

Section 3 - COD Overview

Common Origination and Disbursement:

The Common Origination and Disbursement (COD) System was implemented in April 2002 by the Office of Federal Student Aid (FSA). The COD System is FSA's first step toward achieving two of the organization's enterprise wide goals: to increase customer satisfaction and reduce costs by modernizing business processes. COD has re-engineered the former process of delivering and reporting Federal Pell Grants and Direct Loans from two processes into one Common Origination and Disbursement Process.

COD provides a common process and an integrated system that enables efficient delivery of Title IV Funds. COD allows for:

- Common Processing:
 - One process and record for submitting origination and disbursement data
 - Edits that are common across programs
 - Data tags that are common across programs, and are (approaching) a cross-industry standard for data definitions
 - Elimination of duplicate data reporting for Pell Grants and Direct Loans
- Streamlined edits to reduce turnaround time for exception processing
- Expanded online capability to make corrections/changes, process "emergency" requests, and check transmission status

- Optional student level data reporting capabilities for Federal Supplemental Educational Opportunity Grant, Federal Work-Study and Federal Perkins Loans.

In general, the COD Process is a more simplified process for requesting, reporting, and reconciling Title IV funds.

All schools participating in Title IV Federal Student Aid are using the Common Origination and Disbursement (COD) System for 2003-2004 to process Federal Direct Loans and Federal Pell Grants using one of two processing models. The two models are:

- Full Participation
- Phase-In Participation

The difference in the two models is driven by the data transmissions between the institutions and the COD System.

Full Participation:

A Full Participant uses the Common Record in XML format to submit Pell Grant and/or Direct Loan origination and disbursement data to the COD System over the Student Aid Internet Gateway (SAIG). Additionally, a Full Participant has the option of using the XML Common Record to submit campus-based program data to the COD System for purposes of pre-populating the FISAP. Alternatively, a Full Participant may choose to submit Common Records to COD via a direct connection to the EAI Bus instead of through SAIG.

Schools that use EDEExpress to submit Pell Grant and Direct Loan data are Full Participants in the 2003-2004 Award Year.

Full Participants should refer to the 2003-2004 COD Technical Reference, Volume II - Common Record Full Participant Technical Reference for record layouts and processes.

Phase-In Participation:

A Phase-In Participant uses fixed-length record layouts to submit Pell Grant and/or Direct Loan origination and disbursement data to the COD System over the Student Aid Internet Gateway (SAIG).

Pell Grant Phase-In Participants should refer to the 2003-2004 COD Technical Reference, Volume III - Pell Grant Phase-In Participant Technical Reference for record layouts and processes.

Direct Loan Phase-In Participants should refer to the 2003-2004 COD Technical Reference, Volume IV - Direct Loan Phase-In Participant Technical Reference for record layouts and processes.

COD Customer Service

The COD School Relations Center integrates customer service for the Direct Loan and Pell Grant Programs for ALL Award Years.

All schools and Direct Loan PLUS borrowers should call the numbers listed below for assistance:

- Pell Grant: 1-800-474-7268
- Direct Loan School Service: 1-800-848-0978
- Direct Loan Applicant Service: 1-800-557-7394

The COD School Relations Center telephone system prompts the school to enter the Award Year the school is calling in reference to, and the call is routed to the proper COD Customer Service Center staff.

COD Overview for Full Participants

The Common Origination and Disbursement Process for Full Participants utilizes one single record across programs for both origination and disbursement. In the interest of simplification, the Pell Recipient Financial Management System (RFMS) and the Direct Loan Origination System (DLOS) have been integrated into one system. Full Participants use a Common Record, one that uses common data elements, definitions, edits, and structure for Pell Grants and Direct Loans. Although the record has the same layout for all programs, not all data elements are required for each transmission. This new record layout relies on a new technology called XML, EXtensible Markup Language.

The Common Record is a new standard within the student financial aid community. Not only is it applicable to Pell Grant, Direct Loan and campus-based aid, it is also flexible and can be used in the future for state grants, FFEL, alternative loans, etc. if desired by program administrators.

Members of the National Council of Higher Education Loan Programs (NCHELP) and Postsecondary Electronic Standards Council (PESC) assisted with the development of the Common Record. This collaborative effort enables the Common Record to bring consistency and standardization to the transmission of student financial aid data. The Common Record provides a structure to allow for the addition of FFEL data. Thus, the inherent processing efficiencies of the COD process will also be available to FFEL schools as the FFEL trading partners adopt this format.

Common Record Process

This walkthrough of the Common Record Process applies to Full Participants for the 2003-2004 Award Year. This section addresses at a high level, the processing of the Common Record from the institution perspective.

The COD Process is comprised of the following steps:

1. Common Record Submission
2. Common Record Receipt
3. Common Record Processing
4. Common Record Editing
5. Response Notification

Note: This overview of the COD Process will not cover the entire cycle for a school. There are items that take place prior to the submission of records (i.e. funds draw down) that are not explained in this section of the document.

1. Common Record Submission

The COD Process begins when a Full Participant school submits a Common Record. For the 2003-2004 Award Year, the Common Record is submitted by Full Participants in one of three ways:

- Batch Submission
- On-Line Submission via the COD Website
- Direct transmission via the EAI Bus

Batch Submission

All Common Records sent in batch mode are submitted to COD's Student Aid Internet Gateway (SAIG) mailbox. The Enterprise Application Integration Bus (EAI Bus) performs periodic sweeps of COD's SAIG mailbox and transmits the Common Record data to the COD System.

On-Line Submission

A COD Full Participant can submit Common Record data on-line via the COD Website. Common Record data submitted on-line is sent directly to the COD System.

Direct Transmission

A COD Full Participant may choose to submit Common Records to COD via a direct connection to the EAI Bus instead of through SAIG.

2. Common Record Receipt

After the COD System receives the Common Record via the EAI Bus or the COD Website, the COD System generates a receipt. The receipt is transmitted from the COD System to the source entity in the same manner that the Common Record was submitted. For example,

- If Common Record data is transmitted via the COD Website the receipt is returned to the COD Website.
- For Common Records received by the COD System via batch, the receipt is transmitted to the EAI Bus. The EAI Bus routes the receipt to the SAIG Destination Mailbox indicated in the SAIG Transmission Header and Trailer.
- For Common Records received via direct transmission to the EAI Bus, the receipt is transmitted from the EAI Bus to the school.

3. Common Record Processing

After the COD System transmits a receipt the COD System classifies the record to determine how it is to be processed. The types of records are:

- New Record
- Update Record

New Record

A New Record establishes a new student, award or disbursement on the COD System. There are three types of new records:

- *New Student w/ New Award* – If the identifiers (current SSN, current DOB and the current Last Name) do not match any previously submitted to the COD System the record is considered a New student. A student cannot be established on the COD database without establishing an award for the student. Therefore, any new student record will also be a New Award Record. The Student Identifier submitted by a school to establish the student on COD is matched to data from the Central Processing System (CPS).
 - For Pell Grants, the SSN, Date of Birth, and first two characters of the Last Name are matched with CPS data.
 - For Direct Loans, the SSN and Date of Birth are matched with CPS data.

Note: For Direct Loan PLUS Awards the student is established and the person (parent borrower) must be established. Parent borrowers are not matched against data from the CPS.

- *New Award* – If the identifiers match a person already established on the COD System, the system checks (Financial Award Type, Financial Award Year, Attended Entity ID, Reporting Entity ID, and Financial Award ID [for Direct Loans]) to determine if the award is already on file. If not, then the record is considered a New Award.
- *New Disbursement* – If the person and award already exist on the COD System, the system checks the disbursement number submitted for the award. If it is not already on file, the system logs the disbursement as a new disbursement. There are two types of disbursement records:
 - *Actual Disbursement* - Actual Disbursement Records contain a disbursement release indicator = “True”. The disbursement release indicator is a field on the Common Record that signals the COD System to post the disbursement to a specific award (loan/grant). It either releases funds available to a school via drawdown or FedWire/ACH, or substantiates money already made available to the school. These records do affect the CFL calculation for the school. This can

be thought of as the actual disbursement record in the old fixed-length record process.

- *Edit Only* - Edit Only Records contain a disbursement release indicator = “False” or omitted. These disbursements are not considered Actual Disbursements; therefore, they do not substantiate drawdowns and are not posted to a student’s/borrower’s award (loan/grant). These records do not affect the CFL calculation for the school. This can be thought of as anticipated or pended disbursement information in the old fixed-length record process.

Update Record

An Update Record performs a change to information or elements that was previously established on the COD System by a New Record. There are two types of Update Records:

- *Update Record* - An Update Record performs a change to a non-monetary data element that was previously established by a New Record or is used to change disbursement amounts and dates that occur prior to substantiating drawdowns and posting an award (loan/grant).
- *Release Record* - A Release Record can be submitted to the COD System with a disbursement release indicator = “True” for a disbursement record previously submitted as an Edit Only Record. Data elements can be changed via the COD Website or by resubmission of a Common Record.

4. Common Record Editing

Once the Common Record is received and has been classified, the COD System performs a series of valid format and content edits to determine if the file is suitable for further processing.

The COD System performs three types of edits:

- *Correction* – For Pell Grant data, if the school selects this option, the system automatically corrects the data and sends a response to the entity that submitted the record indicating that a correction took place, the element corrected, the original value, and the corrected value. The default option in the COD System for all schools is set to ‘correct’. If a school wants to have COD reject data instead of correcting it, they must contact Customer Service and/or FSA to make this change.

Note: The COD System does not correct Direct Loan data.

- *Warning* – The COD System sends a response to the entity that submitted the record indicating a warning, the warning code and the relevant element. The record continues to be processed by the COD System without further action required from the school.

- *Reject* – The COD System sends a response to the entity that submitted the record indicating the reject code, the reject reason(s) and the relevant element(s). The record requires action from the school to continue processing.

Where possible, COD uses information from PEPS and CPS as a basis for these edits. COD receives the Abbreviated Applicant file from CPS on a daily basis. This file is used to:

- Confirm a valid ISIR is on file (if applicable) and,
- Pull student level information required for Common Record processing.

The COD System performs Edits on the Document, Entity, Person, Award and Disbursement levels of the Common Record data. Data that passes edits are accepted and continues to be processed while data that does not pass edits are rejected. The COD System stores rejected data and associated reject reasons. Rejected data are held for corrective action to be taken by the school. Data can be corrected via Common Record re-submission or via the COD Website. The COD System then returns a response record notifying the school of the edit results.

Note: The Common Record can be re-sent in its entirety or sent just with the key identifiers and those data elements that have changed.

5. Response Documents

For all Common Records received and processed by the COD System, the COD System returns a Response document indicating the status of the Common Record processing, including any rejected data elements and reason for the rejection. If the Common Record was accepted, the Response document indicates that the record was accepted.

The COD System sends one Response document for each Common Record document submitted. For Common Records that are transmitted via the SAIG, the COD System sends Response documents to the school's SAIG mailbox. For Common Records received via the COD Website, schools have an option to receive a Response document either via the COD Website or via their SAIG mailbox. For Common Records received via direct transmission, real time responses are returned to the school via the EAI Bus.

For Responses received via the SAIG mailbox, schools also have the option to receive a Full or Standard Response to Common Records processed by the COD System. A Full Response contains all the original tags sent by the school and the rejected data elements and reason codes. A Standard Response contains only the rejected data elements and reason codes.

For further information, record layouts and processes, Full Participants should refer to the 2003-2004 COD Technical Reference, Volume II – Common Record Full Participant Technical Reference.

What is XML?

XML stands for EXtensible Markup Language. It is a new language designed to both describe and exchange structured data between a range of applications. XML consists of elements that are defined by tags. A start tag precedes the name of an element. An end tag follows it. While it does employ the kind of tags you see in HTML, XML is not a replacement for HTML. XML uses tags to identify data elements, or what data is, while HTML uses tags to identify data attributes, or how data looks. XML can be used in conjunction with HTML to store data within standard Web pages. It can also be used to store data in files and to pull information from disparate, incompatible databases.

One of the objectives behind the design of the COD Process and System was to provide FSA and our partnering student aid schools greater flexibility in record processing, i.e., opportunities for multiple data cross-walks. The COD Process could serve as a technological foundation for future FSA integration initiatives. Given these objectives, XML was the logical choice for the Common Record's format and structure. XML offers the flexibility to design records, known as XML documents, particular to an audience or community. It allows increased access to and reuse of information. It supports validation [edits] by checking structural validity and flagging errors. It also enables systems to share information and users to see different views of available data.

XML 101

XML technology allows a common data packet structure to be used between two disparate systems. It is a markup language that defines data structure. An XML document is the vehicle through which data is transmitted. It can be thought of as a batch.

XML documents are comprised of markup and content. Markup defines the content. For example, Last Name is the markup describing Jones.

```
<NameLast>Jones</NameLast>
```

<NameLast> is a start tag. Note the presence of brackets. LastName is an element. Jones is the data, or XML content. </NameLast> is an end tag.

Elements can be either complex or simple. A simple element refers to the value that is contained within tags. A complex element is a grouping of attributes or other elements. The Common Record is a logical grouping of complex elements. For example,

Complex Element:

- **<Name>**
 - **<NameFirst>Heidi</NameFirst>**
- **</Name>**

Simple Element:

- **<Name>**
 - **<NameFirst>Heidi</NameFirst>**
- **</Name>**

Fixed Format Files vs. XML Documents

Fixed format files have been used as vehicles through which data can be exported and imported to business applications. Fixed format files contain a sequence of fields that is in machine-readable language. An example of a student fixed format file follows:

SALLY JONES 12345678919820304 Y

Business applications are rapidly moving toward the use of XML to exchange data. XML is a language that is not only machine readable, but also human readable. This characteristic facilitates correcting rejected fields. An XML example of the Person Block follows.

```
<Student SSN="299999999" BirthDate="1979-02-03" NameLast="Student">
  <Identifiers>
    <DriversLicense>
      <DriversLicenseState>IN</DriversLicenseState>
      <DriversLicenseNumber>DL222222</DriversLicenseNumber>
    </DriversLicense>
  </Identifiers>
  <BirthDate>1979-02-03</BirthDate>
  <Name>
    <NameFirst>Sally</NameFirst>
    <NameMiddle>A</NameMiddle>
    <NameLast>Student</NameLast>
  </Name>
  <Contacts>
    <Address>
      <AddressFormatIndicator>>false</AddressFormatIndicator>
      <AddressTypeCode>P</AddressTypeCode>
      <AddressLine>417 Hapler Road</AddressLine>
      <AddressCity>Fort Wayne</AddressCity>
      <AddressStateProvinceCode>IN</AddressStateProvinceCode>
      <AddressPostalCode>46807</AddressPostalCode>
      <AddressCounty>Allen</AddressCounty>
      <AddressCountryCode>USA</AddressCountryCode>
    </Address>
    <PhoneNumber>2197999999</PhoneNumber>
    <EmailAddress>sally.a.student@email.net</EmailAddress>
  </Contacts>
  <CitizenshipStatusCode>1</CitizenshipStatusCode>
  <NoteMessage>PID=221784902</NoteMessage>
```

Common Record Structure

The XML document called the Common Record is composed of different information modules, referred to as complex elements or blocks. Data fields within the blocks emphasize similarities across programs and contain information such as: document or batch information, demographic information, award or origination information, disbursement information, and the response status of the record.

A general rule regarding sequence of data within blocks, and within complex elements: the start and end data tags and their context must be presented on the XML document within the block's tags or the complex element tags to which they belong. The sequence of the data within that block or element is dictated by the sequence of the data tags presented in the XML Common Record Schema. For example, if a complex element has ten simple elements within it, those ten elements must occur in the same sequence as depicted in the XML Common Record Schema.

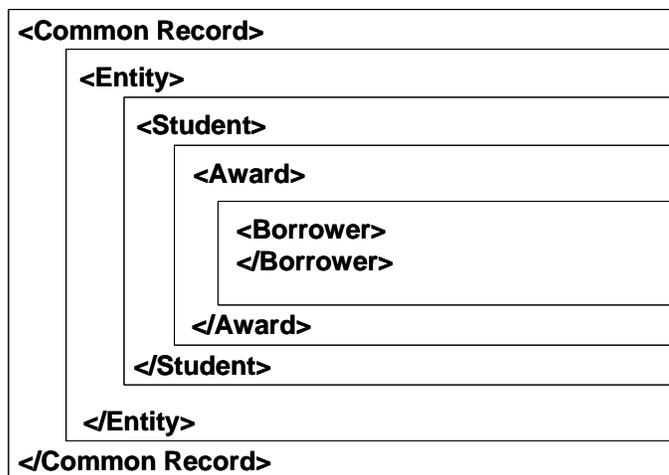
The Common Record is organized into the following structure:

Quick Reference Block Description

	Block Name	Block Description
1	Document Information	The Document Information Block contains information that was previously associated with a batch. It contains a date/time stamp, document validation information, summary level document information, as well as the source of the document. This block occurs once per XML Document or submission.
2	Entity Information	The Entity Information Block contains information about the reporting and attending school. This block occurs once per reporting entity or school within the XML Document or submission.
3	Person	The Person Block contains student or PLUS borrower information. This block occurs once per award per person.
4	Award Information	The Award Information Block contains Direct Loan, Pell Grant and campus-based Award information, similar to origination data submitted in the fixed-length record layouts. As other partners use the Common Record to transport data, this will be the location of those awards. This block occurs once per award per person.
6	Disbursement Information	The Disbursement Information Block contains disbursement information. This block occurs once per disbursement per award per person.
7	Response	A Response block is nested within each block. The Response block is returned by COD to the submitting entity upon processing the Common Record. The Response block contains information about processing edits and document status.

Below is a pictorial representation of the Common Record layout. It illustrates how the Common Record is comprised of information modules or blocks.

The Common Record Document Structure



For participating schools, software developers, and third party servicers, the transition to XML may initially require an investment of resources to build the Common Record. However, reformatting in subsequent years will take considerably less time and effort than currently required for updating fixed format files.

XML Schema

An XML Schema specifies the rules surrounding the logical structure of an XML document. It is a language that describes the allowed content of documents. It defines the elements present in the document and the order in which they appear, as well as any attributes that may be associated with an element.

To support the open standards proven effective in the development of the Common Record, FSA is making the XML Schemas for the Common Record available electronically to all interested parties. Whether a school, a software provider, or a third party servicer is using it for product development to support COD or any student financial resource trading partner interested in incorporating the Common Record into their products and services, the updated schema is available on the web at:

<http://ifap.ed.gov>

XML Resources

Extensible Markup Language (XML) is a growing standard for e-commerce, data transmissions and structured documents using the Internet. Many industry groups are developing schemas and data dictionaries for this purpose. As a result, there is extensive information available about XML and the initiatives specific to the higher education community. Many institutions are already using XML for their own Internet initiatives including self-service applications for students, faculty, and staff; data exchanges both within and outside the school; and even data coordination or backup with data warehouse projects.

Available resources about XML include courses at many institutions and local or Internet bookstores. The Web is also a resource, including the sites mentioned below. The first three are international standards bodies, and the last is specifically for the schema and data dictionary for higher education.

- <http://www.w3c.org>
- <http://www.ebXML.org>
- <http://www.oasis-open.org>
- <http://www.standardscouncil.org>

The following web addresses were shared at the Higher Education Washington, Inc. conference in September 2001. This list was provided by the Office of FSA CIO:

- www-106.ibm.com/developerworks/xml/
- Sun'S XML & Java Technologies: java.sun.com/features/1999/03/xml.html
- The XML Industry Portal: www.xml.org/xml/resources_cover.shtml
- XML Software: www.xmlsoftware.com/
- Web Reference: Exploring XML: www.webreference.com/xml/
- XML Information: html.about.com/cs/xmlinformation
- O'Reilly XML.com: www.xml.com/index.csp
- The XML FAQ: www.ucc.ie/xml

- A toolkit to XML – enable your web server: www.webreference.com/xml/column18/

Literature is constantly being updated as new technologies develop and mature. Therefore, it is recommended that time be spent exploring these resources.

COD Overview for Phase-In Participants

Pell Grant and Direct Loan Phase-In Participant Process:

All schools participating in Title IV Federal Student Aid are using the COD System for 2003-2004 to process Federal Pell Grants and Direct Loans. The Recipient Financial Management System (RFMS) and Direct Loan Origination System (DLOS) are being retired and replaced by the COD System. Phase-In Participants will continue to use fixed-length record layouts to submit Pell Grant and/or Direct Loan origination and disbursement data. This data will be transmitted through the school's Student Aid Internet Gateway (SAIG) mailbox to the COD System for processing.

The COD System will process the fixed-length records and will return the records back to the school in the fixed-file format. Many of the COD enhancements will be 'transparent' to Phase-In Participants.

The COD Process starts with origination records. Origination records can be sent well in advance of any disbursements, as early as a school chooses to submit them and the COD System is ready to accept them. It is recommended that a school submit origination records for any student for which it might award Title IV funds. The Origination record is required for Phase-In Participants. When the COD System receives an origination record, it checks/edits the record to make sure there are no errors and returns a response to the school. This data is also posted on the COD Website.

When a school makes a disbursement, or anticipates making a disbursement, it must send a disbursement record to the COD System. The disbursement record reports the disbursement date and the amount of the disbursement. The COD System returns a response for the disbursement record, which notifies the school of any issues or errors with the submission. In addition, COD sends information from disbursement records via FSA's Financial Management System (FMS) to the Education Central Automated Processing System/Grant Administration and Payments System (EDCAPS/GAPS, or GAPS) to trigger the funding process.

2003-2004 Pell Grant Phase-In Participants should:

- Transmit all batch files to the SAIG mailbox to be forwarded to COD to be processed.
- Call COD Customer Service at the COD School Relations Center for assistance with issues or questions.

Note: Pell Grant Phase-In Participants should refer to the 2003-2004 COD Technical Reference, Volume III - Pell Grant Phase-In Participant Technical Reference for record layouts and processes. If you use a custom system or combination of systems, please refer to the 2003-2004 COD Technical Reference, Volume V - Direct Loan and Pell Grant Combination System Supplement for record layouts, processes, and file edits. This volume will provide you with the essential record layouts pertinent to building your own system or working with a combination of systems.

2003-2004 Direct Loan Phase-In Participants should:

- Transmit all batch files to the SAIG mailbox to be forwarded to COD to be processed.
- Perform on-line PLUS Credit Checks for all program years on the COD Website at cod.ed.gov.
- Mail all Promissory Notes to: Location to be determined.
- Return Excess Cash for 2002-2003 and forward to the COD School Relations Center: P.O. Box 9001, Niagara Falls, NY 14302.
- Return Excess Cash for program years prior to 2002-2003 to: Location to be determined.
- Request Direct Loan Bulk Mail by: Contact to be determined.
- Call COD Customer Service at the COD School Relations center for assistance with issues and questions.

Note: Direct Loan Phase-In Participants should refer to the 2003-2004 COD Technical Reference, Volume IV - Direct Loan Phase-In Participant Technical Reference for record layouts and processes. If you use a custom system or combination of systems, please refer to the 2003-2004 COD Technical Reference, Volume V - Direct Loan and Pell Grant Combination System Supplement for record layouts, processes, and file edits. This volume will provide you with the

essential record layouts pertinent to building your own system or working with a combination of systems.