

# **1 P214 CR101 Solutions**

## **1.1 Introduction**

The main Proposed Solution document ("P214 CR101 FAA LogicaCMG Proposed Solution Summary") presents detailed solutions for 8 combinations of the 9 individual options discussed in the ELEXON document "Requirements Specification for Modification Proposal P214 'Issues Relating to Funds Administration'":

- ET1, EN1, BS1, T1
- ET1, EN1, BS2, T1
- ET1, EN1, BS2, T2
- ET1, EN1, BS3, T1
- ET1, EN2, BS1, T1
- ET2, EN1, BS1, T1
- ET2, EN1, BS2, T2
- ET2, EN2, BS2, T2

In general, all 8 combinations impact common components of the FAA billing system; the difference in requirements between each combination equates to only minor differences in cost and effort.

## **1.2 General Solution**

A similar "baseline" solution is proposed for each combination, with minor variations in design, development and testing effort depending on the complexity of the combination in question.

### **1.2.1 Thresholds**

#### **1.2.1.1 Baseline Solution**

- Payable and receivable thresholds are monitored for each BSC Party Id;
- Thresholds monitored on financial quarters;
- Individual BSC Parties can be set to "override" the threshold at any time.

#### **1.2.1.2 Variations**

Additional effort applies to T2, where thresholds are maintained and monitored at an additional charge type level (Trading Charges, Default Charges and Dispute Charges).

### **1.2.2 Combined Advice Notes, Backing Sheets & Confirmation Notices**

#### **1.2.2.1 Baseline Solution**

- Combined PDF Advice Notes and Confirmation Notices will include Trading Charges, Default Charges and Dispute Charges, with each requiring identical design, development and testing effort;
- Combined Confirmation Notices will indicate the Combined Advice Note to which they relate;
- Individual payable and receivable reports will be produced;
- Combined Advice Notes and Confirmation Notices will be triggered from a new screen;
- Combined Advice Notes and Confirmation Notices will be recorded in a new COMBINED\_ADVICE\_NOTES table, and related to the existing ADVICE\_NOTES table;
- "Delivery Preference" will be maintained for each BSC Party Id (POST for all PDF reports, and EMAIL for PDF Advice Notes/Confirmation Notices and ASCII Backing Sheets);
- A "Reprint Advice Note or Confirmation Notice" function will be provided.

#### **1.2.2.2 Variations**

- BS1: PDF and ASCII Backing Sheets are separated into Payable and Receivable reports, and contain Trading Charges, Default Charges and Dispute Charges for all Payment Dates unbilled since the previous threshold breach;
- BS2: PDF and ASCII Backing Sheets are separated into Payable and Receivable reports, and further separated into individual Trading Charges, Default Charges and Dispute Charges, and collate all Payment Dates unbilled since the previous threshold breach.

*This represents only a marginal addition to the "looping" structure of the design and code of BS1;*

- BS3: PDF and ASCII Backing Sheets are separated into Payable and Receivable reports, and further separated into individual Trading Charges, Default Charges and

Dispute Charges, and separated further still into Payment Dates unbilled since the previous threshold breach;

*This represents only a marginal addition to the "looping" structure of the design and code of BS2;*

### **1.2.3 Email and Encryption**

#### **1.2.3.1 Baseline Solution**

- Two new tables will store the contents of outgoing emails: EMAIL and EMAIL\_ATTACHMENT;
- Email addresses are resolved when Combined Advice Notes or Confirmation Notices are printed;
- A single parent EMAIL record is created, and a flag set to indicate that Advice Notes and Confirmation Notices are attached;
- Multiple EMAIL\_ATTACHMENT records are created for each attachment;
- Emails are set with the BSC Party Id and Payment Date range in the subject line;
- A new polling program examines the EMAIL tables for complete emails ready to send;
- A new mailing program completes the sending via UNIX mail;
- UNIX process monitors are updated for the new programs.

#### **1.2.3.2 Variations**

- ET1: One single email is sent;
- ET2: Two emails are sent: one for Advice Notes and Confirmation Notices, and another for Backing Sheets.

*This represents a slight change to the number of updates to the EMAIL of ET1;*

- EN1: All files are encrypted;
- EN2: Only Backing Sheets are encrypted.

*This represents an additional column in the EMAIL\_ATTACHMENTS table, and a change to the polling program and mailing program.*

### 1.3 Summary of Effort

For any combination, effort is identified in the following areas. In general, effort for each combination is distributed as follows:

Design	12%
Development and Module Testing	48%
System and User Acceptance Testing	21%
Release and Configuration	12%
Project Management	7%

As an approximation, elements of each combination distribute across the overall combination as follows:

Combined Advice Notes, Confirmation Notices and Backing Sheets	30%
Threshold Management	45%
Emailing	20%
Encryption	5%

#### 1.3.1 Documentation

The following documents are identified as requiring minor updates. The effort to update these documents does not vary between each combination, or does not vary enough to impact the overall cost:

- EPFAL IDD Part 1
- User Requirements Specification
- System Specification
- Physical Data Model
- Operations Manual
- Disaster Recovery Procedure

The following design documents are identified as requiring significant changes. The effort to change design documentation includes time to formulate and agree an acceptable solution at a detailed level. The magnitude of change required in each document varies marginally between combinations:

- Design Specification (main document):
  - Encrypt and email files
- Design Specification (Appendix 1 – Module Specifications)

To address the specific requirements of each combination, the following new or existing modules require design effort:

- Calculate (or "Generate") Combined Advice Notes
- Print Combined Advice Notes (including visual design)
- Print PDF Backing Sheets (approximately 1 to 2 days effort difference between BS1, BS2 AND BS3)
- Produce ASCII pipe delimited Backing Sheets (approximately 1 to 2 days effort difference between BS1, BS2 and BS3)
- Calculate (or "Generate") Combined Confirmation Notice

- Print Combined Confirmation Notice (including visual design)
- Reprint Combined Advice or Confirmation Notes

Additionally, each combination introduces the concept of an "Actual Payment Date" in with respect to the Threshold options (approximately 1 to 2 days effort difference between T1 and T2). As such, a range of screens and reports also require design effort:

- Ledger Reports (including screen and report changes):
  - BSC Party Billing Ledger Report
  - Defaults Ledger Report
  - Disputes Ledger Report
- VAT Summary Reports (including screen and report changes):
  - Billing VAT Summary Report (PDF and electronic versions)
  - Defaults VAT Summary Report (PDF and electronic versions)
  - Disputes VAT Summary Report (PDF and electronic versions)
- "Maintain BSC Party" screen:
  - Manage thresholds for each BSC Party
  - Manage delivery preference for each BSC Party
- Expected Cash Reports (including screen and report changes)
- CHAPS Payment Reports (including screen and report changes)
- Bank Advice Reports (including screen and report changes)
- Advice Note Listing (including screen and report changes)
- Confirmation Notice Listing (including screen and report changes)

The following design documents require further updates, of a lesser magnitude. No significant variation is identified between each combination:

- Design Specification (Appendix 2 – Table Definitions)
- Design Specification (Appendix 3 – Compliance Matrix)

### **1.3.2 Software**

Significant code changes are identified for the following existing or new items, common to all combinations.

- New PDF Combined Advice Note (including screen and report changes)
- New PDF Combined Confirmation Notice (including screen and report changes)
- New PDF and ASCII Combined Backing Sheet
- New "Reprint Combined Advice Notes Reports" screen and functionality
- Changes to "Maintain BSC Party" screens
- New column on ADVICE\_NOTES table
- New columns on POOL\_MEMBERS table
- New table, "COMBINED\_ADVICE\_NOTE"
- New table, "EMAIL"
- New table, "EMAIL\_ATTACHMENT"
- New stored procedure to monitor threshold, set ACTUAL\_PAYMENT\_DATE, and update EMAIL records
- New stored procedure to determine email address and manage EMAIL tables
- New FTP configuration
- New Pro\*C EMAIL polling program
- Change to daemon management processes

The following items will require moderate updates, to cater for the Actual Payment Date:

- Expected Cash Report (including screen and report changes)
- Bank Advice Report (including screen and report changes)
- BACS and DD reports (including screen and report changes)
- CHAPS Payment Report (including screen and report changes)
- Ledger Reports (including screen and report changes):
  - BSC Party Billing Ledger Report
  - Defaults Ledger Report
  - Disputes Ledger Report
- VAT Summary Reports (including screen and report changes):
  - Billing VAT Summary Report (PDF and electronic versions)
  - Defaults VAT Summary Report (PDF and electronic versions)
  - Disputes VAT Summary Report (PDF and electronic versions)
- Advice Note Listing (including screen and report changes)
- Confirmation Note Listing (including screen and report)