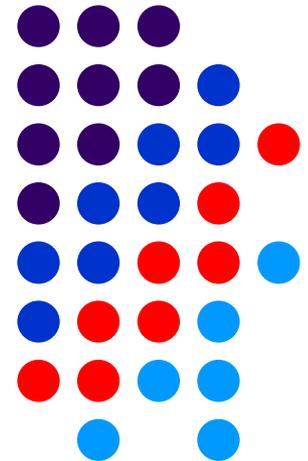
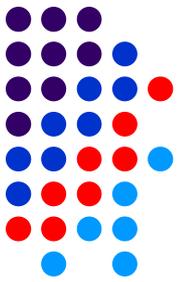


STRATEGIES FOR DEVELOPING A **HOME COURT** ADVANTAGE FOR SYSTEM Z RECRUITERS

Packy Laverty, Robert Morris University
Christine Laverty, CSTC of USA
John Turchek, Robert Morris University

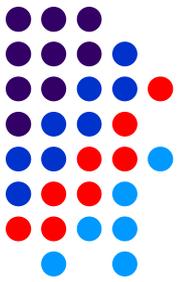


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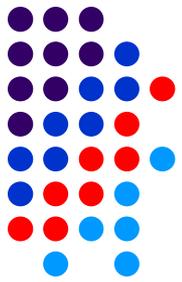


- ◆ **Expected retirements and attrition of System z professionals, and the introduction of new System z technologies will increase the shortage of world-wide System z skills professionals to two million over the next decade.**
- ◆ **The Journal of Education Statistics (United States) has estimated that the number of CS/IS&IT graduates is vary between 50,000 and 70,000 per year.**

Background

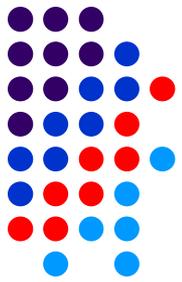


- ◆ **A recent PEW 2015 research study of expected lifetime salary for all college graduates between 2008 and 2014, estimated that more than 57% of these graduates would be unable to pay off their student loans during their careers.**
- ◆ **The Journal of Education Statistics (United States) has estimated that the number of CS/IS&IT graduates is vary between 50,000 and 70,000 per year.**



Challenges Facing System z Entry-Level Recruiters are Complex

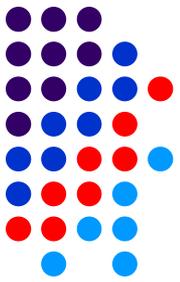
- ◆ Based on interviews with System z professionals, recruiters and faculty the challenges facing System z entry-level recruiters are complex **and extend beyond the introduction of System z skills within the curriculum.**
- ◆ **The demand for STEM graduates and System z skills have increased, while the supply of qualified candidates has decreased.**
- ◆ **The career expectations of STEM graduates have changed, while recruiters compete for a decreasing pool of qualified candidates over a wider range of technology career skills.**



Challenges Facing System z Entry-Level Recruiters are Complex

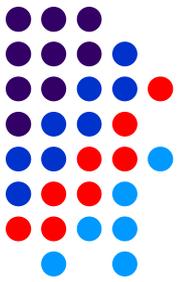
- 1) Understanding the Career Expectations of CS/IS/IT Graduates.
- 2) Understanding the academic constraints of Higher Education, STEM Curriculum, and CS/IS&IT Faculty.
- 3) Developing a System z Home Court Advantage for both Secondary and Higher Education.

Recruitment Lessons Learned from a System z Recruiter



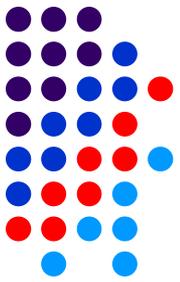
- ◆ **Recruitment Challenge 1.** There are over **4,500** institutions of higher education and most CS/IS&IT programs and faculty teach user interfaces limited-scale operating systems and internet technologies.
- ◆ Most CS/IS&IT graduates are unaware of System z opportunities. **This awareness bias extends to the candidate's school, faculty family members, and peers.**
- ◆ The interview experiences candidates of some System z recruiters outside New York region, are often that **a System z career was not in the candidate's Top-10 list.**

Recruitment Lessons Learned from a System z Recruiter



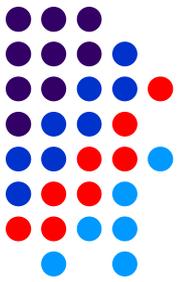
- ◆ **Recruitment Challenge 2.** The Millennial Generation has been characterized by “
 - 1) greater reliance on social networks and a detachment from traditional institutions,
 - 2) an increased sense of entitlement and narcissism, and
 - 3) and strive for a strong work–life balance in their jobs”
- ◆ "I don't mind starting at a lower entry-level salary if my computer technology career opportunities may include video game development, mobile, social networking, or other interesting computer technology which I prefer."

Understanding the Career Expectations of CS/IS/IT Graduates

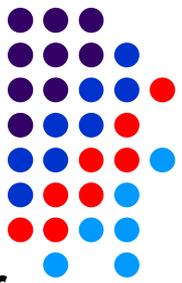


- ◆ **What is Important to Your System z recruitment Candidates – Your Target Market?**
- ◆ **Average entry-level salaries for System z careers are twice the level experienced by most other undergraduate majors or are 40% above other computer technology careers does not solve the problem.**
- ◆ **We can learn about what is "sexy" and "interesting" to the current generation by 1) asking current students, your interns or any entry-level candidate, 2) or reviewing social media, a.k.a., Google, Facebook, and YouTube, 3) or simply watching or studying the Super Bowl Half Time shows**

Understanding the Career Expectations of CS/IS/IT Graduates



- ◆ **Which Majors Attract High School students entering CS/IS&IT?**
- ◆ **GOOD NEWS - The System z recruitment target market LOVES Computer Technology**



Future of U.S. Colleges and Universities

ISECON 2013 Conference Keynote Presentation, Joseph Valacich, Arizona State University

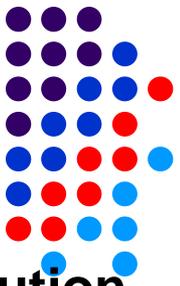
- 1) The number of colleges and universities will decline by 50% either through mergers or termination due to a) the expected decline in number of college age students, b) the increasing level of student debt, c) the unprecedented and increasing level of parent unpaid student debt, and d) and the increasing emphasis on majors which are capable paying off future student debt.**

- 2) Online education students has met its peak.**

- 3) International opportunities are very limited in Europe and China. Substantial opportunities exist in South America.**

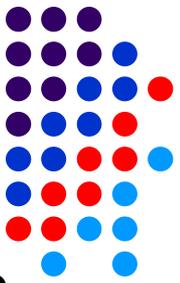
- 4) Decreased education costs and career-based degrees will be the best strategies for U.S. colleges and universities.**

Challenges Facing Higher Education Administrators



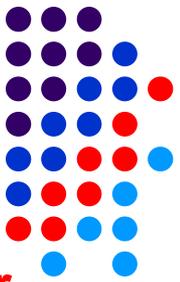
- ◆ The net-tuition rate is correlated to the perception on institution prestige. Many Tier-1 academic institutions have a historical record of institutional prestige which may or may not be correlated with education quality or career opportunities.
- ◆ Tier 2 and Tier 3 academic institutions are looking to "move on up" the "Prestige Hierarchy" to increase tuition rates and perhaps enrollment.
- ◆ Tier 2 and 3 academic institutions are often overlooked by System z recruiters, but may provide an increased pool of the CS/IS& IT graduates and a more receptive administration.

Challenges to Introduce System z into CS/IS&IT Majors and Course Electives

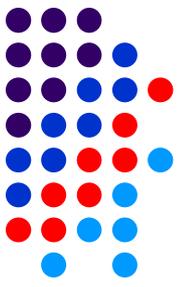


- ◆ **Increased availability of less demanding or perceived more interesting majors reduce the pool of students or inability to relate current CS/IS&IT curriculum to students' perceptions of computer technologies.**
- ◆ **Relatively higher paid CS/IS&IT faculty, increased computer technology support costs, decreased availability of qualified faculty and support personnel.**
- ◆ **Administrators who prefer lower-cost curricula and a broader audience that will increase average class size.**
- ◆ **The process to introduce a new course is challenging and time consuming.**

Challenges for CS/IS&IT Faculty to Adopt System z Courses and Content



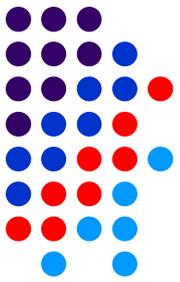
- ◆ The requirement for higher education faculty to "**Publish or Perish**" may discourage the incentive to develop innovative courses or learn new technologies.
- ◆ Improving student's entry level salaries or career opportunities are **NOT one of the criteria for promotion or tenure.**
- ◆ **Biased to existing classroom technologies** which they are familiar, or are offered in the current curriculum, or have been previously developed by the instructor or publisher, or does not take valuable faculty time away from research and publication.
- ◆ Required to maintain **high student enrollment levels or should always appear knowledgeable** in front of students.



Faculty, Academic Curricula and Vendor Neutrality

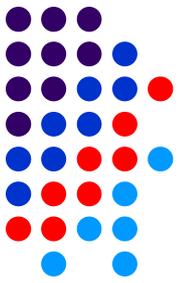
- ◆ Vendor neutrality may more often be an **academic myth**. A faculty member does have a right to prefer specific vendors, tools and products in their instructional design.
- ◆ It is important to balance a faculty member's concerns for Academic Freedom and the appropriate inclusion of vendor technologies with the **obligation to professionally prepare students for careers which will** enable students to pay their future student loan debt.
- ◆ Educational psychologists report that **retention and comprehension** are dramatically improved when more human senses are required for a task, e.g., hands-on skills. Perhaps, the problem may be “how” we teach Vendors and Vendor Products.

Importance of Secondary Education to the Future Success of System z Recruitment



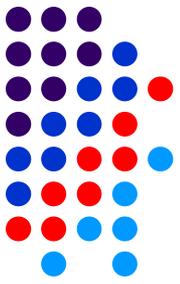
- ◆ **The Digest of Education Statistics, 2001 cites that there are 26,407 public secondary schools and 10,693 private secondary school, and 20.2 million students are expected to attend American colleges and universities.**
- ◆ **Secondary education significantly impacts the selection of higher education institutions and majors, which in the long term will be the source of System z candidates.**
- ◆ **The IBM System z Academic Initiative is also collaborating with the Girl and Boy Scouts of the USA to develop an Enterprise Merit Badge.**

Supporting Secondary Education is Important to Future Success of System z Recruitment



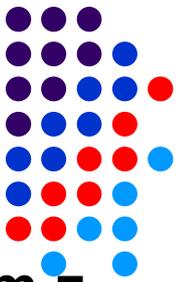
- ◆ **Regional System z professionals are more aware of quality secondary schools who better supports innovative curriculums, computer technology, and set high education standards that should be targeted in their region.**
- ◆ **System z secondary parents are more motivated and influential within their regional school districts than individuals outside the region. Digest of Education Statistics, 2001 cites that there are 26,407 public secondary schools and 10,693 private secondary school, and 20.2 million students are expected to attend American colleges and universities.**

Supporting Secondary Education Guidance Counselors and Parents



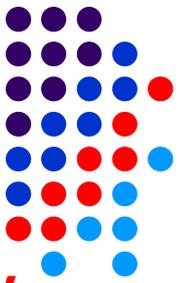
- ◆ **Many parents assume that secondary education guidance counselors will provide college and career guidance. The reality is that in an age of retiring secondary education teachers, budget cut-backs, increasing discipline, drug and other social problems, an average high school student rarely visits the guidance counselor more than once per year.**
- ◆ **Many high school students select colleges, universities and majors based on friends or what is popular.**
- ◆ **The average student 10-year loan payment for a \$55,000 of student debt is estimated to be \$640 per month. The estimated after-tax take home pay for a \$40,000 starting salary is estimated to be \$2,300. It doesn't take much math to determine that after \$1,000 in rent and utilities, there is little discretionary income remaining may be less than \$600 per month.**

Other Secondary Education Ideas



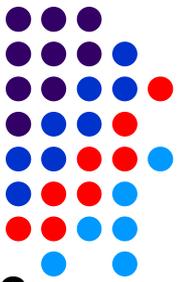
- ◆ **Look for opportunities to sponsor field trips to System z data centers or other interesting STEM locations at your company.**
- ◆ **JP Morgan Chase Visa CICS - Fortune 500 System z professionals often have the most creative ideas and interesting demonstrations to capture the imagination of high school students that may last a life time.**
- ◆ **Reichelson's System z High School Model – Master the Mainframe**
- ◆ **Encourage and Mentor the Master the Mainframe Contest**
- ◆ **Encourage System z Advanced Placement Credit**

Support, Competitive, and Missionary Marketing and Recruitment

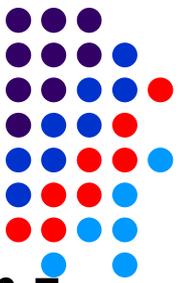


- ◆ **The System z recruitment model must be strategically viewed and budgeted as both an HR and marketing function to staff large-scale, mission-critical transactional and analytical technologies.**
- ◆ **Traditional System z technical recruiting strategies are often based on a "Support and Competitive" marketing models.**
- ◆ **While IBM mainframe technologies are the foundation of many hardware and operating systems concepts presented in computer science programs, the reality is faculty, students and general public are unaware of the importance of IBM System z and related careers.**

Importance of Missionary Marketing and Recruitment



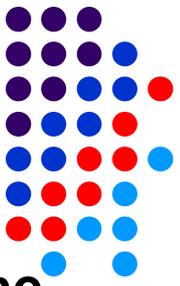
- ◆ **CS/IS&IT graduates often value careers at Facebook, Apple, Microsoft, Google, and other consumer-based and social network computer technologies. Based on the experience of the authors, awareness of student, graduates, and parents of System z career opportunities may be similar to the career opportunities of a plumber.**
- ◆ **System z education and recruitment must include a Missionary marketing component.**
- ◆ **The function of Missionary Marketing includes a) finding and increasing the size of the target market, and b) increasing the awareness (education) of competitive value of an opportunity, product or service, and c) always try to close the sale.**



Sell the Sizzle, Not the Steak

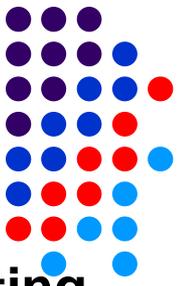
- ◆ It is recommend to "Sell the Sizzle, not the Steak". System z professionals are experts of selling the "Sizzle" by applying System z technologies to their companies and customers.
- ◆ While IBM sells one great steak, but System z customer should sell the "Sizzle" of their System z applications. Marketing this sizzle is critical to the future success of System z recruitment.
- ◆ IBM is only one out of 490 Fortune 500 companies with expertise in System z technologies.
- ◆ System z entry-level recruitment and education begins long before the recruitment visit, is a continuous process, and should also include a component to increase awareness of the Sizzle of their System z company's applications.

Reach out to Department Chair for List of Appropriate Faculty



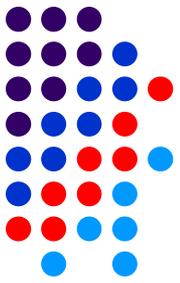
- ◆ **A System z recruiter should initiate the relationship with the CS/IS&IT Chair and faculty.**
- ◆ **Younger faculty who teach hardware, operating systems, or any lower level course may be more interested to listening to the "Sizzle of System z technologies".**
- ◆ **Senior and more technical faculty will be more reluctant to change since their students will find a career no matter what they teach.**
- ◆ **Any major or level of student can be motivated to become a System z professional. Don't rely on the Department Chair or primary faculty members to direct or revise your target market recruiting strategy. Think outside the box.**

How to sell the Sizzle BEFORE the visit.

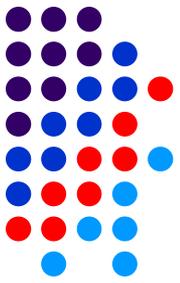


- ◆ **Become a face-to-face or a remote class, department meeting, academic department, or general guest speaker. This a great opportunity for younger staff member to practice speaking skills.**
- ◆ **Encourage, support, and mentor the Master the Mainframe Contest for ALL majors in a Most CS/IS&IT departments require a core hardware and operating system course. The IBM Academic Initiative provides introductory System z course modules which includes great instructional resources, theory and hands-on assignments.**

How to sell the Sizzle BEFORE the visit.



- ◆ **Recruit sophomores and juniors, as well as seniors. Do establish a relationship with lower-level courses and students. Evidence indicates that most RMU CIS System z undergraduate students will have either internship or career offer starting at the point after the beginning of their senior year. An early friendship does provide recruitment advantages.**
- ◆ **Develop and advertise a Facebook or other social network which emphasizes the Sizzle of System z, which should be targeted and may interest any student.**
- ◆ **Establish your Recruitment Presence on the College or University Internship or Career web site.**



Other Recruitment Ideas

- ◆ **The RMU CIS Recruitment Visit Model - Teach Students about System z before Recruiting**
- ◆ **Leverage Independent Opportunities to Engage Faculty Development in System z Skills**
- ◆ **Internship Experiences and Boot Camps and System z Education**
- ◆ **The System z intern could be awarded a System z education scholarship to take an online RMU graduate certificate course. The intern would benefit from the superior educational format, supplemented by experienced, on-site System z professionals, and would also earn graduate college credit.**

Thank You!



Packy Laverty
John Turcheck
Christine Laverty

