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Newsletter

James V. Schoster - President; Eric (Rick) M. Mills - President Elect, Robin Starr-Chichester - Secretary Treasurer;
Ronald D. Smith - Newsletter Editor

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ASSOCIATION NEWS

Membership Renewal Deadline Extended!

From: "Robin M. Starr" <starrchi@earthlink.net>

The AVI appreciates your support over the last year and looks forward to providing you with information and educational events in 2000.

Membership expires on December 31 of each year. We have extended the deadline for listing your name in the AVI Membership Directory. Your name will be included if your renewal check arrives by March 15, 2000. We look forward to your continued participation. If there is anything we can do to address your needs regarding informatics, please feel free to contact any of the officers or working group chairs. A renewal form for the Association for Veterinary Informatics is attached.

Talbot Symposium Finalized

Jim Schoster <schoster@schoster.vetmed.wisc.edu>

The Talbot Symposium has been finalized. Go to <http://schoster.vetmed.wisc.edu/talbot2000> to see the schedule for Talbot and the subsequent 2 days of Informatics talks. Posters will be up all 3 days. Since there are only 2 posters; I will accept poster submissions up until June. Unfortunately, no remuneration of any kind can be given for these because of a late submission. We have room for many posters.

How to Contact AVI

Applications for membership, accompanied by a check payable to the AVI, should be sent to:

Dr. Robin M. Starr; Secretary Treasurer, AVI;
31575 Griffin Drive, Conifer, CO 80433
Phone: 303/674-5231; FAX: 303/674-9717;
e-mail: starrchi@earthlink.net

Membership application forms are available online at:

<http://netvet.wustl.edu/avi.htm>

Dr. Starr is responsible for distribution of the hardcopy version of the AVI Newsletter.

Newsletter items can be sent to:

Dr. Ronald D. Smith, Newsletter Editor, AVI;
UI College of Veterinary Medicine; 2001 South
Lincoln; Urbana, IL 61801.
Phone: 217/333-2449
FAX: 217/333-4628
E-mail: rd-smith@uiuc.edu

If you are an AVI member and would like to be on the AVI Newsletter electronic distribution list, send an e-mail message to the Newsletter Editor. The electronic (PDF) version is faster, searchable, easier to store and retrieve, and environmentally friendly.

Current and past issues of the AVI Newsletter are also available on the Web at:

<http://netvet.wustl.edu/avi.htm>

CORRESPONDENCE

Opportunities in Veterinary Informatics?

A thread from AVI-L@WUVMD.WUSTL.EDU

QUESTION:

From: Carol Radinsky <into_blue@YAHOO.COM>

I am a first-year veterinary student with a combined interest in veterinary medicine and

computers. I would appreciate any input as to how these interests may be combined in the real working world.

I follow some of the human medicine trends like the use of remote minimally invasive surgeries done with hand and voice guided instrumentation.. over the Internet.. but am not

hearing much with vet med. What's cutting edge in this field right now?

RESPONSE 1

From: Tom Roper <t.roper@rcvs.org.uk>

You might like to look at our recently published survey of the information seeking behaviour of UK veterinary surgeons. Carried out by Tim Wales, a postgraduate researcher at City University, London, it's available at: http://www.rcvs.org.uk/downloads/Infosurvey_9_9_for_web.pdf

RESPONSE 2:

From: James <james@TRILOGY.COM>

Hi Carol, I was in private veterinary practice for 7 years and have now been in the computer industry for 5 years.

I was interested in the same sort of things you are asking about awhile back but here's what happened with me- Once I got interested in computers, I found that dropping the veterinary medicine thing altogether was best for me. Had I just been coming out of school, I most likely would have thought differently, but I was tired of private practice, I had really gotten into computers, and I found a great job at an awesome software company. Going back to school wasn't that appealing and that seems to be where all the interesting vet med/computer stuff is happening.

There's all sorts of really cool things that could be done with information technology in veterinary medicine, but I'm pretty sure almost any of it that's actually getting done is in academia. There is not enough money to be made to motivate many talented people to develop for the private market. Even if you come up with something that's good, whether it's practice management software, diagnostic aids or what have you there's not a big enough pay off to make it worth the cost and effort to develop.

Unfortunately, private practice vets are notoriously frugal and conservative, shall we say, so the demand and willingness to pay for innovative IT solutions just doesn't seem to be there.

RESPONSE 3

From: John Bowskill john@streamtime.com.au

Carol & James, my story is very similar to yours James. Information Technology is THE booming industry of our time. I am also a vet, graduated in 1985. Went back to University to study computer science and then got totally sidetracked from my original dream of developing veterinary diagnostic software. I started working for another vet in IT three and a half years ago (this had nothing to do with veterinary science whatsoever). His business grew from the two of us to 50 people in three years without the need for any capital investment and without any particularly special management. What other industry could that happen in? Six months ago I started a new company in streaming media and it looks set to take off as well. But I do miss being a vet and being involved in the veterinary profession. Would like to get back into it one day - but it won't be because there is money to be made. It would probably be in a joint research project with some academic institution - I agree with James that that is where almost all vet informatics R&D will happen. Of course Carol, money is not everything and you will be a far more interesting person if you stick to your dreams. But once you have acquired those IT skills, head hunters will come knocking to lure you off course.

RESPONSE 4

From: Deb Prattley <debprattley@HOTMAIL.COM>

Hi James and Carol! I don't know what Carol had mentioned in her letter but have just read yours, James. I graduated in 1997 and [worked] in small animal practice for almost 2 years, but always knew clinical practice wasn't for me. Now I am halfway through a masters in bioinformatics. How I will actually use this I'm not sure. But we are doing Java programming and Oracle, and at the moment I feel I will be better prepared for a straight computing job at the end of this, than anything else (I had wanted to combine vetting and computing, but agree with what you said about things happening in academia and the lack of money). Would love to hear more about your experiences - if all else fails I will go back into practice but would very much prefer not to, and am trying to find out as much as possible about what options there will be come September.

AN IDEALIZED DESIGN OF A NORTH AMERICAN COMPANION-ANIMAL HEALTHCARE SYSTEM

**Kenneth C. Bovee, Larry T. Glickman, Charles Newton, James F. Wilson,
Aaron Katcher, Sheldon L Rovin, Russell L Ackoff**

The “**Information Systems**” section of this report is reprinted below with permission from the Companion Animal and Family Health Council; c/o Dr. Kenneth C. Bovee; Department of Ciinical Studies; School of Veterinary Medicine; University of Pennsylvania; 3900 Delancey Street; Philadelphia, PA 19104-6010

The entire 68-page report (MS Word format) can be downloaded from
<http://hahn.lcs.mit.edu/booklet/CAFHC.doc>

Preface

The Companion Animal and Family Health Council (CAFHC) began the effort that gave rise to the design presented here. An ad hoc group was formed in 1994 to discuss the limitations and opportunities for growth of companion animal medicine in North America. A group of 20 persons, including veterinarians and other professionals representing many constituencies such as veterinary education, professional organizations, pharmaceutical firms, pet insurance, specialty colleges, general practitioners, corporate practices, and human healthcare planners were included (Appendix II). A series of roundtable discussion led to the formation of CAFHC. It became apparent to this group that a radical redesign of companion animal practice and education was needed and new types of healthcare specialists are required in veterinary medicine.

In 1995, CAFHC organized a long-range design effort in cooperation with the Institute for Interactive Management (INTERACT). An expanded group of participants representing 40 stakeholders in companion animal medicine (six of whom were consumers) agreed to participate in the design process. The design team undertook this effort because its members wanted to develop a healthcare plan (design) with a fresh view to the future. Design is aimed at satisfying the user of companion animal healthcare services in the year 2015. Because the future is uncertain, the planners recognize that the adoption of this design in its entirety is unlikely. What we hope is that the ideas offered prove useful, promote debate, and otherwise stimulate the thinking of those looking for a design that best approaches the ideal.

The design of a healthcare system for companion animals has not been conducted previously. The design presented here is a transformation of the current fragmented system, not a mere reformed version of it. For this reason it tends to attract either strong support or strong opposition. Those who would like to retain most of the current system or do not see a ready mechanism to achieve major changes will look for deficiencies in the proposed design and use them, no matter how minute the point, to reject the design as a whole.

Others will "take to" the design and go through an "aha" experience while reading it. They will try to fix whatever deficiencies they perceive and fill any gaps with new ideas. Such engagement in the design process is one of our objectives. It is our intention to start a continuous design process that involves an increasing percentage of those who hold a stake in companion animal healthcare in North America.

Therefore, consider this presentation as an invitation to join the process. Let us know about the changes and additions that you propose.

Information Systems - Executive Summary

The current system does not contain a standardized information system within a community or links to other communities. Basic tools for information collection, such as a standardized medical record and uniform diagnostic coding, do not exist in a format that allows collection and analysis. The proposed design includes an entirely new entity containing a community and nationwide information system that would be electronically linked to allow standardized medical data to be collected and analyzed. The availability of individual, community, or national data should produce increased quality of health care and growth of the veterinary profession.

Information Systems - Discussion

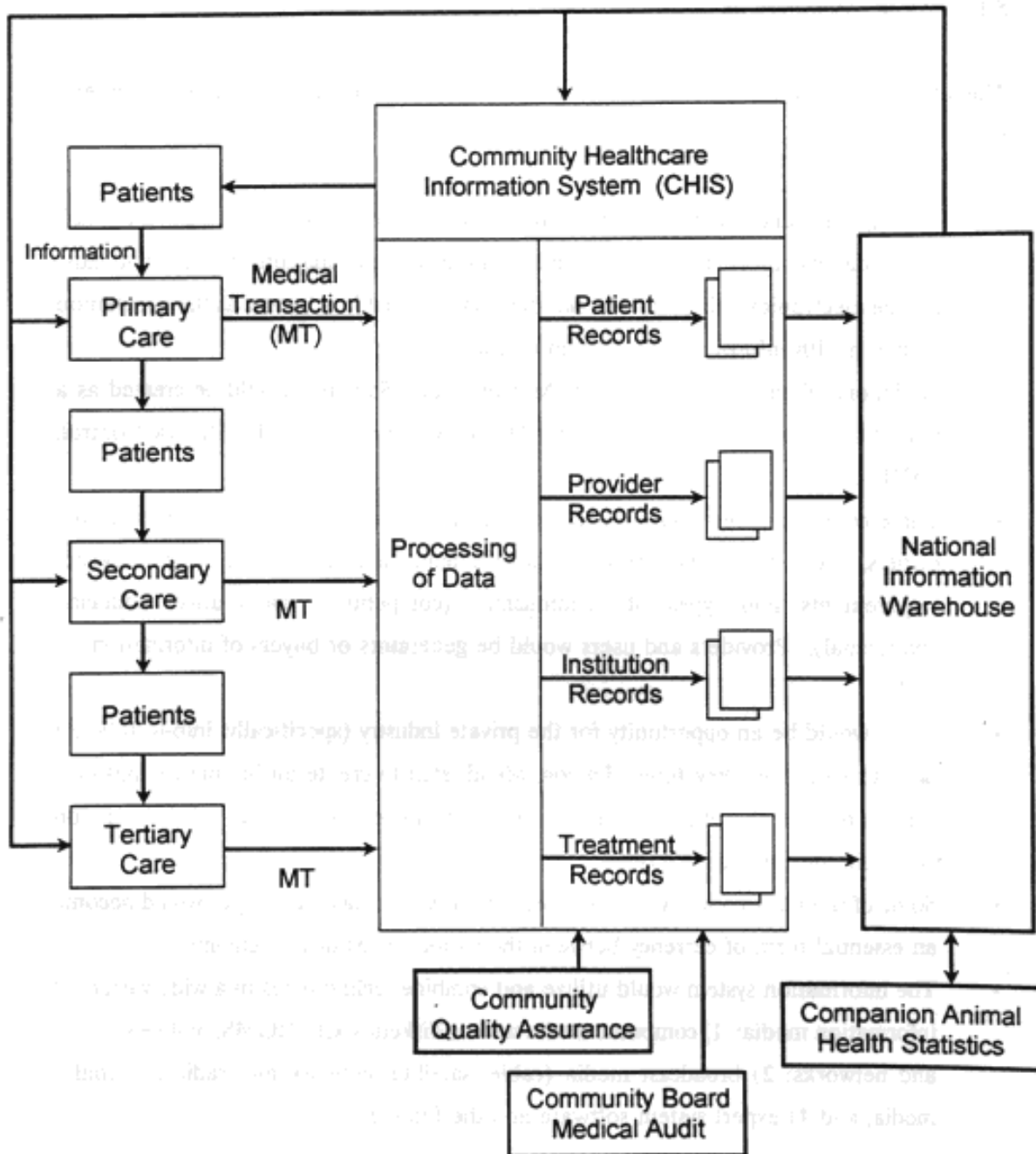
System Assumptions

The following assumptions are made regarding the nature of the system and its environment, that:

- A complete standardized medical record would be used for each companion animal.
- A community information system and a nationwide information system would exist and be electronically linked. The national system would be known as the companion animal health info-warehouse system (Figure 3).
- A National Center for Companion Animal Health Statistics would be created as a unit of the present National Center for Health Statistics (Center for Disease Control, DHHS).
- There could be several different categories of information providers and users (pet owners, care providers, industry, government, and educators) with different requirements and types of relationships (competitive, cooperative, collegial, contractual). Providers and users would be generators or buyers of information, or both.
- There would be an opportunity for the private industry (specifically, info-warehouse operators such as Dow Jones, Dialog, Mead, etc.) to create an infomarket business which would enable the above mentioned stakeholders to buy and sell information and facilitate finding each other.
- Some of the information would be "free" to users, whereas other types would become an essential form of currency between the various types of participants.
- The information system would utilize and combine technologies in a wide variety of information media: 1) computer media such as diskettes, CD-ROMS, on-line services and networks; 2) broadcast media (cable, satellite, network and radio); 3) multimedia; and 4) expert system software and the Internet.
- Wherever appropriate the system would utilize existing distributed networks, on-line services and databases (e.g., the World Wide Web, VIN, and NOAH), software applications that know how to link to, browse, download and manipulate the content acquired.
- The information system would include a human component, that is, certain types of information (such as understanding and wisdom) would continue to reside within the human person. However, the information system would enable more effective and efficient access to such humans, and thereby leverage their value to the profession.
- Revenues can be derived from the usage of information and these would be routed to the community system when appropriate to assist in its maintenance.
- The high priority of desirable output and advantages of the information system would include:
 1. Nationwide monitoring of the companion animal population via computerized records of healthcare histories including wellness
 2. Diagnosis, treatment, and outcome data for diseases

3. Actuarial analysis of data to assist the development and evaluation of a pet health insurance industry
4. Advanced research data collection, management, and distribution
5. Simpler, complete, and cost-effective opportunities for pharmaceuticals, biologic firms, and academia to conduct clinical trials
6. Enhance the quality of medical care and data collection for legal protection

Figure 3. Information Systems



System Specifications

- The system would maintain a complete standardized medical record using electronic media for all pets and healthcare providers. Access to this record by a person other than the provider would require permission of the pet's owner or the care provider.
- The system would generate the information required to select on a community or national basis, effective and efficient healthcare providers, institutions, and treatments. The system would provide mechanisms for insuring confidentiality and security of data. Providers of information would have the ability to review and amend their entries.
- Standards which insure timely and accurate distribution of information would be developed.

The Community Healthcare Information System (CHIS)

The community is defined as a geographic region with many primary care veterinarians, one or more secondary care centers, a FPCEC, and formal links to a tertiary care center, which functions as a system. The most basic common element would be a standardized medical record. The community information system would maintain the health records of all pets in its community regardless of where they receive services.

- Primary-care providers would record each of their transactions involving patients in a uniform medical record format specified by an appropriate national body. This record would be consistent with the format used by the National Center for Health Statistics. The record would be transmitted via computer terminal or hand-held computer to the CHIS where a comprehensive record of each patient's interaction with the system is maintained.
- Secondary institutions and tertiary care would also prepare a record of each patient visit using the nationally specified format and transmit it electronically to the CHIS. A copy of this record would also go to the appropriate primary-care provider.
- The CHIS computer would reside at a tertiary or secondary care center depending on the availability of expert personnel.
- Every owner of a pet would have a Health Record Card with a number that provides access to that pet's complete record in the info-warehouse-system in which it resides. The card would contain all the medical information about its carrier that his or her primary-care provider considers to be essential for another healthcare provider in case of emergency. It would also contain a photograph of the pet. This card would be updated each time the pet is involved in a transaction with a healthcare provider. A copy of the card would be maintained in the info-warehouse system so that it could be reproduced if lost or destroyed.

Individual provider inputs and outputs

- Healthcare providers would be able to add information to a pet's Health Record Card from their own or another's terminal through the national network to the appropriate CHIS (provided the author is clearly identified and no portion of the record could be erased or altered). All providers and institutions would have on-line read/write access to relevant episodic information for patients they serve.
- All primary-care providers and specialists would have computer systems in the offices on which they would update and have access to complete records of their interactions with patients and those of other healthcare providers (with the permission of the owner). Such access would also be available through use of hand-held computers.
- Data on owners, such as age, sex, demographics, and environment, related to their pet, would be collected.
- Owner Compliance: doctor's assessments of owner-patient cooperation and compliance may be entered into the owner-patient's health record and used to document a case for dropping further

responsibility for a patient. This information would be available to the owner on request and could be subject to the owner's review.

- Veterinary epidemiologists and clinicians (peer review) would be responsible for periodic audits of medical records to determine outcome assessments for patient testing, diagnoses, and treatments. These assessments would be entered into the patient's health record. Failure to provide information by provider would be called to the provider's attention by the CHIS personnel, as this function would become a standard of care.

Secondary and tertiary provider inputs and outputs

- While receiving care in an institution, information on the patient's chart would be available on-line throughout the institution on a need-to-know basis and would automatically update the patient's standardized health record and become part of the CHIS record.
- Primary, secondary, and tertiary care doctors would have full and immediate read/write access to their patient's health records.

Community inputs and outputs

The records received by the CHIS would be processed to produce and maintain five categories of information relevant to each community:

1. Patient Health
 2. Provider Performance
 3. Institutional Performance
 4. Treatment Effects
 5. Community Health Status (e.g., ailment frequencies and trends.)
- Reports prepared by a Community Medical Reports Committee (appointed by Community Healthcare Board) (section 6.1) would be entered into the CHIS. Information relevant to each healthcare provider's or institution's performance would be extracted from these reports and added to the appropriate performance records.
 - Tabulations reflecting the performance of care-providing institutions and treatment regimens would be prepared and analyzed by the CHIS and would be provided to individuals on request for a fee. Care providers and consumers within the community would be provided with summary data on a regular basis describing their community without a fee.
 - Specific requests for data from industry or academia would be prepared by contract on a fee-for-service basis.
 - The information would be accessible only to those authorized to obtain it.
 - Using a form specified by the National Center for Health Statistics or other appropriate body, the CHIS would prepare reports of health status of pets in the community. These data may include summaries or abstracts of individual diagnoses (reportable diseases, drug interactions, drug toxicity) as requested. These would be used by the national info-warehouse system to compare performance and incidence of disease in different communities.
 - The Community Healthcare Board (p. 56) could charge private care providers, individual or institutional, to cover the cost of the services provided to them by the CHIS.
 - Each Family Pet Care and Education Center would provide computer information stations for owners to access their pets health records, community health records, related educational materials, and summaries of community health performance records prepared by the CHIS.

National or North American Healthcare Information Output

- All CHIS units would be linked in a national network maintained by an appropriate national body.

- The national network would require standardization of data inputs, forms of storage, access programs, telecommunication links.

The info-warehouse system would provide access to data using a North American database that would enable healthcare providers and administrators to:

- Assess performance of care providers, institutions, and communities.
- Analyze and compare costs, treatments, outcomes, and community health status. This would enable communities to benchmark the quality and cost-effectiveness of the care they provide (outcomes, care plans, spending) compared to other communities or institutions.
- Collect data to allow for appropriate statistical analysis to determine prevalence of diseases in various communities, regions, and North America.
- Formulate and maintain standards of practice.
- Enable users and providers to assess different care strategies.
- Compare costs and fees within and across different communities.
- Facilitate the accreditation process of institutions (quality assessment) by monitoring and evaluating the quality of care provided.
- Evaluate non-traditional treatments and identify emerging health threats, e.g., epidemics.
- The info-warehouse system could also collect information annually on user satisfaction regarding the care they received to compare providers, communities, and regions.

Other System Outputs

The info-warehouse system could also provide primary and secondary care providers with a number of services unrelated to patient data input. Such standardized services could include:

- Bookkeeping, accounting, and other relevant financial services. This information would be accessible only to those authorized to obtain it.
- A Veterinary Expert Information System could be included in the info-warehouse and provide at least the following information:
 1. Given a set of symptoms, signs, and diagnostic data, a list of differential diagnoses and probabilities of each being correct.
 2. For any set of symptoms the next question to answer in order to reduce the probability of a diagnostic error as much as possible.
 3. Success rates of various treatments for each illness including the effectiveness of various pharmaceuticals and biologicals.
 4. The side effects and interactions of drugs and the frequency and conditions under which they occur.
- Through the network of CHIS any healthcare provider could contact any other individual or institutional provider directly and schedule or reserve time or facilities for a patient with that provider.
- Educational resources for healthcare providers (course materials, computer simulations, self-testing)
- Educational opportunities including availability of internships, residencies, and other postdoctoral training
- Public relations data that may be helpful to care providers
- Communication access between various FPCECs to assist pet-focused special interest groups, breeders, tenants, etc.

Design Options

A number of design options for the information system may include:

- Income from the sale of data from community systems would be returned to the community. Data generated on a national or North American basis from the info warehouse would become public information as it was collected and analyzed with public money by the National Center for Companion Animal Health Statistics.
- A for-profit system which could operate like an ATM network, in which individual participants owning the necessary hardware and software would contract to be on a specialized (dedicated) network provided by a private info-warehouse system.
- Information providers and users would be able to find each other throughout the network, and financial transactions would be facilitated automatically.
- Hardware and software, including practice management (inventory, billing, etc.), health records (PE, lab, etc.) federal regulation and legal protection systems would be provided to the subscribers for their participation in the system.
- Practice management, medical quality assessment, and legal protection software systems could be provided to caregivers by the info-warehouse system.
- A central repository (library) of all publications related to companion animal health, so that care providers can easily locate and properly assess information reported and requested by their clients.
- Privately owned repositories of information (similar to the physician profiles and data purchased from pharmacies by third party value adding" companies and sold to pharmaceutical firms) would be accessible to qualified users within the system.
- A variety of matchmaking or clearinghouse functions for pet owners: apartment and house rentals, pet adoption, and temporary care situations.

INTERNET RESOURCES

VetPet Partners

From: "H. Brown" <hilbro@HOME.COM>

Join veterinary professionals and companion animal caretakers in discussion of health, welfare, behavioral issues and chronic disease management. Emphasis on encouraging productive partnership and communication between caretakers and veterinary professionals. VetPet Partners serves a growing body of education oriented companion animal advocates.

Subscription instructions:

To subscribe to VETPET PARTNERS, send the command: subscribe vetpet to: Majordomo@imagicomm.com OR visit subscription page at:

<http://members.home.net/hilbro/vetpet.html>

Owner/moderator address:
owner-vetpet@imagicomm.com

Wildlife Rehabilitators Listserv

For active professional wildlife rehabilitators or vets/biologists/techs etc., who are licenced or lawfully permitted to rehabilitate or work with wildlife in their prov/state. Clinical discussions of care/release, etc. of orphaned, injured, or sick wildlife. Membership restricted - by approval (application) only.

Subscription instructions:

<http://www.onelist.com/community/wlrehabprofessional>

Owner/moderator address: marnic@home.com

EQWISE - Equine Health and Welfare Discussion List

A discussion list which provides a focus for parties with an interest in the health and welfare of horses, donkeys and mules.

Contributing subscribers are likely to come from owners, those involved in amateur and professional equestrian activities, members of the equine industry, equine researchers and the veterinary profession. It is supported by The

Home of Rest for Horses, one of the leading equine welfare charities in the United Kingdom. The list (Lyris list server) is available directly as e-mail, through a web browser and as a digest.

To subscribe, read or post messages:

http://lists.dis.strath.ac.uk/index.cgi?enter=eqhw-list&text_mode=0

For further information:

<http://www.vie.gla.ac.uk/eqwise/list-server/list-server.htm>

NEWS & COMMENTARY

Cyberspace is Tapped to Curb Disease

The Clinton administration today is expected to propose spending \$65 million in 2001 to develop a nationwide computer system that tracks infectious diseases such as the flu and hepatitis C. The network would replace a system of phone calls and postcards that notifies authorities about diseases. Jeffrey Koplan, director of the Centers for Disease

Control and Prevention, said the program would use cyberspace to transfer reports from a city clinic to a state public health service to the CDC in one day. More than 35 emerging diseases have been identified since 1973, including AIDS, Legionnaire's disease, Lyme disease, and hepatitis C. The plan reportedly has bipartisan support in Congress. (USA Today, 10 Jan 2000)

MEETINGS & EDUCATIONAL OPPORTUNITIES

See the informatics section of NetVet for a more complete and current list of informatics-related activities at:

<http://netvet.wustl.edu/info.htm>

Workshop on Electronic Publishing of Data Sets on the World Wide Web

March 13-15, 2000

Geospatial and Statistical Data Center
University of Virginia Libraries
Charlottesville, VA

Workshop Information Online:

<<http://www.lib.virginia.edu/arl.workshop/>>

Workshop Registration Online:

<<http://db.arl.org/workshops/sregform.html>>

The ARL Statistics and Measurement Program will again offer its popular three-day workshop on publishing and analyzing data sets on the World Wide Web, March 13-15, 2000, at the University of Virginia. This workshop is for anyone who has a set of data that they wish to make available through a web site such as surveys, class assignments, or statistical compilations.

This three-day workshop is one in a series of ARL initiatives to provide essential skills to information professionals who work with numeric data sets and data analysis. Numerical databases and quantitative analysis require knowledge of statistical programming, but the WWW allows users to manipulate data more easily. The workshop is intended for librarians, information professionals, educators, and data producers and provides hands-on experience in developing interfaces for publishing and analyzing data sets on the World Wide Web (WWW).

Workshop participants will be given step-by-step instructions to develop tools for creating useful interactive sites for social, economic, demographic, and other data on the Internet. The curriculum includes developing HTML pages for datafiles, creating Perl scripts, working with CGI, and invoking SPSS and other statistical analysis tools to provide transparent data analysis capabilities for data users.

Familiarity with either HTML, Perl, and statistical packages is helpful but not essential.

This workshop is intended to extend the skills of those with some familiarity with HTML and the Unix operating system.

Attendance will be limited to 18 for this workshop.

Security of the Distributed Electronic Patient Record (EPR)

June 21-25, 2000; Victoria, B.C., Canada

An IMIA Working Conference

PURPOSE - To initiate, foster and promote international cooperation and collaboration for the security of distributed electronic patient records.

FORMAT - Conference materials available before conference; keynotes and invited lectures by internationally renowned representatives of research, industry and practice; recorded results of discussion sessions; concluding synthesis of conference into guideline proposals.

Contributions to the poster session are welcome.

WHO SHOULD ATTEND - Practitioners, developers, systems engineers, educators,

researchers concerned with advancement of electronic patient records.

CONFERENCE PACKAGE - A comprehensive package including all materials, accommodation in the four star Oak Bay Beach Hotel, meals and refreshments, and a West Coast Evening in a spectacular environment, is offered for Can\$2,650 (approx. US\$1,830). An early bird registration fee of Can\$2,400 (US\$1,656) is available for those registering by Feb.15, 2000. The fee for accompanying persons sharing a room with a conference participant is Can\$475 (US\$330). Accompanying persons are not entitled to attend the scientific sessions.

DETAILS - Details on the preliminary program, accommodation, social program and registration are available at: http://hinf.uvic.ca/imia_wg4/

International Congress on Medical Informatics, Biometry and Epidemiology

August 27 - September 1, 2000; Hannover, Germany

<http://www.hcc.de>

<http://www.mie2000.de>

SUGGESTED READING

Anatomic pathology Image Capture Using a Consumer-Type Digital Camera

Tse, CH. The American Journal of Surgical Pathology 23(12): 1555-1558, 1999

Implementation of a Practical Digital Imaging System for Routine Gross Photography in An Autopsy Environment

Belanger A, Lopes A, Sinard J. Arch Pathol Lab Med. 2000;124:160-165

CLOSING BITS

I Remember When...

A computer was something on TV
From a science fiction show
Windows were something you hated to clean
And ram was the cousin of a goat.

Meg was the name of a girlfriend
And gig was when a band played at night
Now they all mean different things
And that really mega bytes!

An application was for employment
A program was a TV show
A cursor used profanity
A keyboard was a piano

Memory was something that you lost with age
A CD was a bank account
And if you had a 3 1/2" floppy
You hoped nobody found out

Compress was something you did to the
garbage
Not something you did to a file
And if you unzipped anything in public
You'd be in jail for a while

Log on was adding wood to the fire
Hard drive was a long trip on the road
A mouse pad was where a mouse lived
And a backup happened to your commode

Cut you did with a pocket knife
Paste you did with glue
A Web was a spider's home
And a virus was the flu

I guess I'll stick to my pad and paper
And the memory in my head
I hear nobody's been killed in a computer crash
But when it happens they wish they were dead!