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FSA Integration Partner

United States Department of Education

Office of Federal Student Aid

Enterprise Application Integration (EAI)

PUT
Legacy Record Schools
Interface File

Interface Control Document

January 2, 2003

Document Change Control

Date	Author	Version	Change Reference
12/12/2002	Brian Whisnant	1.0	Initial Document Creation – revised ICD from 2002-2003
1/2/2003	Brian Whisnant	1.1	Made revisions/additions based on reviews
8/27/2003	Brian Whisnant	1.2	Added transfer details for RFMS mailbox and enhanced adapter.

Approval

Created By:	Brian Whisnant	202.962.0748	Creation Date: 12/12/2002
Approved By:			
Tech Sign Off:			

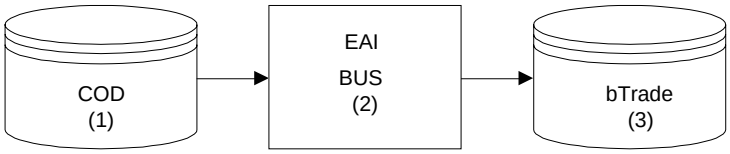
Interface Control Specification

Interface Name:	Common Record Feed
Interface Type:	One Directional Batch
Interface Short Description:	After COD has processed a record and a response is created to go back to the school, this interface will move the file to SAIG and place it back into the school's mailbox. System-generated responses and reports will also use this interface. Response files will be transformed by the transformation program on the bus, reports will simply pass through the bus. Upon arrival at SAIG, the files will be placed in the appropriate mailbox by the bTrade API.
Source Application:	COD is the source application for this feed.
Destination Application:	SAIG is the destination application for this feed via the EAI BUS.
Functional Requirement References:	In the COD RTM document, the following requirement sections would apply: bTrade Interfaces – bTrade bTrade Interfaces – EAI Bus bTrade Interfaces – Legacy Utility bTrade Interfaces – TSYS bTrade Interfaces – EAI Bus General TSYS Interface General Legacy System Interface
Related Interface Internal Design(s):	
Related Unit Test Document:	TBD

Other Related Interfaces:	
Interface Usage Frequency:	This interface is used whenever COD produces a response record or report.
Interface Usage Volume:	

Interface Overview

Flow Diagram:



Usage Scenarios:
This interface enables COD to send files to the schools via the schools' mailboxes on bTrade/SAIG. All school-bound files from COD will pass through the EAI bus to SAIG, where they will be placed in the appropriate mailbox by the bTrade API. This process is known as the "PUT." Response records will be transformed on the bus by a custom Java transformation program, reports will simply transfer directly to SAIG.

Response files: COD starts the process by transferring an XML file via Data Integrator to the Bus, to the directory **/export/data/mqm**. As part of the transfer, COD calls a script on the Bus named "**SAIGjob.sh"** in **$EAIDIR/scripts/ftf**, passing it the file name as a variable. **SAIGjob.sh** will attempt to transform the file by calling the Java transformation program.
If this is successful, **SAIGjob.sh** will move the original XML file to **/export/data/mqm/saig/proc**, and send the transformed file to **/export/data/mqm/saig/proc** on SAIG, calling the "PUT" script on SAIG.
If transformation is unsuccessful, the original XML file is moved to **/export/data/mqm/saig/errors** on the Bus, and a copy is also transferred back to COD to an error dataset, via Data Integrator.

Reports: Reports do not require any transformation, so they are transferred via Data Integrator from COD to SAIG, via the Bus. They do not stop on the bus. The final step of this transfer is the call to the "PUT" script on SAIG.

Once a file arrives at SAIG, the "PUT" script (**$EAIDIR/scripts/saig/putMessage.ksh**) is called and passed the path of the file. This script will copy the transformed file to **/export/data/mqm/saig/input/**, keeping the same base name that COD used for the initial transfer to the Bus. This folder is swept every minute automatically by **$EAIDIR/scripts/saig/putWrapper.ksh**. Once this 'wrapper' script begins to run, it checks for the existence of **/tmp/SAIGputlockfile**. If this file is not present, the script creates it, and then deletes it once the message is processed. This lockfile prevents two instances of the 'wrapper' from running at once. The actual function of the script is to call **$EAIDIR/scripts/saig /addMessage.ksh** for each file, with pauses in between to avoid overloading the bTrade process.

The **addMessage.sh** script calls the final custom component, a Java adapter. The Java adapter uses two Java classes provided by bTrade: it first compresses the file using the 'compressionAPI' class then uses it as input with the 'connectorAPI' class. The adapter determines the client ID (COD or RFMS) to be used as the sender from

$EAIDIR/config/saig/Common.SAIGadapters.properties, which is passed as the second parameter (the first parameter is the actual file to be added to the mailbox). It then uses 'connectorAPI' to place the file in the school's bTrade mailbox. All activities are logged to **$EAIDIR/logfiles/eailog_<date>.log**.

COD (Source) Hardware/Software Components

#	Type	Vendor	Product Name	Version
1	Production Platform	IBM	IBM Mainframe	
2	Operating System	IBM	OS/390	V2.9
3	DBMS	IBM	DB2	6.1
4	Transmission	IBM	MQSeries - TCP	V2.1

Source System Additional Information

#	Type	
1	Production System IP Address	206.209.32.1
2	Production System Location	Columbus, GA
3	Contracting Organization	TSYS
4	Developer Location	Columbus, GA

bTrade (Destination) System Hardware/Software Components

#	Type	Vendor	Product Name	Version
1	Production Platform	HP	HP	V11
2	Operating System	HP	HP-UX	v11
3	DBMS	Oracle	Oracle	V8i
4	Transmission Protocol	IBM MQSeries	TCP	V5.2

Destination System Additional Information

#	Type	
1	Production System IP Address	4.20.17.220
2	Production System Location	Meriden, CT
3	Contracting Organization	BTrade.com
4	Developer Location	Irving, TX

Source System Responsibilities

#	Type	Responsibility
2	System Configuration	COD is expected to have MQSeries installed and running and utilize the Commerce Quest Data Integrator Tool.
3	System Configuration	COD is expected to process Common Records adhering to the format specified in this document.
4	System Configuration	COD is expected to save legacy fields required to rebuild the SAIG Header and Trailer in order to send them as a part of the response record.

Destination System Responsibilities

#	Type	Responsibility
1	System Configuration	The bTrade application is expected to place the files from COD into the mailbox of the appropriate school.
2	System Configuration	bTrade is expected to have MQSeries v5.2 installed.
3	System Configuration	bTrade will allow the MQ Series Adapter program to reside on bTrade.

Interface Assumptions

#	Assumption
1	Assumption that the Common Record legacy format contained on www.ed.gov will be the standard format used.
2	bTrade is replacing the processing of TIVWAN. The assumption that the bTrade batches will contain headers which match the format of the TIVWAN batch headers.
3	Assumption that the bTrade batches will contain the trailers which match the format of the TIVWAN batch trailers.
4	The functional rules and logic for COD creating responses to bTrade are outside of the scope of this document.

Interface Dependencies

#	Dependency

File Specification

SAIG Headers and Trailers:
Please reference http://www.sfadownload.ed.gov/mainframeguide.htm - Communications Procedures for the most up-to-date information.

Pell Response Records:
Please reference the http://www.fsadownload.ed.gov/CODTechRef0304.htm - Pell Grant Fixed-Length Record Layouts section for the most up-to-date information.

Direct Loan Reports:
Please reference the http://www.fsadownload.ed.gov/CODTechRef0304.htm - Direct Loan Fixed-Length Record Layouts section for the most up-to-date information.

Error Messages

#	Code	Message
1	Error-stop	BTrade MQ Wrapper/Adapter could not read the input file.
2	Error-stop	EAI Bus Remote Queue unavailable.
3	Error-stop	The school TG Number is not recognized.

Issues and Additional Considerations

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

Reviewers

Name	Date	Team