reviews

Performance — Speed is everything on mobile. Slow launch times, network speed can ruin the experience. Speed up your app. Make things faster, or make them look faster.
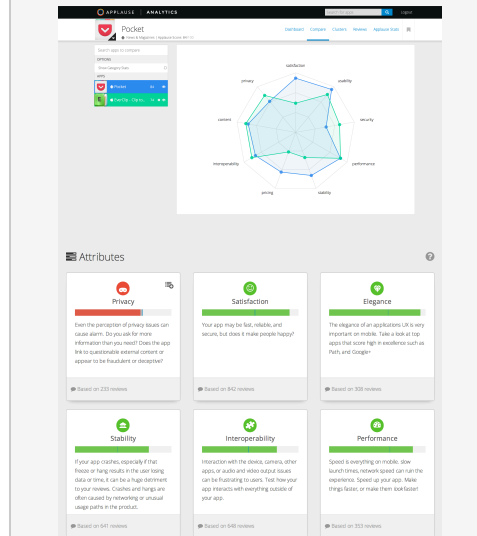Based on 353 reviews

APPLAUSE®

o **Stay on top of your app's quality in the lab and in production**

o **The auto-installing Applause SDK closes the feedback loop between app creators, testers and users, ensuring high-quality apps**

o **Key features include:**

– Auto-installs itself

– Over-the-air (OTA) build distribution

– In-app bug reporting

– In-app crash reporting

– Real-time session reporting

– In-app user feedback

– Integration with the 360°App Quality Dashboard

APPLAUSE SDK

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- **SETUP**
  - Automatically installed via our online-platform
  - A single library per platform (Android, iOS, Windows Phone and Unity)
  - Full documentation is available online
- **The Applause SDK activates when the app starts**
  - The Applause SDK's code runs with the rest of the app's code
- **When new builds are published or problems happen, the Applause SDK takes over**
  - New builds can be easily distributed OTA to test teams
  - On a crash, relevant data is immediately captured and reported:
    - Device maker & model
    - OS version
    - Carrier & connectivity
    - Battery life
    - Stack trace
    - Event logs

Method

① BOT-Crawler analyzes huge amount of data (110.000.000 reviews so far)
② Uses semantic analysis to understand qualitative feedback data
③ Looks for combinations of predefined keywords
④ Creates a rating based on found keyword combinations
⑤ Creates clusters of feedback that express similar opinion
⑥ Rating is structured in "attributes" like
   • Overall Satisfaction
   • Usability
   • Functionality
   • Stability
   • Security
   • etc.

Data

① Crawls app store reviews
   • Apple App Store
   • Google Play Store
② 2+ million apps 110+ million reviews
③ Data is analyzed daily for all available apps
④ **Any kind of feedback data can be crawled and analyzed**
   ▪ E.g. analysis of user reviews from beta communities have already been applied

Results

① Results are available on the Applause Analytics platform
② Creation of review clusters that show all reviews grouped by meaning and feeling
③ Creation of Attributes that show the performance over time for specific areas (usability, satisfaction, functionality, stability)
④ Possible to compare performance across industries and applications of competitors

- o Possible to compare against other apps from the industry
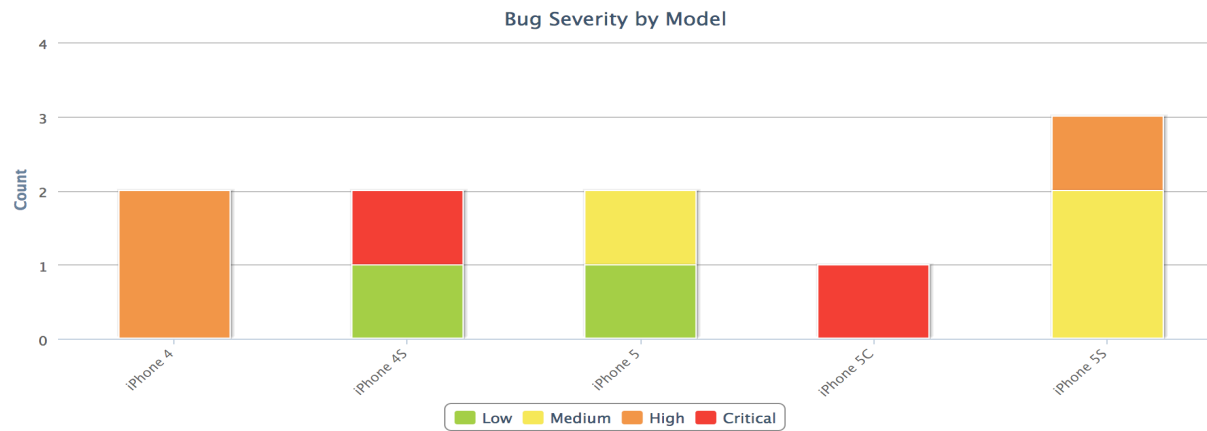
- o Radar chart to understand how the app performs on individual attributes if compared to other apps
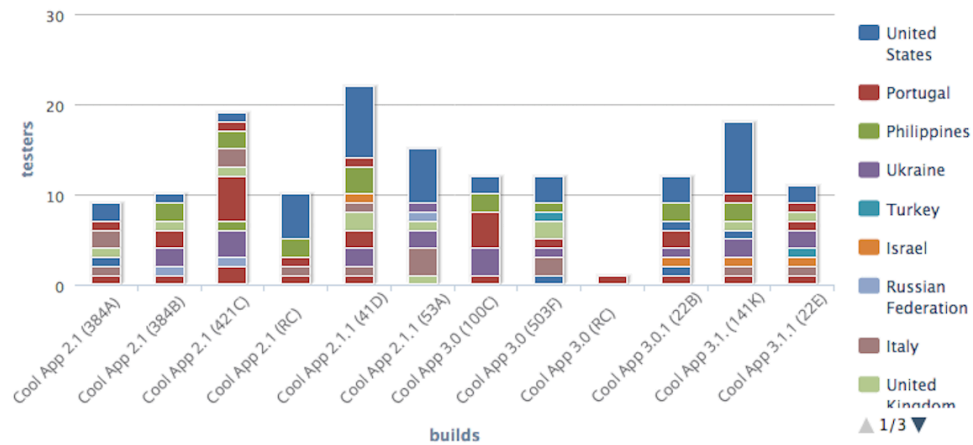
1. Platform

- 24/7 Access to testers and results

- Integrated with all major bug trackers

- Real-time chat with testers

- Crash details and screenshot per bug

- Live tracking of test progress

- Automated Sanity-Checks

Test Case Execution Results by Model

Bug Severity by Model

Platform

Tester Distribution

Reporting testers: 72

Gold: 35
Silver: 26
Bronze: 6

Countries: 20

Legend:
- United States
- Portugal
- Philippines
- Ukraine
- Turkey
- Israel
- Russian Federation
- Italy
- United Kingdom

1/3

Environments With Issues

Environments with most issues:

Galaxy S III, Android 4.1.1: 35
Galaxy S III, Android 4.1.2: 29
Nexus 7, Android 4.2.2: 24
Desire, Android 4.0: 23
Transformer Prime TF201, Android 4.1.1: 22

Legend:
- Android 4.2.1
- Android 4.2.2
- Android 4.0.4
- Android 4.0.3
- Android 4.0.2
- Android 4.0.1
- Android 3.2

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2. Community

- o 3-5 years of QA experience (average)

- o Big pool End users in 150+ Countries

- o Vetting process of new testers

- o Bug valuation and tester ranking (Bronze, Silver, Gold)

- o Testers paid per bug ("bug hunting")

- o Virtual Teams are available on demand with about 10-15 Tester and Test manager

- o Skills, Devices, Demographics, Location selectable

3. Project Management

1

Dedicated Project Manager

- o Internal employee

- o „Single Point of Contact"

- o Analyses current processes

- o Integrates Applause in current processes

- o Creates plans for testing, suites of testcases and is in charge of maintenance of those

- o Takes test requirements and creates corresponding projects on our Platform. (Device coverage, skills, locations)

- o Monitors test cycles and updates customer in case of events

2

Dedicated Test Engineer

- o QA Expert from the community

- o Has completed over 100 test projects successfully and qualified for becoming a test manager

- o Responsible for fast communications with the tester team - 24/7

- o **Checks every reported bug for:**
    - o Being in scope
    - o Potential Duplicates
    - o Reproducibility

- o It is his responsibility that all bugs are relevant for the customer.

4. Test process

Applause
- Validates fixed bugs
- Makes sure that the final version can be released.

7 RE-Test of Bug-Fixes

1 *New version*

Customer
Hands over a new build before a new release

Customer and Applause
- Define new features that have to work
- Define requirements – Device-coverage, locations, scenarios
- Update existing test cases

2 Test focus

6 Vetting of Bugs

Customer
- Evaluate reported bugs
- Get in touch with testers in case of questions
- Export bugs to BTS

5 Triaging Bugs

3 Test-setup

4 TESTING

Applause
- Creates a new test cycle on the platform
- Invites and briefs existing test team

Applause TTL und PM
- Triage all Bugs
- Make sure that all test requirements are met
- Make sure all necessary testing has been performed

Applause Community (10-15 Tester)
- Complete test cases
- Search explorativly for Bugs
- Enter Bugs on Applause platform

Security Measures

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3

Enterprise Level Security and Privacy

1   **German and European Data Privacy Standards**

Data privacy is as important to us as it is to our clients. As German legal entity and service provider to a large number of Enterprise customers such as BMW or Deutsche Telekom, we fully comply with German data privacy laws.

2   **Strict Non-Disclosure and Confidentiality Policies**

We provide an NDA with the testers and the company. In addition, any company can have testers sign up to their own NDA to have individual NDAs with every tester that participates in a cycle.

3   **Enterprise Level System and Network Security Standards**

Encrypted network protocols are used for transmission of any data with personal or sensitive nature. To access any system, personal credentials are required. Different access levels exist so that personnel can only access as much data as necessary for business purposes. Applause uses only commercial cryptographic algorithms. We use 3DES for VPNs and SSL. SSL keys are 128 bits and VPN keys are 256 bits.

4   **Enterprise Level Information Security Policies and Procedures**

The Applause Information Security Policies define information security as the protection of information from loss of confidentiality, integrity, or availability. The scope of these policies includes all information that is stored, processed, transmitted or printed using any system or storage medium, and cover everything from Security, Backup, Encryption, Access, etc. These policies apply to all Applause staff and to all other individuals who directly or indirectly use or support the services or information of Applause or any of its customers.

5   **Quarterly Third Party Security Reviews and Assessments**

We have run security scans of our platform with external security advisors.

Case Studies

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Introduction

500 Tester in 82+ Countries. Performing payments with multiple payment methods (520 payment instruments in total).

Covered areas: Functionality

Test-Setup	Goals and Challenges	Results
▪ 500 Testers participate ▪ 82 Countries covered (South Africa, Morocco, Ghana) ▪ Testing continuously since 12 months ▪ Testing online-purchasing systems ▪ Executing transactions, pay-ins, withdrawals, purchases	① Verifying online payments systems worldwide ② Validating the functionality of various payment instruments (520 in total in usage) like PayPal, Visa, MasterCard etc.. with country specific properties	① 500 test cases executed since start ② **54** uncovered Issues have been marked as "Exceptionally valuable" or "Very valuable" by the customer ③ **284** Issues uncovered in total

Introduction

20-100 Tester in 10 diff. countries (Europe, North America, Asia) perform weekly test sessions of 1-2 hours

Covered areas: Functionality

Test-Setup	Goals and Challenges	Results
▪ 20-100 Testers participate simultaneously each week ▪ 10 Countries covered (Portugal, Sweden, Tunisia, Ukraine, Philippines…) ▪ Scheduled conference calls of 1-2 hours between all testers ▪ Investigating quality of conference calls on various platforms (Mac, Windows, Android, iOS) and connectivity type ▪ Test cycles have been performed weekly for the last 36 months	① Establish a consistent quality level that is monitored weekly ② Quickly react to defects resulting from changes in Platforms and internal development ③ Approve quality before each release. Regression testing of main use-cases	① **5.620** test cases executed since start ② **53** uncovered Issues have been marked as "Exceptionally valuable" by the customer ③ **75** uncovered Issues have been marked as "very valuable" by the customer ④ **470** Issues uncovered in total

Summary

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1 — Time to market

① Testing over nights or weekends

② Testcase execution within hours

③ Build up a dedicated test team which knows all products and internal

④ Availability 24/7

2 — Device coverage

① Every new feature can be tested on almost each devices.

② Testing on a regular base in front of every release

③ Over 140.000 Testers with 300.000 devices

3 — Worldwide execution

① 134 Testmanager in 24+ countries. Testers are located in over 150 countries.

② Functional testing in each target market

③ Testing under real conditions (car, tube, coutryside, airport etc)

4 — Enlarge your internal QA-power

① Testplan creation

② Virtual test team incl. Specialists for certain circumstances

③ On-Site resources for complex test scenarios

- **Thank you very much!**