

*FSA Integration Partner*

United States Department of Education

Office of Federal Student Aid



## Enterprise Application Integration (EAI)

GET

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
6/17/2003	Brian Whisnant	1.2	Added message classes for prior-year (RFMS) files
8/26/2003	Brian Whisnant	1.3	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:			

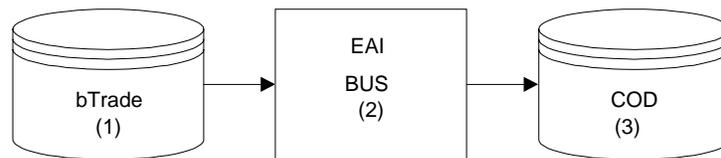
**Interface Control Specification**

Interface Name:	Common Record Feed
Interface Type:	One Directional Batch
Interface Short Description:	This interface enables the schools (via bTrade) to send a batch of legacy format student records to COD periodically throughout the day. The message types included in this interface include the Pell/DL Sub and Unsub/DL PLUS/DL Change Originations and Pell/DL Disbursements. EAI Bus does not need to transform any fields in these Legacy Files and simply transports them (including the SAIG Header and Trailer Information) to TSYS for processing.
Source Application:	BTrade (Schools) is the source application for this feed.
Destination Application:	COD 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 there is mail in the COD or RFMS mailbox on bTrade.
Interface Usage Volume:	

## Interface Overview

Flow Diagram:



Usage Scenarios:

This interface enables bTrade to send a batch of Legacy and Common Record Format Record files (including SAIG batch headers and trailers) to COD periodically through out the day. This process is automated and normally runs every minute. No transformation needs to take place on these Legacy File Types at the EAI BUS. Incoming files are routed to COD based on their message class (which appears in the header). The message classes appear in the file specification section.

There is a script (known as the "GET") in **\$EAIDIR/scripts/saig**, named "**getMessages.sh**". This script first sets several environment variables that be used later on in the process. Then it checks for the existence of "**SAIGgetlockfile**" in the **/tmp** directory. If this file is not present, the GET creates it, and then deletes it once all messages are processed. This lockfile prevents two instances of the GET from running at once.

This script runs constantly and calls a custom Java adapter, which in turn uses the bTrade API to pull incoming messages that are in the COD or RFMS mailbox. This Java adapter uses two Java classes provided by bTrade: it first retrieves the file using the 'connectorAPI' class then decompresses it with the 'compressionAPI' class. All activities are logged to **\$EAIDIR/logfiles/eailog\_YYYY\_MM\_DD.log**. The adapter determines which mailbox(es) to pull from by reading **\$EAIDIR/config/saig/Common.SAIGadapters.prod.properties**, which is passed as a parameter. The final step is to actually transfer the file, which is now local, to COD. The adapter will refer to the SAIG properties file (**\$EAIDIR/config/saig/Common.SAIGmessageClass.prod.properties**) to determine which send script to call, based on the incoming message class. Each incoming message class is associated with its own send script in this properties file. Any unknown message class is sent using an UNKNOWN send script, to the appropriate location at COD.

These send scripts, named in the format **<MsgClass>.prod.sh**, all reside in **\$EAIDIR/scripts/saig**. They are essentially Data Integrator scripts that will transfer the file, via the EAI Bus, to the appropriate COD dataset. An example of one of these scripts appears at the end of this section. The logic at the top of the script is used to set the date/time as well as a random number variable, ensuring that the latter is three characters in length. The target dataset name at COD is a combination of TSYS environment information, file type, and the date/time stamp with the aforementioned random number appended. This dataset name for each script can be found in the script as the "DPATH" parameter. The parameters for record length (lrecl), block size (blksize) and the post-transfer process (exitdata) are specific to each type of file (and hence, each script).

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Example script:

```
Date=D`date +%y%m%d`
Time=T`date +%H%M%S`
Timestamp=`/home/mqm/eaicodr1/bin/hp/getTimeStamp`
Random=$(echo $Timestamp | awk '{print substr($0,11,3)}')
```

```
if [[ $Random -lt 100 ]] then
Random=0$Random
fi
```

```
if [[ $Random -eq 01 ]] then
Random=010
fi
```

```
Random=R$Random
```

```
DPATH=C${SAIGREGION}Q${SAIGCLIENTID}.GP00.C21050.PLD.$Date.$Time.$Random
```

```
ftf -oqm $SAIGSQM -lqm $SAIGSQM -dqm $SAIGDQM -spath $1 -dpath $DPATH -org PS -unit SYSDA -type text -pool
EAIPOOL -recfmt FB -compress -immed -lrecl 100 -blksize 27900 -exit 8 -exitdll FTFEXJSP -exitentry FTFSUBJ -exitdata
"t${SAIGCLIENTID}PDP"
```

## bTrade (Source) 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

## COD (Destination) 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

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### Source 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

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### Destination 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

### Source System Responsibilities

#	Type	Responsibility
1	System Configuration	The bTrade application is expected to place the Schools' legacy format data received by use of the bTrade Easy Access Client into the COD or RFMS mailbox.
2	System Configuration	bTrade is expected to grant the bTrade MQ Series Adapter extraction program access to the COD and RFMS mailbox.
3	System Configuration	bTrade is expected to have MQSeries v5.2 installed.
4	System Configuration	bTrade will deliver the files to the COD or RFMS mailbox un-encrypted and uncompressed and ready for pickup.
5	System Configuration	The bTrade MQ Adapter gets data from the COD and RFMS mailbox and calls the Data Integrator Tool.
6	File Configuration	Data will be formatted according to the Request File Specification section of this document.
7	System Configuration	bTrade will allow the MQ Series Adapter extraction program to reside on bTrade.

### Destination System Responsibilities

#	Type	Responsibility
1	System Configuration	The EAI BUS will deliver the file to the TSYS server.
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.

### Interface Assumptions

#	Assumption
1	Assumption that the Common Record legacy format contained on <a href="http://www.ed.gov">www.ed.gov</a> 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

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## 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.

The following is a list of message classes for input files, but always check the website for the most up-to-date information:

99-00 Msg Classes	00-01 Msg Classes	01-02 Msg Classes	02-03 Msg Classes	03-04 Msg Classes
PGOR00IN	PGOR01IN	PGOR02IN	COMRECIN	COMRECIN
PGDR00IN	PGDR01IN	PGDR02IN	CODREPIN	CODREPIN
PGRQ00IN	PGRQ01IN	PGRQ02IN	CODESTIN	CODESTIN
			DESF03IN	DESF04IN
			DEPF03IN	DEPF04IN
			DESC03IN	DESC04IN
			DESD03IN	DESD04IN
			PGOR03IN	PGOR04IN
			PGDR03IN	PGDR04IN
				PGRQ04IN

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**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.

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Issues and Additional Considerations

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

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Reviewers

Name	Date	Team