**Headstrong**

Greenfield

**Test Design Specification Document**

***Slice1 (Company- Security Reference Data)***

Version 1.0

Date: 02/23/2012

Contributors: QA Team

**Document History**

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| Version | Release Date | Author | Description of Change | Reviewed By | Approved By |
| 0.1 | 23-Feb-2011 | QA Team Offshore | First Draft for circulation and review. | Monica Saini |  |
| 0.2 | 24-Feb-2012 | QA Team Offshore | Added Security Selection UI component features. |  |  |

**Distribution List**

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| **Details** |
| All the members of #Greenfield\_EMM will be able to access to this document.  Mode of distribution will be through HQ. https://hq.headstrong.com/ |

**Reference Documents**

| **Document ID** |
| --- |
| Sow-AshmoreEMM Greenfield Development Finaldraft\_v10 (2)1 |
| EMM\_Greenfield\_Look\_And\_Feel\_BRD |
| Pre Slice Tasks |
| Changed-Look and feel |
| Test\_Plan\_Greenfield\_V0.2 |
| EMM\_Slice\_1\_Security\_Reference\_Data\_BRD |
| EMM\_Slice\_1\_Security\_Reference\_Data\_SRD |
| EMM\_Slice\_2\_External\_Analyst\_Research\_SRD |

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1. Purpose of document

The purpose of this Test-Design specification document is to provide an intermediate level view of the testing process for Greenfield system, subsystem in terms of slices, or component features or attributes.

This Test Design document will cover all the testing requirements that are needed for Company-Security reference Data (Slice 1). This document defines the testing features to be tested, test design specifications, their severity and priority benchmarks. Additionally, this document also defines the Entry and Exit criteria of testing, constraints and dependencies, Stop, suspension and resumption criteria for the Slice1 of the Greenfield. It must include the functionalities that the BRDs’ and SRDs’ have to build the Greenfield application.

We have defined a set of requirements from AshmoreEMM and the developed Greenfield application must meet those requirements by assuring the quality. QA team will prepare the Test Design document which covers all the features to be tested, Test goal, Test execution strategy, Risks and dependencies. Apart from the Test design document, a Test Scenario/ Cases sheet will be prepared to cover the business requirement. If client comes back with further requests or change request, testing phase will be revived from the beginning to ensure nothing has been affected with a new change. . Those requests will be handled as change requests and implemented on a schedule we work out with the client. Testing will be done based on the feature specifications.

1. Test design specification

|  |  |
| --- | --- |
| Project | Greenfield |
| Author | QA team |
| Date | 02/23/2012 |
| Version | 1.0 |
| Product areas | Detailed description of product is covered by test design specification. |

1. Overview
   1. System Objective

The current implementation (Work pad) was developed years ago using Foxpro. Foxpro is a data-centric development platform that has gone into end of life with Microsoft, back in 2007. As such, Work pad has become difficult to maintain and enhance.

Headstrong has done an assessment of the EMM legacy application to identify key challenges with the current system and built a business case for re-engineering the System with new generation technologies and an open and flexible architecture.

The Greenfield application has re-architected the current Work pad product in a flexible, layered methodology using new generation technologies improving usability, security, scalability and maintainability.

The overall system objective of Greenfield is to build a comprehensive research application that will manage internal and external research analytics, portfolio allocations (targeting) and fund/security performance monitoring. Greenfield provides a seamless integration of market data, prices, financials, consensus earnings estimates, research reports and analysis tools, along with a customizable user interface, to provide portfolio management, stock research, targeting and holding analysis functionality to the users.

The Intent is to deliver a system meeting all the requirements of Ashmore EMM with high level of satisfaction and quality assured.

# Functional Overview

The following is the main functionality that is provided by Slice 1:

* UI components that display security summary information at both the issue and issuer levels.
* A multi-line charting component that plots closing price for the selected security and additional currencies, commodities, indices and benchmarks if desired. Additionally, volume is also plotted in the graph.

1. Features to be tested

The following product features are included within the scope of this document:

* Feature 1- Security Selection UI component
* Feature 2 – Security Overview UI component
* Feature 3 – Charting (Single and Multiline)

# Security Selection UI component

* The dropdown should be divided into two sections and both ticker and issue name is displayed for each security in the dropdown list.
* Top section should be sorted by ticker and has the ticker, in bold, above the issue name for each security
* Bottom section should be sorted by issue name and has the issue name, in bold, above the ticker.
* The container should be notified of the selected security and the container notifies all UI components that the selected security has changed and which security was selected.
* The affected UI components should then redraw themselves based on the selected security.

# Feature 1: Security Overview UI component

* This component displays the following details for each security when user selects the security from the Menu combo box and clicks on this overview component.

1. Issue name
2. Country (Issuer level)

* ISO country
* EMM Proprietary Country

1. Sector (Issuer level)
2. Industry (Issuer level)
3. Sub-industry (Issuer level)
4. Ticker
5. Stock Exchange (name)
6. Trading Currency
7. Website
8. EMM One Liner
9. Fiscal Year End

* The font in the UI is same across all the fields except the Issue and Ticker name.

# Feature 2: Users (login and System Administration)

* A single line chart should display price data (closing or gross) for a particular security, chosen by the user, over the selected time period and data frequency.
* A Multiline charting functionality must allow users to plot additional entities on the chart, to compare to the chosen security, for a selected group of; currencies, commodities, securities and indices (non-benchmark) to make the graph “a comparison graph”.
* The user should be allowed to select other entities to plot using the dropdown search feature i.e. **Add to Chart**. Once the user presses the arrow icon near to the Dropdown search box, the series is added to the chart.
* User should be provided with **search begins with** checkbox feature which watch the characters that were entered. If this checkbox is checked, then the entities surface must begin with the value in the textbox. If this checkbox is not checked, then the string in the textbox can be found anywhere within the entity.
* The results are grouped in the following categories, in this order:

1. Currencies
2. Commodities
3. Indices
4. Securities

* Both a long description and a short description/code values should be displayed.
* User should be allowed to remove a series from the chart as s/he press the  icon and the chart will be redrawn with the select series removed and the chart no more remains a comparison graph.
* All the series being plotted should begin at 0 and then each series plots the change of the frequency return for each series.
* The labels on the y-axis should display a percentage changed.
* By default, the chart should reflect the closing price. However, if the user checks the **Total Return (Gross**) checkbox, then any series plotted on the chart, or added to the chart, should plot the gross price values/comparisons.
* The legend should display the total return **(gross)** prices if user checks on the Total return gross.
* The Plotted entities should be displayed just below the ***Add to Chart*** textbox and should also display ***(Gross,)*** if gross prices are being plotted.
* If the user hover the mouse over a charted data point, a hover window should appear that contains the actual value of that particular data point.
* This chart should also display the volume for the chosen security over the same selected time period and data frequency as the Closing Price chart.
* User should be allowed to select the time period for which to draw the chart by selecting an item from the Time dropdown list on the left side of the chart and just above the **Add to Chart** text box.
* The List should have all the values:

1. 1-Month
2. 2-Month
3. 3-Month
4. 6-Month
5. YTD
6. 1-Year (Default)
7. 2-Years
8. 3-Years
9. 4-Years
10. 5-Years
11. 10-Years
12. Custom

* The Closing Price and Volume charts should be redrawn as per the selected time period.
* To add custom time, User should be allowed to enter the start and end date in two date boxes with calendar controls available.
* User should be allowed to select the frequency by selecting an item from the Frequency dropdown list for which the x-axis data points are plotted.
* The List should have all the values:

1. Daily
2. Weekly
3. Monthly
4. Quarterly
5. Yearly

* The Closing Price and Volume charts should be redrawn as per the selected frequency.

Note: All the features mentioned above will be tested extensively in IE 8.0 and Mozilla Firefox 9.0. In other browsers such as Google Chrome only smoke testing will be performed based on the criticality of requirement and its impact on business.

1. Severity and Priority

# Critical (Severity 1)

Critical defects are the defects which could affect all users including system unavailability and data integrity issues with no solution available.

* Service crashes or hangs indefinitely causing unacceptable or indefinite delays for resources or response.
* Data corrupted or lost and must restore from backup.
* A critical documented feature / function is not available.

Severity 1 issues identified by the customer not related to a service interruption require the customer to have dedicated resources available to work on the issue on an ongoing basis, during contractual hours, as required.

# Major (Severity 2)

Major functionality is impacted or significant performance degradation is experienced. Issue is persistent and affects many users or major functionality of Greenfield and there is no reasonable workaround available.

* Service is operational but highly degraded performance and impacting the business of AshmoreEMM.(more specific details are TBD )
* Important features of the Software as a Service offering are unavailable (Either because of Dev. Team’s ignorance or some service glitch) with no acceptable workaround.

### Minor (Severity 3)

System performance issue or bug affecting some but not all users comes in this category. Short-term solution or workaround is available, but not scalable and will be addressed.

* Service is operational but partially degraded for some and an acceptable workaround or solution exists.
* Service is operational with alternative features available but not as per the documented requirement. Reasonable workaround is available and will be worked further.

### Priority:

Priority will be based not only on how severe the problem is, but the customer's importance, business needs, etc. Many bugs cause crashes (High severity mentioned above), but aren't fixed because the crash is very infrequent or on a version/platform/feature low on the vendor's support list. It will be partially based on the severity of the defect but would also depend on the factors such as the frequency of the defect occurrence.

Priority will be classified as follows:

* High: Defects will be given urgent attention for which further testing cannot be done until the defect has been fixed.
* Medium: Defects will be fixed in the normal course of development. It can wait until next release of the build.
* Low: This category involves the defects which needs improvement to existing code, e.g. performance enhancement, or problems with an easy workaround but could be deferred.

1. Testing Environment

Client will provide QA environment.

### 

1. Entry and Exit Criteria

### Entry Criteria

### The criteria that must be met before testing of specific elements may begin.

* All developed code must be unit tested. Unit testing must be completed and signed off by development team as per the schedule.
* The onsite QA environment should be set up in its place.
* Required test data for each slice will be available in the data model testing for those slices that require data from the data model.
* The test cases should be reviewed and signed off by Project Manager, QA Lead and eventually by AshmoreEMM.
* All the hardware and software requirements mentioned must be present at the time of commencement of Testing Phase.

### Exit Criteria

* All the Test Cases are executed, and their results are logged.
* All High Priority/Critical Defects in Greenfield application must be fixed and Re-tested for assured quality of the application.
* All deliverables must be signed off by the Project Manager, QA Lead and eventually by AshmoreEMM.
* The final product must meet all the requirements as per the SRD.

1. Deliverables

|  |  |  |
| --- | --- | --- |
| **No.** | **Deliverables** | **Responsibility** |
| 1 | Documents   * Test Design | Offshore QA Team |
| 2 | Test Case/Bug Write-ups   * Test Scenario/Case/Results * Bug Report | Offshore QA Team |
| 3 | Reports   * Test Report | Offshore QA Team |

1. Test Schedule

The following Schedule to be followed to cover the below mentioned activities:

**Slice 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Activities** | **Start Date** | **End Date** | **Responsibility** |
| 1 | Preparation of Test Design | 23-Feb-2012 | 24-Feb-2012 | Offshore QA Team |
| 2 | Creation of Test Scenario | 24-Feb-2012 | 24-Feb-2012 | Offshore QA Team |
| 3 | Creation of Test Cases | 24-Feb-2012 | 29-Feb-2012 | Offshore QA Team |
| 4 | Approval of Test Scenario/Cases |  |  | AshmoreEMM |
| 5 | Test Execution |  |  | Offshore QA Team |
| 6 | Preparation of Bug Report |  |  | Offshore QA Team |
| 7 | Preparation of Test Report |  |  | Offshore QA Team |
| 8 | Test Sign off |  |  | Offshore QA Team |

1. Roles and Responsibilities

The table below lists all the activities to be performed by the Testing Team and the roles, responsibilities corresponding to each task.

|  |  |
| --- | --- |
| Test Activity | Roles |
| Preparation of the Test Design | Offshore QA Team |
| Review of the Test Design | Project Manager/QA Lead, AshmoreEMM |
| Test Scenario/Case Design | Offshore QA Team |
| Review of Test Cases | Project Manager/QA Lead, AshmoreEMM |
| Ensuring Entrance criteria achieved prior to System Test start | Offshore QA Team |
| Test Execution | Offshore QA Team |
| Documentation of Test Results | Offshore QA Team |
| Defect Logging and Re-testing | Offshore QA Team |
| Suspension decision | Project Manager/Other Stakeholders |
| Defect analysis, fixing and closing | Offshore Development Team |
| Ensuring exit criteria achieved prior to System Test signoff | Offshore QA Team, Project Manager |

1. Test Life Cycle
2. Constraints & Dependencies

* No prior benchmarks of application response times.
* The test machines need to be available during normal working hours. Any downtime will affect the test schedule.
* Delay in the release of build from Offshore Development Team for Testing.
* Non availability of the test data to QA Team while testing.
* Interface to other applications might limit the testing.

1. Stop, Suspension Criteria and Resumption Requirements

**Suspension Criteria**

* Hardware/software (QA environment) is not available at the times indicated in the project Test schedule
* Application under test contains one or more critical defects, which seriously prevents or limits testing progress.
* Assigned test resources are not available when needed by the test team.
* When 10% of test steps fail, an investigation will be initiated.

**Resumption criteria:**

* If testing is suspended, resumption will only occur when the problem(s) that caused the suspension was resolved or stakeholders agree upon the problem to continue.

**Stopping Criteria:**

* It states the successful completion of all test cases, meeting the requirements of the Greenfield application as per the business needs of AshmoreEMM.

1. Regression and Retest Criteria

Retesting on the Greenfield application will be performed if the bugs found in the first Test Lifecycle will be fixed and are declared non producible. If the stability of the code is in question and bugs raised once can be reproduced then the Retesting will only be performed after checking the quality of the code with Project Manager and the scope of changes made on application. Regression Testing will be performed only if it is required.

### 

1. Risk Management

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Risks** | **Mitigation Strategy** | **Impact** |
| 1 | Delays in delivering required documents from Development would impact test deadlines. | Development team to be advised to adjust release of documents on time, to allow the test activities to be performed in time. | Medium |
| 2 | Delays in fixing critical bugs, which would require re-testing, could have an impact on the project deadlines. | Development must ensure bugs are fixed and available for re-testing in the scheduled time. | High |
| 3 | Delay in the release of the build to the Client. | Revise Schedule plans like Negotiate deadlines of high-risk tasks to accommodate potential slippages or Schedule tasks later in the project, which can be postponed or cancelled if necessary. | High |

1. Testing approach for features

Following are the steps that will define the way to proceed:

* Understanding System requirements
* Planning Testing schedule
* Preparing Test scenarios and Test Cases
* Approval from AshmoreEMM
* Execution of Test Cases
* Test Result Loggings
* Reviews and Approvals
* Deciding on Stop, Suspension and resumption criteria

1. Template History

|  |  |  |  |  |  |
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*----End of Document----*