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**TEST PLAN
FOR
TAGDEER**

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PREPARED FOR:

General Commission for Taxes

DATE: 25 JUN 2006



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Tax IT System Implementation

AUTHORS

This document was prepared by:

Pedro Valdés, Manager

BearingPoint

USAID / BearingPoint

APO AE 09316

Tel: +964 (790) 1919 495

E-mail: pedro.valdes@bearingpoint.com

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1. INTRODUCTION

To assist the General Commission for Taxes (GCT) to automate the tax accounting processes, which include the processing of declarations, payments, audits, and other documents affecting the taxpayers' accounts, BearingPoint conducted a Request for Information (RFI) to select a tax package that best suits the needs of the Iraq GCT.

As a result of the RFI, the taxation platform TAGDEER from Estarta Solutions has been selected. TAGDEER provides the GCT with the basic tools to administer several taxes in a common framework.

The Test Plan gives a summary of testing activities necessary to accept the customization and functionality of the TAGDEER application. Due to the limitations of the environment, only the functional test will be performed in Amman at the Estarta facilities. However, the functional testing will be repeated and expanded in the pilot installation in Baghdad.

1.1. Purpose

The purpose of this document is to provide the details of how the acceptance testing of the TAGDEER application will be conducted.

1.2. Approach

Releases are prepared by Estarta based on pre-scheduled times. Every new release will undergo a Release Verification Acceptance (approx 5 - 15 days). Together with the new Release, Estarta will submit a Release Documentation Report indicating fixes, changes, and additional features (if any).

The GCT Testing Team will prepare new test scenarios and modify existing ones as needed to ensure the new release is in conformity with the Release Documentation Report and the requirements set by the GCT.

After the Release Verification Acceptance process the GCT Testing Teams will conduct a full functional testing and document the testing outcomes.

1.3. Intended Audience

The intended audience for this document is:

- The General Commission of Taxes (GCT) – Responsible for the Maintenance and Administration of TAGDEER
- BearingPoint IT Managers – Responsible for the implementation of TAGDEER
- GCT Testing Team – Responsible for executing the Test Plan

2. TESTING OVERVIEW

The Testing Overview includes a description of the Testing Strategy, Quality Assurance, Test Team Organization, Test Types, Test Cases Pass/Fail Criteria, and Defect Management Procedures.

2.1. Testing Strategy

The Quality Testing effort is designed to test the completeness, consistency and accuracy of the product and application being tested. The Quality Test Plan ensures not only that the program functions as specified but that all internal and interface logic is tested.

2.2. Quality Assurance

Quality Assurance for TAGDEER Deployment testing will be managed according to the following categories:

- **Quality Monitoring:** The Testing Manager will monitor quality by selecting samples of test cycles and review them for accuracy of data gathering, completion, and adherence to pass/fail criteria.
- **Defect Rating:** To ensure quality defects must be classified in the appropriate manner, the Test Manager will review them according to the severity levels. The review will ensure that defect classification adhere to the classification guidelines.
- **Test Case Reuse:** Test cases are designed for reuse. All test cases will be approved by the Test Manager prior to execution.

2.3. Test Types

The tables below describe the different test types that would be conducted on TAGDEER project. The main considerations for the test type are the techniques to be used and the criterion for knowing when the testing is completed.

2.3.1. Functional Testing

| | |
|-----------------------------|--|
| Test Objective: | The goals of these tests are to verify proper data acceptance, processing, and retrieval, and the appropriate implementation of the business rules. This type of testing is based upon black box techniques, that is, verifying the application (and its internal processes) by interacting with the application via the GUI and analyzing the output (results). |
| Technique: | Execute each use case, use case flow, or function, using valid and invalid data, to verify the following: The expected results occur when valid data is used. The appropriate error / warning messages are displayed when invalid data is used. Each business rule is properly applied. |
| Completion Criteria: | All planned tests have been executed. All identified defects have been addressed. |

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2.3.2. Performance Testing

| | |
|--------------------------------|---|
| Test Objective: | <ul style="list-style-type: none"> Validate system response time for designated transactions or business functions under the following two conditions: <ul style="list-style-type: none"> Normal anticipated volume Anticipated worse case volume |
| Technique: | <p>Use Test Scripts developed for Functional Testing.</p> <p>Modify data files (to increase the number of transactions) or modify scripts to increase the number of iterations each transaction occurs.</p> <p>Scripts should be run on one machine (best case to benchmark single user, single transaction) and be repeated with multiple clients (virtual or actual, see special considerations below).</p> |
| Completion Criteria: | <p>Single Transaction / single user: Successful completion of the test scripts without any failures and within the expected / required time allocation (per transaction)</p> <p>Multiple transactions / multiple users: Successful completion of the test scripts without any failures and within acceptable time allocation.</p> |
| Special Considerations: | <p>Performance testing should be performed on a dedicated machine or at a dedicated time. This permits full control and accurate measurement.</p> <p>The databases used for Performance testing should be either actual size, or scaled equally.</p> |

2.3.3. Security and Access Control Testing

| | |
|-----------------------------|---|
| Technique: | <p>Function / Data Security: Identify and list each user type and the functions / data each type has permissions for.</p> <p>Create tests for each user type and verify permission by creating transactions specific to each user type.</p> <p>Modify user type and re-run tests for same users. In each case verify those additional functions / data are correctly available or denied.</p> |
| Completion Criteria: | <p>For each known user type, the appropriate function / data are available and all transactions function as expected and run in prior Application Function tests</p> |
| Considerations | <p>The GCT Technical Team is responsible for preparing security test cases.</p> |

2.3.4. Business Cycle Testing

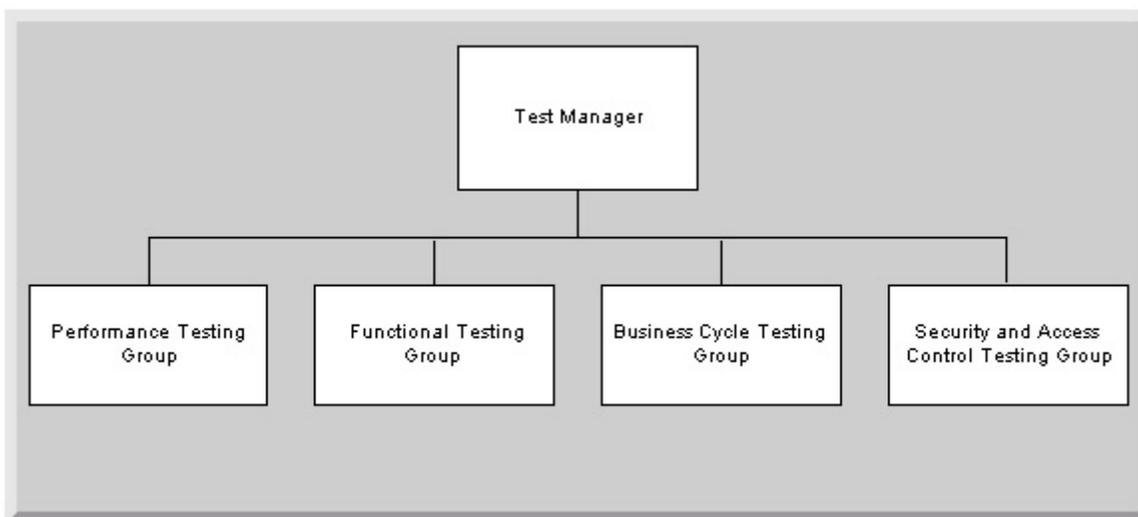
| | |
|-------------------|---|
| Technique: | <p>Full business processes per sub-tax covering all stages</p> <p>Create scenarios for each sub-tax type covering the full cycle of Registration, Declarations, Payments, Audit, Appeals, Collections, Refunds, Write Off, Transfers, Installments, De-registration</p> |
|-------------------|---|

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| | |
|-----------------------------|--|
| Completion Criteria: | For each stage, the appropriate data is available, and required outputs (Notices, Reports) have been generated |
| Considerations | The GCT Technical Team is preparing testing scenarios |

2.4. Test Team Organization

The following diagram provides the organizational structure of all groups involved in the test plan under the supervision of the Test Manager.



2.5. Test Codes

The test cases will be organized according to test types. Within test types sub-types will be defined and within the subtype a unique identifier will be assigned. The following table describes the test types and subtypes:

| Test Type | Test Type ID | Subtype | Subtype ID | Test Case ID |
|--------------------|--------------|-----------------------|------------|--------------|
| Performance Test | PT | Load Test | PT-LT | PT-LT-NNN |
| | | Stress Test | PT-ST | PT-ST-NNN |
| | | Volume Test | PT-VT | PT-VT-NNN |
| Security Test | ST | Application Level | ST-AL | ST-AP-NNN |
| | | System Level | ST-SL | ST-SL-NNN |
| | | Connectivity Level | ST-CL | ST-CL-NNN |
| Functional Testing | FT | Registration | FT-RE | FT-RE-NNN |
| | | Batching Declarations | FT-BD | FT-BD-NNN |
| | | Batching Payments | FT-BP | FT-BP-NNN |

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| Test Type | Test Type ID | Subtype | Subtype ID | Test Case ID |
|-----------------|--------------|--------------------------------|------------|--------------|
| | | Audit | FT-AU | FT-AU-NNN |
| | | Appeals | FT-AP | FT-AP-NNN |
| | | Collections | FT-CO | FT-CO-NNN |
| | | Installments | FT-AC | FT-AC-NNN |
| | | Refunds | FT-RF | FT-RF-NNN |
| | | Tax Types | FT-TT | FT-TT-NNN |
| | | Form Editor | FT-FE | FT-FE-NNN |
| | | Administration | FT-AD | FT-AD-NNN |
| Business Cycles | BC | Sales Tax | BC-ST | BC-ST-NNN |
| | | Income Tax Corporation | BC-IC | BC-IC-NNN |
| | | Income Tax Individual | BC-II | BC-II-NNN |
| | | Monthly Wage Withholding | BC-MW | BC-MW-NNN |
| | | Annual Wage Withholding Report | BC-AW | BC-AW-NNN |

2.6. Test Case Pass/Fail Criteria

In order for a test to pass, the test item must correctly exhibit all of the features outlined within test case, as verified by the test script. Additionally, all test scripts within a test subtype (test cycle) must be executed and passed in order for the test subtype to be considered complete.

2.7. Defect Management Procedure

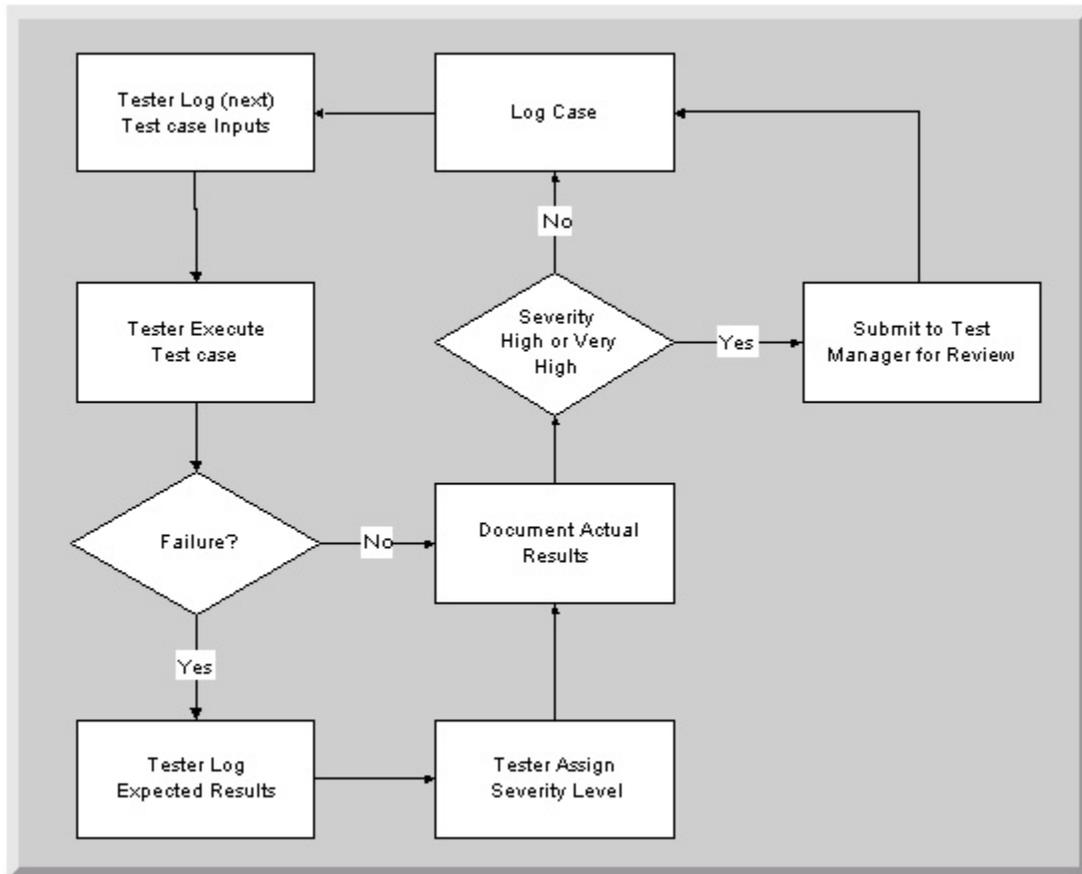
Testers will use the testing templates scripts described in the Appendices section and will document the Actual Results and Expected Results (if different from Actual Result). In addition, will indicate whether the test has passed or failed and assign a severity level if the test case fails.

Defects will be classified according to the following severity levels

- Very High (VH):** The defect is affecting the whole functionality of the system. No work around exists and the test plan can't be resumed (other test cycles are also affected). The defect is also affecting other test cycles
- High (H):** Major functionality is disabled within the test cycle and no work around exists.
- Medium (M):** Functional defect affecting the test cycle and for which a work around exists
- Low (L):** Variance from the requirements but has no impact on the system
- Very Low (VL):** Cosmetic defect without any impact on the functionality of the system

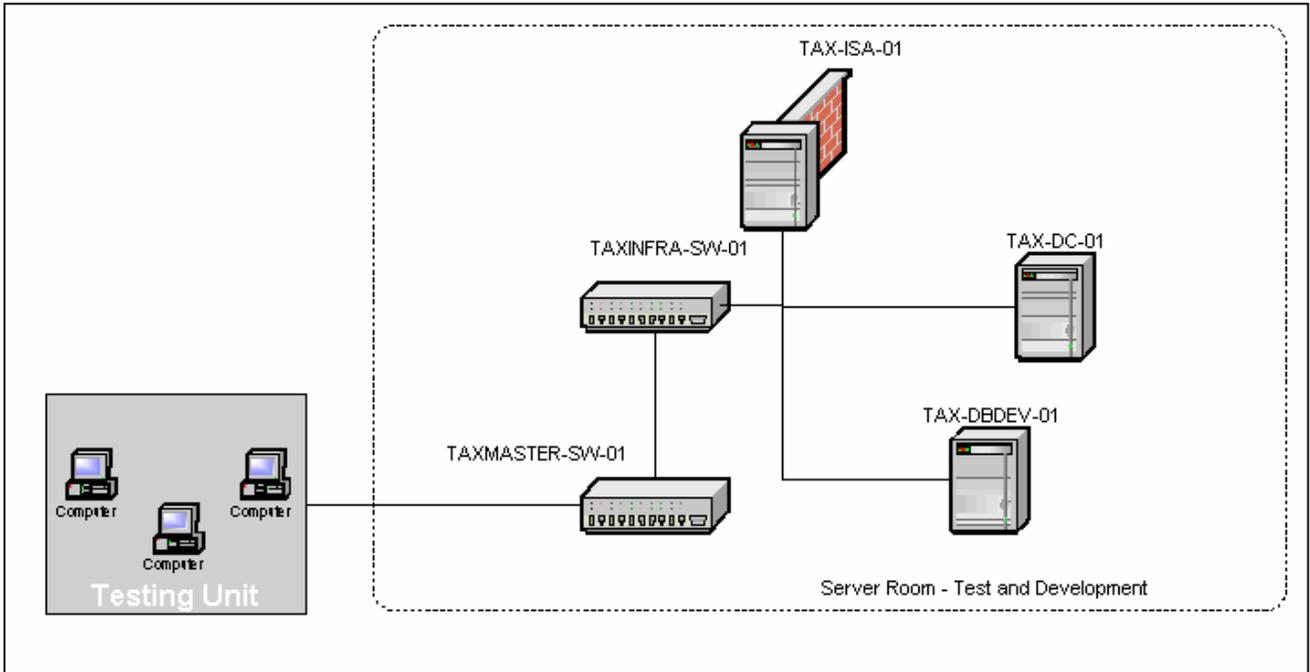
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The following diagram depicts the Defect Management Procedure:



3. TEST ENVIRONMENT

The diagram below depicts the testing environment at the GCT.



4. TEST EXECUTION GUIDELINES

The test execution guidelines are outlined in the following sections.

4.1. Release Verification Acceptance

Once Estarta has delivered a new release and the corresponding documentation, the Test Team will verify, all upgrades, fixes, and changes according to the release documentation. If needed, additional test cases will be developed and existing will be modified to ensure the new release is in conformity with the Release Documentation Report and the requirements set by the GCT.

4.2. Acceptance Criteria

The acceptance criteria for all releases will be as follows:

- All planned test cases addressing the new release has been successfully executed
- No Very High and High severity defects exists
- All previous Medium and Low defects have been fixed
- No more than 10% of new Medium and Low defects exists

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- All test cases documentation review and approved by Test Manager

4.3. Roles and Responsibilities

This section documents the roles and responsibilities of the Testing Team

| Role | Resource | Responsibilities |
|------------------------------|--------------|--|
| Testing Manager | Pedro Valdes | <ul style="list-style-type: none"> • Develop Test Plan • Quality Monitoring • Review test cases logs • Review Very High and High defects • Compile master defect log to be submitted to Estarta • Maintain master test log |
| Performance Testing Group | TBD | <ul style="list-style-type: none"> • Perform all Performance type/subtype tests • Prepare individual test logs • Assign Severity levels to defects |
| Functional Testing Group | TBD | <ul style="list-style-type: none"> • Perform all Functional type/subtype tests • Prepare individual test logs • Assign Severity levels to defects |
| Business Cycle Testing Group | TBD | <ul style="list-style-type: none"> • Perform all Business Cycle type/subtype tests • Prepare individual test logs • Assign Severity levels to defects |

4.4. Deliverables

Deliverables for Testing include:

- Test Plan for TAGDEER (This document)
- Test Cases Templates (Appendix A through Appendix L)
- Master Test Log
- Defect Log

5. MISCELLANEOUS INFORMATION

5.1. Definitions, Acronyms, and Abbreviations

| | |
|---------|--|
| AC | Accounts |
| AD | Administration |
| AL | Application Level |
| AP | Appeals |
| AU | Audit |
| AW | Annual Wage Withholding |
| BC | Business Cycle |
| BD | Batch Declarations |
| BP | Batch Payments |
| CL | Connectivity Level |
| CO | Collections |
| FE | Form Editor |
| FT | Functional Testing |
| GCT | General Commission For Taxes |
| H | High |
| IC | Income Tax Corporations |
| II | Income Tax Individuals |
| IT | Information Technology |
| L | Low |
| LT | Load Test |
| M | Medium |
| MW | Monthly Wage Withholding |
| PT | Performance Test |
| RE | Registration |
| RF | Refunds |
| RFI | Request for Information |
| SL | System Level |
| ST | Security Test |
| ST | Sales Tax |
| TAGDEER | Tax Application For Governmental Departments & Entities External Revenue |

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| | |
|-----|-----------------|
| TBD | To Be Determine |
| TT | Tax Types |
| VH | Very High |
| VL | Very Low |
| VT | Volume Test |

5.2. References and Related Documents

- Tax Project – Production Environment, March 21, 2006, BearingPoint, Inc. (Draft)
- Tax Project – Software Architecture, February 26, 2006, BearingPoint, Inc. (Final)
- Tax Project – Configuration Documentation for TAGDEER (Draft)

APPENDICES

Appendix A – Test of Registration Use Cases

| Use Case | Template |
|---|--------------------------------|
| Add Taxpayer | Appendix A Test Case FT-RE-001 |
| Select Applicable Taxes (Association) | Appendix A Test Case FT-RE-002 |
| View Taxpayer Profile | Appendix A Test Case FT-RE-003 |
| Print Taxpayer Registration Certificate | Appendix A Test Case FT-RE-004 |
| Update Taxpayer Profile | Appendix A Test Case FT-RE-005 |
| Update Applicable Taxes | Appendix A Test Case FT-RE-006 |
| Print Registration Certificate (Update) | Appendix A Test Case FT-RE-007 |
| Search Taxpayer | Appendix A Test Case FT-RE-008 |
| Query Tax Transaction | Appendix A Test Case FT-RE-009 |

Appendix B – Test of Batch Declaration Use Cases

| Use Case | Template |
|--|------------------------------------|
| View batches list | Appendix B Test Use Case FT-BD-001 |
| Generate Declaration Batch | Appendix B Test Use Case FT-BD-002 |
| Filing Declarations | Appendix B Test Use Case FT-BD-003 |
| Adding declarations | Appendix B Test Use Case FT-BD-004 |
| Saving Batch | Appendix B Test Use Case FT-BD-005 |
| Checking declaration discrepancies | Appendix B Test Use Case FT-BD-006 |
| Accept Data Entry | Appendix B Test Use Case FT-BD-007 |
| Re-enter form | Appendix B Test Use Case FT-BD-008 |
| Update Declaration Form | Appendix B Test Use Case FT-BD-009 |
| Verify Business Rules | Appendix B Test Use Case FT-BD-010 |
| Post Declarations | Appendix B Test Use Case FT-BD-011 |
| Archive Declaration's Batch | Appendix B Test Use Case FT-BD-012 |
| Generate Errors Report | Appendix B Test Use Case FT-BD-013 |
| Update suspended declaration (Compare) | Appendix B Test Use Case FT-BD-014 |
| Update Suspended Declarations (Verify) | Appendix B Test Use Case FT-BD-015 |
| Delete Suspended Records | Appendix B Test Use Case FT-BD-016 |
| Filing Annual Withholding Reports | Appendix B Test Use Case FT-BD-017 |

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| Use Case | Template |
|-----------------------------------|------------------------------------|
| Adding Annual Withholding Reports | Appendix B Test Use Case FT-BD-018 |

Appendix C – Test of Batch Payments Use Cases

| Use Case | Template |
|--|------------------------------------|
| View Payment List | Appendix C Test Use Case FT-BP-001 |
| View Payment | Appendix C Test Use Case FT-BP-002 |
| View Payments Batches List | Appendix C Test Use Case FT-BP-003 |
| Generate Payment Batch | Appendix C Test Use Case FT-BP-004 |
| Filing Payments Batch | Appendix C Test Use Case FT-BP-005 |
| Add Payment Batch | Appendix C Test Use Case FT-BP-006 |
| Saving Payment Batch Without Closing the Batch | Appendix C Test Use Case FT-BP-007 |
| Checking Payment Discrepancies (Compare) | Appendix C Test Use Case FT-BP-008 |
| Re-enter Form | Appendix C Test Use Case FT-BP-009 |
| Update Payment | Appendix C Test Use Case FT-BP-010 |
| Verify Payments | Appendix C Test Use Case FT-BP-011 |
| Accept data entry | Appendix C Test Use Case FT-BP-012 |
| Suspend data entry | Appendix C Test Use Case FT-BP-013 |
| Post Payments (Transfer) | Appendix C Test Use Case FT-BP-014 |
| Archiving a batch | Appendix C Test Use Case FT-BP-015 |
| Generate Errors Report | Appendix C Test Use Case FT-BP-016 |
| Update Suspended Payment | Appendix C Test Use Case FT-BP-017 |
| Delete Suspended Record | Appendix C Test Use Case FT-BP-018 |

Appendix D – Test of Audit Use Cases

| Use Case | Template |
|---------------------------|------------------------------------|
| View Assigned Audits List | Appendix D Test Use Case FT-AU-001 |
| View Audit. | Appendix D Test Use Case FT-AU-002 |
| Assign Audit Case | Appendix D Test Use Case FT-AU-003 |
| File Audit Results | Appendix D Test Use Case FT-AU-004 |

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| Use Case | Template |
|-----------------------------|------------------------------------|
| Extend Audit | Appendix D Test Use Case FT-AU-005 |
| Delete Extended Declaration | Appendix D Test Use Case FT-AU-006 |
| File Declaration Results | Appendix D Test Use Case FT-AU-007 |
| Print Adjustment Notice | Appendix D Test Use Case FT-AU-008 |

Appendix E – Test of Appeals Use Cases

| Use Case | Template |
|-------------------------------|------------------------------------|
| View Appeals List | Appendix E Test Use Case FT-AP-001 |
| Add Appeal Request | Appendix E Test Use Case FT-AP-002 |
| Change appeal’s status | Appendix E Test Use Case FT-AP-003 |
| Update Appealed Audit Results | Appendix E Test Use Case FT-AP-004 |
| Reactivate Appeal Request | Appendix E Test Use Case FT-AP-005 |

Appendix F – Test of Collections Use Cases

| Use Case | Template |
|---|------------------------------------|
| Search for Delinquents accounts (Stop-Filers/Stop payers) | Appendix F Test Use Case FT-CO-001 |
| Update Collection Notice Status | Appendix F Test Use Case FT-CO-002 |
| Search for Delinquent Payers | Appendix F Test Use Case FT-CO-003 |
| Update Collection Notice Status | Appendix F Test Use Case FT-CO-004 |

Appendix G – Test of Accounts Use Cases

| Use Case | Template |
|------------------------------|------------------------------------|
| View Penalties / Interest | Appendix G Test Use Case FT-AC-001 |
| Get Balance | Appendix G Test Use Case FT-AC-002 |
| View Transfer Credit List | Appendix G Test Use Case FT-AC-003 |
| Add Credit Transfer | Appendix G Test Use Case FT-AC-004 |
| Write off Debit | Appendix G Test Use Case FT-AC-005 |
| View Installment Information | Appendix G Test Use Case FT-AC-006 |
| Add Installment | Appendix G Test Use Case FT-AC-007 |
| Close Installment Plan | Appendix G Test Use Case FT-AC-008 |

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Appendix H – Test of Refunds Use Cases

| Use Case | Template |
|----------------------|------------------------------------|
| View Refunds List | Appendix H Test Use Case FT-RF-001 |
| View Refund Request | Appendix H Test Use Case FT-RF-002 |
| Add Refund Request | Appendix H Test Use Case FT-RF-003 |
| Change Refund Status | Appendix H Test Use Case FT-RF-004 |

Appendix I – Test of Tax Type and Sub Tax Type Use Cases

| Use Case | Template |
|---------------------|------------------------------------|
| Define Tax Types | Appendix I Test Use Case FT-TT-001 |
| Define Sub Tax Type | Appendix I Test Use Case FT-TT-002 |

Appendix J – Test of Forms Use Cases

| Use Case | Template |
|---------------|------------------------------------|
| Define a Form | Appendix I Test Use Case FT-FE-001 |

Appendix K – Test of Business Cycles

| Use Case | Template |
|--------------------------|------------------------------------|
| Corporate Income Tax | Appendix K Test Use Case BC-IT-001 |
| Monthly Wage Withholding | Appendix K Test Use Case BC-WW-001 |
| Sales Tax 10% | Appendix K Test Use Case BC-ST-001 |