Residential Internship
Kennedy Space Center
Business System Branch Abilities, Capabilities, and Services Web Page
Cortés-Peña, Aida Yoguely
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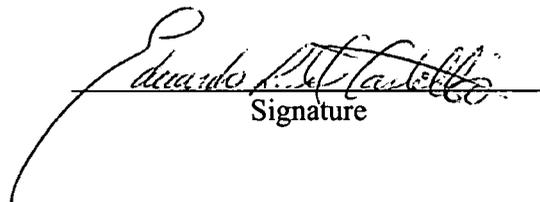
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Business Systems Branch Abilities, Capabilities, and Services Web Page
NASA/INSPIRE
Kennedy Space Center
Eduardo Lopez del Castillo
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During the INSPIRE summer internship I acted as the Business Systems Branch Capability Owner for the Kennedy Web-based Initiative for Communicating Capabilities System (KWICC), with the responsibility of creating a portal that describes the services provided by this Branch. This project will help others achieve a clear view of the services that the Business System Branch provides to NASA and the Kennedy Space Center. After collecting the data through the interviews with subject matter experts and the literature in Business World and other web sites I identified discrepancies, made the necessary corrections to the sites and placed the information from the report into the KWICC web page.

My first task for the first week was to learn how to create web pages in the KWICC system, this was achieved through the online training tutorials and the help guide. The second task was to understand what the Business System Branch does for NASA by investigating the Internal Web Portal, KNPR 1470.1 (Kennedy NASA Procedural Requirement), reviewing online literature and documents. I also used Tech Doc and Business World which are two handy tools to review literature. Business World is the authoritative information source for Kennedy Space Center Business Systems Branch and it serves as a web portal to access KSC's Business Management System information. Tech Doc is a Web-based Document and Search Management System that provides: document security, access controls, history tracking, electronic notification of events, reporting capabilities, revision control, release, distribution, search, retrieval, and watermarked PDF versions of released documents. The information online was very vague, incomplete, not current, and discordant in relation to the other web sites. Updates and corrections were needed in the point of contacts, job titles, document references, functional area listings, grammar, services, responsibilities, concepts, sentences which could develop miss-interpretations and information that had to be removed from the location due to the objectivity of the website, and clearly showed that many changes needed to be made. On Friday, I attended the BEST Barbeque Intern Social event and got to meet other interns with similar goals and aspirations.

On the second week, I began scheduling meetings with each subject matter expert. During the interviews I collected information about their services, responsibilities and I also went over the information found in the Internal Web Portal, KSC Business World and KNPR 1470.1 to get inputs on any updates, additions, and corrections they recommended. Every Tuesday, our office holds a staff meeting in which the supervisor reports what is going on Kennedy Space Center and then each one of us explains what we have worked on last week and what we plan to work on this week. Then I created an Excel spread sheet that displayed all the different titles given for one job at different websites and presented it to my mentor, he liked and provided some recommended minor format changes to display the information in categories that would help identify discrepancies and facilitate the corrections. He recommended for me to create a report with a four column table which would include Job Title, Job Description, corrected Job Description, obtained after the interviews, and status whether it needed

modification or the information was current. The following day I went to two meetings, the first was with my mentor who is the Business System Documentation Manager and is responsible for the development, performance and control of an integrated documentation system that meets the requirements of the NASA Management System Policy. The second was with the Process Modeling Manager, who manages the development of the process models and processes used to implement requirements. The following day I had a meeting with the Continual Improvement Specialist whose responsibility is to monitor activity and advise senior management of progress and accomplishments, and additionally manage the Opportunities for Improvement System. Apart from work, we saw the LCROSS/LRO launch, attended an IT security training and an enrichment activity entitled "Navy Seal Rescue Story" by Colonel Macrander Commander 920th Rescue Wing.

On the third week, I had various meetings. One was with the Audit Liaison Representative, who maintains processes that ensure prompt and proper management decisions and implementation of Government Accountability Office (GAO) and Office of Inspector General (OIG) audit recommendations. Later that day I had a meeting with the Directives Manager who manages the process for the review, release, and cancellation of directives documentation. Later I had a meeting with the Business System Manager who manages the control, performance and continual improvements of the KSC Business Management System (BMS) to ensure that it meets the requirements of the NASA Management System Policy. I presented my outlined structure for the KWICC website to my mentor; he liked it very much, and told me that I had to write a Kennedy Technical Instruction (KTI) that will state the responsibilities and services of each functional area of the branch. I interviewed the Supervisor of the Business System Branch and we discussed the changes I recommended for Business World and for the job titles. He made some suggestions and approved. After that the previous Business System Manager was visiting the office and was very helpful to point me out how his job was done. The following day I had a meeting with the Audit Manager, who assesses the effectiveness of the KSC Business Management System through internal audits and Assessments. Also I got the opportunity to interview last year's Metrics Manager from whom I learned that this person used to provide expert advice, guidance and team facilitation for the development of metrics used to track progress toward strategic objectives. My mentor thought it was a good idea for me to work hands-on developing a metric to fully understand what a Metrics Manager does. Then on Friday afternoon we went to the Intern Social Event to gather and watch the launch of the GOES (Geostationary Operational Environmental Satellite) weather satellite on a Delta Rocket.

On the fourth week, I had just a few functional areas of the office to interview. I met with last year's Audit Manager and discussed the information I had gathered with the current Audit Manager. As I was meeting the experts I documented the results of the interviews and literature search in a report that integrated the data found in multiple places. The report identified multiple sites where the same information is provided and identified discrepancies in the information provided at the different sites. By the fourth week I completed the report and proceeded to conduct a review with subject matter experts to verify the integrity of the information and have their final check and approval. The office had a internal audit closing meeting with the head of Center Operation (TA) and so we were invited to come. It was an amazing experience in which we talked about the findings during the audit.

On the fifth week, we filmed my vodcast, which is a video interview with our mentor. We filmed the scenes at amazing sights around Kennedy Space Center such as the VAB (Vehicle

Assembly Building), OPF (Orbiter Processing Facility), NASA Press Site next to the countdown clock, Banana Creek shuttle viewing site and the Saturn V museum. In order to understand more thoroughly the functions of a Documentation Manager, my mentor and I worked together on loading files into TechDoc and releasing documents. He maintains a library of KSC's signed original Processes and Technical Instructions which are crucial for the operation of NASA and its missions. This week I showed my report and KTI to my mentor. In order to easily maintain the information about the Business Systems Branch, we decided to place a brief description of the services and responsibilities that are provided then a link to the KTI in every website. The KTI contains an extensive detailed description which can be modified by the office in any moment without having to contact the administrators of any site. Also we found that the Internal Web Portal had definition of terms rather than services provided, so we placed those terms in appendixes and other documents where it truly belonged. On Friday we had lunch with INSPIRE tier 1 students, the next generation of explorers. I was very excited to tell them about my summer experience and NASA. When I returned to the office my supervisor gave the co-intern and I a presentation about "Engineering as a Profession".

The sixth week began with an enrichment activity on "How to be a good protégé". On Wednesday afternoon I saw the STS-127 launch, it was an amazing, unique, and breathtaking experience. After the weekly staff meeting I gathered to speak with my mentor and the supervisor about anything they would like to add to the KWICC. On Thursday we went to the Apollo 40th Anniversary, where we saw many of the astronauts and engineers who contributed to the Apollo missions. The tool i-Grafx used by the office had been updated and the new version had an issue which I was assigned to solve. The issue involved a hyperlink icon appearing during the conversion process from i-Grafx to pdf. A software change affects documents such as KTI's, so I updated an instruction on how to install i-Grafx2007 and another instruction on how to eliminate the hyperlink icon when converting i-Grafx files into pdf files.

On the seventh week I made the finishing touches to the KWICC page by placing the hyperlinks to Kennedy Directive Policies (KDP), NASA Policy Directives (NPD), Kennedy NASA Procedural Requirements (KNPR), Process Models, Framework, TechDoc and Business World. We decided to change the outline structure of the page to "Process Development Analysis and Management" in order to display more of a technical capability of Kennedy Space Center. I made an introduction to the webpage and placed the services and success stories there. I attended another enrichment activity about the "Google Lunar X prize". Then we had a Digital Learning Network (DLN) session and got to speak with students interning at other NASA Centers and ask them questions about their projects. Once I finished spell checking the webpage I uploaded the "Process Development Analysis and Management" page and placed a link on the KWICC index page to be able to access it. My mentor congratulated me for excelling at successfully finishing my summer project. My mentor made arrangements for the co-intern and I to see the parts of the Constellation project. So on Thursday afternoon we went to the VAB and saw the Ares I –X rocket. Also we went to the OPF 3 were we saw the Discovery Space Shuttle being prepared for rollout to the VAB for mission STS-128. On Friday the Business Systems Branch Supervisor toured us around the Space Station Processing Facility (SSPF) were I got to see the modules and nodes that were going to be launched in the last couple of space shuttle missions. I went to a meeting with an education specialist who gave the co-intern and me orientation about NASA programs and internships. And last, I showed my mentor how to maintain the KWICC website throughout the years to come.

In conclusion the NASA INSPIRE program has been a stupendous, out of this world experience. I am proud to say that I have contributed to NASA as well as NASA has helped me to grow in the STEM fields. While working on my project I got to expand my knowledge on the organization and the grand importance of the Business Systems Branch. I am now more than ever motivated to continue my studies in Aerospace Engineering and work for NASA. Also being able to see up close a shuttle launch has been a spectacular experience. I want to especially thank my mentor Eduardo Lopez del Castillo for his guidance and support throughout the summer internship. I also thank everyone in my office: Rey Diaz, Donna Lozaw, Delia Markham, Jim Lichtenthal, Cathy Parker, Rebecca Sharek, Kenneth Young, and Cheri Wynn. Special thanks to my physics teacher Elba Sepúlveda who informed me about this outstanding program and helped me throughout the process. Thanks to all those who made this program possible: Jim Gerard, Priscilla Moore and many others. I enjoyed the work I did this summer and aspire to return as an intern next year to gain knowledge and help NASA achieve its missions.