

# THE UCSD NEGATIVE CHARGES TOOL

FOCUS ON EFFICIENCY

*The new negative charges tool at UCSD removes many of the errors and the hands-on labor of reversing financial transactions that plagued the previously inefficient process of reversing charges. Today, the newly developed web application processes reverse charges more accurately and efficiently, increases data reliability, and the university benefits from a cost savings.*

The UCSD Negative Charges Tool is a web application that allows departments at UCSD to reverse charges on accounts. The accounts receivables (AR) for the university are processed in the AR module of the university's Integrated Student Information System (ISIS). The system processes approximately 2 million charge transactions annually. Many of the transactions will be reversed as required.

The constraints of the system resulted in reversing transactions that were entered in error and could not be reconciled with the original transaction in ISIS. These errant charges were inefficient and expensive to resolve. The goal was to develop a tool that charging departments may use to reverse charges accurately.

The new design is an intuitive web application that interacts with ISIS and processes the negative/reversing charge accurately. The tool was developed utilizing Java 1.8, Spring, Hibernate, HTML, CSS, JQuery and AJAX. The user interface was developed using HTML and CSS; the backend uses Spring and Hibernate.

The application pulls data from the ISIS AR tables and calls a batch job that updates the data in ISIS. The application is completely role based, as it determines the user's charge reversal permissions from his or her user ID. The solution design allows the user to enter the account ID into the tool, and then the service efficiently scans the account to correctly identify the original charge that needs to be reversed. The service reverses all or part of the charge and clears up any affected payments.

## MILESTONES

Aug-Sept  
2016

- Student Business Services project team identifies key failure points and business impact in processing negative charges at UCSD.

Sept  
2016

- A white paper describing the problem, its business impact and a solution is produced and submitted for approval.

Oct  
2016

- Funding is granted for the development of a solution, the UCSD Negative Charges Tool.

Nov 2016 -  
Mar 2018

- Several departments collaborate to code, develop, test and retest the tool.

Apr  
2018

- UCSD Negative Charge tool is put into production.

## QUANTIFICATION AND RESULTS

The UCSD Negative Charges Tool has been successfully deployed to a few of the top campus departments that process negative charges.

The number of errant/unreconciled negative charges for departments utilizing the tool has dropped by approximately 90 percent.

The only errant negative charges that still occur come from users in departments not making use of the tool.

Once fully deployed, the expectation is total eradication of errant/unreconciled negative charges.

## IMPACT AND BENEFITS

- The previous manual process within the accounts receivables system was very time consuming, cumbersome and often resulted in the entry of errant data, such as incorrect terms and amounts.
- At times, Student Business Services would have to handle as many as 100 errant negative charges per day. The new tool provides an easy-to-use and reliable system allowing the department's users to reverse their charges without error.
- The departments, especially Student Business Services, has experienced a reduction in errant charges to near zero for the departments that are using the tool. This results in a large increase in efficiency and data reliability, as well as a significant reduction in cost to the university and charging departments.

## LESSONS LEARNED

1

More in-person communications during development and testing would have delivered the tool to users faster and more efficiently. A lot of the communications during the development and testing for this tool occurred via remote teleconferences and e-mail exchanges. Despite the hype of modern technology, this type of communication is less efficient and effective.

2

Full implementation of the tool to all departments has been impacted by a need for training for users and setting up permissions for using the tool. A video teaching tool earlier in the rollout and a more streamlined method for establishing user permissions would've been beneficial.

## PROJECT TEAM

Student Business Services collaborated closely with developers on the Information Technology Services team as well as with representatives from some of the primary charging departments.

### STUDENT FINANCIAL SOLUTIONS TEAM

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### STUDENT HEALTH SERVICES

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### UCSD REGISTRAR'S OFFICE

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**First screen:** The user sees the start page for the Negative Charge Tool:

**Second screen:** The user enters the account ID:

**Third screen:** The user enters code for the charge to be reversed or date range for charges:

**Fourth screen:** The user sees a list of applicable charges that can be reversed:

SBS Account Information

PID : A11431273  
Student Name : Abonasser, Leena

Display 10 records

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		A100 TP	UCSD STATEMENT LATE FEE	320	2018-05-18	25.00	25.00		Enter Reversal
ABONASSER, LEENA		TPSSFP	Parking S Permit Full Payment	300	2017-09-06	61.00	0.00	61.00	Enter Reversal
ABONASSER, LEENA		BURDCR	CC REFUND ON PYMT - 370180381	311	2017-10-13	110.00	0.00	110.00	Enter Reversal
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	Enter Reversal

Showing 10 of 4 entries

Instructions:  
Select above transactions to reverse. Modify, reduce the charge amount, enter reverse amount and click "Submit" button

**Fifth screen:** Per instructions, the user selects the charge to reverse:

**NEGATIVE CHARGES** UC San Diego

SBS Account Information  
 PID : A11431273  
 Student Name : Abonasser, Leena

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2016-05-16	25.00	25.00		Enter Reversal
ABONASSER, LEENA		TPSSFP	Parking-5 Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	Enter Reversal
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186391	311	2017-10-13	110.60	0.00	110.60	Enter Reversal
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	Enter Reversal

Showing 1 to 4 of 4 entries

**Instructions:**  
 Select above transaction to reverse/moify, reduce the charge amount, enter reverse amount and click "Submit" button.

Submit

**Sixth screen:** The user sees a Confirmation Page:

**NEGATIVE CHARGES** UC San Diego

SBS Account Information  
 PID : A11431273  
 Student Name : Abonasser, Leena

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2016-05-16	25.00	25.00		Enter Reversal
ABONASSER, LEENA		TPSSFP	Parking-5 Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	Enter Reversal
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186391	311	2017-10-13	110.60	0.00	110.60	Enter Reversal
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	Enter Reversal

Showing 1 to 4 of 4 entries

**Instructions:**  
 Select above transaction to reverse/moify, reduce the charge amount, enter reverse amount and click "Submit" button.

Submit

**Seventh screen:** The user sees an Acknowledgement Page:

**NEGATIVE CHARGES** UC San Diego

SBS Account Information  
 PID : A11431273  
 Student Name : Abonasser, Leena

Full Name	Term Code	Detail Code	Detail Desc	Trans Number	Effective Date	Charge Amount	Detail Balance	Applied Amount	Reversal Amount
ABONASSER, LEENA		BURLTE	UCSD STATEMENT LATE FEE	320	2016-05-16	25.00	25.00		Enter Reversal
ABONASSER, LEENA		TPSSFP	Parking-5 Permit Full Payment	309	2017-09-06	61.00	0.00	61.00	Enter Reversal
ABONASSER, LEENA		BURCCR	CC REFUND ON PYMT - 376186391	311	2017-10-13	110.60	0.00	110.60	Enter Reversal
ABONASSER, LEENA		BURLTE	UCSD Statement Late Fee	312	2017-10-24	25.00	0.00	25.00	Enter Reversal

Showing 1 to 4 of 4 entries

**Instructions:**  
 Select above transaction to reverse/moify, reduce the charge amount, enter reverse amount and click "Submit" button.

Submit

**Eighth screen:** The user sees a Resolution Page:

**NEGATIVE CHARGES** UC San Diego

Show: 10 of 1 entries

pid	Detail Code	Charge Amount	Trans Number	Effective Date	Reversal Amount
A11431273	BURLTE	25.00	00000320	20160516	25.00

Showing 1 to 1 of 1 entries

Submit

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