Edited and improved version of the document text:

8:00
Room: Capitol

**Title:** Keep this, get rid of that: Revivifying an existing liaison program

**Author/Affiliations:** Brian Bunnett, Director of Library and Education Services, Health Sciences Library and Informatics Center, University of New Mexico

**Purpose:** To describe the top to bottom reorganization of the liaison program at the Health Sciences Library and Informatics Center (HSLIC) at the University of New Mexico and to present the approach as a model which other libraries may wish to emulate.

**Brief Description:** The original liaison program at HSLIC was created in 2004 to enable its librarians to establish closer collaborative relationships with faculty throughout the campus. Although well conceived, the program was imperfectly implemented. Its successor program, the HSLIC Envoy Program, has retained all the successful elements of its predecessor while jettisoning those that undermined its effectiveness. The result is a program that combines innovation with proven practices.

**Discussion:** Existing programs, especially those that are of long standing, require period evaluation to determine if they continue to serve their original purpose. Such a review at HSLIC revealed serious problems with its liaison program. Enthusiasm for it had waned, it was carried out in a haphazard manner, training was non-existent, and there was no accountability or review. The HSLIC Envoy Program was launched on June 1, 2011 after extensive planning and research. The unveiling of the program was preceded by a thoroughgoing publicity campaign. Personal accountability based on careful tracking of all activities conducted by the Envoys is a hallmark of the new program. Training, clarification of its mission, the creation of a suite of supporting tools, regular review of problems, and an annual evaluation are other distinguishing characteristics. This paper will discuss the program’s initial implementation and examine both the accomplishments and problems that ensued.

8:30
Room: Capitol

**Title:** Mobile on a budget: Geaux for it

**Author/Affiliations:** Margaret Peloquin, Head Librarian Eastview/Riverside Campuses, Austin Community College

**Purpose:** This paper describes an initiative by the Web Team at Austin Community College in response to preferences revealed in a survey of students, “Library & Technology Use Environmental Scan.”

**Setting/Participants/Resources:** Austin Community College (ACC) eight campus libraries; ACC on-campus and distance-learning students; Library Web Sites.

**Brief Description:** ACC Libraries Services operates libraries on eight campuses of a centrally-administered single college. In order to help ensure equitable services to all students and staff, ACC Library Services attempts to provide resources in a variety of formats and venues. Our environmental scan revealed that many students would like to access information and resources through mobile devices. With limited budgetary resources, the Web Team was tasked to explore mobile options.

**Outcome:** Austin Community College Library Services now provides a mobile web site, a mobile catalog, and mobile research guides. We continue to explore additional services that might be provided in this way.

**Evaluation:** Statistics are kept and analyzed for these services along with all other services.

9:00
Room: Capitol

**Title:** Preparing an information toolkit to go for health-related pre-professional students

**Authors/Affiliations:** Xuequn Pan, Ana D. Cleveland, and Jodi L. Philbrick, Health Informatics Program, College of Information, University of North Texas
Purpose: This paper provides an overview of how undergraduate health-related pre-professional students at the University of North Texas (UNT) are prepared with an information toolkit to go for their future careers.

Participants: Undergraduate biology and health promotion students, who are interested in future careers in healthcare fields.

Description: The course, Biomedical Sciences Information Management, prepares health-related pre-professional students with an information toolkit that they can use in their future healthcare careers. The course content includes concepts and practical skills in information management in the context of biomedical sciences. Students learn basic concepts in information organization and retrieval and bioinformatics. Major information resources related to biomedical sciences are introduced and discussed. Emphasis is placed on developing the information skills of the students through hands-on activities. Experts in bioinformatics participate in live, online chats with the students, and they share how they use information in their work environments.

Outcome: Hundreds of health-related pre-professional students have gained an understanding of biomedical sciences information management and are prepared for their future careers in information-driven healthcare environments.

9:30
Room: Capitol

Title: Writing consultants
Author/Affiliations: John Cyrus, Liaison Librarian and Talicia Tarver, Digital and Information Services Librarian, Department of Medical Library Science, LSU Health Shreveport
Classification: Non-research
Purpose: This paper will describe the first 10 months of the Writing Consultants (WC) program at the LSU Health Shreveport (LSUHS) Medical Library. Points of emphasis include the launch of the program, services, usage, and reception by users.

Brief Description: An examination of possible library services led to the creation of the WC in October 2010. As a research university/teaching hospital, publication is a requirement for many of the employees. Programs like the WC can provide significant benefit to their parent institution. A business plan was drafted, outlining procedures and services. The WC was designed to provide free writing/editing help to faculty, staff, and students of LSUHS. The WC proofs submitted documents for grammar, punctuation, syntax and usage, and assists in document submission/publication. The service was publicized through a brochure, a page on the library website, in internal press releases, and at meetings for special interest groups.

Results: Since its launch, the WC has seen consistent and increasing usage. Documents submitted to the program come from nearly every section of the institution and from every level. Responses to post-use surveys were overwhelmingly positive and encouraging. For a new service such as this, challenges such as promoting the service and expanding the client base persist. However, the WC staff believes that through word of mouth, continued publicity, and prompt and accurate service, the program will experience continued success and growth.

Conclusions: Over the last 10 months, the Writing Consultants program has proven a valuable service that assists in the research and publication portion of the mission of LSUHS, and increases the visibility and value of the medical library.

10:00
Room: Capitol

Title: Providing Info on the Geaux: Mobile resources and academic health sciences libraries
Classification: Research
**Authors/Affiliations:** Jodi L. Philbrick and Ana D. Cleveland, Health Informatics Program, Department of Library and Information Sciences, College of Information, University of North Texas

**Objective:** The objective of the study is to identify how many academic health sciences libraries have the following: (1) mobile websites, (2) mobile applications, and (3) mobile resources pages.

**Study Population:** The population of the study is academic health sciences libraries represented in the Membership Directory of the Association of Academic Health Science Libraries (http://www.aahsl.org/mc/directory/viewsimplesearch.do).

**Methods:** The researchers conducted an analysis of the websites of the academic health sciences libraries to identify if they had mobile websites, mobile applications, and mobile resources pages for their users.

**Preliminary Results:** Preliminary data analysis shows that a number of academic health sciences libraries have mobile websites and mobile resources pages for their users. However, fewer libraries have developed mobile applications.

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**Contributed Papers**

**8:00**

**Room: Governor**

**Title:** Challenges and rewards: finding opportunities for WISER training

**Authors/Affiliations:** Linda Levy, MLS, AHIP and Pegeen Seger, MLIS

University of Texas Health Science Center, San Antonio

**Classification:** Non-research paper

**Objective:** Librarians at the University of Texas Health Science Center (UTHSC) sought to provide public health and emergency responders with a resource to use in disaster and hazardous materials events. WISER was selected as a free authoritative application.

**Methods:** Librarians taught WISER and WebWISER to first responders from the Laredo, Texas Fire Department. A similar class was promoted to the San Antonio Fire Department and the San Antonio Metropolitan Health District. A Sewell fellow hired by the Health District became an internal advocate for the class. Training consisted of an introduction to the mobile version of WISER, an overview of the resource using WebWISER, and practice with specific scenarios.

**Results:** Three WISER/WebWISER classes were taught in San Antonio, two for managers and emergency responders from the Health District and related agencies and one for airport police and operations personnel. Overall, class evaluations were very positive. All participants considered WISER to be a valuable addition to other tools and resources that they already use.

**Conclusion:** WISER is an effective mobile and Internet-based resource for use by first responders, emergency personnel and hazmat specialists. Many of them were already familiar with WISER but welcomed the opportunity to have an in-depth overview and to practice using WISER.

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**8:30**

**Room: Governor**

**Title:** What do they need? Expanding services to minority and underserved communities

**Authors/Affiliations:** Michelle Malizia and Cheryl Rowan, NN/LM SCR

**Objective:** The NN/LM SCR convened a task force to better understand the health disparities which exist in the Region, as well as to improve efforts to work toward the reduction of these disparities within the Region.

**Methods:** Twelve individuals located throughout the five states of the NN/LM SCR were identified as potential members of the Task Force based on their history of experience with the NN/LM SCR and shared commitment to the reduction of health disparities in the various communities in which they live and work. The Task Force met via teleconference (using Adobe Connect) over a period of 6 months.

**Results:** The meetings of the Task Force provided the NN/LM SCR with a deepened understanding of the health disparities which exist in specific areas of the Region as well as several potential interventions for addressing these disparities. The Task Force provided valuable information on unique health issues faced
by individuals in minority and underserved communities, obstacles these individuals encounter in
obtaining health information, and concrete suggestions of groups which could benefit from training,
programs, and funding opportunities implemented by the NN/LM SCR.

**Conclusion:** While the lessons learned and benefits gained from this Task Force have yet to be fully
realized, many of the ideas and suggestions put forth will be used to plan and develop programs, training,
and funding opportunities for the current 2011-2016 NN/LM SCR contract.

9:00
Room: Governor

**Title:** An interloper in the midst? The LSU Law Center library is a part of the medical library community!

**Author(s)/Affiliation:** LSU Law Center Library, Baton Rouge, LA: Ajaye Bloomstone, Acquisitions Librarian;
Kevin Baggett, Circulation Librarian; Phillip Gragg, Reference and Faculty Services Librarian

**Classification** (research or non-research): Non-research

**Objective:** To inform the medical library community about the types of medical information our law
professors and students request and how they put this information to use in their classes and research.
Some law schools have cross-disciplinary programs in public health management, which creates an even
stronger need for medico-legal information.

**Methods:** Survey of DOCLINE requests over the past several years to determine the types of requests
initiated by the law center community.

**Results:** Members of the legal community use medical information/literature to blend with legal analysis
and/or the practice of law. Access to the clinical medical literature in our case is facilitated by
membership in the DOCLINE network.

**Conclusion:** The availability of medical literature, clinical or otherwise, is an important part of the
“medico-legal project,” although its use by the legal professional may well differ from that of the medical
researcher. Since libraries do not always have access to all resources needed by the patron community,
networking and sharing available resources as appropriate becomes all that much more important.

9:30
Room: Governor

**Title:** Oh, the places you’ll geaux! A case study in managing collaborative opportunities

**Author(s)/Affiliation:** Heather K. Moberly¹, Esther Carrigan², and T. Derek Halling²

¹Oklahoma State University ²Texas A&M University

**Classification:** non-research

**Objective:** To describe the unplanned opportunities that arose during a digitization project because we
engaged our user community in the development and promotion process.

**Methods:** The Texas A&M University Medical Sciences Library and Oklahoma State University Libraries
received a Library Technology Award from the South Central Region of the National Network of Libraries
of Medicine (NN/LM SCR) to scan the *Index Catalogue of Medical and Veterinary Zoology (ICMVZ)* for both
improved patron access and preservation. The project scope included not just digitization, but also
promotion of the resulting product.

As librarians, we knew the *ICMVZ* as the quintessential parasitology literature index. The initial idea for
this project sprang from the Veterinary Archives Grey Literature Steering Group’s interest in it as grey
literature. Early in the project, we presented a poster at an international grey literature conference. With
a focus on the technical aspects, we presented a poster at the Texas Digital Library conference. As part of
the NN/LM SCR grant application, we included letters of support from parasitologists who later
approached us to collaborate to present at parasitology conferences. Their insistence on including the
historical context of the *ICMVZ* inspired us to present in the History of the Health Sciences program at
MLA.
**Results:** We embraced collaborative opportunities instead of either the “if we scan it they will find it” or the “present it to solely to librarians” models; and along the way, we strengthened our relationship with our user base and added another dimension to the original planned institutional collaboration.

**10:00**

**Room:** Governor

**Title:** Geauxing to the dogs, sometimes the portal bites back. The agony and ecstasy of building the AgNIC Animal Health Portal

**Author(s)/Affiliation(s):** Heather K. Moberly, Oklahoma State University

**Classification:** Research

**Objective:** To improve discovery and access to reliable animal health information using the Agricultural Network Information Center (AgNIC).

**Methods:** The Agricultural Network Information Center (AgNIC) is a voluntary alliance of more than 60 member institutions from five countries. Its goal is to provide access to information about agriculture, food, and natural resources that is reliable, freely available, evaluated, and primarily available online. Throughout its 15-year history, although more than 60 subjects are covered, AgNIC has never achieved adequate animal health coverage.

In 2010, we built a collaborative Animal Health Portal (AHP) as a subset in the AgNIC knowledge discovery system. It uses Open Source software including AJAX, RSS, ATOM, Fedora, Blacklight, SOLR, and Lucene. During construction, we kept AgNIC’s commitment to its basic components: topical RSS feeds, hand selected calendar of events, records harvested from institutional repositories, and creating metadata records for deeper web resources. All RSS feeds, calendar events, and metadata records are included and discoverable in AgNIC. Moving content forward meant facilitating inclusion of larger groups of records.

**Results:** We successfully integrated almost 2 million records from the veterinary subset of PubMed and animal health records from Agricola. Additional enhancements include developing topical pages, perhaps using LibGuides, and linking extant AgNIC animal health content to the AHP.

**Conclusion:** In 2011, the Oklahoma State University Libraries won the AgNIC Partner of the Year Award for the AgNIC Animal Health Portal. The AHP is available at [http://animalhealth.agnic.org](http://animalhealth.agnic.org).

**10:30**

**Room:** Governor

**Title:** Get your disaster Info to Go: An overview of mobile apps

**Author/Affiliations:** Jodi L. Philbrick and Ana D. Cleveland, Health Informatics Program, Department of Library and Information Sciences, University of North Texas

**Purpose:** This paper provides an overview of mobile apps related to disaster information.

**Description:** The authors will present mobile apps, designed for iPhone and Android platforms, related to disaster information. Each mobile app will be evaluated in terms of authority, scope, usability, simplicity, contextuality, and cost. Potential uses of the mobile apps in disaster situations will be discussed.

**Outcome:** The attendees of this paper session will learn about mobile apps for disaster information, which they can apply in their institutional settings.

**11:00**

**Room:** Governor

**Title:** Preparing for the age of the digital palimpsest

**Author/Affiliations:** Jason Bengtson, MLIS, Emerging Technologies/ R&D Librarian, University of New Mexico

**Objective:** To define and stimulate interest in a potential new specialty within the Information Science Field.

**Methods:** Sources on digital forensics and digital archeology are discussed, and the topic is examined critically from a librarian perspective. The author examines the possibility of an Information Science
**Contributed Papers**

specialty pursuing the reconstruction of “digital palimpsests”, where data that later becomes historically significant has been overwritten on digital media.

**Results:** The author identifies at least one key incident (the NASA moon landing tapes) where this potential field has already started to be defined. Examination of the literature indicates that emphasis in data recovery to this point has centered on the needs of law enforcement and disaster recovery rather than on the considerations of manuscript preservation, recovery, and curation. The author emphasizes the need for librarians to bring together the skills of multiple fields, especially that of Information Technology, in order to shape the tools needed to take the lead in “digital palimpsest” recovery.

**Conclusions:** The author asserts that the recovery of “digital palimpsests” will become important as digital archives age and society’s position on what has historical value inevitably shifts. The author further asserts that members of the Information Science field must actively work to take ownership of the field before it is subsumed by Information Technology or another discipline less equipped to manage its nebulous considerations effectively.

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**EBM—Considering the evidence**

8:00
Room: King

**Title:** Geauxing forward with systematic reviews

**Author/Affiliations:** Yumi Yaguchi, MSIS, Unit Assistant Director, Harrington Library, Texas Tech University Health Sciences Center (TTUHSC) - Amarillo

**Classification:** Descriptive/non-research

**Objective:** Third-year medical students at TTUHSC Amarillo are introduced to evidence-based medicine (EBM) and the types of materials that qualify as evidence based, including systematic reviews. They then critically appraise and apply evidence to actual patients encountered during clinical rotations, as part of their EBM case presentations. In addition to contributing to the students’ theoretical and practical knowledge in systematic reviews through classroom instruction, the author intends to share the information with her library and SCC/MLA colleagues.

**Methods:** The author will attend a 2.5-day intensive workshop: Systematic Review Workshop: The Nuts and Bolts for Librarians, offered by the University of Pittsburgh Health Sciences Library Systems, July 18-20, 2011 (URL: http://www.hsls.pitt.edu/systematicreview/). Sessions will include small/large group discussions, interactive lectures, and hands-on exercises.

**Results:** The author will learn the theory and development of systematic reviews and the librarian’s role in this process. The structure of systematic reviews, reference interview, methods/techniques for conducting comprehensive literature searches, analysis, and project management/organization will be included. A brief demonstration of the process along with useful resources will also be presented during her presentation.

**Conclusions:** After the workshop, the author’s plan for incorporating her experience into her EBM instruction will be created. She believes this workshop will provide her with a solid foundation for instructing students on systematic reviews. It will also strengthen her preparation for participating in the scholarly or clinical research process at her institution.

8:30
Room: King

**Title:** Making the CASE for EBM: The development and evaluation of the Critical Appraisal for Summaries of Evidence (CASE) worksheet

**Authors/Affiliations:** Margaret J. Foster, MS, MPH, Texas A&M University Libraries, Sterling Evans Library Suzanne Shurtz, MLIS, AHIP, Texas A&M University Libraries, Medical Sciences Library

**Objectives:** Standards for evaluating evidence based medicine point of care (POC) summaries are lacking. A Critical Appraisal for Summaries of Evidence (CASE) worksheet will be developed by the authors to guide librarians and users in assessing the evidence within these resources.
• To describe the development of the CASE worksheet
• To evaluate the inter-rater reliability of the CASE worksheet

Methods: A literature review of other critical appraisal tools will be conducted, focusing on those evaluating tools similar to EBM POC summaries. A worksheet will then be developed. Inter-rater reliability will be evaluated by comparing independently completed worksheets on selected EBM POC summaries.

Results: The form will be presented. Statistics on inter-rater reliability, such as kappa statistics, will be presented. The evaluation results will be compared with other evaluations of critical appraisal worksheets.

Conclusions: The strengths and limitations of the project will be discussed. Applications for the worksheet and further research will be described.

9:00
Room: King

Title: Accessing and assessing the FACTTS: An EBM and critical appraisal course for medical students
Authors/Affiliations: Kim Pullen, Head, Liaison Program; David C. Duggar, Reference Librarian; John Cyrus, Assistant Liaison Librarian; Deidra Woodson, Metadata & Digitization Librarian; Donna Timm, Head, Education/Outreach; Department of Medical Library, LSU Health Shreveport; Jerry W. McLarty, Professor of Epidemiology, Department of Medicine, LSU Health Shreveport; Mark P. Baggett, Systems Development Librarian, University of Tennessee Libraries, Knoxville, Tennessee; Daniel E. Banks, MD, Director of Academic Affairs, Brooke Army Medical Center, San Antonio, Texas
Objective: Fourth-year Academic Clinical Training & Teaching Selective (FACTTS) is a course on evidence-based medicine (EBM) and critical appraisal of medical literature co-taught by faculty of the Department of Medical Library Science and Department of Medicine. The objectives of this study are (1) to determine if the fourth-year medical students’ understanding of evidence-based medicine and critical appraisal of medical literature improve as a result of the FACTTS course and (2) to determine if the students benefit more from having two or three sessions of the FACTTS course.
Methods: During three academic calendar years of the FACTTS class covering 2007-2010, students took an eight-question pre-test in the first session and took a post-test with the same eight questions in the last session. The de-identified data was compiled by the study personnel and analyzed to determine change in student’s knowledge.
Results: Out of 304 students, who attended the FACTTS class, 283 completed a pre- and post-test. Sixteen completed a pre-test only, and five completed a post-test only. The overall score of the pre- and post-test showed a p-value of .005, showing that the results of the post-test were significantly better than the pre-test. No significant difference was seen between the numbers of class sessions held.
Conclusions: According to the results of this study, fourth-year medical students gain a better understanding of EBM and critical appraisal after attending the FACTTS course taught by faculty from both the medical library and the Department of Medicine. However, they do not gain any additional benefit from attending a third session. Therefore, the class will be taught in only two sessions.

9:30
Room: King

Title: Evidence based health care: The librarian’s place at the table
Authors/Affiliations: Joy Summers-Ables, Professor/ Associate Director and Shari Clifton, Professor/ Head, Reference – Robert M. Bird Health Sciences Library, University of Oklahoma Health Sciences Center – Oklahoma City, OK
Classification: Descriptive
Objective: To identify the arenas in which health sciences librarians can participate in promoting and being actively involved in Evidence Based Health Care (EBHC).
Methods: EBHC efforts to incorporate librarians at the University of Oklahoma Health Sciences Center have developed over a period of six years. Beginning at what seemed like a turtle’s pace, momentum is
building and activities are expanding significantly, thanks to a core group of dedicated faculty. Participation in EBHC activities has grown substantially and now incorporates individuals from all seven colleges on campus and associated disciplines.

**Results:** Librarians’ involvement in EBHC activities has moved beyond the campus to include non-affiliated clinicians, health professionals and other librarians from across the country. This provides an environment of enriched learning for librarians, other facilitators and participants.

**Conclusion:** Becoming actively engaged with campus EBHC initiatives has provided OUHSC librarians new opportunities for growth and development and a forum for librarians to highlight their expertise and skills. Their inclusion in local, regional and national EBHC activities has also been used to reinforce the value of librarians and serves as a successful working model for interdisciplinary collaboration.

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**10:00**  
**Room: King**

**Title:** Librarians, change agents, EHRs, Twitter and more: An Overview of the 2011 Woods Hole Biomedical Informatics Spring Program  
**Author/Affiliations:** Emily Hurst, NNLM, South Central Region, Houston Academy of Medicine, Monte Dobbins, LSU Health Science Center-Shreveport, and Holly Phillips, University of New Mexico Health Science Library & Informatics Center, Albuquerque  
**Objective:** Twice a year the National Library of Medicine sponsors a Biomedical Informatics Course designed for medical librarians, health care practitioners, educators and administrators at the Marine Biological Laboratory in Woods Hole, Massachusetts. The highly successful program, now in its 20th year, has successfully prepared numerous participants to be change agents in their institutions. Three South Central Chapter (SCC) members attended the course in May, 2011. The authors will highlight course topics and share information about the experience for those who may be interested in attending.  
**Methods:** The curriculum of this year’s Spring class projects focused on emerging trends in Electronic Health Records (EHRs). Through classroom lectures on a wide variety of topics the participants were able to learn valuable information about the importance of informatics and what the future of the EHR means to health care and health related research.  
**Results:** The class consisted of physicians, nurses and librarians sharing valuable perspectives with one another on course topics. The Spring 2011 class also used online social media such as Twitter as a way of communicating information from lectures, allowing former participants to learn and exchange ideas with the current class.  
**Conclusions:** The three librarians from SCC who participated in the spring session learned valuable information about biomedical informatics. These librarians will work as change agents to spread the information they have learned not only at their local institutions but at the SCC/MLA Annual Conference so colleagues can benefit as well.

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**10:30**  
**Room: King**

**Title:** Geauxing the distance: the digitized Index Catalogue of Medical and Veterinary Zoology on two university institutional repository platforms  
**Authors/Affiliations:** T. Derek Halling\(^1\), Robin Leech\(^2\), Esther Carrigan\(^1\), and Heather K. Moberly\(^2\)  
\(^1\)Texas A & M University Medical Sciences Library  
\(^2\)Oklahoma State University Libraries  
**Purpose:** This presentation examines the technical aspects and considerations of digitizing the Index Catalogue of Medical and Veterinary Zoology (ICMVZ), an historical compendium of parasitological literature. With generous support from the National Library of Medicine, two colleges of Veterinary Medicine, across two states, have brought the ICMVZ freely available on the web.  
**Setting/Participants/Resources:** The Texas A & M University Medical Sciences Library and the Oklahoma State University Libraries collaborated to digitize the Index-Catalogue of Medical and Veterinary Zoology, making it searchable and downloadable on both the ContentDM and DSpace platforms.
Brief Description: The project received a National Network of Libraries of Medicine South Central Region Library Technology Award in 2008, which provided $20,000 to collect, preserve, and digitize this essential parasitological literature reference. Texas A & M scanned more than 100 volumes and 20,000 pages to high quality tiff files with derivative pdf/a files. Each school uploaded the ICMVZ into its institutional repository platform. This presentation describes the processes and procedures during this part of the project. Each library will describe challenges and rewards encountered, including storage/memory considerations, and pros/cons of commercial vs. in-house platform development.

Results/Outcome: The partnership between TAMU and OSU proved beneficial for both libraries and laid the groundwork for further collaborations. Each site also provides a unique interface to this comprehensive collection – giving researchers a variety of choices, depending on their analysis and method.

Evaluation Method: Statistics will be provided for both sites.

11:00
Room: King

Title: Searching internet health information in multiple languages
Description: Research
Author/Affiliations: Della Pan, Health Informatics Program, College of Information, University of North Texas

Background: There are many culturally and linguistically diverse communities in the United States. Non-native English speakers have a preference for searching health information in their language of origin. Native English speakers may also want to find additional health information in other languages. Multilingual Internet health information is available to meet these needs.

Objectives:
1. To investigate health information sources available in multiple languages;
2. To identify techniques to conduct and support multilingual search.

Methods: This study employs content analysis of National Library of Medicine (NLM) health information sources in multiple languages to address their organization, topics, contents, search features, and languages displaying. Techniques applied in multilingual health information search are identified through literature review.

Results: Many multilingual health information materials are well organized. Some sources provide introductory and instructional information for patient education in multiple languages, which are directly translated from English flyers or brochures, however, their topics are limited, and the contents are seldom updated. Most websites which provide multilingual information do not support cross language search, and some of them have problems in coding foreign language characters. Cross Language Information Retrieval (CLIR) and multilingual information retrieval systems support multilingual search. CLIR makes information accessible across languages. The common translation techniques used in CLIR include machine translation, dictionary based translation, statistics approach, and information mapping. Advanced search engines facilitate multilingual search with features of language limits, machine translation, and interface with multiple languages. These techniques can be applied to the search of multilingual Internet health information.