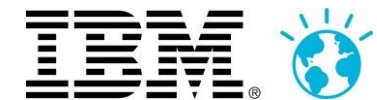




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Analysez et optimisez l'expérience utilisateur mobile avec Tealeaf CX Mobile

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Consultant Avant-vente



Agenda

- Tealeaf CX Mobile Overview
- Success Factors
- Case Studies
- Questions

Tealeaf CX Mobile



Tealeaf CX Mobile: Discover what's working and what isn't – and WHY

Visibility into user success & failure

- ▶ Automatic detection of customer struggle, obstacles or issues
- ▶ Understand customer feedback for making improvements
- ▶ Visibility into your mobile usage across the user base, site and apps

Accelerate time-to-market

- ▶ Eliminate poor quality to deliver winning mobile services
- ▶ Identify cause without having to update or re-launch your services
- ▶ Rapidly evaluate mobile features – adoption, success & failure points

Make the right mobile investments

- ▶ Quantify business impact to prioritize decisions: fix, invest, remove
- ▶ See the actual usage of mobile services rather than the expected

Obtain mobile ecosystem analysis and insight

Mobile Analytics “What is happening?”

- Quantitative
- Audience profiling
- Time-based reporting
- Mobile content measurement

Reporting

Mobile CEM “Why is it happening?”

- Qualitative
- User struggle detection
- Drill down on user behavior
- Correlate behavior with network data

Discovery

Unprecedented Visibility into the Mobile Experience

See the complete mobile experience through the eyes of your customers

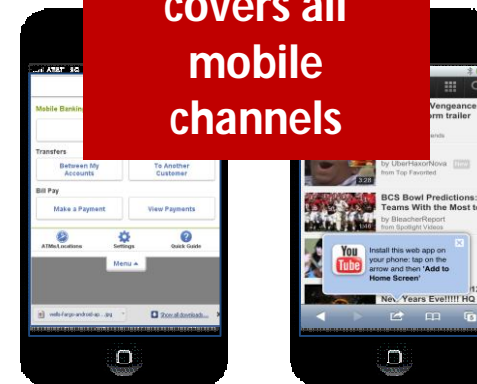
- ▶ Discover “why” customers succeed or fail
- ▶ Automatically detect customer struggles, obstacles or issues
- ▶ Drill down into actual user behavior, complete with gestures
- ▶ Translate customer feedback into actionable improvements
- ▶ Correlate customer behavior with network and application data

Native Apps



Mobile Site

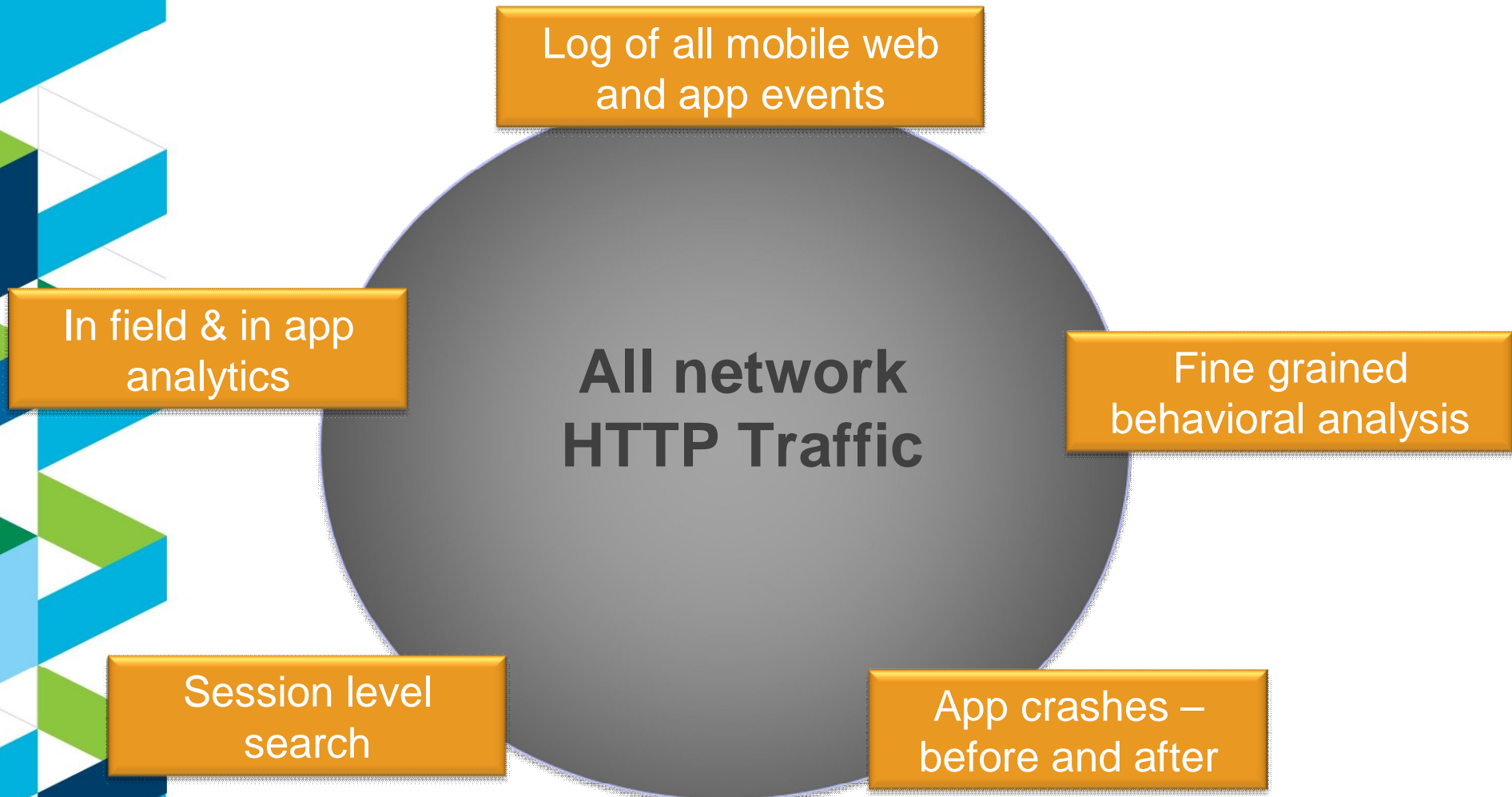
Hybrid Apps



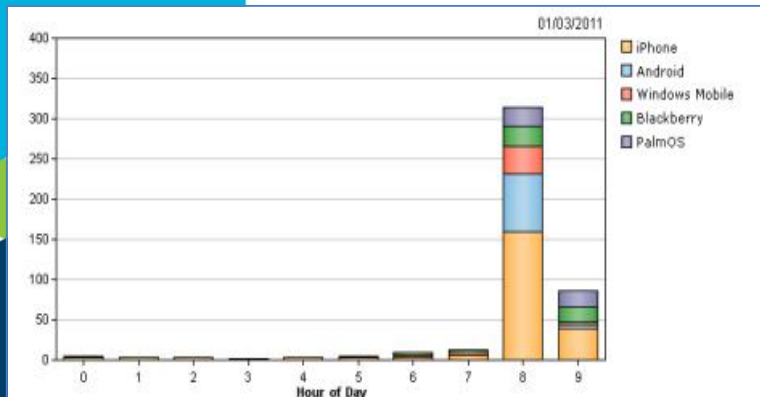
HTML5

CX Mobile covers all mobile channels

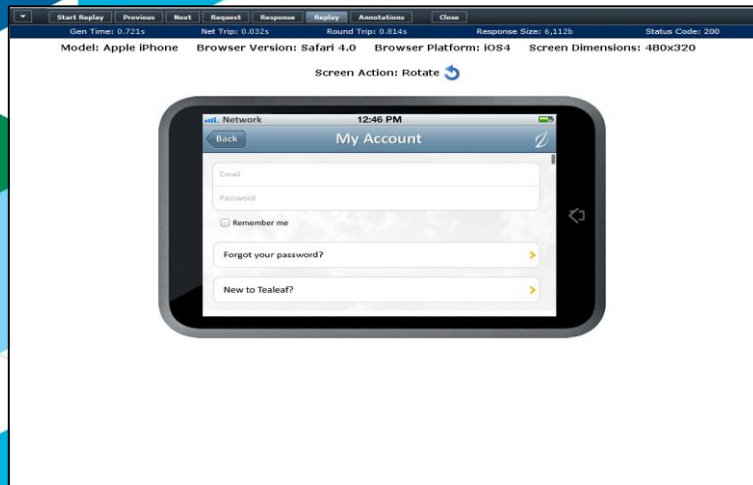
Tealeaf's unique capabilities



Tealeaf CX Mobile for mobile web



Impact Analysis Using Mobile Device Demographics

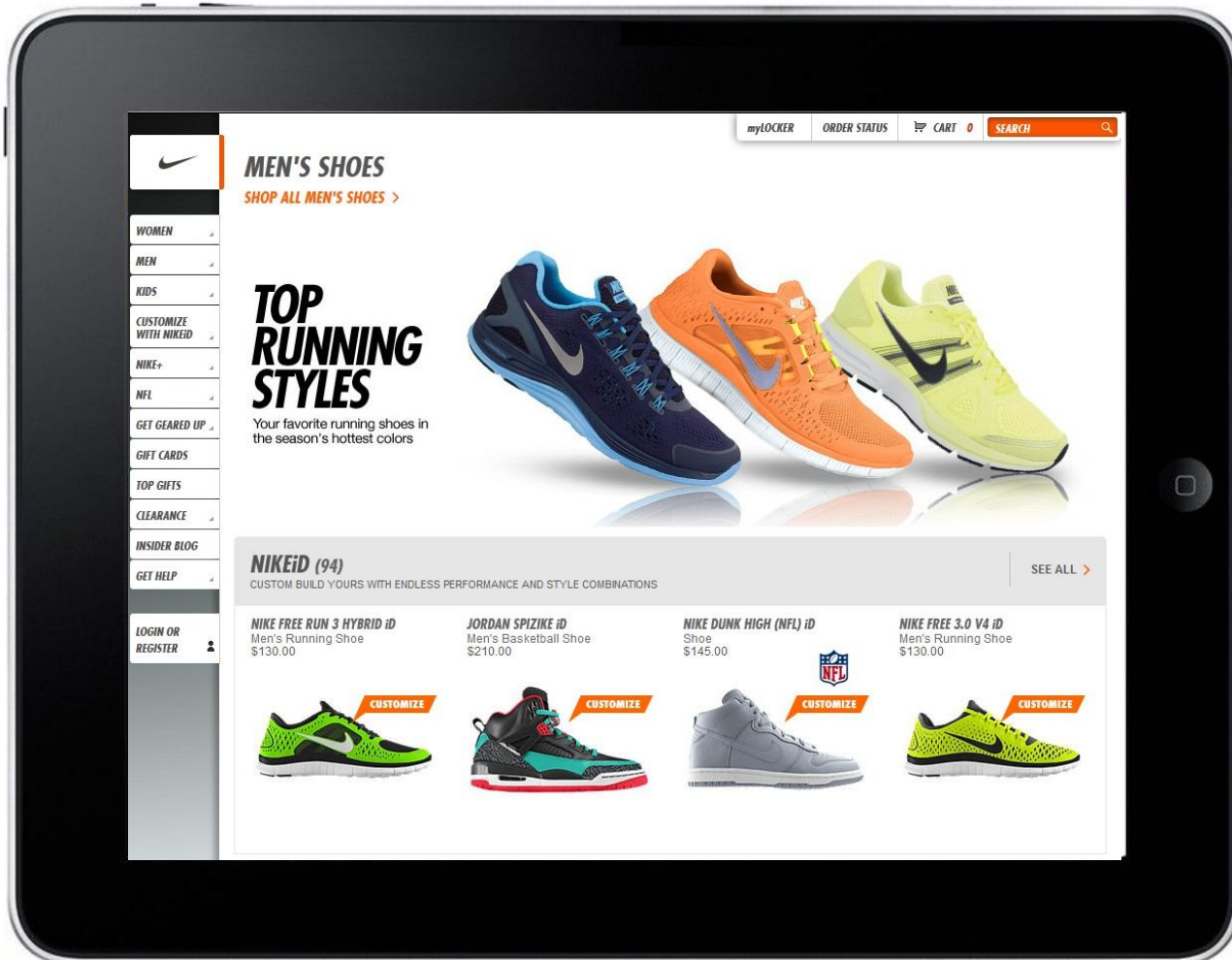


Orientation-Specific Enhanced Mobile Replay

- Intelligent Device Demographics
 - ▶ Optimized algorithm to derive device details from user agent string
 - ▶ Reliable method to power data for, troubleshooting, behavior analysis, development decisions
- Advanced In-Screen Visibility
 - ▶ SDK support for mobile-specific actions. E.g. Orientation, swipe
 - ▶ Powers rich replay and mobile experience behavior analysis
- Enhanced Mobile Browser Replay
 - ▶ Rendered using screen dimensions, device orientation, touch-screen actions
 - ▶ In-depth visibility to recreate problems and optimize mobile functionality

Gain insight into iPad/Tablet users

Tablet visitors are one of the fastest growing segments of users – Optimizing this channel for these users will be critical.



cxMobile provides:

- **Reports and Events for device-specific gestures**—Important for understanding struggle related to tablet interface
- **Replay in device skin and form factor** – Visually see site as customer sees it.
- **Advanced user-agent and device-specific metrics** – Better understand how different segments of customers are performing on your site

Mobile DOM Rendering

The screenshot displays a web browser window with a navigation pane on the left and a main content area showing a mobile DOM rendering of a website. The browser interface includes a navigation pane with a table of page titles and timestamps, a main content area displaying a tablet view of the Strauss & Plesser website, and a status bar at the bottom.

Page	Title	Time Stamp
1	Home page	10/10/2012 14:17:00
2	ScreenView: LOAI	10/10/2012 14:17:00
3	UI: Touch/Gesture B:	10/10/2012 14:17:00
4	UI: Touch/Gesture B:	10/10/2012 14:17:00
5	UI: Touch/Gesture B:	10/10/2012 14:17:00
6	UI: Touch/Gesture B:	10/10/2012 14:17:00
7	UI: Touch/Gesture B:	10/10/2012 14:17:00
8	UI: Touch/Gesture B:	10/10/2012 14:17:00
9	UI: Touch/Gesture B:	10/10/2012 14:17:00
10	UI: Touch/Gesture B:	10/10/2012 14:17:00
11	UI: Touch/Gesture B:	10/10/2012 14:17:00
12	UI: Touch/Gesture B:	10/10/2012 14:17:00
13	UI: Touch/Gesture B:	10/10/2012 14:17:00
14	UI: Touch/Gesture B:	10/10/2012 14:17:00
15	UI: Touch/Gesture B:	10/10/2012 14:17:00
16	UI: Touch/Gesture B:	10/10/2012 14:17:00
17	UI: Touch/Gesture B:	10/10/2012 14:17:00
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21	UI: Touch/Gesture B:	10/10/2012 14:17:00
22	UI: Touch/Gesture B:	10/10/2012 14:17:00
23	UI: Touch/Gesture B:	10/10/2012 14:17:00
24	UI: Touch/Gesture B:	10/10/2012 14:17:00
25	UI: Touch/Gesture B:	10/10/2012 14:17:00
26	UI: Touch/Gesture B:	10/10/2012 14:17:00
27	UI: Touch/Gesture B:	10/10/2012 14:17:00
28	UI: Touch/Gesture B:	10/10/2012 14:17:00
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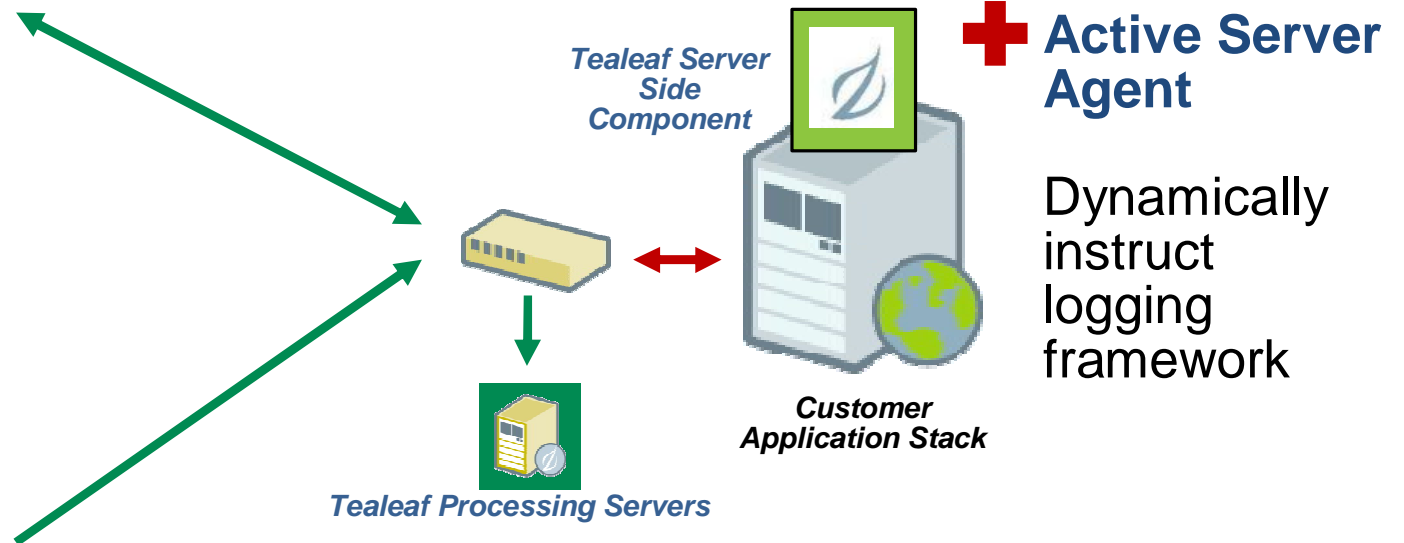
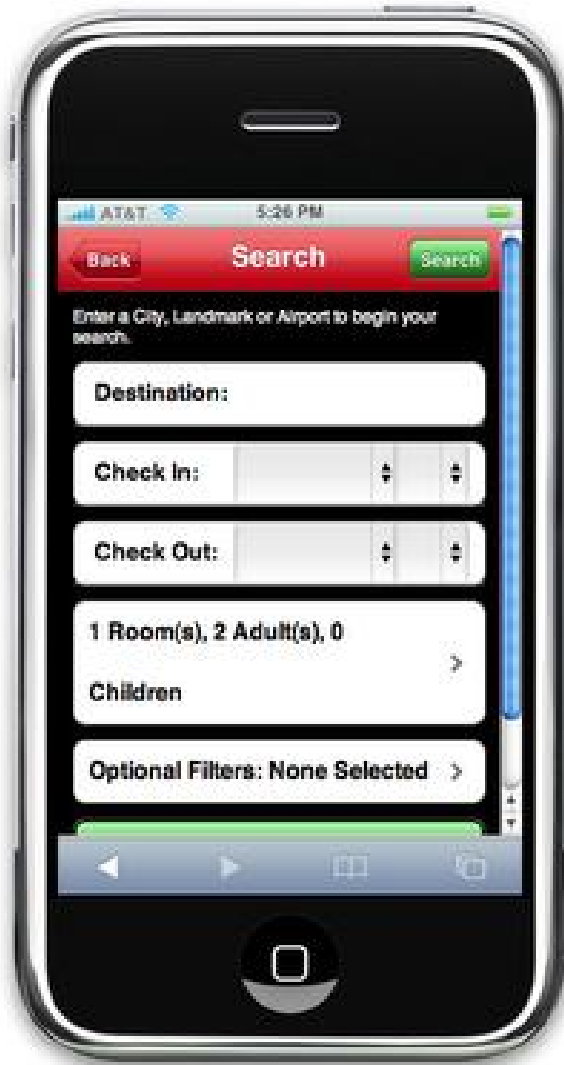
The main content area displays a tablet view of the Strauss & Plesser website. The website features a navigation menu with categories like Furniture, Electronics, and Apparel. The main content area includes a search bar, a list of products, and a "FREE SHIPPING on orders over \$50" banner. The website is rendered on a tablet device, showing a mobile-optimized layout.

Session First User: 10/10/2012 14:17:00 Session Last User: 10/10/2012 14:18:16 Hit Count: 6 Last Update: 10/10/2012 17:34:22

Tealeaf CX Mobile for native applications

Intelligent Logging Framework for iOS & Android

Intelligently record and transmit customer behavior activity, app health and environmental data



Passive Network Capture

Passive HTTP(S) capture to unify logging framework and network data

Logging framework and screen capture

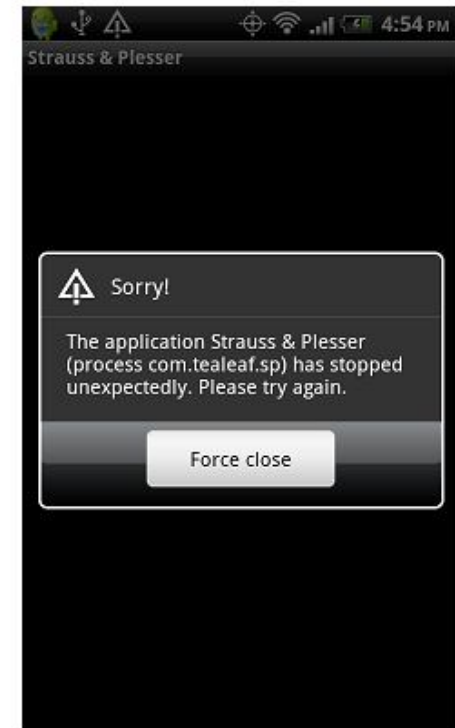
```
Browser: NoUserAgentHeaderFound Traffic Type: NoUa
xsp1TLB=0
RspTTLA=31504
ConnSpeed=197308
ConnType=DSL
WS_Generation=1217
WS_Grade=ExcellentWS
WS_GradeEx=0
NT_Total=31504
NT_Grade=ExcellentNT
NT_GradeEx=0
RT_Total=32721
RT_Grade=ExcellentRT
RT_GradeEx=0

[urlfield]
Android=ImageTest

RequestBody]
{"serialNumber":30,"messageVersion":"0.0.0.2","sessions":[{"startTime":1333644402188,"id":"4879AEF317C446D3B5AD99B4EE66754C","
{"offset":25479,"type":6,"contextOffset":4827,"exception":{"description":"divide by zero","stackTrace":"java.lang.ArithmeticException: divid
com.tealeaf.sp.activities.BaseActivity.crashTheApp(BaseActivity.java:61)\n\tat com.tealeaf.sp.activities.BaseActivity.onOptionsItemSelected(B
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com.android.internal.view.menu.MenuItemImpl.invoke(MenuItemImpl.java:145)\n\tat com.android.internal.view.menu.MenuBuilder.performIt
com.android.internal.view.menu.IconMenuView.invokeItem(IconMenuView.java:553)\n\tat
com.android.internal.view.menu.IconMenuView.performClick(IconMenuView.java:122)\n\tat android.view.View$PerformClick.run(Vi
android.os.Handler.handleCallback(Handler.java:587)\n\tat android.os.Handler.dispatchMessage(Handler.java:92)\n\tat android.os.Looper.loop(I
android.app.ActivityThread.main(ActivityThread.java:3906)\n\tat java.lang.reflect.Method.invokeNative(Native Method)\n\tat java.lang.reflect.
com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:840)\n\tat com.android.internal.os.ZygoteInit.main(ZygoteInit.ja
dalvik.system.NativeStart.main(Native Method)\n","name":"class java.lang.ArithmeticException"}]}],"clientEnvironment":{"mobileEnvironm
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```

Capture of stack trace for application exception

Request Response Replay Annotations Close
Net Trip: 0.023s Round Trip: 0.521s
S Version: 2.3.4 App Version: 1.0.5



Screen capture to give developers context to when exception occurred

CX Mobile provides visibility and value

■ User Behavior

- ▶ Screens viewed, Referring screen
- ▶ Text field, Text Field value
- ▶ Touches, Motion
- ▶ App launched, Entered background

■ Environmental

- ▶ App version, iOS/Android version,
- ▶ Device Model
- ▶ Device orientation, IP, Memory
- ▶ Connectivity
- ▶ Carrier, GPS

■ Application Health

- ▶ Exception, Crash
- ▶ Server connection success / error

- **Detect customers struggling to change reservation or order**

- **Isolate by application version, by error, by input**

- **Quantify users impacted**

- **Analyze customer behavior – sequence of events, screen logs, server calls**

- **Search to find other impacted users**

A low impact, high ROI solution



■ Tealeaf SDK

- ▶ Logging framework to communicate with Tealeaf servers
- ▶ Sample application
- ▶ Integration documentation
- ▶ Total library size between 75 to 400KB (variable by amount of instrumentation)

■ Integration

- ▶ Low level of effort to add library → add log statement to your corresponding event handlers (manual process)
- ▶ xCode (iOS) or Eclipse (Android) for auto instrumentation

■ Size of payload sent to server dependent on the amount of data collected

- ▶ Tealeaf uses gzip for data compression OTA (Over The Air)

■ Buffer

- ▶ Configure to keep it in memory or save to file
- ▶ Buffer full – oldest data deleted first

■ Radio Intelligence

- ▶ Intelligence for radio usage and/or WiFi – log levels can be configured based on available network
- ▶ Tealeaf sends at end of session or on timed intervals

Mobile app development controls



■ Sampling

- ▶ Turn on logging for only a sample of users (e.g. start with 1%)
- ▶ Controlled from the server at runtime (can change over time)
- ▶ Enables controlled rollout of logging framework

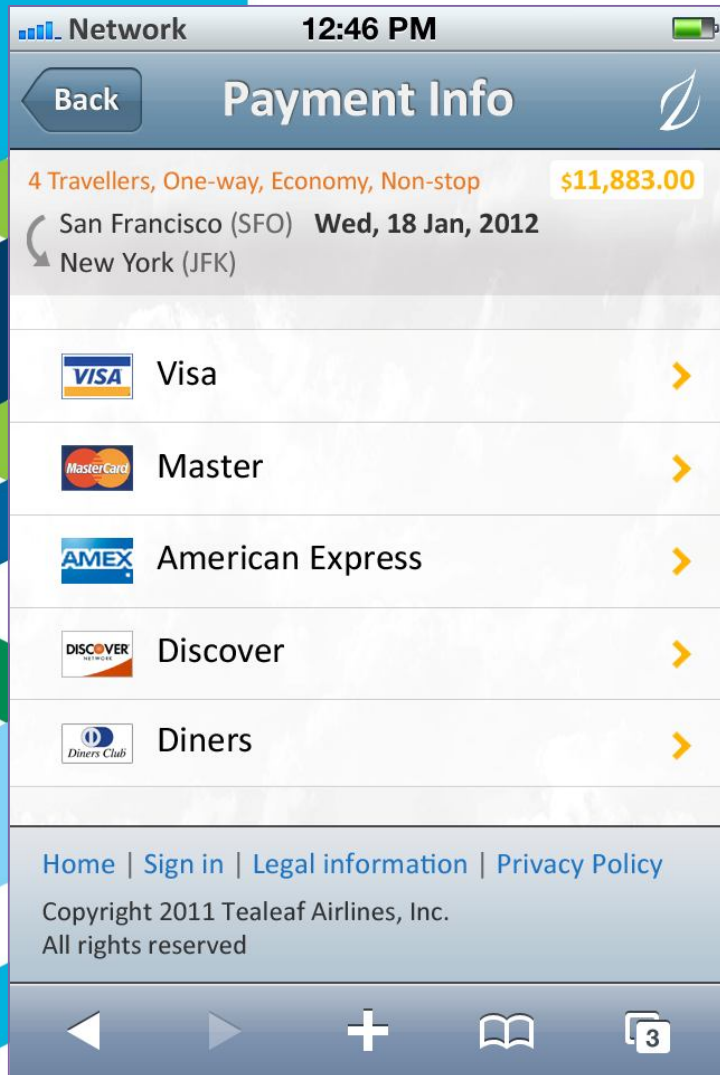
■ Controlled instrumentation

- ▶ Separate levels of instrumentation for dev and production
- ▶ Lighter weight logging for production
- ▶ Can be customized for specific apps: control what to capture

■ Eventing and reporting

- ▶ JSON format and parser to simplify eventing off of data

Tealeaf CX Mobile for Hybrid Apps

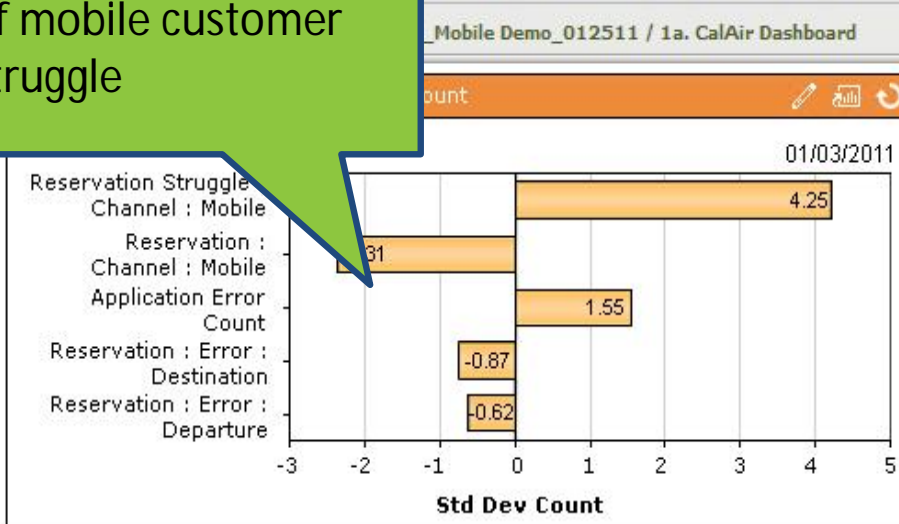


- Combines traffic from HTML and native portions of the app
- Complete view of all user actions regardless of where they occur
- Replay the HTML portions of user sessions
- Screen shots of native app portions of user sessions

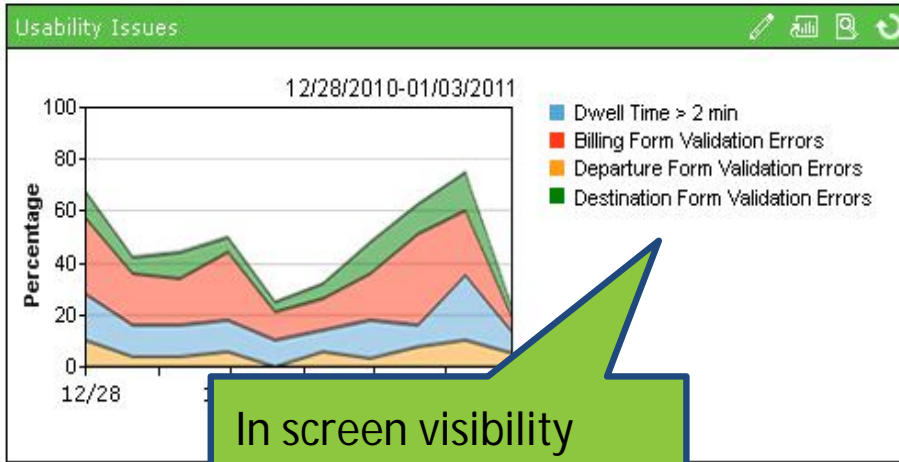
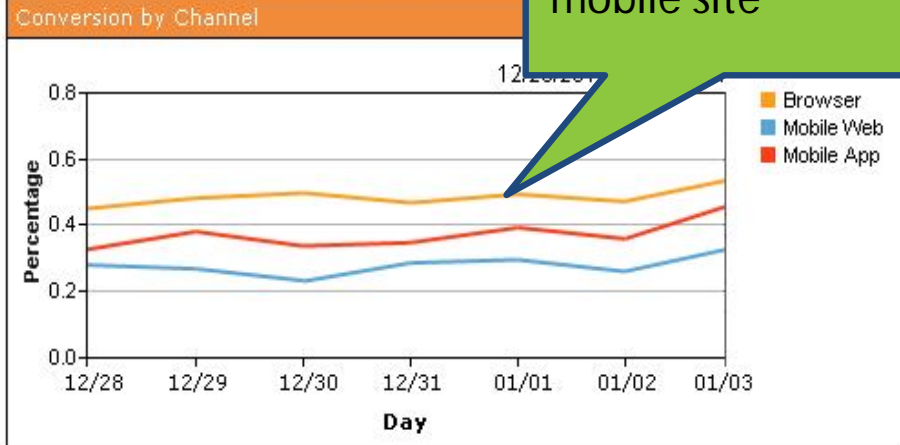
Success Factors

Mobile dashboard

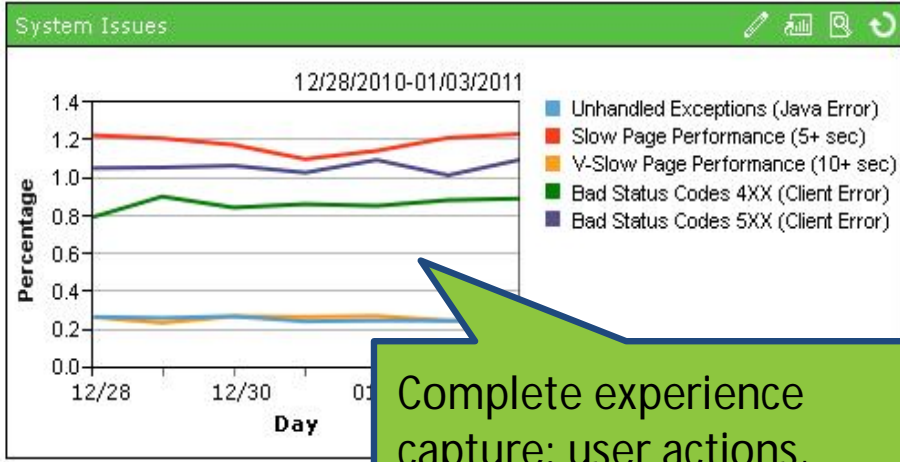
Automatic detection of mobile customer struggle



Cross channel analytics: web, app, mobile site



In screen visibility (orientation, swipe, form entry, clicks) to track usability issues

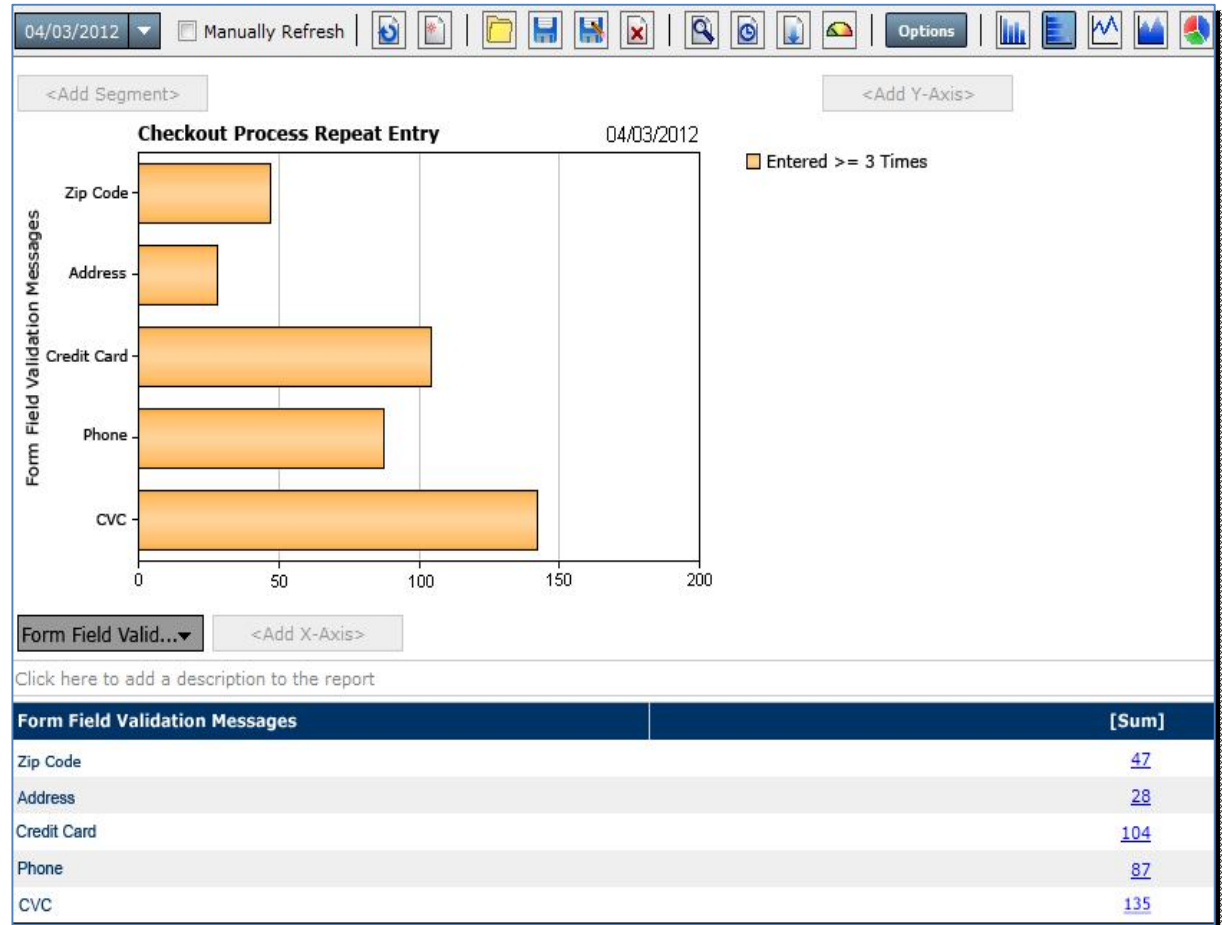


Complete experience capture: user actions, application, environmental and network data



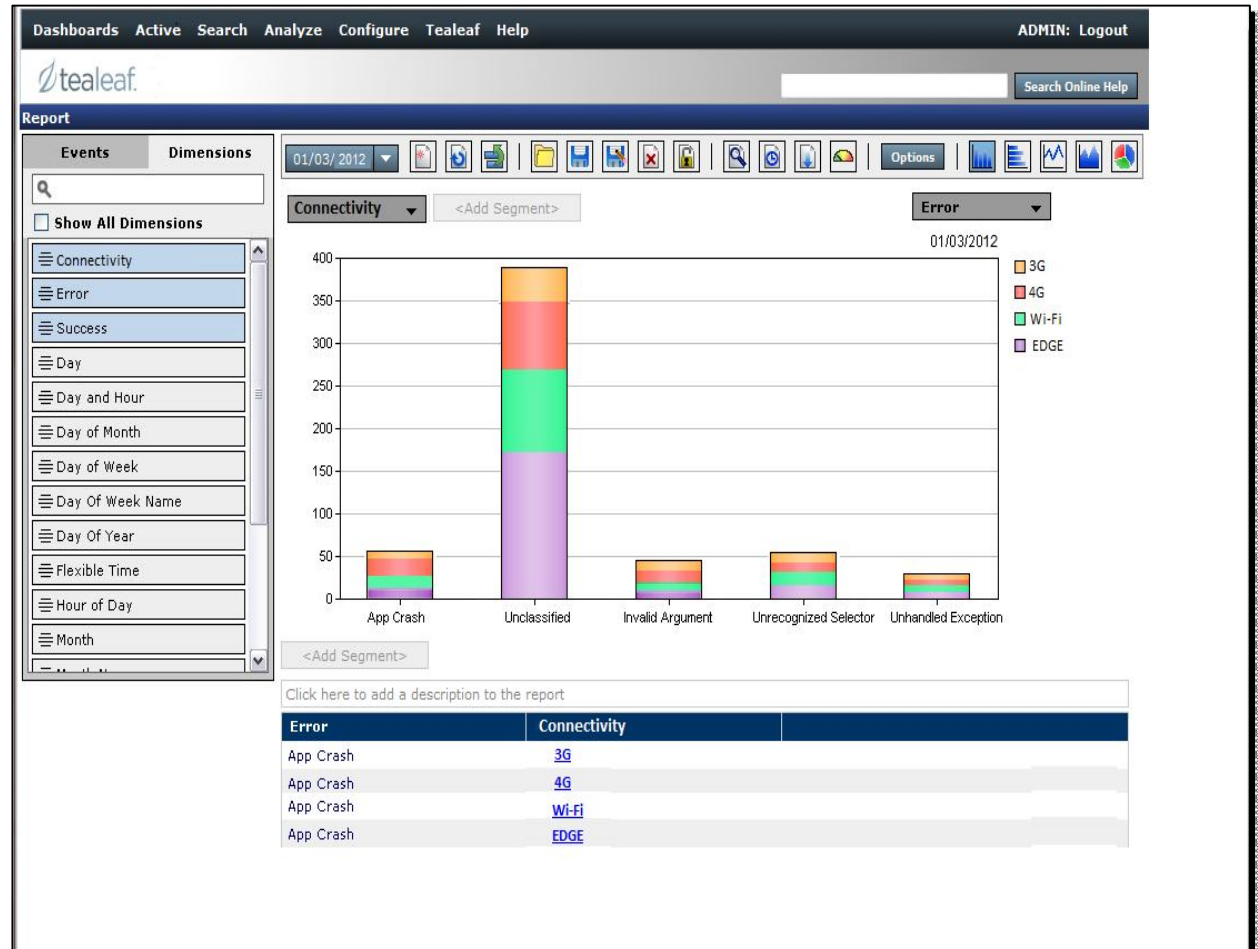
Usability reports

- Top fields with longest dwell time
- Top fields based on 1st or last entered per URL
- Client-side validation failures
- Avg time to fill out form
- Longest times to fill out a form
- Number of orientation changes
- Number of gestures (zooms in/out)
- Total screens viewed
- Top links based on average number of times clicked per session



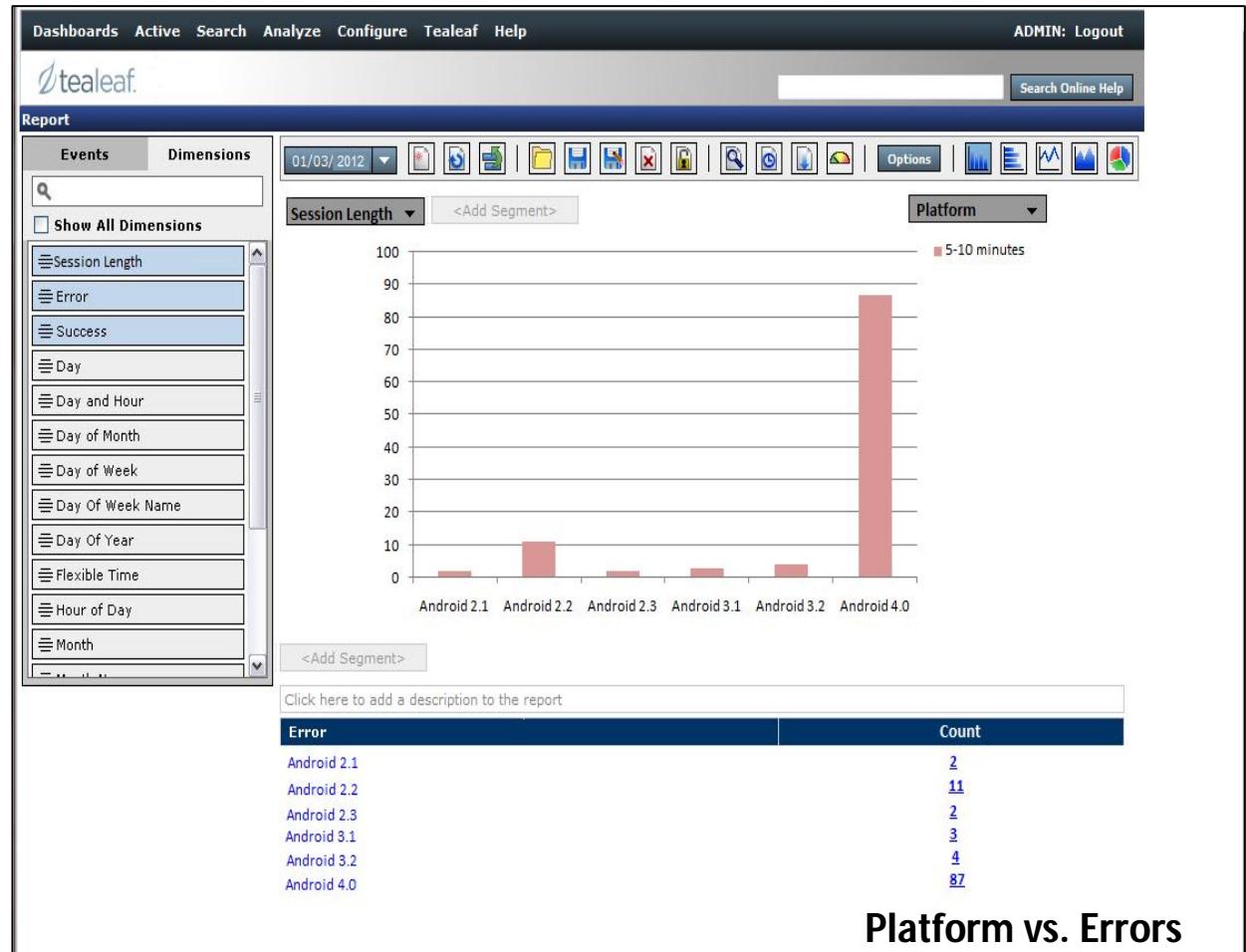
Performance reports

- Conversion Rates by API response. Errors by:
 - Connectivity
 - Session length
 - Battery state
- Avg. length of mobile web session (time)
- Number of lost connections per session
- Network time top pages



Business and application reports

- Application errors by:
 - Mobile OS platform
 - OS platform version
 - Application version
- What were customers doing when application errors occurred?
- Conversion rate by:
 - Mobile OS platform
 - OS platform version
 - Application version
- Struggle by:
 - Mobile OS platform
 - OS platform version
 - Application version



Battery level vs. Errors

Case Studies

Zions Bank Case Study

■ Challenge:

- ▶ User experience on mobile devices is harder to ensure than on the Web - hard to match usability to consumer expectations.
- ▶ Zions Bank is growing its mobile banking suite needs to respond quickly to ongoing user experience issues and navigation tendencies.

■ How CX Mobile helped:

- ▶ Zions is tracking mobile usage with Tealeaf to view users' preferences, such as screen orientation and scrolling; as well as isolate and quantify deeper issues.
- ▶ The bank can then view a synopsis of the customer or customers' sessions to make changes on the fly through integration with its underlying mFoundry mobile banking engine.

■ Benefits:

- ▶ Able to replay user sessions and see what the user was looking at when they were using mobile banking
- ▶ Capitalized on small window of opportunity to capture people on mobile and have right design.

Matthew Wilcox, Director of Interactive Design Services at Zions: "Customer experience is vital to growing our business and the mobile channel is particularly critical. With Tealeaf CX Mobile we're able to identify opportunities to make the experience better or solve problems we might not know existed."

Skybet Case Study

■ Challenge:

- ▶ 1/3 of all bets are placed through the mobile device.
- ▶ Emerging channels like mobile are key to the company's future success and user experience on the mobile is a competitive differentiator

■ How CX Mobile Helped:

- ▶ Identified a time consuming and confusing process around conversion rates for ID recovery – a relatively common occurrence for people trying to login from a stadium to bet on a soccer match
- ▶ Developed better understanding of the optimal customer path for betting from login to bet placement.

■ Benefits:

- ▶ Recovery of 400 customers a day that were being lost in poorly the User ID/PIN recovery system
- ▶ Saw an overall jump in betting conversion based on optimized design path.

Steve Morrison, Tealeaf Manager at Skybet: "with Tealeaf we know how our customers are using mobile and thanks to Tealeaf we leave nothing to chance."

Questions?