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Final Report on Product testing of 1KEY Agile BI suite ver 2.0.3

Submitted to:

M/s MAIA Intelligence Pvt Ltd

Version 1.0

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Brief Description of the Product:

1KEY Agile BI Suite Ver. 2.0.3 Business Intelligence Suite is an innovative, powerful, robust reporting and analysis software developed on Microsoft .net platform. 1KEY Agile BI Suite Ver. 2.0.3 is a comprehensive Business Intelligence application catering to Strategic, Tactical & Operational data analysis & reporting needs of multiple vertical industries and has extremely intuitive & user friendly presentation interfaces like 1KEY View, 1KEY Cube & 1KEY Charts, 1KEY KPI, 1KEY Dashboard, 1KEY Ticker, most of which are available in client-server as well as web versions.

1KEY Agile BI Suite Ver. 2.0.3 has been integrated with Windows ADS, Microsoft SharePoint Services, etc. As a part of the product deliverables, 1KEY Agile BI Suite Ver. 2.0.3 has RSS Feeds integrated in its Dashboard, Tickers like the one used by Stock Markets helps to flash company information on the desktops of business users. The Charts have variety of alternatives like heat maps, drillable graphs, etc. All this is part of the product, just because the BI has to move to the Operational Business Users, which is currently being restricted to the Analytical users and CXO's.

This helps the Business users to take faster and factual decisions that need them the most, providing them Single version of truth.

Some highlights of the 1KEY Agile BI Suite:

- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has sort, filter, group by drill down drill through reports with cross tab functionality very similar to spreadsheets with both client and web version.
- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has charts and graphs with dial, gauges, heat maps and many more data visualization methods both on client and web.
- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has key performance indicators and dashboards where users can define their own KPI and Dashboards using wizards.
- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has ticker reporting where on the user's desktop important data and alerts are flashed continuously in ticker format at scheduled intervals.

- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has dynamic query engine with expression builder and model creator.
- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has scheduler which can push report in email or particular locations with variety of formats like PDF, TXT, XLS, HTML, MHT and RTF.
- ✓ 1KEY Agile BI Suite Ver. 2.0.3 has File Reader providing the functionality of direct reporting from Text Files and Excel Files in cube and view format.
- ✓ SAP Connector - 1KEY SAP Connector lets you access, extract, and integrate data from your SAP system into 1KEY Agile BI Suite. 1KEY SAP Connector extends the system's functionality to SAP data sources.

The common Features of 1KEY Agile BI Suite Ver 2.0.3 are:

- Service oriented Architecture.
- ADS Integration.
- Rapid Cube to chart formatting.
- Zero foot print deployment.
- Enterprise management console.
- Role based security & Authentication.
- Heterogeneous database connectivity.
- Intuitive user interface.
- SAP integration adapter.
- Real-Time Monitoring.
- Real-Time dashboards for different user roles.
- Correlation of events.
- Industry-specific dashboards.
- Metadata framework to model and link events to resources.
- Dashboard customization and personalization.
- Dimensional database.

1KEY Agile BI Suite Ver. 2.0.3 also provides the ability to associate metadata with metrics, process steps, channels, etc.

Project Objective & Scope:

The objective of the project was to perform product testing for an operational Business Intelligence tool - "1KEY Agile BI Suite Ver. 2.0.3", developed by M/s MAIA Intelligence Pvt. Ltd.

Detailed objectives of the 1KEY Agile BI Suite Ver. 2.0.3 Product testing were to:

- Understand the Product features from the given product Demo.
- Understand the Product Interfaces with SAP Connector, 1KEY Web application.
- Design test cases with expected results as per the Product features demonstrated.
- Execute test cases and documenting results.
- Perform retesting on reported defects after resolution given by M/s MAIA Intelligence.

Final objective was to analyze the test cases to understand whether the product meet the functionalities as described by M/s MAIA Intelligence during its Product Demo.

References:

The following base documents provided by M/s MAIA Intelligence were used as reference for designing the Test Cases:

- a) 1KEY User Manual Ver 2.0.2
- b) Test Cases provided by M/s MAIA Intelligence of 1KEY Ver. 2.0.2 for references.
- c) 1KEY Ver.2.0.2 Setup for understanding application's feature and behavior.

The following documents were expected from the product vendor for understanding the features & functionalities in 1KEY Agile BI Suite Ver 2.0.3:

- Functional Specifications
- System Requirement Specification
- Design Specifications and related documents
- Data Flow Diagram
- Business Process Document
- Business Process Change

In absence of any of the above given documents & based on the Product Demo, Test Scenarios, Test Cases & Checklists were designed for the Features & Functionalities described.

Annexure I

This document contains the specifications of hardware and software used during testing, test methodology & known issues & limitations in the product. We have tested the Product 1KEY Agile BI Suite Ver 2.0.3 with multiple scenarios and the results of the testing exercise were analyzed and based on which the key observations are made.

Specifications of Hardware and Software used for Testing

Hardware Specifications

- **Server Setup:** 1KEY Agile BI Suite 2.0.3 was installed on P4 machine with 3 GB RAM and 80 GB HDD.

- **Client Setup:** 1KEY Agile BI Suite 2.0.3 was installed on P4 machine with 1 GB RAM, 160 GB HDD.

The Testing was carried on a minimum bandwidth of 1 Gbps for server setup & 100 Mbps and 1 Gbps for client setup.

Software Specifications

- **Server Setup:** Microsoft Windows Server 2003 R2 enterprise edition SP-2, IE 6.0, IIS-6, with internet connectivity.
- **Client Setup:** Microsoft Windows XP - Professional edition SP 2.
- **Database:** SQL Express 2005 - enterprise edition.

Test Methodology

The product is designed using VB.NET, ASP.NET, C#.NET technology and report definitions are stored in SQL Express 2005.

Functional Testing:

The Functional Testing has covered checking of individual modules, module level Functional Testing, GUI testing, Integration tests and System testing.

Round 1:

- Business Scenarios identification
 - **Test Specification:** Documenting test cases and expected result for the new Enhancements & Improvements.

New Enhancements in 1KEY Agile BI Suite version 2.0.3

1KEY Agile Web - This is a completely new, web browser-based, user-interface for viewing various 1KEY Agile reports, such as View, Cube, Chart, Dashboard, KPI and Gauge reports.

Key Performance Indicators (KPI) - A representation of tabular data with visual indicators about performance levels. This is a new report layout, which can be viewed in the web browser user-interface.

Dashboard - A collection of top-level information from multiple reports, displayed in a single dashboard layout. This is a new report layout, which can be viewed in the web browser user-interface.

Gauge Report - A visual representation of summary figures in a gauge layout. This is a new report layout, which can be viewed in the web browser user - interface.

Ticker - A collection of top-level information from multiple reports, with summary figures displayed in a floating bar on the user's desktop.

User Management -User Roles - Can be defined in 1KEY Agile for role-based access to information.

LDAP Mapper - For single-sign-on to 1KEY Agile, based on the user's network login authentication.

SMTP Settings - Enables SMTP settings for users to send reports via email.

Default Settings - Default domain, default dashboard, authentication mode.

SAP Connector - 1KEY SAP Connector lets you access, extract, and integrate data from your SAP system into 1KEY Agile. The 1KEY SAP Connector extends the system's functionality to SAP data sources.

Improvements in 1KEY Agile BI Suite version 2.0.3

➤ Report Creation

- Report header - Report Footer, Use footer, Use domain logo
- No need to execute existing query
- Chart options
- Cube options

➤ 1KEY Agile Scheduler

- Report filter
- Save to Disk - Save the report to a user-defined file name
(With over- write and append functionality)
- Mass email - Sending mass email to all 1KEY Agile users
- Email options - Don't send blank report, send message but no Attachment, send normally

➤ User Manager

- Default domain
- Default dashboard
- Authentication mode
- Domain-wise user role selection

➤ Domain Manager

- Domain Image - The domain image can be displayed in the top-right corner of the printed output of various reports.

➤ View

- Run-time comments

- Allow cell merging
- Edit / remove formula column
- Save report layout (for single report)
- Remove report layout
- Mail - email with content

➤ Cube

- Run-time comments
- Edit / remove formula column
- Save report layout (for single report)
- Remove report layout
- Chart and per data selection (Chart export in different format)
- Percentage column (as per applied style condition)

➤ Chart

- Run-time comments
- Export chart to PPT file
- Save report layout (for single report)
- Remove report layout
- Chart-specific properties
- User-defined color to each slice in pie chart

➤ Creation of Test Data

- Since the purpose of the product is to analyze and generate reports from vast amount of data, test data generation was an important activity. Test

data was created by using queries and inserting data into the databases RDBMS as mentioned above.

- **Test Execution and Defect reporting:**

Defects were reported on daily basis after tests were executed. The defects were fixed in development area simultaneously.

Round 2 was primarily for defects verification.

All defects reported were verified to ensure the closure of defects raised.

Round 3:

Aiming at defects verification and complete retesting of entire suite was executed to verify if any new defects have been introduced or uncovered as a result of the fixes/changes. Mentioned below is the flow diagram used for defect lifecycle (Fig. 1.1).

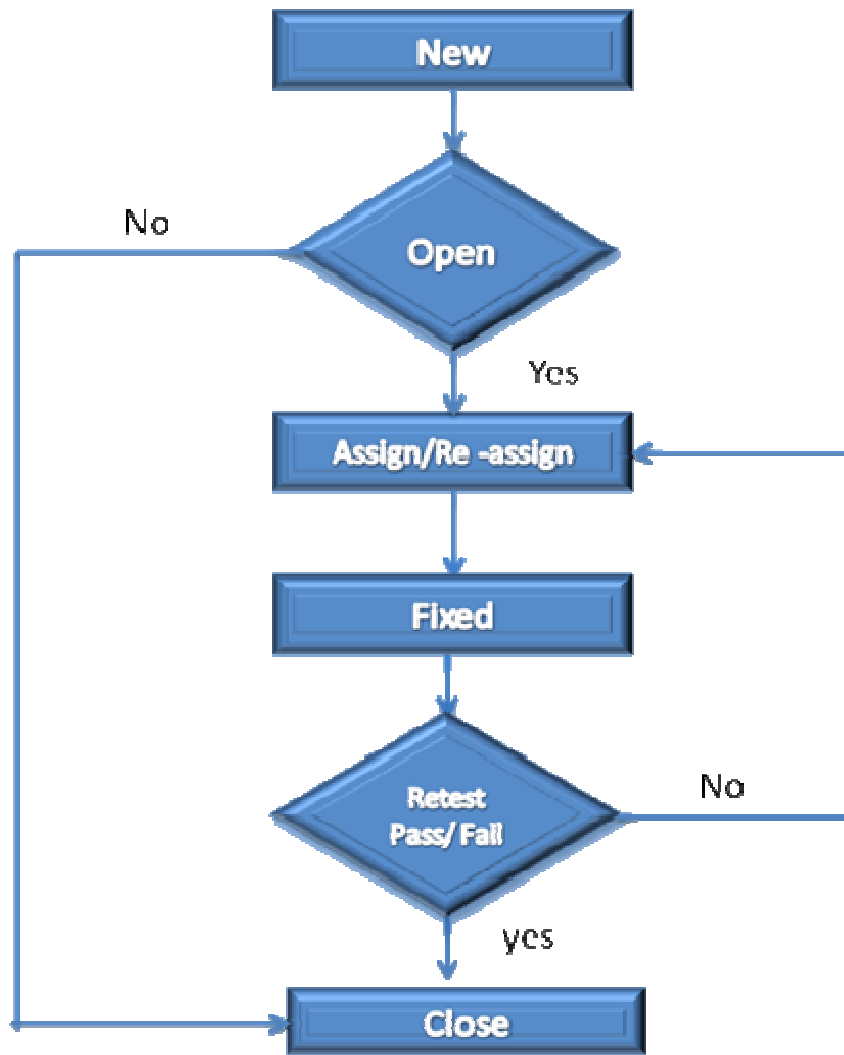


Fig 1.1 Defect Life Cycle