

## **Taking a Paper-based Effort Reporting Process into the World of Automation**

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## **Abstract**

*Florida's public universities are subject to extensive and very detailed reporting of all faculty, graduate assistant and faculty adjunct activities funded by the state.*

*Florida's Required Number of Classroom Teaching Hours for University Faculty Members, (Florida Statutes 1012.945, also known as the Twelve-Hour Law) requires that each full-time equivalent faculty member who is paid with state funds teach a minimum of 12 classroom contact hours per week or do equivalent assignments each term.*

*Another Florida requirement, the submission of an Instruction and Research file, adds more reporting detail, to include all courses taught and credit hours generated by each faculty, graduate assistant or faculty adjunct and the percentage of time in these instructional activities, as well as all non-instructional activities, such as research and public service—all at the individual employee level.*

*As a result of Florida requirements, plus the (A-21) effort reporting requirements by the federal government, Florida State University has to do extensive effort and activities reporting at the end of each semester (for exempt employees) or monthly period (for non-exempt) employees.*

## **Introduction of the Organization**

One of the nation's elite research universities, Florida State University — with the Carnegie Foundation's highest designation, Doctoral/Research University-Extensive — offers a distinctive academic environment as the oldest continuous site of higher education in Florida.

Florida State University's 15 colleges offer nearly 300 undergraduate, graduate, doctoral, professional and specialist degree programs, including medicine and law, covering a vast array of disciplines critical to society today. Enrollment at the university is roughly 40,000 students.

Florida State University's arts programs—dance, film, music and theatre—rank among the finest in the world, offering an arts education comparable to leading conservatories. Our creative writing program is consistently ranked among the nation's best and is home to the most consistently honored and published student body in the U.S.

Other programs consistently included in the top 25 public university list include physics, chemistry, statistics, ecology and evolutionary biology, meteorology, political science, psychology, sociology, criminology, information, public policy, business and law.

At the Ph.D. level, interdisciplinary programs draw on notable research faculty strengths that transcend the traditional disciplines, including neuroscience, molecular biophysics, computational science, materials science and research at the National High Magnetic Field Laboratory—the only national laboratory in the state.

## **Statement of the Problem/Initiative**

In 1991, Florida State University implemented a home grown mainframe application, known as EPAR (Exempt Personnel Activity Reporting), to be used by departments across campus for state and federal effort reporting. Departmental representatives were responsible for logging into the EPAR application and entering effort, as a breakdown of the employee's FTE, by job and funding source. Upon completion of this process, paper forms (in multiple copies) containing the effort distribution were generated by the Office of Institutional Research, and distributed to the employees/departments for (manual) certification signature.

This legacy and paper-based system had become very outdated and offered numerous avenues for process improvement. Moving the effort reporting process to a web-based application would allow faculty and staff and their supervisors to access the system and complete their tasks at any time, from anywhere in the world. A web-based solution would also provide a means for eliminating the paper trail that existed with the legacy system and allow Florida State University to utilize automated workflow to streamline the entire process, and result in a higher return rate and a much faster turn-around time for the certifications.

In the legacy system cost-sharing agreements with sponsoring agencies and the effort reporting related to these agreements was difficult to monitor centrally because cost-sharing information was kept in a separate database in the Office of Contracts and Grants. Although the Offices of Institutional Research and the Office of Contracts and Grants worked together, there was no automated way to enter the cost-sharing agreement information in the legacy effort reporting system. The lack of database compatibility made it difficult to monitor the timeliness and accuracy of cost sharing effort reporting and retroactive corrections were necessary when the reporting gaps were detected.

In the legacy system, the detailed information on courses and course sections taught was not fully integrated. A lot of this information, which is needed for state reporting and as support for the instructional portion of effort reporting was housed in a separate database.

In the legacy system, after having switched payroll systems several times in the last few years, actual salaries for the semester were not as accurate as they needed to be.

In the legacy system, certain requirements and guidelines by several of the Federal agencies were difficult to monitor, such as NIH salary caps and NSF funding guidelines. The system did not have built-in functionality to monitor the parameters.

## **Design**

Once Florida State University (with primary sponsorship by the Provost and the Vice President for Research as well as the Vice President for Finance and Administration) made the decision to move the effort reporting process into a web based solution, we began evaluating effort reporting applications designed by various vendors. All of the vendor solutions on the market today are designed to capture federal A-21 effort reporting requirements, but none contained functionality specific to the state of Florida reporting requirements applicable to Florida State University. Therefore, going into the vendor evaluation, we knew that we would have to partner with the chosen vendor to enhance their solution to include this functionality, allowing us to capture effort related to instruction and other non-sponsored activities.

After evaluating the solutions, we determined that our preference would be to purchase a solution that was developed within Oracle's PeopleSoft software development tools, and would be in essence a 'bolt on' application to Florida State's existing PeopleSoft Financials and Human Resources systems. Since Florida State has the existing PeopleSoft systems, we have the technical expertise in house to support the additional functionality as well as participate in the development of the new solution. Florida State also wanted a solution that we owned at the end of the implementation, and didn't have to rely on vendor support or a hosted application when issues arose or enhancements were needed. Housing the new effort reporting functionality within one of the existing PeopleSoft environments would allow this type of flexibility. With those preferences in mind, senior management decided to purchase CedarCrestone's ER (Effort Reporting) Toolkit. The ER Toolkit was designed to be able to be deployed within either the PeopleSoft Financials or HR systems. Florida State decided to implement it as a bolt-on within the Human Resources system, since a good portion of the data being utilized by the application resides within the HR system.

Prior to beginning the implementation of the new web-based application, CedarCrestone conducted a series of workshops with key Florida State staff to determine the requirements for capturing the data elements for state reporting. Once these requirements were defined, the scope and timeline for the project was finalized and agreed upon by everyone.

One of the many key selling points to the new solution is the ability to pull information from several different systems into one central repository that can be easily accessed by those involved in effort certification during the cycle. This includes detailed course and instructor information from the course scheduling system, project/grant details from the PeopleSoft Financials system, and employee and supervisory information (including salaries) from within the same PeopleSoft HR system. By clicking on links within the effort report, the end user has the ability to see this detailed information without leaving the report.

In addition to being used for effort reporting requirements, the ER Toolkit also contained delivered functionality that allow an institution to track grant commitments for each project team member. This commitment tracking module is integrated with the effort reporting application, in that the commitments that have been made to a sponsor are displayed on the effort report and can be used within system edits to validate the data entered by employees, to ensure that the

commitments are being met. Utilizing this functionality would fill a huge gap that existed.

## **Implementation**

In May 2008, Florida State University began a project to implement the new web-based effort reporting solution. As the vendor of the chosen solution, CedarCrestone consultants served as our implementation partner for the project. The scope of the project included the implementation of the effort certification application to be used for both exempt and non-exempt effort reporting (for both state and federal A-21 requirements) as well as the grant commitments tracking application to be used by the Sponsored Research Services group for entry and tracking of grant commitments by project.

The implementation was broken down into five main phases. The initial phase of the project was the Design Phase. During this phase, the core project team, made up of representatives from the central office departments responsible for owning and managing the system, along with ERP staff, participated in a series of interactive design sessions where all of the requirements for the system were defined and all of the business processes surrounding effort reporting and commitment tracking were evaluated and updated accordingly. In addition to core team participation in this phase, the decision was made to also form a Focus Group for the project. The Focus Group was composed of departmental representatives and deans from around 20 different departments on campus. This group was consulted heavily during the design phase to review the proposed system to ensure that the needs of the campus were being met and that the system was being designed as logically as possible for them. Including this group in the project was a tremendous asset to us, as it made the campus part of the solution.

Also during the Design phase, the Provost requested that the core project team evaluate the existing faculty Assignment of Responsibilities (AOR) process. AORs are completed once a year by faculty, along with their departmental chair and dean, and it serves as a detailed plan of what they plan to accomplish, as it relates to instruction, research and other activities during the upcoming academic year. The goal in analyzing this process was to determine if it would be possible to have it be integrated into the new effort reporting application, as the AOR outlines what the faculty plan to accomplish and effort reporting is the after the fact reporting of what they actually did accomplish. Most departmental representatives use the percentages specified on the AOR as the starting point for the faculty member's effort report. Since the AOR process is currently a decentralized process across campus, the team requested department chairs complete a survey and provide sample AORs to us in order to gain a better understanding of the similarities and differences in the process across campus and determine how feasible it would be to create a centralized web-based AOR application as part of this new system. The analysis proved that it would be feasible to build an AOR application within the new system and doing so would not only allow for integration between the two processes as hoped, but could also serve to provide better controls as it relates to grant commitments in addition to streamlining the entire AOR process. The decision was made to move forward with this initiative, but as an additional phase of the project, after the go-live of the effort reporting and grant commitments functionality.

The second phase of the project was the Development Phase. Once the overall design of the application was complete, the technical staff began the development of the additional requirements/enhancements to the delivered core CedarCrestone ER Toolkit. These additional

requirements include the functionality to allow entry of effort on Instruction and Non-Sponsored activities, development of interfaces to gather all inbound data requirements for the system, required reports, and workflow, which includes an escalation process to an employee's supervisor after 7 days of no activity (certification), the creation of an alternate workflow path for (graduate assistant and adjunct faculty that have no sponsored funding) that pre-populates their effort reports and eliminates the need for manual certification, and the generation of outbound data files that must be sent to the state for analysis. In addition to technical development, configuration of the system by the functional resources also occurred during this phase.

Once key components of the system had been completed, the Testing Phase of the project began. Both the core team and the focus group members participated in testing cycles during this phase of the project. Upon the completion of testing, the core team began the development of training materials for both the departmental representatives responsible for managing the effort certification process as well as the faculty involved in certifying their effort. Specific training sessions were offered for both groups prior to the go-live of the new system.

Prior to going live with the new module, Florida State wanted to come up with a catchy yet relevant name for the new system, to aid in differentiating it from the old legacy system. In order to ensure that the name reflected the three main components of the system – effort reporting, grant commitment tracking and faculty AORs (future phase), the decision was made to name the new module FACET – Faculty Assignments, Commitments and Effort certification Tracking.

The go-live of the new module occurred in May 2009. The initial go-live included the rollout of the grants commitment tracking application and effort certification for the Exempt population. The first Exempt effort cycle to be certified within FACET was Fall 2008 (Academic Year 2009). Once live, the core team began offering drop in sessions for the departmental representatives to aid them in getting started with effort reporting in the system.

Now that the system is live and been utilized for a couple of effort certification cycles, the core team continues to work with the focus group and key campus representatives to obtain feedback on the usability of the system and issues they or the faculty may be having in adapting to a new system. The team members responsible for the system have been collecting the feedback and prioritizing the enhancement requests to be implemented.

## **Benefits**

There are numerous benefits to be gleaned from the rollout of the FACET web-based module. The ability for departmental representatives, faculty and supervisors to access the system for effort certification 24/7 from anywhere in the world is an incredible leap from the legacy mainframe and paper based system. This flexibility along with the automated workflow process associated with the effort certification (routing from the departmental representative to the faculty member and then back to the representative for finalization) and the elimination of paper forms has served to greatly streamline the entire process and resulted in much faster and higher compliance rates among the departments.

In addition to streamlining the overall process, the automated workflow within FACET has also aided in facilitating communications amongst everyone involved in the process. The email notifications that are generated from FACET as effort reports progress through the approval process help to notify the appropriate person that a report has entered their queue, requiring action. There is also an escalation process within the workflow process that results in an effort report being escalated up to the faculty member's supervisor if the faculty member hasn't taken action on the report within 7 days of it entering their queue. The faculty member receives email notifications from the system warning them that this will occur prior to and upon the escalation. Additionally, the creation of the alternate workflow path for the reports meeting the criteria (graduate assistants and adjunct faculty with no sponsored funding) has also served to save a lot of time for the departmental representatives during the effort reporting cycle. The workflow is also very beneficial for the central staff responsible for FACET, allowing them to easily tell at which step each reporting is within the approval process.

From an administrative standpoint, the central offices responsible for managing the effort process have many new tools at their disposal with the new module that allow them to more effectively manage the system. They have numerous reports and queries that allow them to track stats on where the reports are within the cycle, details surrounding reports with issues/errors, etc. The elimination of the paper report requirement has also allowed them to stop pushing paper and focus more on analyzing the data and managing the process.

A great additional feature of FACET is that from within the one application, end users can access all of the detailed information that feeds into the effort report within the one system, utilizing links from the effort report itself. This information includes detailed course data, employee data, funding data, grant information and detailed definitions of the activities appearing on the page for which they have to break down effort. With the legacy system, the end user would have to log into separate systems to view each of these types of information. By having all of this information at their fingertips, the new system has also brought several data issues to light that could not have been discovered in the past. Now, everyone is clearly able to see the data issues and work to be proactive in clearing up the issues prior to effort certification in order to ensure a smoother reporting cycle.

The Sponsored Research staff has also seen great improvements in their grant commitment tracking capabilities. Now that they are able to track this information online, utilize workflow within the process, and define edits against these commitments over on the effort report, it will

be much easier for them to ensure that overall commitments to sponsors and A-21 requirements are being met.

## **Retrospect**

Having gone thru a couple of Exempt effort certification cycles in the new FACET module (Fall 2008 and Spring 2009), there are certainly lessons to be learned. There are two main areas in which we've experienced the majority of our issues with FACET, usability issues and challenges with the workflow process.

As mentioned above, a Focus Group from across campus was pulled together for the project and utilized to ensure they were satisfied with the design, involved in key decisions regarding the new module, tested the application, etc. But until the system is actually live, it can be difficult to truly determine where people will have trouble understanding what do to within the application. The faculty members who are getting into FACET for effort certification are not regular users of Florida State's PeopleSoft Financials and Human Resources systems, whereas the project team and departmental representatives involved in the process are. It has become clear that there are some small usability features, such as labels on fields, descriptions on what icons do on the page, understanding the sequencing to completion, etc., that were taken for granted. These are easy issues to work thru and the team has begun collecting this type of feedback from key campus representatives, prioritizing them and enhancing the system to make it easier and more intuitive for the faculty.

The other biggest challenge we've had with the rollout of the new module is the automation of the certification process that was paper based but is now workflow based. When defining a system that requires logic to route reports from one level to the next utilizing existing data elements in the system (such as the employee's department or supervisor), it is critical for that data to be accurate. There was a big assumption on the project team's part that the supervisory data within the Human Resources system was up to date. This information is a driver in directing which reports a supervisor will be able to view within FACET as well as to whom an effort report will escalate if the employee does not take action to certify it within 7 days of it appearing in his/her queue. Once FACET was live, it was quickly determined that a lot of this type of data had become stale or incorrect within the HR system, resulting in incorrect routings of reports or reports being generated for employees who had actually terminated. As a result, the team is working with the departments to aid them in determining where bad data exists and cleaning it up, as well as improving business processes to try and ensure that the data conditions don't exist to begin with.