Software Developers Conference August 11, 2005

Agenda

9:00 am - 9:05 am Welcome and Opening Remarks

Jerry Schubert

9:05 am - 10:05 am ADvance Update

Jim McMahon and Renee Wade

Ron Bennett

10:35 am - 11:00 am Break

11:00 am - 12:00 pm COD and CPS Processing Updates

Mike Murray and Marilyn LeBlanc

12:00pm - 12:30 pm XML

Tim Bornholtz

12:30 pm - 1:00 pm Questions and Answers

Wrap-up Jerry Schubert



Sheraton National Hotel Arlington, Virginia



August 11, 2005

Software Developers Conference





Agenda

9:00 am – 9:05 am Welcome and Opening Remarks

Jerry Schubert

9:05 am – **10:05** am **ADvance Update**

Jim McMahon and Renee Wade

10:05 am – 10:35 am NSLDS Update

Ron Bennett

10:35 am – 11:00 am Break

11:00 am – 12:00 pm Common Origination and Disbursement (COD) and Central Processing System (CPS)

Updates

Mike Murray and Marilyn LeBlanc

12:00pm - 12:30 pm XML

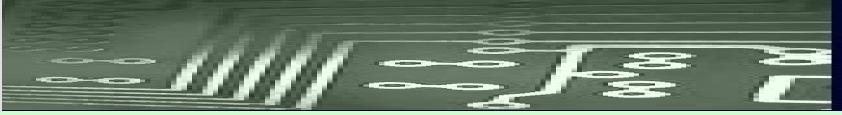
Tim Bornholtz

12:30 pm – 1:00 pm Questions and Answers

Wrap-up

Jerry Schubert





Welcome

Jerry Schubert

Chief Information Officer



FSA Software Developers Liaison

- FSA is changing your liaison:
 - From Holly Hyland
 - To Tim Bornholtz
 - Tim's Contact Information:

Tim Bornholtz

Phone: 202-377-3465

E-mail: Tim.Bornholtz@ed.gov



ADvance Update

Jim McMahon

Deputy Project Manager, ADvance

Renee Wade

Lead, ADvance System Development



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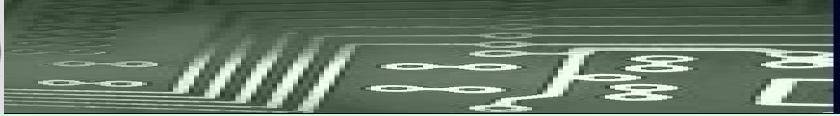
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Why Change?

- Current environment makes interaction with systems and finding answers difficult
- Solution provides
 - More efficient processes
 - Integrated technology
 - Increased data integrity
 - Enhanced customer service
 - Greater control

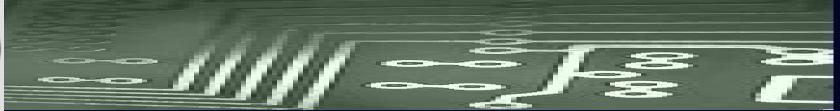




The ADvance Solution

- Goals of ADvance:
 - Increase program integrity
 - Improve customer service





The ADvance Solution

- Supports Aid Awareness outreach activities
- Integrates Application Processing, Origination, and Disbursement systems (AOD)
- Provides Single Customer Contact Center
- Provides Single Technical Help Desk
- Provides enhanced Portal Solution with integrated Web views & tools
- Simplifies students'/parents' and trading partners' interactions with Federal Student Aid (FSA)

ADvance: A School's View

Web Products for Students

Student Portal, FAFSA on the Web, E-MPN Web Products for Schools

Schools Portal, FAA Access, R2T4

Software Products for Schools

EDExpress

Application

Aid Awareness Establish Person Record

Aid Eligibility Determination

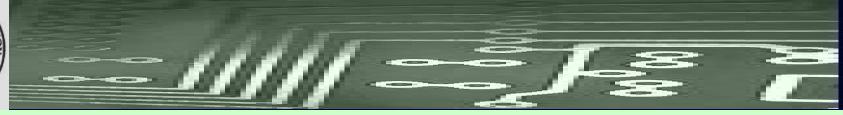
Origination & Disbursement

Award & Disbursement Processing

School Aid Payments & Funding Level Mgmt

Help Desk Support

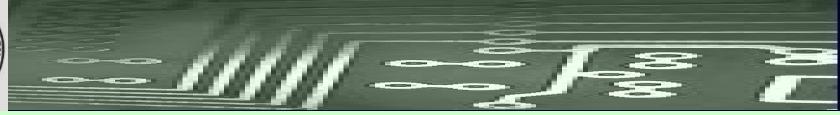




ADvance Highlights

- Improved support for aid awareness and outreach
- Increased online functionality for customers
- Single enhanced portal for all customer segments (public, student/parent, and schools)
- End-to-end view of financial aid lifecycle via the Portal (filing of FAFSA through disbursement of funds and repayment of loans) for the FAA and Student





ADvance Highlights

- Consolidated rules and edits across applications
- Stable, non-changing System Identifier (SID)
 - Will never change
 - Will uniquely identify every participant in the application, origination, and disbursement processes



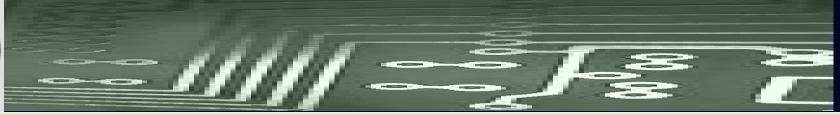
Target State Goal

- Visioning Activities
 - Spring Conference
 - Focus Groups (NASSGAP, NSLC, High School Counselors, NASFAA)
 - FSA Visioning Sessions
 - Advisory Committee Report
 - Ideas/suggestions submitted through e-mail



- Assign a unique system identifier (SID) to each unique individual interacting with ADvance
- In addition to the SID, each user will have a unique self-selected customer identifier (CID) they can modify, which will replace the current "stable data" (SSN, DOB, and 1st 2 letters of the last name), and be used as part of the credential, along with the PIN for authentication





- Establish routing identifier (RID) as a unifying identifier for any partner entity
- Provide User Enrollment for FSA and business partners through the ADvance Portal
- Business partners will access the portal functionality reserved for business partner users by entering their customer ID, RID, and their password

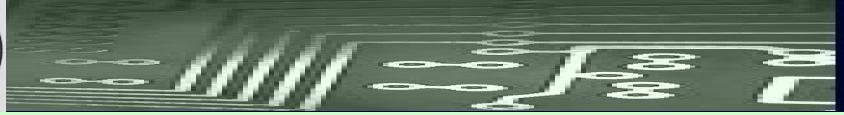


- Incorporate PLUS application into application processing
- Provide application status and real-time results for web filers through the FSA Portal
- Separate entry and maintenance of the schools that students and parents would like to have receive their processed data from the FAFSA itself to allow the flexibility for the applicant to authorize as many schools as needed and to change that authorization at any time



- Provide on-line information in languages other than English and business functions/outputs in Spanish
- Include the ability to collect information during the "apply" stage to track how applicants became aware of the application process and at what age
- Use pre-population process to allow income tax preparation software vendors to link to FOTW to allow families to import their tax information or add a link to the IRS website.



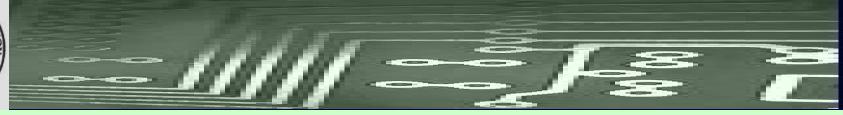


- Calculate EFC for records that are missing signatures and include EFC on ISIR record
- Calculate the Parent Contribution for independent students who are applying at schools with Health Profession Programs
- Based on initial EFC calculations, provide Students with an estimate of their Pell grant eligibility



- The business rules and edits used in the Central Processing System (CPS) and Common Origination and Disbursement (COD) will be evaluated and consolidated
- Don't allow student to make corrections to specific fields if FAA has verified and/or paid on record





- Allow pennies to process for Direct Loans
- An electronic disclosure notice will be implemented that students and parents can access, download, and print via the portal for Direct Loans only
- Allow parent borrowers to initiate the PLUS Loan Appeals process via the ADvance portal



I Light of Detention

- Generate reconciliation reports on a regularly scheduled basis to support ongoing reconciliation activities
- Offer on-demand reconciliation as an additional web service that will allow schools to reconcile their transactions against AOD data at any time
- ADvance will include receiving, processing, and maintaining Campus Based disbursement data at the school and student level



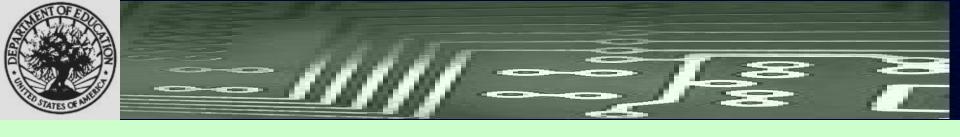
- Allow schools to pre-define parameters which would 'auto-load' data for the ISIR Analysis Tool process and generate reports automatically as a result
- Provide an EDExpress product on-line (continue to produce current PC product)
- Provide users with a reconciliation tool for Pell and Direct Loans





Implementation: Key Dates

- Initial Go-Live January 2007 for 2007-08, application processing only
 - Includes system and new tools for customer service (e.g. integrated views)
- Full award year processing for integrated application, origination, and disbursement for 2008-09

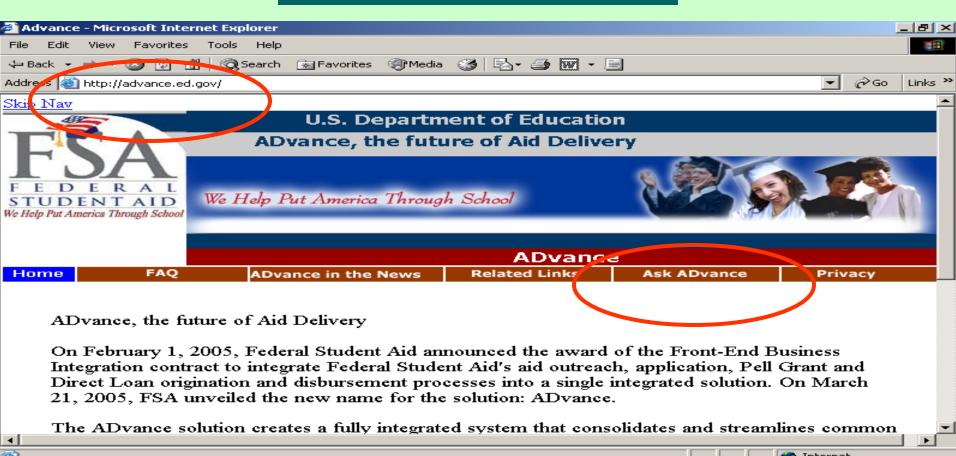


Implementation: Risk Mitigation

- Gradual transition of origination and disbursement help desk and system processing
 - Transition of oldest prior years first (lowest volume of transactions)
 - 6 months+ of parallel system processing



Stay Informed



(S) Inbox - Mic... Advance -... ADvance w... Is Microsoft P...





Contact Us

We appreciate your feedback and comments!

Jim McMahon

James.McMahon@ed.gov

Renee Wade

Renee.Wade@ed.gov

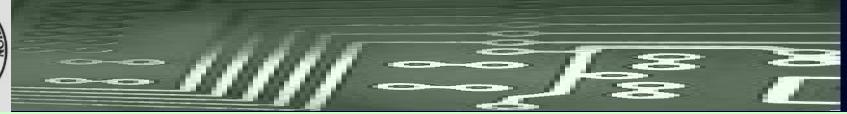


NSLDS Update

Ron Bennett

Information Technology Specialist

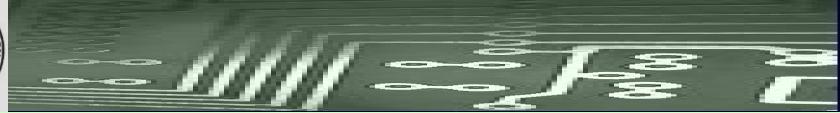




Capturing Balance History

- Prior to March 2005, historical data on OPB and OIB amounts not stored or displayed in NSLDS
- As of late March 2005, NSLDS started to store and display OPB and OIB related data

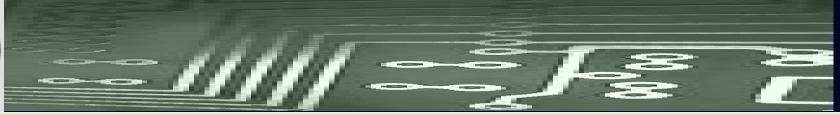




Capturing Balance History

- Historical data related to OPB and OIB reported prior to March 2005 will not be available
- Historical balances only seen on www.nsldsfap.ed.gov web site and not student's web interface
- Formulas for calculating aggregates have not been changed





Capturing Balance History

- Changes will not affect the Prescreening or Postscreening processes
- NSLDS captures OPB/OIB information:
 - At end of each quarter
 - Before and after a loan status code change





Viewing OPB and OIB History

• History icons appear next to the OPB and OIB fields on the Loan Detail screen

Amounts for Loan 1						
Date Amount						
	Loan:	01/05/2004	\$2,750			
	Outstanding Principal Balance:	01/05/2004	\$2,750			
	Outstanding Interest:	01/05/2004	\$0			
	Other Fees:		\$0			



Viewing OPB and OIB History

History Icon displayed in the Loan Status information

Status Changes for Loan 1					
Date Changed		Status			
08/30/2003	RP : IN REP	AYMENT			

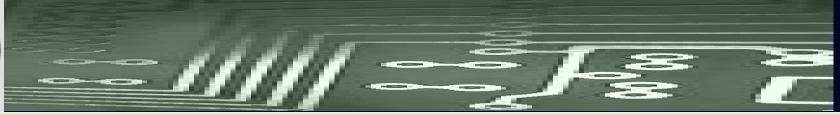
 Clicking the history icon displays the Outstanding Amount Balance History



Viewing OPB and OIB History

NSLDS Effer Begin Date		Outstanding Principal Balance/ Date Of	Outstanding Interest Balance/ Date Of	Status Code/ Date Of	Historically Correct Loan Status
08/02/2005	Current	\$2,750	\$0	0 IG	Yes
		01/05/2004	01/05/2004	08/02/2005	162
12/02/2004	08/01/2005	\$2,750	0 \$0	0 IA	Yes
		01/05/2004	01/05/2004	01/05/200.4	Tes
11/02/2004	12/01/2004	\$2,750	0 \$35	O RP	No
		01/05/2004	05/01/2004	1.1./0.1./200.4	140
05/02/2004	1.1/01/200.4	\$2,750	\$0	o IG	No
		01/05/2004	01/05/2004	05/01/200.4	INO
01/05/2004	05/01/2004	6 \$2,750	o \$0	0 IA	No
		01/05/2004	01/05/2004	01/05/2004	140





Interpreting the Outstanding Balances History

The information Icon displayed next to the value indicates changed data

NSLDS System Effective Begin Date/End Date		Outstanding Principal Balance/ Date Of	Outstanding Interest Balance/ Date Of	Status Code/ Date Of	Historically Correct Loan Status
08/02/2005	Current	\$2,750	\$0	o IG	Yes
5000202000	Current	01/05/2004	0.1./05/200.4	08/02/2005	165





Additional Resources

- NSLDSFAP On-line help pages
 - Loan Detail
 - Outstanding Amount Balance History
- NSLDS Newsletter #10, May 2005

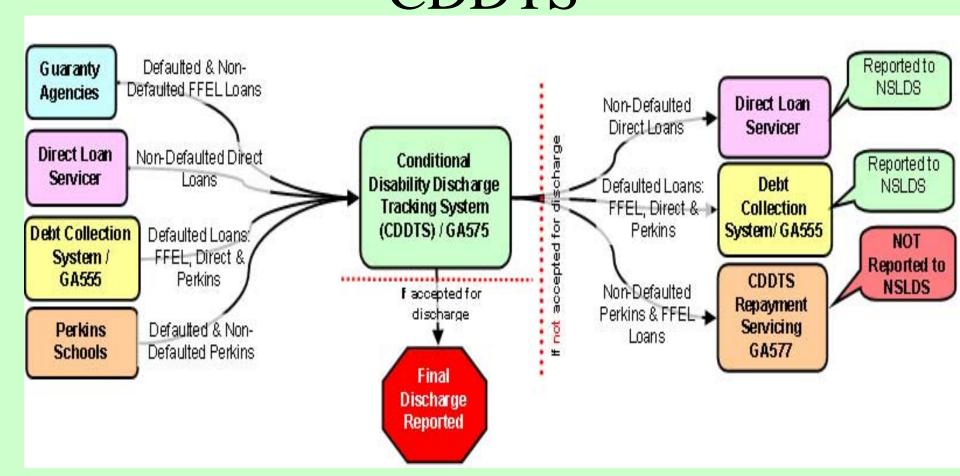


Conditional Disability Discharge Process

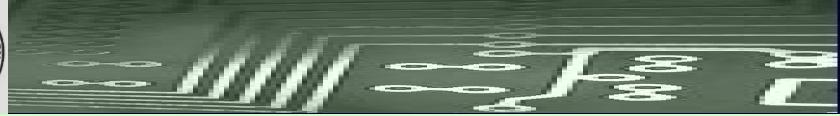
- Since late 2002, CDDTS has been administering Conditionally Discharged Loans but not reporting to NSLDS
- As of April 2005, CDDTS began reporting as GA575
 - Balances during Conditional period
 - Closures for Permanently Discharged Loans
 - Loan Status
 - DI- Disability
 - DS- Defaulted, then Disabled



Flow of Loans- To and From CDDTS







Disability Discharge Flags

- Conditional
 - DI or DS Loan Status Codes and loan balance is greater than

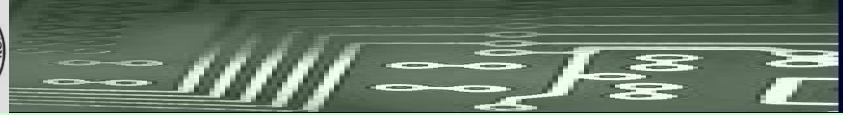
\$0

1	STAFFORD S	SUB RSITY - 00140300		Status	DI as of O	6/20/2003	Loan De	etail
Guaranteed Amt:	\$3,931	Disbursed Amt:	\$3,931		OPB:	\$609	Agg. OPB:	\$609
Loan Date:	11/02/1990	Sep. Loan Ind:	А	Loa	ın Period:	09/0	01/1990 - 12/28/19	990
Last Disb. Date:	11/23/1990	Last Disb. Amt:	\$3,931		Acad. Lv:	3	Discharge:	C
GA:	CDDTS - 575							

- Permanent
 - DI or DS Loan Status Codes and loan balance is equal to \$0

SF - FFEL STAFFORD SUB WORCESTER STATE COLLEGE - 00219000 Status: DS as of 12/15/2002 Loan D					Loan Det	tail		
Guaranteed Amt:	\$2,500	Disbursed Amt:	\$2,500		OPB:	\$0	Agg. OPB:	\$0
Loan Date:	10/21/1986	Sep. Loan Ind:	A	Loa	n Period:	09/0	08/1986 - 05/14/19	87
Last Disb. Date:	11/17/1986	Last Disb. Amt:	\$2,500		Acad. Lv:	3	Discharge:	Р
GA:	CDDTS - 575							





Reinstated Loans

- CDDTS will reassign Reinstated Loans:
 - Direct Lending will receive non-defaulted Direct loans
 - DCS (GA555) will receive all defaulted loans, including Direct Loans



CDDTS Repayment Servicing

- Two types of non-defaulted loans will not be reported to NSLDS after reinstatement:
 - FFEL
 - Perkins
- CDDTS Repayment Servicing (GA577) will receive these loans and should be contacted for status information



ISIR Data

- Loans associated with GA575
 - Contact Type "DDP" for Disability Data Provider
 - Comment Code: 137
- Loans associated with GA577
 - Contact Type "RDS" for Reinstated Disability
 - Comment Code: 139 (Perkins)
 - Comment Code: 147 (FFELs)



References and Contact information

- Contact information for GA575 and GA577
 - NSLDS Newsletter #10, May 2005
 - NSLDSFAP Organization Contact Information



Aggregate Changes for 2006/2007

• NSLDS will derive an unallocated figure for Direct Loans

™ Agg	Loan History Aggregate Loan Information					
Loan Type	Outstanding Principal Balance	Pending Disbursements	Total			
Subsidized Loans	\$21,375	\$2,750	\$24,125			
Unsubsidized Loans	\$16,000	\$2,000	\$18,000			
FFEL Consolidation Loans, Unallocat	ed \$2,375		\$2,375			
Combined Loans	\$39,750	\$4,750	\$44,500			
FFEL Consolidation Loans	\$46,000		\$46,000			
Perkins Loans	\$0		\$0			
PLUS Loans	\$0		\$0			



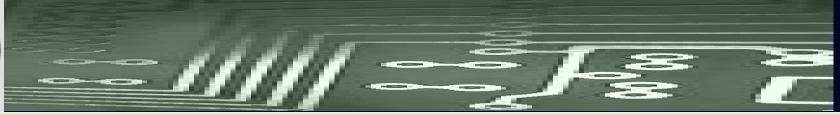
Aggregate Changes for 2006/2007

Removing FFEL Consolidation Loans

	Loan History				
Aggregate Loan Information					
Loan Type	Outstanding Principal Balance	Pending Disbursements	Total		
Subsidized Loans	\$21,375	\$2,750	\$24,125		
Unsubsidized Loans	\$16,000	\$2,000	\$18,000		
FFEL Consolidation Loans, Unallocated	\$2,375		\$2,375		
Combined Loans	\$39,750	\$4,750	\$44,500		
FFEL Consolidation Loans	\$46,000		\$46,000		
Perkins Loans	\$0		\$0		
PLUS Loans	\$0		\$0		

Loan History

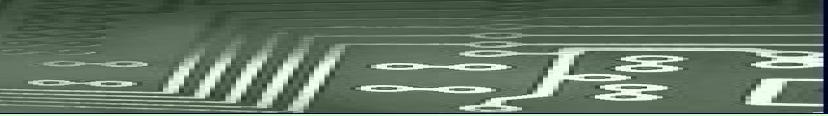




Password/Security Reminders

- Passwords must be 8 characters in length
- At least 1 character must be numeric; 1st character must be letter
- New password must be different than last previous 4 passwords
- Password expires every 90 days





• DCL-GEN-05-06

- Responsibility reminder for users of NSLDS
- Provides access and use requirements such as:
 - Student/Applicant Eligibility
 - Collection Activities for Title IV Loans and Grant Overpayments
 - Submitting Student Enrollment
 - Obtaining Default Rate Information
- Consequence of misuse
- Management of NSLDS Access

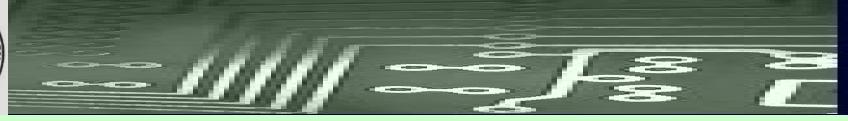


NSLDS Customer Service Center 1-800-999-8219

Expert Assistance 8:00 am – 9:00 pm Eastern Time

NSLDS@pearson.com

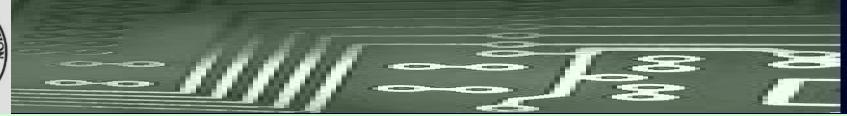




Break

Re-convene at 11:00 am





Welcome Back!





Common Origination and Disbursement (COD)

and

Central Processing System (CPS) Update

Mike Murray

Director, COD Systems;

Team Lead, ADvance Systems Development and Implementation

Marilyn LeBlanc

Acting Director of Application Processing, CPS





COD Update

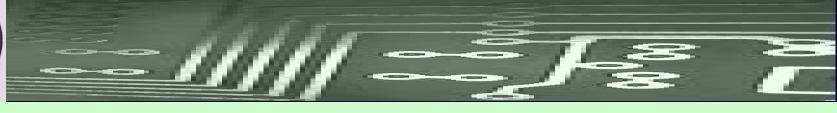




COD Changes

- Limited enhancements or changes to COD due to focus on ADvance
 - Limit development effort for COD solutions to enable software developers to focus resources on ADvance solutions
- Edits No new edit codes or changes to existing edit codes for 2006-07
- •Record Layouts No record layout changes for 2006-07

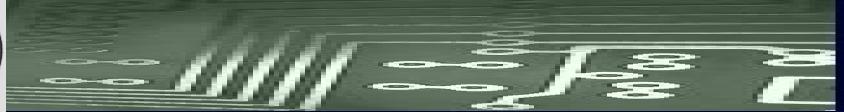




MPNID

- Award Year indicator in the MPNID will roll over to "07" when COD 2006-2007 software is implemented on March 13th
 - Previous years, MPNID rolled over when COD set up funding for the new award year in February prior to the software going live
 - •This year, MPNID will not roll over until COD software is implemented in March
 - •Beginning on March 13th, schools will receive MPNID with "07" as the cycle year in the CRPN07OP message class





Report Retention

• Beginning in August 2005, previous versions of COD reports will only be available on the web for 365 calendar days from the date the report was generated



COD Technical Reference

- Draft of the 2006-2007 COD Technical Reference, including edit code, message classes, and record layouts is posted on IFAP
- •Final version including Implementation Guide, Report Layouts, and Appendices will be published in November 2005 before the EAC
- •There will not be a beta review of the Technical Reference this year due to the minimal changes



School & Vendor Testing Dates

- Award Year 2005 2006 Structure Testing Dates: April 05 July 05
- Award Year 2005 2006 Unstructured Testing Dates:
 May 05 Feb 05
- We expect the Award Year 2006 2007 dates to be similar; we do not know the exact dates



Customer Service Reminders

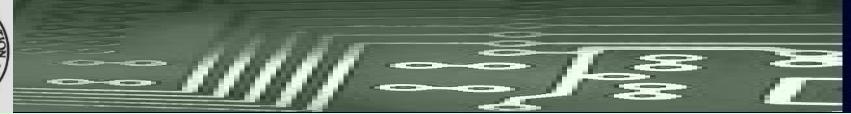
- First name required for PLUS credit checks
 - Schema and Edit codes indicate that either First or Last name is required
 - In order to process a PLUS credit check, first name and last name of the parent borrower are required
 - A PLUS loan submitted without the parent borrower first and last names will reject



XML Predefined Entity References

- XML does not allow open angle bracket (<), closed angle bracket (>), quotation mark ("), apostrophe ('), or ampersand (&) within a tag
- •If you must use on of these characters, XML has predefined entity references to represent the character
- •These are explained in the COD Technical Reference, Implementation Guide – page II-1-19





COD Customer Service Center

1-800-4-PGRANT For Pell Grants

1-800-848-0978

For Direct Loans

CODSupport@acs-inc.com

www.cod.ed.gov



CPS Update





CPS UpdateToday's Topics



- FAFSA Changes
- Central Processing System (CPS) Changes
- Institutional Student Information Record (ISIR)
 Changes
- CPS Test System
- EDExpress Changes



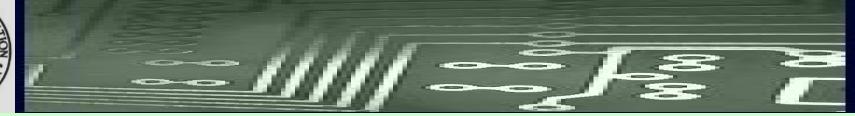


CPS UpdateFAFSA Changes

Step One: For questions 1-30, leave blank:	my questions that do	not apply t		de a 1845-0001 denta.
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Var Accial Scratch Narster Var Accial Scratch Narster Var Accial Scratch Narster Var Accial Scratch Narster	19	H. Ye.	rpersonert sein)	
II-12. Visus former in terminal and state (of		11,000		

- No new or deleted questions
- Questions follow same order as last year
- Changes have been made to some instructions and question wording





CPS UpdateFAFSA Changes

• Questions 33 b. and 71 b.: Will eliminate TeleFile from list of filing options because IRS will no longer offer it as a filing method





CPS UpdateThe Paper FAFSA

- Question 53: Divided into a two part (a) and
 (b) question for clarity
- 53. Are (a) both of your parents deceased, or (b) are you (or were you until age 18) a ward/dependent of the court?







CPS UpdateRenewal FAFSA

- Paper Renewal FAFSA eliminated for 2006-07
- All renewal-eligible applicants will receive 2006-07 Renewal Reminder notices (November/December) --
 - E-mail reminder





Paper reminder letter



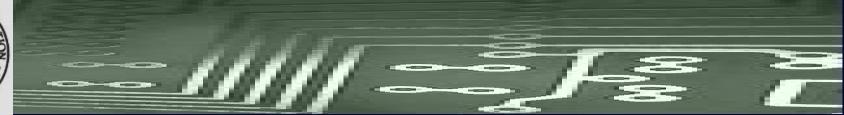


CPS UpdateRenewal FAFSA



- Reminder e-mails and letters will provide instructions --
 - About how and when to reapply for aid
 - Using Renewal FAFSA on the Web
- Follow-up reminders will be sent the week of February 6, 2006





CPS Update Edit Changes

- Parameters changed for cross-year edits
 - Edits check for significant changes in Number of Family Members, Total Income, or Taxes Paid compared to AGI
 - Based on positive results, parameters have been tightened to alert more applicants to inconsistencies
- New warning edit when student or parent enters same amount in asset net worth fields



CPS UpdateRejects



- Rejects for name not matching SSA's records (D, E & F)
 - Verifiable rejects
 - If name is correct, student or parent must reenter both first and last names and submit a correction
 - Changing comment text (Web and SAR) to clarify that both names must be re-entered to override the reject

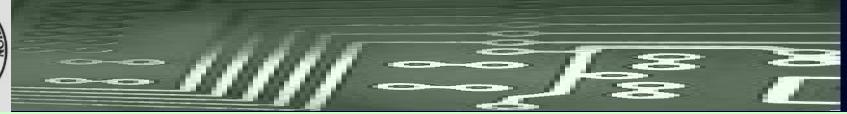






- Rejects 3 and 12 (taxes paid is equal to or greater than AGI)
 - Will continue to allow students to verify data on the Web and receive a rejected SAR
 - FAA will continue to have override capability in FAA Access
 - May want to follow up with students with this reject condition

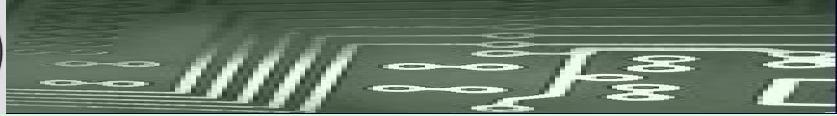




CPS UpdateDatabase Match Changes

- NSLDS Pre-Screening Match
 - Added new fields to pre-screening records sent to NSLDS to set loan limit flags
 - Dependency status change
 - Graduate status change
 - Grade level change





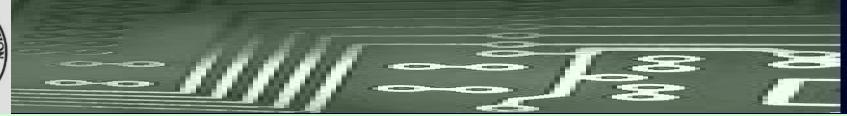
CPS Update

Institutional Student Information Record (ISIR)

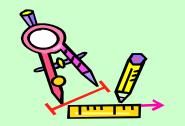
- Draft ISIR record layout available on IFAP (<u>ifap.ed.gov</u>)
- ISIR layout will follow order of the FAFSA
- No data element changes
- Date fields incremented
- Deleted Renewal application message classes
 - RADDnnIN
 - EREPnnOP
 - PINRnnOP
- ISIRs available in flat file format only in 2006-07
- XML ISIR implemented in 2007-08





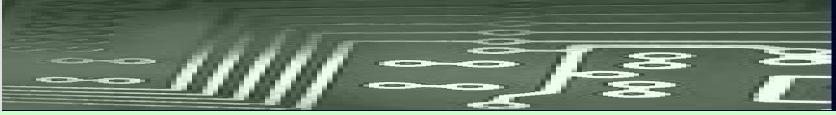


CPS Update Specifications



- Draft Software Developer (NAS) Specifications will be posted in August
- Updates will be provided as needed





CPS Update CPS Test System



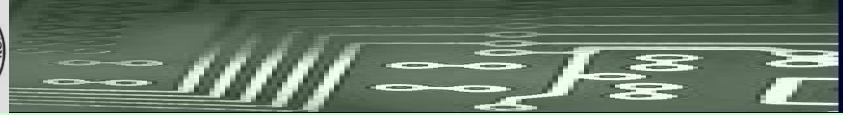
- Mechanism for you to confirm that your system --
 - Meets specifications for interfacing with CPS
 - Is calculating correct results
- Allows you to ---
 - Test applications and corrections
 - Receive ISIR data



CPS Update CPS Test System

- Available on November 21, 2005, and remains available through end of processing cycle
- User Guide will be posted to Federal Student Aid download web site (<u>FSAdownload.ed.gov</u>) by end of October
- An Electronic Announcement will be issued when test system goes live





CPS Update CPS Test System



- Test files will be available
- Separate input and output files will be posted for testing specifications
- Remember—CPS is **still in test** until FSA accepts the system and production starts on January 2, 2006





CPS Update EDExpress Changes

- All EDExpress modules will be 508 Compliant (ADA)
 - Global, Apps, Packaging, Pell, and DL
 - Direct Loan Tools
 - SSCR (will be the first product updated)
- Cents will display (when appropriate) in Pell
 - Origination
 - Disbursement
 - Reports











CPS UpdateContact Information

We appreciate your feedback and comments!

Phone: 1-800-330-5947

E-mail: cpssaig@ed.gov



XML Update

Tim Bornholtz

Senior System Integration Architect



Doing more with XML

Using the XML Registry as a basis for an FSA enterprise data model



XML Registry & Repository

- The Registry is a central access point for
 - XML Core Components
 - XML Schemas
 - Supporting Documentation

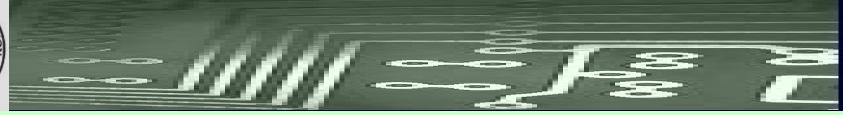


XML Registry

- Everyone can use the data in the Registry
- Many members of the Higher Education community worked collaboratively to create the common definitions and common usage of the core components

But we can use it for more than just schemas!

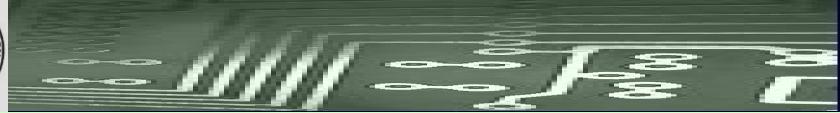




The FSA Landscape

- FSA currently has several legacy systems with:
 - Slightly different definitions of elements
 - Slightly different data sizes
 - Slightly different relationships between elements
- We can use the XML Registry to harmonize these differences across the enterprise by building an Enterprise Data Model





Create an Enterprise Data Model

- Improved understanding of FSA assets
- Standardized naming conventions
- Reuse of FSA assets
- Improved impact analysis
- Reduced development and maintenance time
- Improved compliance with OMB data requirements



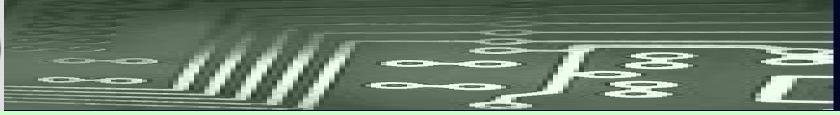
FSA Benefits in real numbers

- > 950 Attributes at 20 hours per attribute represents 9 person years worth of effort
 - ➤ Reduces Risk
 - ➤ Promotes Reuse
 - >Saves Time

Data is an FSA asset



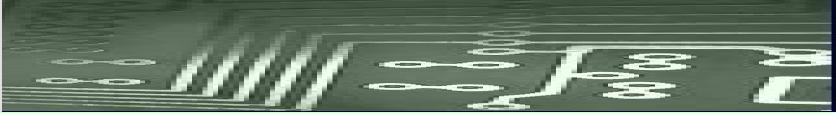




Planning an Enterprise Model

- Reviewed and adopted Department of Education Naming Standards
 - Complies with current PESC XML standards
- Defined and documented the process for registering data models and related metadata into FSA repositories
- Evaluated & adopted the current procedures for registering metadata into XML Registry



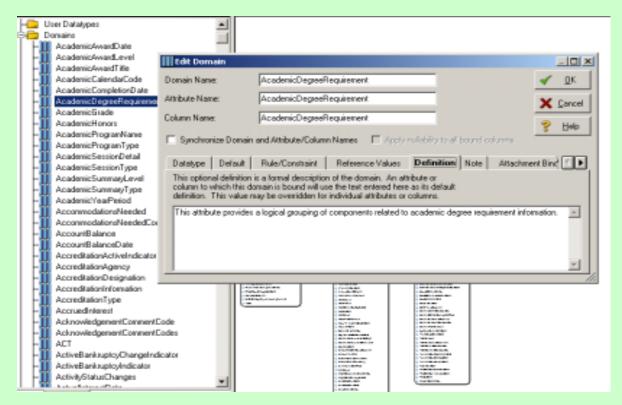


Reusing the Data

- Created a bridge between XML Repository and our data modeling tool to share data attributes and convert XML Schemas into data models
 - Meta Integration tool bridges the gap between XML Registry & data modeling tool (Embarcadero)
- Converted Common Record and draft ISIR Schemas into a data model & provided to ADvance
- Converted XML Tags into Data Element Encyclopedia for ADvance Data Model



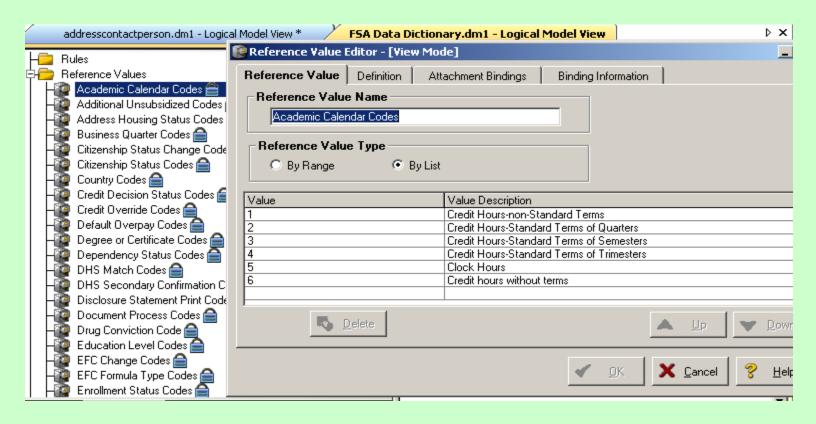
XML Tags as Data Attributes



Over 950 tags converted to data attributes and loaded into our modeling tool



Centrally Managed Code Lists



664 reference values ranging from country codes to academic calendar codes are available to FSA developers



Data Modeling Process

- Started with:
 - Tags registered in XML Registry
 - ISIR XML Schema
- Transitioned to Data Modeling tool which:
 - Created data model & preserved definitions and naming conventions
 - Created scripts for DBA





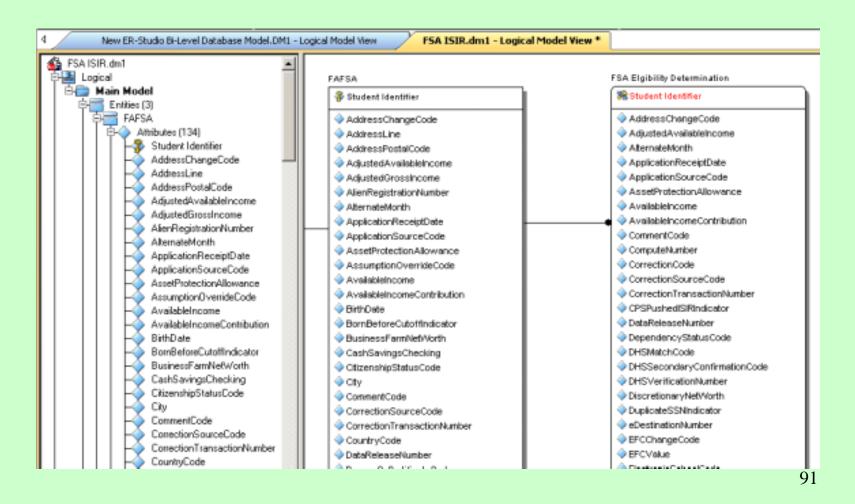
ISIR XML Schema (Draft)

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XMLSPY v5 rel. 4 U (http://www.xmlspy.com) by Nakia D Leggett
(Proquire LLC) -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"</pre>
elementFormDefault="qualified" attributeFormDefault="unqualified"
version="1.0.1">
   <xs:import schemaLocation="FSA DataTypes_CC_1.0.1.xsd"/>
   <xs:simpleType name="DriversLicenseNumberType">
        <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
        </xs:restriction>
   </xs:simpleType>
   <xs:simpleType name="DriversLicenseStateType">
        <xs:restriction base="StateProvinceCodeType"/>
   </xs:simpleType>
   <xs:complexType name="DriversLicenseType">
        <xs:sequence>
            <xs:element name="DriversLicenseNumber"</pre>
type="DriversLicenseNumberType" minOccurs="0" nillable="true"/>
            <xs:element name="DriversLicenseState"</pre>
type="DriversLicenseStateType" minOccurs="0" nillable="true"/>
        </xs:sequence>
   </xs:complexType>
   <xs:complexType name="PersonalIdentifiersType">
        <xs:sequence>
            <xs:element name="SSN" type="SSNType" minOccurs="0"/>
```

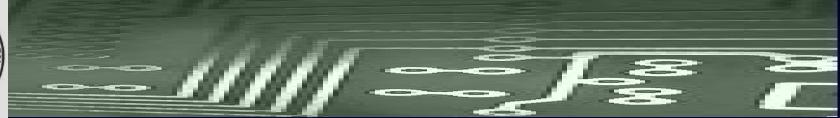




ISIR Data Model



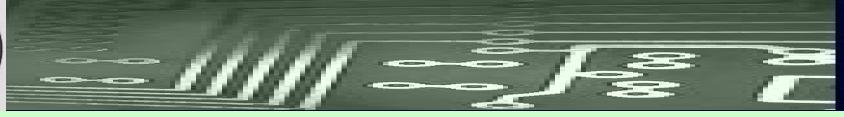




Physical Table Scripts

```
--ER/Studio 6.6 SQL Code Generation
-- Project :
                  FSA ISIR.dml
-- Author :
-- Date Created : Tuesday, July 19, 2005 06:40:40
-- Target DBMS : IBM DB2 UDB for OS/390 7.x
-- TABLE: FAFSA
CREATE TABLE FAFSA(
    "Student Identifier"
                                                      NOT NULL,
                                      CHAR(10)
   AddressChangeCode
                                      VARCHAR(20),
   AddressLine
                                      VARCHAR(50),
   AddressPostalCode
                                      VARCHAR (14),
   AdjustedAvailableIncome
                                      VARCHAR (20),
   AdjustedGrossIncome
                                      DECIMAL,
   AlienRegistrationNumber
                                      DECIMAL,
   AlternateMonth
                                      VARCHAR(20),
   ApplicationReceiptDate
                                      DATE,
   ApplicationSourceCode
                                      VARCHAR(20),
   AssetProtectionAllowance
                                      VARCHAR (20),
   AssumptionOverrideCode
                                      VARCHAR (20),
   AvailableIncome
                                      VARCHAR(20),
   AvailableIncomeContribution
                                      VARCHAR(20),
   BirthDate
                                      DATE,
   BornBeforeCutoffIndicator
                                      SMALLINT,
   BusinessFarmNetWorth
                                      DECIMAL,
```





Primary and Foreign Keys

- The XML Registry does not (and will not) contain primary keys and foreign keys
 - XML is a hierarchical format
 - Relationships between elements are determined by the structure

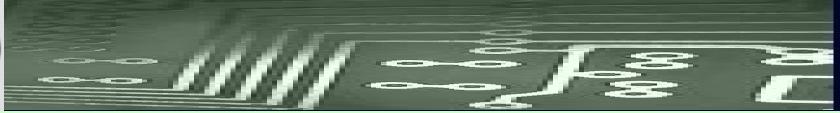


XML Registry at FSA

XML Registry, FSA data modeling tools, and enterprise architecture tools provide FSA with:

- The mechanism to define and maintain the Enterprise Data Model for all new or reengineered applications
- A central source of data name definitions, abbreviations and common acronyms
- Enterprise metadata accessible to system developers and other users





Future Direction

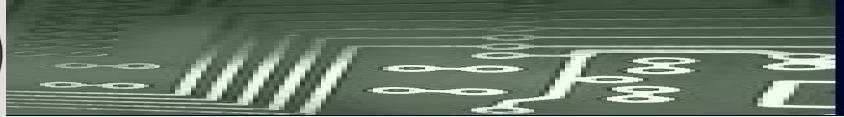
- Expand the data model to include more FSA systems
 - NSLDS
 - IPM/EZ Audit
- Working with ADvance Team to review its Data Models
- Working with Federal Enterprise Architecture Data Reference Model to promote FSA XML Registry and approach



Sharing our work

- Through the xml.gov community, we are sharing the software and data XML Registry
 - IRS
 - Department of State
 - Other federal, state and foreign agencies





Contact Us

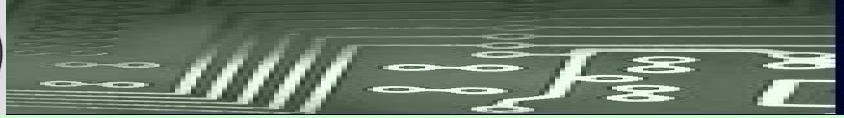
We appreciate your feedback and comments!

Tim Bornholtz

Phone: 202-377-3465

E-mail: Tim.Bornholtz@ed.gov





Questions and Answers

Our Panel of Experts:

Jim McMahon

Renee Wade

Ron Bennett

Mike Murray

Marilyn LeBlanc



Thank you for attending!

Jerry Schubert

Chief Information Officer

(202) 377-3009

Jerry.Schubert@ed.gov