FIN AID & HR/PAYROLL INTEGRATION:
The Missing Link

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Session Rules of Etiquette

- **Please turn off your cell phone/pager**

- **If you must leave the session early, please do so as discreetly as possible**

- **Please avoid side conversation during the session**

Thank you for your cooperation!

Introduction

- **The purpose of this presentation is to explain how Connecticut College eliminated the task of duplicating data entry of Student Employment Authorizations in the Human Resources – Position Control Functional modules.**

- **Added Value**
  - **(1) Data Integrity- No more inaccurate data entry**

  - **(2) Cost Savings- No more data Entry!**

AGENDA ITEMS- WHAT YOU SHOULD KNOW

- **Terminology**
- **Functional owner**
- **Financial Aid**
  —**What tables should you understand?**
- **Payroll and Position Control**
  —**What do I have to Insert? Update?**
- **Scope of Solution**
  —**From where will the data come?**
  —**Know your form triggers**
- **Developing the Process**
  —**Show and Tell**

Cont. Agenda Items

- **Where to begin? At the end of course!**
  —**The look and feel of a JOB data entered in to the Form *as oppose* to a JOB generated d via the process. Hint: Leave no traces behind!**

- **Exceptions**
  —**Are there any? Yes! Let's talk Exception Block coding**

- **What are the challenges and pitfalls to fitting a solution that crosses two modules?**
  —**Lessons Learned**

TERMINOLOGY in terms of Banner application software
- **SEAR / SEA**
  —**RJRSEAR Record (Form RJASEAR)**
  —**Student Employment Authorization**
- **PLACE CODE**
  —**Financial Aid's term for Organization Code**
- **EMPL**
  —**PEBEMPL Record (Form PEAEMPL)**
- **Job(s)**
  —**NBRJOBS Record (Form NBAJOBS)**
- **LD**
  —**Labor Distribution**
- **Base Job**
  —**NBRBJOB record (Form NBAJOBS- First Canvas)**
- **Contract Type (Primary, Secondary)**

KNOW YOUR FUNCTIONAL OWNER: Who Will Run This Job?

- **Your functional owner will a stakeholder. Make them understand the proposed solution, then lasso them into drawing up the specifications for the job.**

- **Consider this: Some larger schools may have FinAid perform this function.**

- **The functional owner will help define what would shake out as an exception.**

- **Bring HR and FinAid together and for weekly meetings: learning each other's business processes and _timings_. Financial Aid has big impact on what happens in the HR/Payroll processes. _Timing is everything!_**

FIN AID TABLES- _UNVEIL THE MYSTERY FOR HR FOLKS_

- **Overview of Tables for this Solution**
  - **RORTPRD**
    - **Get your start and stop dates**
    - **Join rortprd_aidy_code = _v_aidyear_**
  - **RJRSEAR**
    - **Primary table to pull data from for each Student Employment Authorization.**
    - **Join rjrsear_auth_start_date >= v_aidy_start AND rjrsear_aidy_code = v_aidyear**
  - **RJRJOBT**
    - **Job Title Table holds the description of the Job Code and is preferred entry into the JOB Record over the pooled POSN Description from NBBPOSN.**
    - **Join RJRSEAR_ JOBT_CODE = RJBJOBT_CODE**

RJRSEAR RECORD

Field	Value
RJRSEAR_AIDY_CODE	0910
RJRSEAR_PIDM	261041
RJRSEAR_JOBT_CODE	1CATTU
RJRSEAR_PLACE_CDE	300040
RJRSEAR_POSN	SR0103
RJRSEAR_SUFF	00
RJRSEAR_AUST_CODE	AUTH
RJRSEAR_AUTH_START_DATE	11/30/2009
RJRSEAR_AUTH_END_DATE	5/19/2010
RJRSEAR_PAY_START_DATE	11/30/2009
RJRSEAR_PAY_END_DATE	5/19/2010
RJRSEAR_ACTIVITY_DATE	12/1/2009
RJRSEAR_FUND_CODE	
RJRSEAR_AUTH_HRS	169.7
RJRSEAR_PAY_RATE	8.25
RJRSEAR_AUTH_EARNINGS	1400
RJRSEAR_STIPEND_AMT	
RJRSEAR_SORT_KEY	
RJRSEAR_USER_ID	MLOP

WHERE RJRSEAR_ AIDY_CODE = [INPUT PARM for Aid Year]

=RJBJOBT_CODE to fetch RJBJOBT_DESC

='AUTH' (liaise with FinAid to know their code for Authorized (approved) SEAs.

PAYROLL / POSN CTRL: Site Specifics

- • **STIPENDs**
- — **where RJRSEAR_STIPEND_AMT**
- • **SEA AUTH STATUS CODEs**
- — **Ex: AUTH, TERM, JOUR, RESTART**
- • **PAY TYPE**
- — **Ex: SM, MN, WK (ptrcaln_pict_code)**
- • **SUFFIX : word of caution…**
- — **Controlled by the data enterer in NBAJOBS form. NOT SO in FinAid! Train FIN AID user away from effective dating SEA changes. The form RJASEAR will trigger a one-up to the suffix.   Ex: POSN 0012 SUFF 00, POSN 0012 SUFF 01. POSN 0012 SUFF 00 is STILL in effect a current active job. Causes problems downstream.**
- • **EMPLOYEE CLASS CODES**
- — **Ex: SR, SS, ST**

TABLES NEEDED: FINAID-HR/PR

- • **What is our Scope?**

  - —**Origination of Data: FIN AID tables (3)**
    - • **RJRSEAR- get 8 pieces of data per SEA**
    - • **RJBJOBT- get job title to fill nbrjobs_desc for ea posn**
    - • **RJRTPRD- get start/stop dates for aid year for main cursor**
  - —**Insert / update Data: POSNCTL / PAYROLL tables(5)**
    - • **PEBEMPL**
    - • **NBRBJOB**
    - • **NBRJOBS**
    - • **NBRJLBD**
    - • **NBRJLHS**
  - —**Optional Custom table**
    - • **CC_HR_JOBS**

Ancillary tables, but must-have's in process…

- • **SPRIDEN- for your output report**

- • **SPBPERS- for testing the presence of employee minimum requirements (ssn, birthdate, gender, citizenship, ethnicity)**

- • **NBBPOSN- for p**

- • **NBRPLBD- for L**

- • **PTRPICT/ PTRECLS- for background knowledge**

MAP all fields before creating process flow and coding solution.

Example: HR cross reference from FinAid.xls

MAIN CURSOR– fetching SEA data in prep for insert/update

STUFF MOST OF THE PROGRAMMING LOGIC IN THE MAIN CURSOR TO GROUP WHAT SORTS OF JOBS YOU FETCH. Meaning, did the student ever have the job? Is a PEBEMPL needed? Is it a new job?

```
main cursor for rjrsear to hr module
SELECT decode(all_empl_pidms.pebempl_pidm,null, 'EMPL_CREATE','EMPL_EXISTS') EMPL_REC_FLAG
     , decode(base_job.pidm,null,'NEW_JOB','JOB_EXISTS') JOB_REC_FLAG
     , base_job.end_date
     , rjrsear_activity_date
```

Inline Views of empl and base job tables

SEAR pidm outer joined to the inline views to fetch all

```
     , saturn.spriden s
     , faismgr.rjbjobt title
     , (SELECT pebempl_pidm
          FROM pebempl
       ) all_empl_pidms
     ,(SELECT nbrbjob_pidm pidm
            , nbrbjob_posn posn
            , nbrbjob_suff suff
            , nbrbjob_end_date end_date
        FROM  nbrbjob
       WHERE  nbrbjob_posn like '5%'
```

MAIN CURSOR- the WHERE Clause

Notice the outer joins; still getting all SEAs whether or not they already exist in the payroll.

```
     )  base_job
RE sear.rjrsear_auth_start_date >= v_aidy_start
ND sear.rjrsear_aidy_code = v_aidyear
ND sear.rjrsear_pidm = s.spriden_pidm and s.spriden_change_ind IS NU
ND sear.rjrsear_jobt_code NOT IN ('STIPEN', '1HOUSE' ,'1FLOOR')
ND sear.rjrsear_aust_code = 'AUTH'
ND sear.rjrsear_pidm = all_empl_pidms.pebempl_pidm(+)
ND (  sear.rjrsear_pidm = base_job.pidm(+)
    AND sear.rjrsear_posn = base_job.posn(+)
    AND sear.rjrsear_suff = base_job.suff(+) )
ND sear.rjrsear_jobt_code = title.rjbjobt_code
  avous  -begin- Am using the cc_hr_jobs table as it should have bee
ND (sear.rjrsear_activity_date >= (select max( trunc(runtime) )
                                     from connman.cc hr jobs cc
```

Notice site specific requirement: we do not auto populate STIPENDs.

MAIN Cursor- use of custom table

```
  avous  -begin- Am using the cc_hr_jobs table as it should have been used.
   AND (sear.rjrsear_activity_date >= (select max( trunc(runtime) )
                                         from connman.cc_hr_jobs cc
                                        where cc.job_name = 'PYPSEAR'
                                          and cc.attribute2 = v_aidyear
                                          and cc.attribute1 in ('u','U'))
-- v8.0  avous start
        OR
       (select max( trunc(runtime) )
                                         from connman.cc_hr_jobs cc
                                        where cc.job_name = 'PYPSEAR'
                                          and cc.attribute2 = v_aidyear
                                          and cc.attribute1 in ('u','U'))  IS NUL
-- v8.0  avous enc
```

Custom table, cc_hr_jobs, hold vitals about the job run.

The cursor will further limit data where the activity date of the SEAR record is equal to or greater than the last time the PYPSEAR (the job itself) was run successfully.

Code it at your discretion. Have fun with the custom table!

CUSTOM TABLE: More about it

CC_HR_JOBS: Created: 11/25/2009 10:09:05 AM Last DDL: 12/22/2009 1:06:40 PM

Columns | Indexes | Constraints | Triggers | Data | Scripts | Grants | Synonyms | Partitio

Column Name	ID	Pk	Null?	Data Type	Default
JOB_NAME	1		Y	VARCHAR2 (50 Char)	
RUNTIME	2		Y	DATE	
ATTRIBUTE1	3		Y	VARCHAR2 (150 Char)	
ATTRIBUTE2	4		Y	VARCHAR2 (150 Char)	
ATTRIBUTE3	5		Y	VARCHAR2 (150 Char)	
ATTRIBUTE4	6		Y	VARCHAR2 (150 Char)	
ATTRIBUTE5	7		Y	VARCHAR2 (150 Char)	
ATTRIBUTE6	8		Y	VARCHAR2 (150 Char)	
ATTRIBUTE7	9		Y	VARCHAR2 (150 Char)	
ATTRIBUTE8	10		Y	VARCHAR2 (150 Char)	
ATTRIBUTE9	11		Y	VARCHAR2 (150 Char)	
ATTRIBUTE10	12		Y	VARCHAR2 (150 Char)	

☑ Editable Table Comments

This table is updated by custom HR processes. Timestamp is used
by the same process for input into the next runtime. Attribute fields can be used during
runtime of the same process.

• Borrowed from Oracle
Application logic

• Can use as a
temporary holding tank
for records you need to
investigate during or
after the process

•Can delete what you
don't need, save only run
date/timestamp info.

…and still more about the CUSTOM Table…

JOB_NAME	RUNTIME	ATTRIBUTE1	ATTRIBUTE2	ATTRIBUTE3	ATTRIBUTE4	ATTRIBUTE5
PYPSEAR	1/14/2010 10:23:33 AM	E	0910	03-SEP-09	19-MAY-10	0
PYPSEAR	1/6/2010 11:23:02 AM	E	0910	03-SEP-09	19-MAY-10	0
PYPSEAR	1/4/2010 12:21:15 PM	E	0910	03-SEP-09	19-MAY-10	0
PYPSEAR	1/4/2010 11:09:05 AM	E	0910	03-SEP-09	19-MAY-10	0
PYPSEAR	12/22/2009 3:11:06 PM	E	0910	03-SEP-09	19-MAY-10	0
PYPSEAR	11/24/2009 12:23:47 PM	U	0910	03-SEP-09	19-MAY-10	2
PYPSEAR	11/23/2009 3:59:44 PM	U	0910	03-SEP-09	19-MAY-10	2

Job Name, Runtime, Successful Update Mode, AIDY, AIDY START DATE, AIDY
END DATE, NUMBER OF NEW EMPL RECORDS.

The use of a custom table is solely up to the discretion of the developer.

PRIMARY OR SECONDARY Contract: Solution

```
SELECT nbrbjob_pidm, nbrbjob_posn, nbrbjob_suff
     , nbrbjob_begin_date, nbrbjob_end_date
     , nbrbjob_contract_type
  FROM nbrbjob
 WHERE nbrbjob_pidm = v_pidm
   AND (nbrbjob_end_date >= sysdate
    OR nbrbjob_end_date is null
       )
   AND nbrbjob_contract_type = 'P';
- find prim cur find prim%ROWTYPE:
```

The Student could already have a Primary Job set up in the system. The
program does not care when it was set up. Just that it exists. It could have
been created in the prior processed record. Result: If exists, insert the
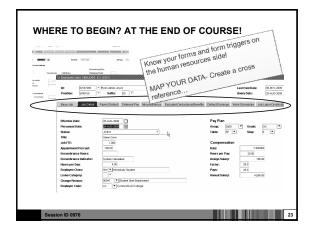Base Job record as contract_type = secondary.

Fetching the FOAPAL: Solution

```
                        -- Created some redundancy in this cursor due to
/* Formatted on 2009/06/26 11:59 (Formatter Plus v4.8.8) */
  SELECT   nbbposn_title, nbbposn_posn, nbbposn_ecls_code, nbbpos
           nbbposn_sgrp_code,
           SUBSTR (RTRIM (nbbposn_title),
                      LENGTH (RTRIM (nbbposn_title)) - 5,
                      6
                   ) orgn,
           nbrplbd_orgn_code, nbrplbd_percent, nbrplbd_fund_code,
           nbrplbd_acct_code, nbrplbd_prog_code, nbrplbd_actv_cod
           nbrplbd_locn_code, MAX (nbrplbd_activity_date)
    FROM   nbbposn, nbrplbd
   WHERE   nbbposn_posn = v_posn
     AND   nbbposn_posn = nbrplbd_posn
     AND   nbrplbd_chud_code = 'FY' || π_aidyear
```

Fetch the FOAPAL from NBRPLBD .

19

REPORTING- warnings for end user (don't fail the job)

```
CURSOR cur_biochek
IS
   select spbpers_ssn, spbpers_birth_date,spbpers_citz_code, spbpers_ethn_code
   from saturn.spbpers
   where spbpers_pidm = v_pidm;
rec_biochek  cur_biochek%ROWTYPE;



    EN cur_biochek;
    TCH cur_biochek INTO rec_biochek;

    rec_biochek.spbpers_ssn  IS NULL
         THEN
              UTL_FILE.PUT_LINE(v_logfhandle.chr(10)||'ID '||rec_new.spriden_id||CHR(09)||rec_n
              ||chr(09)||'**WARNING** SS# is missing in Banner.');
    SIF rec_biochek.spbpers_birth_date IS NULL
         THEN
              UTL_FILE.PUT_LINE(v_logfhandle.chr(10)||'ID '||rec_new.spriden_id||CHR(09)||rec_n
              ||chr(09)||'**WARNING** BIRTHDATE is missing in Banner.');
    SIF rec_biochek.spbpers_citz_code  IS NULL
         THEN
              UTL_FILE.PUT_LINE(v_logfhandle.chr(10)||'ID '||rec_new.spriden_id||CHR(09)||rec_new
              ||chr(09)||'**WARNING** CITIZENSHIP CODE is missing in Banner.');
    SIF rec_biochek.spbpers_ethn_code  IS NULL
         THEN
              UTL_FILE.PUT_LINE(v_logfhandle.chr(10)||'ID '||rec_new.spriden_id||CHR(09)||rec_n
              ||chr(09)||'**WARNING** ETHNICITY CODE is missing in Banner.');
```

20

EXCEPTIONS – TRAPPING ERRORS

```
ERROR!

ROLLBACK ISSUED ON ID 00236461.
Program failed on Checkpoint: 12d. Inse
ORA-00001: unique constraint (POSNCTL.P

SEAR AND JOB INFO:
NJASEAR RECORD for ID: 00236461
JOB TITLE:      LTCHAS
ORGN:    202780
POSN:    SW0028
SUFF:    00
AUTH START DATE:          03-SEP-09
AUTH END DATE:  03-JAN-10
PAY START DATE: 03-SEP-09
PAY END DATE:   03-JAN-10
ACTIVITY DATE:  12-JAN-10
FUND:    FFWS
RATE:    8.45          82.84
AUTH HOURS:
STIPEND AMT:
NJASEAR USER    MLOP

NBAJOBS RECORD FOR 00236461
POSN:    SW0028
SUFF:    00
CONTRACT TYPE:  5
BEGIN DATE:     03-SEP-09
END DATE:       23-DEC-09
MAX EFFECTIVE DATE:      23-DEC-09
REG RATE:       8.45
JOB STATUS:     T
```

One or more failed records do NOT fatal error the job!

Nice to have: Give the user a snapshot of the JOB RECORD if it exists.

Problem easily detected: Job FinAid extended job. Job already existed. HR to change the end date.

21

CHALLENGES & SOLUTIONS

- **Jobs that are already current- SEA changes**
  - —**Handle it through outer joins**
- **Student Jobs Terminate- Need a Termination Record**
  - —**For every new job, insert a new future effective dated record where status = terminated**
- **Students missing an employee requirement**
  - —**Insert the new Job for the Student, BUT give the HR owner a warning that a biological requirement is missing.**
    - • **The HR functional owner already knows that the PEAEMPL or NBAJOBS FORMS may throw an error due to missing bio criteria.**

WHERE TO BEGIN? AT THE END OF COURSE!

Know your forms and form triggers on the human resources side!

MAP YOUR DATA- Create a cross reference...

REPORT OUTPUT

CONSIDERATIONS....

Sample Log File…

- **Give your user everything they need to know about the job runs...**

```
pypsear_781508.log - Notepad
File  Edit  Format  View  Help

PYPSEAR v8.0
Human Resources Update and Maintenance of Student Jobs from RJRSEAR(FinA
Connecticut College Custom Program
Database Instance: CONN
**********************************************************************
Run Date: 1-OCT-2009 04:06:42 PM
Job Submission Number: 781508

Userid: MVONA
User Param Mode: u
User Param Aid Year: 0910
Aid Year Start Date: 03-SEP-09
Aid Year    End Date: 19-MAY-10

NOTE: First time job has been run for aidyear,0910.

PYPSEAR is in UPDATE MODE for AidYear 0910 and will seek all new SEAs
======================================================================
```

Rollback problem written to Log File ~Job does not fatal error~

- **Give your user enough information so that they can follow up w/o YOU!**

Backdating in FinAid causes problems downstream in HR. Trap it and spit it out in the .log

```
PYPSEAR is in UPDATE MODE for AidYea
============================================
ERROR!
ROLLBACK ISSUED ON ID 00000010         12d. I
Program failed on checkpoint: (POSNCT
ORA-00001: unique constraint (

SFAR AND JOB INFO:
RJASEAR RECORD for ID: 000000
JOB TITLE:            1BARIS
ORGN:                300034
POSN:                SW0179
SUFF:                00
AUTH START DATE:     03-SEP-09
AUTH END DATE:       19-MAY-10
PAY START DATE:      03-SEP-09
PAY END DATE:        19-MAY-10
ACTIVITY DATE:       04-FEB-1
FUND:                FFWS
RATE:                8
AUTH HOURS:          56.25
RJASEAR USER:        MLOP

NBAJOBS RECORD FOR 00000010
POSN:             SW0179
SUFF:             00
CONTRACT TYPE:    S
BEGIN DATE:       30-SEP-09
END DATE:         19-MAY-10
MAX EFFECTIVE DATE: 23-DEC-09
REG RATE:         8
JOB STATUS:       T
```

Biographic problems written to .log file

- **I allowed the job to create the empl, job and history records. The report tells the HR Lead what is missing…**

```
pypsear_778746.log - Notepad
File  Edit  Format  View  Help

Userid: MVONA
User Param Mode: A
User Param Aid Year: 0910
Aid Year Start Date: 03-SEP-09
Aid Year    End Date: 19-MAY-10

NOTE: First time job has been run for aidyear,0910.
PYPSEAR will AUDIT changes from FinAid for beginning of FY0910. No updates will
00278587 Armstrong, Brittany Logan PEAEMPL will be created when in Update mode.
ID 00000099     Ball, Lucille   **WA...  is missing in Banner.
ID 00000088     Arnaz ...      ...date is missing in Banner.
ID 00000093 ...              ...Ethnicity is missing in Banner.
                             ...NING** MA Address is missing in Banner.
```

NOTE that the job has two modes: Audit and Update.

The List File (jobName_oneup.lis)

LAST THOUGHTS…

- **CREATE A CROSS REF- MAP YOUR DATA!**

- **HR/PAYROLL upgrades & patches may break your job**

- **Know your functional owner**

- **Break down silos. Get the departments working as one team.**

- **Web Time Entry in Self Service? Know the impact of timing!**

➢ Test..Test..Test..Test..test..test ….

FINANCIAL AID STUDENT AUTHORIZATIONS TO PAYROLL - POSITION CONTROL MODULE UPDATES:

QUESTIONS ??
COMMENTS?
THOUGHTS?

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Thank You!

Mary Vona
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Please complete the online class evaluation form
Session ID 0976