

**University of California, Riverside**  
**Application for 2010 Larry L. Sautter Award**  
*University Advancement Report Gateway*

UNIVERSITY OF CALIFORNIA, RIVERSIDE



Generating Report...



| Stewardship | RCATS Stages |      |      |      |      | Results |    |    | Substantive |                             |                    |                         |                               |                        |                             |                     |       |             |                      |                   |                  |                        |   |
|-------------|--------------|------|------|------|------|---------|----|----|-------------|-----------------------------|--------------------|-------------------------|-------------------------------|------------------------|-----------------------------|---------------------|-------|-------------|----------------------|-------------------|------------------|------------------------|---|
|             | IDEN         | QUAL | CULT | SOLI | STEW | SP      | SA | SR | Total       | Email - Related to Proposal | Email Solicitation | Meeting - Proposal Sent | Meeting - Related to Proposal | Meeting - Face to Face | Phone - Related to Proposal | Phone - Substantive | Total | Direct Mail | Email Correspondence | Email Information | Email Invitation | Mailings - Information |   |
| 0           | \$0.00       | 0    | 0    | 0    | 1    | 0       | 0  | 0  | 0           | 0                           | 0                  | 0                       | 0                             | 0                      | 0                           | 0                   | 0     | 0           | 0                    | 0                 | 0                | 0                      | 0 |
| 0           | \$0.00       | 1    | 18   | 101  | 0    | 0       | 2  | 0  | 1           | 1,112                       | 269                | 15                      | 63                            | 72                     | 365                         | 266                 | 26    | 707         | 6                    | 396               | 11               | 7                      | 1 |
| 2           | \$103,500.00 | 1    | 3    | 5    | 4    | 2       | 2  | 1  | 0           | 8                           | 0                  | 0                       | 1                             | 0                      | 4                           | 0                   | 0     | 2           | 0                    | 1                 | 0                | 0                      | 0 |
| 0           | \$0.00       | 0    | 36   | 0    | 0    | 0       | 2  | 5  | 1           | 168                         | 15                 | 3                       | 6                             | 4                      | 33                          | 50                  | 8     | 127         | 0                    | 58                | 0                | 0                      | 0 |
| 0           | \$0.00       | 2    | 0    | 8    | 1    | 0       | 1  | 0  | 0           | 12                          | 5                  | 0                       | 1                             | 2                      | 3                           | 1                   | 0     | 4           | 0                    | 2                 | 0                | 0                      | 0 |
| 1           | \$10,000.00  | 0    | 9    | 1    | 0    | 1       | 0  | 0  | 0           | 21                          | 0                  | 0                       | 1                             | 0                      | 3                           | 14                  | 3     | 37          | 0                    | 22                | 0                | 0                      | 0 |
| 0           | \$0.00       | 0    | 0    | 1    | 0    | 0       | 0  | 0  | 0           | 28                          | 2                  | 1                       | 0                             | 0                      | 9                           | 15                  | 1     | 21          | 0                    | 8                 | 1                | 2                      | 0 |

**The Challenge of Timely Report Delivery**

The UCR Office of the Vice Chancellor University Advancement (VCUA) relies on the availability of timely reports in order to fulfill its advancement, fundraising, and communications related missions. The VCUA possesses expert level knowledge of Crystal Reports and the various donor databases and tables it relies on for information, but over time, their method of sending reports as email attachments became burdensome and no longer viable due to time and security concerns. In 2009, the VCUA approached Computing & Communications (C&C) for a delivery solution that would NOT require ANY NEW resources or funding and that would automate the process of a programmer / analyst writing a report in Crystal, running it on the desktop, and sending it out via e-mail.

In just a few months, C&C developed the VCUA Report Gateway using standard campus technology integrated with the UCR portal, R'Space – with no change in the way VCUA creates reports. With no significant learning curve and no incremental cost, C&C used its knowledge of web services and the Microsoft .NET Crystal Reports “wrapper” to facilitate accurate and timely report delivery (24x7) for VCUA. This solution allows any other department, unit, or campus to leverage their existing expertise and deploy reports to its users or customers.

*" Working closely together for more than a year (and even today!), the team has built, tested and deployed more than two dozen live reports designed to assist Advancement administrators and development officers in easily and accurately tracking progress of Advancement as a whole as well as progress of individual units."*

*-- Judy Lehr, Donor Research & Relations and Gift Administration*

## **University Advancement Report Gateway features:**

- Innovative use of technology resulting in timely and accurate reports in pursuit of Fundraising
- Ease of use for development officers and university executives
- Seamless integration with the UCR campus portal, R'Space
- Large time and effort savings in creating reports and making reports available in Word, Excel, PDF, Rich Text or Crystal Reports format
- Adoptable by other UCR units / organizations and other UC campuses

## **Overview:**

Everyday, development officers at the University of California, Riverside seek to increase the university's fundraising potential. Development officers need to understand donor propensity, giving levels, campaign effectiveness, pledge counts, and overall donations to the university. Obtaining this information in an easily formatted, specially designed report is essential to all development officers in their quest to solicit funding and gifts for the university. To meet this need, Computing & Communications and the Office of the Vice Chancellor for University Advancement created a one-stop-shop for generating these reports on-the-fly. The result has been a steadily growing repository of reports ranging from "Professional School Student Support" to "Four-Week Rolling Gift & Pledge Count."

To date, the University Advancement Report Gateway contains the following reports:

- Dollars by Gift Level in 000's (CAE Standard)
- Five-Year Giving - Individual vs. Organization
- Five-Year Giving by Constituent Code (CAE)
- Five-Year Giving by Donor Level (CAE)
- Five-Year Giving by Unit (CAE)
- Four Week Rolling - Gift & Pledge Count (UC Standard)
- Four Week Rolling - Gift & Pledge Dollars (UC Standard)
- Gifts of \$25K and Above (CAE Standard)
- Individual College Student Support
- Non-Professional School Student Support
- Professional Schools Student Support
- Relationship Coordinator – Proposal Action Summary
- Relationship Coordinator Solicitation Status
- Unrestricted Annual Giving (Cash) (CAE Standard)

***“In early 2009, University Advancement and Computing & Communications began a first-time collaboration. The goal was to make web-based Advancement reports available through what would be called the University Advancement Report Gateway. We envisioned that it would work like the UCRF Financial Reports.*”**

*Working closely together for more than a year (and even today!), the team has built, tested and deployed more than two dozen live reports designed to assist Advancement administrators and development officers in easily and accurately tracking progress of Advancement as a whole as well as progress of individual units. The portal is hosted on R'Space and is cooperatively maintained by Advancement and Computing & Communications staff.*

*[C&C] has been and continues to be a responsive and involved partner in this innovative venture.*

*-- Judy Lehr, Donor Research & Relations and Gift Administration*

## Project Highlights:

- Secure access to fundraising actions and results for all UCR development officers
- Web-based access to 13 reports available to all development officers 24x7
- Report data updated automatically each day from Raiser's Edge Data Warehouse
- Report presentation options: HTML, Word, Excel, PDF, Rich Text, or Crystal Report
- User Authentication via CAS and Authorization via security profiles from The Raiser's Edge
- Utilizes campus core technical competencies - native Crystal Reports expertise (University Advancement) and Oracle PL/SQL (Computing & Communications)
- Extensive user support site

## Report Generation User Experience:

Authorized users can quickly and easily generate reports by logging in and making a few simple choices. The process is as follows:

- The user logs in to the R'Space Staff Portal and follows the link for University Advancement Report Gateway.

The screenshot displays the R'Space Staff Portal interface. At the top, there is a header with the University of California, Riverside logo and a welcome message: "Welcome, Eric, Twilight Tour at the Botanic Gardens, 9/11 6:30 PM info at gardens.ucr.edu". Below the header is a navigation bar with links: Home, add homepage features, Phone Book, Feedback, Security, Acct. Report, A-Z Index, Help, Accounting, Budget, Materiel Mgt., Human Resources. The main content area is divided into several sections: Alerts (Portal Messaging), Authorized Applications (with a red box around the "University Advancement Report Gateway" link), My Announcements (Botanic Gardens Twilight Tour), My Messages (Now Viewing Unread Messages...), Riverside Weather (Fair, 84°F), and Traffic Information (map of Riverside). The "Authorized Applications" section lists various systems like UC Learning Center (LMS), Travel Planning and Expense Reporting System, Academic Personnel eFile System, Corporate Calendar System, Web-Based Email System, Emergency Notification Registration System, Encumbrance Balance Reports, Hazardous Materials Shipping, Portal Admin Tools, and At Your Service Online. The "Tools" section lists UC Learning Center (LMS) Support, Policies and Procedures, Trouble Tickets, Encumbrance Tools & Tips, Storehouse Catalog Search, and On-Line Payroll Inquiry.

- The logged-in user chooses a report to generate and enters the required report parameters.

## University Advancement Report Gateway

**Welcome!** The University Advancement Report Gateway provides access to reports regarding various aspects of philanthropic giving and activity at the University of California, Riverside. Please select a report you wish to view from the drop-down list below, enter the parameters associated with that report, select an output option, then click the "Run Report" button to generate the report.

Please note that the data used for these reports is pulled from a data warehouse that is updated nightly. Hence, information entered or updated on the day the report is pulled will not be reflected in the reports until the next day. Additionally, gift adjustments and fund updates such as funds converting to endowments, may affect the results of the same reports run at different times.

(This site is best viewed with browser tabs enabled in Internet Explorer 7/8)

[?](#) Help [Exit](#)

Select Report:

Relationship Coordinator - Proposal Action Summary Report

This report counts the number of actions made by Team Leaders during a date range defined by the user. It shows totals by action type and by Team Leader. Actions are divided into **significant** actions and **other** actions. This report excludes actions not linked to a proposal, and Team Leaders without actions during the report date range.

Output Format:

PDF

Parameters:

Start Date (mm/dd/yyyy):

05/01/2010

End Date (mm/dd/yyyy):

05/17/2010

Run Report

[i](#) More about this report

- The report is generated based on user input.

## University Advancement Report Gateway

Generating Report...



4. The report is presented in the web browser as PDF, Excel, HTML, Word, or Crystal Report format.

**Relationship Coordinator - Proposal Action Summary Report**  
Report Date: 5/1/2010 to 5/17/2010

|              | Grand Total | Substantive |                             |                         |                               |                        |                             |                     | Other Actions |                      |                   |                       |                                     |   |
|--------------|-------------|-------------|-----------------------------|-------------------------|-------------------------------|------------------------|-----------------------------|---------------------|---------------|----------------------|-------------------|-----------------------|-------------------------------------|---|
|              |             | Total       | Email - Related to Proposal | Mailing - Proposal Sent | Mailing - Related to Proposal | Meeting - Face to Face | Phone - Related to Proposal | Phone - Substantive | Total         | Email Correspondence | Email Information | Mailing - Information | Mailing - Letters of Correspondence | Relationship Coordinator Assignment Request |
| <b>Total</b> | <b>114</b>  | <b>68</b>   | 17                          | 1                       | 6                             | 29                     | 11                          | 5                   | <b>46</b>     | 11                   | 1                 | 1                     | 31                                  | 2   |
| Aldrich      | 1           | 1           | 0                           | 0                       | 1                             | 0                      | 0                           | 0                   | 0             | 0                    | 0                 | 0                     | 0                                   | 0   |
| Conrad       | 7           | 7           | 0                           | 0                       | 4                             | 2                      | 1                           | 0                   | 0             | 0                    | 0                 | 0                     | 0                                   | 0   |
| Elliott      | 1           | 1           | 0                           | 0                       | 0                             | 1                      | 0                           | 0                   | 0             | 0                    | 0                 | 0                     | 0                                   | 0   |
| Forrester    | 4           | 1           | 0                           | 0                       | 0                             | 1                      | 0                           | 0                   | 3             | 1                    | 1                 | 1                     | 0                                   | 0   |
| Hall         | 5           | 4           | 3                           | 0                       | 0                             | 0                      | 1                           | 0                   | 1             | 0                    | 0                 | 0                     | 1                                   | 0   |
| Parker       | 17          | 12          | 4                           | 0                       | 0                             | 4                      | 0                           | 4                   | 5             | 5                    | 0                 | 0                     | 0                                   | 0   |
| Preble       | 25          | 18          | 6                           | 1                       | 0                             | 9                      | 1                           | 1                   | 11            | 3                    | 0                 | 0                     | 7                                   | 1   |
| Schultz      | 2           | 2           | 0                           | 0                       | 0                             | 0                      | 2                           | 0                   | 0             | 0                    | 0                 | 0                     | 0                                   | 0   |
| Soriano      | 23          | 2           | 1                           | 0                       | 0                             | 1                      | 0                           | 0                   | 21            | 0                    | 0                 | 0                     | 21                                  | 0   |
| Tole         | 23          | 19          | 3                           | 0                       | 0                             | 10                     | 6                           | 0                   | 4             | 2                    | 0                 | 0                     | 1                                   | 1   |
| Truong       | 2           | 1           | 0                           | 0                       | 0                             | 1                      | 0                           | 0                   | 1             | 0                    | 0                 | 0                     | 1                                   | 0   |

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**User Support:**

The University Advancement Report gateway is accompanied by a user support site, providing users with information regarding:

- Best practices and preferred web browser settings (reports work in all web browsers)
- How to obtain access to the system
- How to use the report tools
- Expected report performance (i.e. expected report generation time for each report)

The support site is available at: <http://cnc.ucr.edu/vcuarg/>

## **Technology and Implementation:**

### ***Report Generation Technical Details:***

Each report available from the Report Gateway is a combination Crystal Report file, Oracle Database and PL/SQL web form, and a Windows Server-hosted Microsoft ASP.NET “wrapper.”

#### 1) Crystal Report File

The UCR Advancement staff utilizes their expertise of the Crystal Reports software to create a Crystal Report file. This file contains all of the data required to display the report at runtime. Each report file is given a name such as Five\_Year\_Giving.rpt. Each Crystal Report file is copied to a special directory on the Windows Server.

#### 2) Oracle Database and PL/SQL web form

The web-based interface (user-facing) is built on an Oracle database with Oracle’s procedural language, PL/SQL. The Oracle database drives the report gateway and holds the following:

- a. PL/SQL generated html pages and forms.

The PL/SQL generated html pages and forms display report choices to the user and also display Help pages for each report.

- b. Database tables to hold data about the reports.

The Oracle database tables contain each report name, report description, parameters, format types and help text. Report Parameters may be a) entered by the user, such as a date or date range, or b) provided as a validated list of static values for the user, such as Disbursing Units, or c) provided as a validated list of dynamic values derived from a query made to the Data Warehouse. The format types allowed for each report are stored related to each report name in the database.

When the user clicks the Run Report button, the PL/SQL form submits the form parameters for the chosen report to an ASP.net aspx file hosted on the Windows Server. This file generates a unique file name for the report and sends the filename back to a PL/SQL function in an Oracle stored procedure. (Step 4b in Figure 1 below)

The web interface then displays a “generating” page to the user while the report is being generated. During the process below, this page continually checks for the final report (stored in the Oracle database, until a report file name and success status is found.

#### 3) Microsoft ASP.NET “wrapper”

On the Windows server, a call is made to a special “wrapper” .Net library (provided by Crystal Reports vendor SAP Business Objects ®) which supports the automated execution of Crystal Reports.

A new Crystal Report Object (consisting of .NET DLL files) is created for the chosen report and opens the report file (Five\_Year\_Giving.rpt) to compile the parameters, and add the parameters to the report object. This object is granted read-only access to the Raiser’s Edge Data Warehouse.

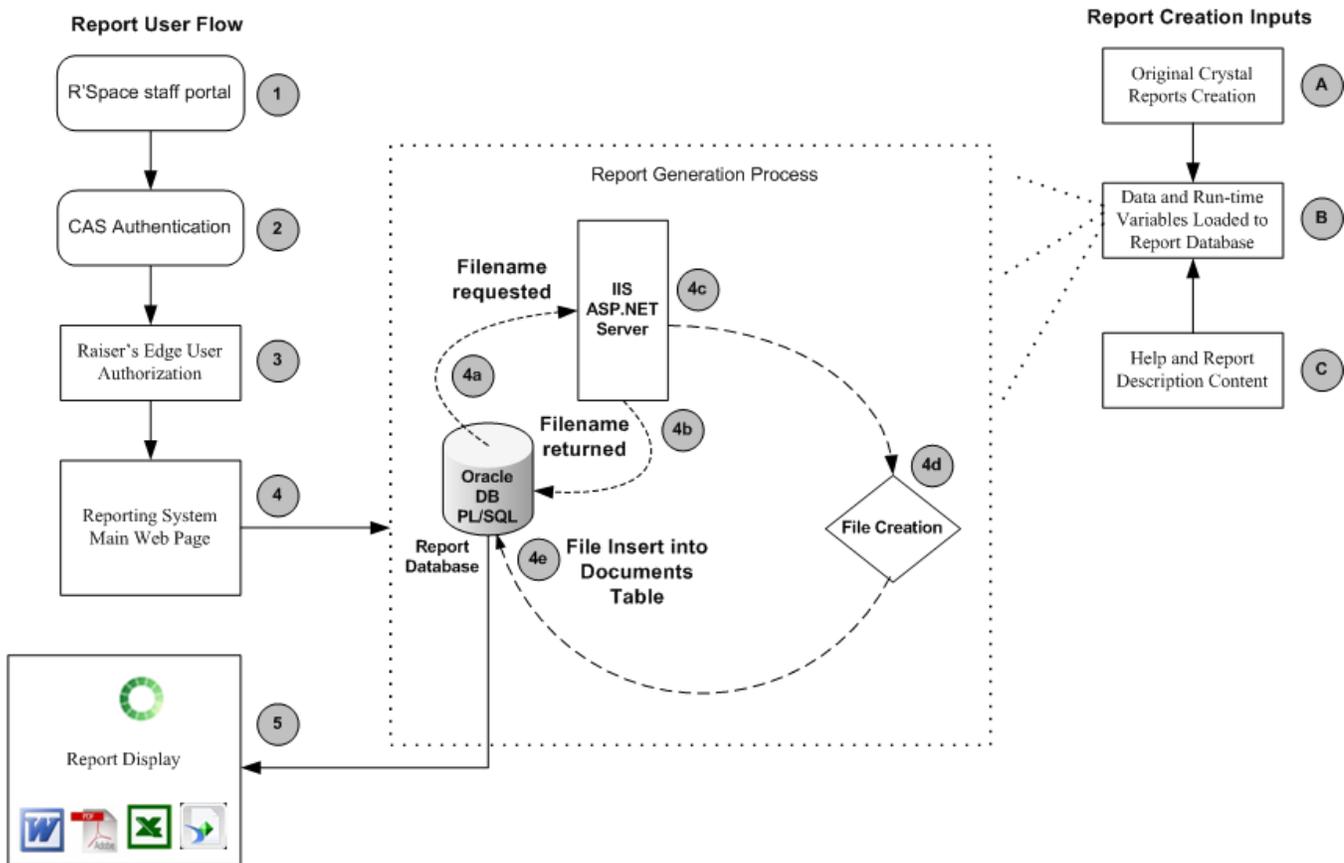
Within the DLL the “Export to Stream” function is called, which takes in the output format parameter (HTML, PDF, etc.) and the report object (report object contains the report name, and report parameters) and generates a stream, storing the final generated output to memory. (Step 4d in Figure 1 below)

The completed report is inserted into the Oracle database Documents table (via ODBC) as a byte array and the final report filename and status (completed Yes/No) is stored in the Finished\_Reports table. (Step 4e in Figure 1 below)

The “generating” page being displayed to the user then finds the final report in the Finished\_Reports table and looks in the Documents table for the final report to display.

The final report is then displayed to the user in their chosen format. (Step 5 in Figure 1 below)

**Diagram of the Report Generation Process**



**Figure 1. The report generation process, inputs and user flow.**

**Project Timeline:**

|                   |  |
|-------------------|--|
| September 2, 2009 | Project kick-off   |
| November 2, 2009  | Demonstration of Report Gateway to Key Stakeholders                  |
| December 8, 2009  | Report Gateway Testing Phase begins, training provided to test users |
| February 12, 2010 | Completion of Testing Phase, User Training                           |
| February 19, 2010 | Launch of Report Gateway to all authorized users                     |

**Project Team Members:*****Computing & Communications***

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