

DEPARTMENT OF EDUCATION-FSA
FMS INTEGRATION PARTNER
INTERFACE FUNCTIONAL DESIGN



FMS TO COD INTERFACE UPDATE

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Subject: FMS to COD Interface Functional Design
Phase: TO 119 - Transaction ID
Version: 5.0

Prepared by: John Kim

Date:
January 14, 2003

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Document Change Control

Date	Author	Version	Change Reference
10/30/02	Dave Stuart	1.0	Document Creation Date
11/14/02	Dave Stuart	2.0	Updated based on review comments
01/07/03	Dave Stuart	3.0	Updated based on review comments
01/07/03	Mike Connors	4.0	Updated based on review comments
01/14/03	John Kim	5.0	Updated based on final review

Approval

Created By:	Dave Stuart	962-0685	Creation Date: 10/30/02
Team Lead Sign Off:	John Kim	962-0702	Sign Off Date: 01/14/03
Project Lead Sign Off:	Jen Alden	962-0682	Sign Off Date:
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Specification

Interface Name:	FMS to COD Interface
Functional Design Document ID & Title:	FMS_COD_Update_Interface_FD
Application:	Oracle G/L
Priority:	High
Estimated Production Date:	April 2003
Other Affected Applications:	N/A
Comments:	N/A



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General Requirements

Interface Short Description:

The FMS to COD Interface program was originally implemented as part of the FMS Phase IV efforts. The program was designed to facilitate interaction from FMS to Common Origination and Disbursement (COD). This interface allows COD to receive Direct Loan Origination and PELL financial event information from FMS.

The purpose of this document is to provide a detailed functional description of the updates to the interface. As part of the TO 119 - Transaction ID effort, FMS has been tasked with the following enhancement requirements (as stated in section 5.0 of the Core FMS Requirements Matrix document):

- Transaction acknowledgements sent to COD will contain the original Transaction ID that was sent by COD to FMS.
- Ability to replace "OB" with "FL" and send FL transaction acknowledgements to COD.
- Ability to replace "CC" with "FL" and send FL transaction acknowledgements to COD.
- Ability to send RF transaction acknowledgements to COD (for RF transactions originated by COD).
- Ability to send DD transaction acknowledgements to COD (for PY transactions originated by COD).
- GAPS originated transactions will be sent to COD without the FMS generated Transaction ID.

Data Interface Expectations:

Currently, acknowledgement transactions (OB, CC, RF, DD) are not forwarded to COD. Part of the TO 119 - Transaction ID efforts specifies that the updated FMS to COD Interface send these acknowledgements to COD (Requirement 5.1.2 – 5.1.5).

In addition, the updated FMS to COD Interface program will replace the transaction type for OB (Requirement Number 5.1.2) and CC (Requirement Number 5.1.3) transactions with FL prior to sending to COD.

If FMS receives a transaction from COD with a Transaction ID, the same Transaction ID will be returned in the acknowledgement transaction back to COD (Requirement Number 5.1.1).

If FMS receives a transaction from COD without a Transaction ID, the acknowledgement transaction to COD from FMS will not include a Transaction ID. FMS will not create Transaction IDs for COD related transactions that are received without Transaction IDs. (Requirement Number 5.1.6)

Business Event That Initiates Interface:

The FMS to COD Interface program is scheduled to run daily.

Interface Characteristics:

Interface Direction:	Outbound from FMS to COD
Interface Type:	Batch
Interface Category:	Update to current FMS to COD Interface



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Instances:	N/A
Frequency:	Daily
Volume:	The volume of transactions varies.
From System FMS	To System COD

Selection Criteria:

Same criteria as the existing FMS to COD Interface program.

Scheduling Requirements:

Same criteria as the existing FMS to COD Interface program.

Transaction Purge Criteria:

Same criteria as the existing FMS to COD Interface program.

Contingency Procedures:

Same criteria as the existing FMS to COD Interface program.

Development Complexity:

- Replace "OB" transactions with "FL" transactions prior to forwarding to COD – Low
- Replace "CC" transactions with "FL" transactions prior to forwarding to COD – Low
- Ability to send RF transactions to COD – Medium
- Ability to send DD transactions to COD –Medium
- Ability to send transactions for COD with or without Transaction ID to GAPS – Low
- Ability to update failed transaction to "C" – Medium

Assumptions:

- The GAPS to FMS interface will provide "RF" and "DD" transaction types.
- The GAPS to FMS interface will provide "OB" and "CC" transaction types.
- COD will be able to accept transaction types of "FL", "RF", and "DD."



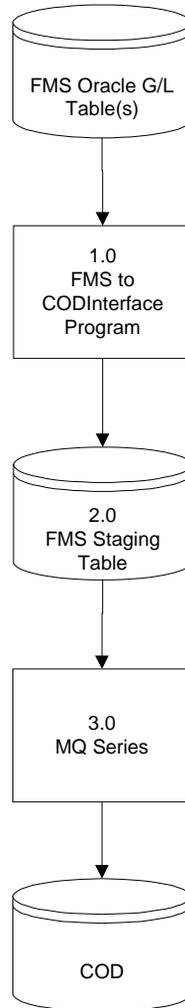
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Design

Data Flow Diagram:



Data Flow Diagram Narrative:

1.0 FMS to COD Interface Program

The FMS to COD Interface Program will extract data from GL and insert the data into the FMS staging table. At this point in time, the OB and CC transaction types will be changed to FL transaction types.

2.0 FMS Staging Table

The COD staging table contains COD destined data that MQ Series extracts to send to COD.



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3.0 MQ Series

MQ Series will extract any records residing in FMS Staging table that have not been sent to COD.

Data Mapping:

The table below describes the record layout for transactions between FMS and COD. FMS will send transactions to the FMS staging table where MQ series will load the data from that table in a COD staging table.

COD Transaction Record Layout:

Start	End	Length	Data Type	Name	Description	Values/Rules
1	10	10	A	Transaction ID	Unique identifier of transaction	COD will populate the first field of all COD created txns as "C". FSA FMS will populate the first field of all FSA FMS created txns as "F".
11	18	8	N	Transaction Date	Date the transaction was created on the source system	MMDDYYYY
19	26	8	N	Transaction Time	Time the transaction was created on the source system	HHMMSSNN
27	28	2	A	Transaction Type	The business event	AD, DA, DB, DD, DF, DP, ER, EX, FA, FE, FL, GR, OP, PL, PY, RA, RB, RC, RE, RF, UB, UD, XE
29	31	3	A	Program Type	The FSA program area	DLO, PEL
32	39	8	N	Grantee Institution	Common school identifier for a grantee	Common School Identifier
40	47	8	N	Payee Institution	Common school identifier for payee	Common School Identifier
48	57	10	N	Grantee DUNS #	DUNS # belonging to grantee	Grantee DUNS # or Zeroes
58	60	3	A	CFDA	Catalog of Federal Domestic Assistance; accounting code	CFDA code or Spaces Note: COD will send the CFDA code for all transactions.
61	64	4	A	CFDA Subpart	Subdivision of the program field	P, J, Q, R, K or Spaces
65	68	4	N	Award Year	School year, program year	CCYY
69	72	4	N	Award Sequence Number	Fifth part of GAPS award number	Award Sequence #
73	75	3	A	Limitation	Part of ED ACCS	Allotment Limitation code or Spaces



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Start	End	Length	Data Type	Name	Description	Values/Rules
76	78	3	A	Activity	Part of ED ACCS	Allotment Activity code or Spaces Note: COD will send spaces and FSA FMS will derive the Activity code from the transaction type.
79	80	2	A	Loan/Grant Type	Defines the loan and grant type.	D1 (DL Subsidized) D2 (DL Unsubsidized) D4 (DL PLUS) PE (Pell)
81	84	4	N	Funding Fiscal Year	Initial year of the appropriation	CCYY or Zeroes
85	88	4	N	Budget Fiscal Year	Year of apportionment	CCYY or Zeroes
89	92	4	N	Cohort Year	Year in which the loan was first disbursed	CCYY or Zeroes
93	106	14	N	Amount	Dollar value	99999999999999 or Zeroes
107	107	1	A	Amount Sign	Denotes increase or decrease	+/- or Spaces
108	115	8	N	Effective Date	Used for future processing functionality only; denotes the date the transaction is to be processed in FSA FMS	MMDDYYYY or Zeroes
116	116	1	N	Participation Level	New participation level for Direct Loan	Participation Level or Zeroes
117	130	14	N	Payment Request Limit Amount	Limit amount on a payment	Zeroes
131	136	6	A	Schedule Number	SF215 schedule number for refunds and returns; SF5515 number when a bank rejects return of funds	SF215/SF5515 or Spaces
137	149	13	N	Pay Control Number	Check number for drawdowns performed in GAPS	Pay Control # or Zeroes
150	157	8	N	Confirmation Date	Treasury Confirmation or deposit date of refunds and returns	MMDDYYYY or Zeroes
158	159	2	N	Error Code	Code detailing a GAPS error	Error Code or Zeroes
160	161	2	A	Error Transaction Type	Type of GAPS error	Error Code or Spaces
161	178	18	A	Transaction ID	Unique identifier	<Program Id><Date> <Sequence #> <ul style="list-style-type: none"> • Program Id = 'PL' or 'LO' • Date =



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Start	End	Length	Data Type	Name	Description	Values/Rules
						YYYYMMDD • Sequence # = 8-digit sequence number

Database Objects:

Database Object Name	Object Type	Oracle Application	Comments
N/A			

Dependencies

Data Cleansing:

Task	Responsibility	Dependency
N/A		

Dependencies on Other RICE Components:

N/A

Dependencies on Other Business Components:

- FMS to GAPS Interface
- GAPS to FMS Interface
- COD to FMS Interface

Design Constraints:

N/A

Performance Considerations:

N/A

Implementation Considerations:

N/A

Other Dependencies/Special Concerns:

N/A



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Error Handling

Potential Errors	Possible Reasons	Solution Strategy
Same as existing COD to FMS Interface.		

Testing Requirements

Test Condition	Expected Results
Refer to Unit Test Scripts in F: TO 119 - Transaction ID\ Core FMS\ Interface Design Updates\ Unit Testing\TEST SCRIPTS	

Issues and Additional Considerations

The following Issues were defined during Functional Design:

Issue	Raised By / Date Needed	Resolution/Answer	Resolved By / Date Completed