

Report for inFIRE Annual Conference  
Ottawa, Ontario  
Tuesday, May 9, 2000

We arrived at National Research Council, Institute for Research in Construction. Each attendee received a conference bag and notepad. Each attendee had a flag that represented their country on the table. It was a great touch by indicating how many of us attended from around the world.

The conference began with a welcoming from Russ Thomas, Director of the Institute for Research in Construction's Fire Risk Management Program and Janet Green, inFIRE chair.

The "Getting to know you" roundtable was very informative. Each attendee was requested to provide the name of their organization, their constituency base and any new developments or products within the last year. We decided to include everyone's updates and as well as news from those who could not attend on a separate document that will be forthcoming.

Before the first presentation, the attendees were escorted by Dr. David Torvi to the IRC fire testing facilities to see the set up preparations of a floor test. Unfortunately we were unable to see the results as the testing was contracted by a private company who did not want the results released.

Consideration of Reliability and Performance of Fire Protection Systems in FIRECAM by Dr. David Yung, NRC/IRC.

One of the few fire risk-cost assessment models that is being developed is the National Research Council of Canada's (NRC) FIRECAM(tm) (Fire Risk Evaluation and Cost Assessment Model). The NRC model assesses the expected risk to life of the occupants, as well as the fire protection costs (capital and maintenance costs) and expected fire losses, in residential or office buildings, by simulating the dynamic interactions of fire growth and spread, smoke movement, occupant response and evacuation and fire department intervention. These interactions are affected by the reliability and performance of the installed fire protection subsystems, such as fire alarms, automatic sprinklers and smoke controls. A more reliable fire alarm system or a more reliable and effective automatic sprinkler system can increase the level of safety to the occupants in a building. This presentation briefly describes FIRECAM(tm) and how the reliability and performance of subsystems are considered.

"Mapping Multiple Vocabularies for Better Subject Access to Fire Science Materials" by Lian Ruan, Librarian, Illinois Fire Service Institute, USA.

A number of problems arise when several subject vocabularies have been used in a catalog because of acquired cataloging. One of the solutions to this problem is to map the systems involved and move from one vocabulary's term to the approved terms during the validation process. Since August 1999, a project to map the Library of Congress Subject Heading (LCSH), Medical Subject Headings from the National Library of Medicine (MeSH) and other fire vocabularies, systems has been carried out at the Illinois Fire Service Institute Library (FSI Library), University of Illinois at Urbana-Champaign. Named as Fire Talk, this map will become a printed and a web-based electronic thesaurus. In the FSI Library's Online Public Access Catalog, LCSH, MeSH and other terms will be linked,

thus enhancing retrieval of relevant bibliographic citations and facilitating multiple database searching.

Tour of CISTI, The Canada Institute for Scientific and Technical Information. Elizabeth Katz, the marketing person for CISTI provided demonstrations of the CISTI Source and NRC Expertise Database. CISTI is comparable in size to the Library of Medicine in the United States. They provide access to full text and electronic resources, table of contents services and a database of experts/researchers.

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The first paper by Robert Fraser (Canada Centre for Remote Sensing) looked at an automatic system for monitoring and mapping forest fires, scars and smoke from satellites. This paper introduced an extensive end-to-end GIS based system for fire related applications developed at the Canada Centre for Remote Sensing. The system consists of three components: monitoring fire hot spots, mapping burned scars, and detecting fire smokes. During the fire seasons in 1998-1999, the system has been run successfully. To obtain and disseminate daily fire information across Canada a few Hours after the data reception. Check out their web site: [fms.norc.cfs.nrcan.gc.ca/FireM3/](http://fms.norc.cfs.nrcan.gc.ca/FireM3/)

Some other interesting items: regeneration of forests after fires can Take up to 150 years. It depends on what kind of trees were in the forest. Often fires go through a forest before it has reached maturity and it is often the same species of trees, which regenerate in that area. This method of fire detection has picked up fires that were missed by the More traditional means of fire detection.

Tour of the IRC's fire test facilities. While it was not possible for us to see an actual test in operation (due to confidentiality for the client for whom the tests Were being conducted), it was interesting to see the equipment, including video cameras and other apparatus.

Upon our return, Mike Culhane (our host) took us on a tour of the IRC library. From our visit to CISTI the previous day, it was important to note that the IRC branch library is still in existence due, among other reasons, to the fact that much of the subject matter is largely out of the pure scientific and medical scope of CISTI's collection. We were able to use the computers to search the "virtual library" and meet the rest of the IRC library staff who work with Mike.

Dr Guylene Proulx discussed the results of her field study on photoluminescent signage used to guide building occupants to exits in complete darkness. An office building's four identical stairwells were set with different conditions: one had full lighting, one had reduced lighting, another had reduced lighting with photoluminescent way guidance signs and one had photoluminescent way guidance signs with no other lighting output. Video cameras recorded the egress of occupants down these stairwells. It is interesting to note that photoluminescent signage is installed and used in Europe on ferries and on oilrigs. Where there are problems with emergency lighting through power failure or smoke density, this photoluminescent signage can glow from 3 hours to 3 days in total darkness.

Ian Henderson, IRC's Reference Librarian, discussed the concepts of bibliographic instruction at IRC. The introduction of the virtual library, including major scientific databases, journals and electronic current awareness tools, offer IRC researchers access to a variety of bibliographic and full-text information. Contact him at [Ian.Henderson@nrc.ca](mailto:Ian.Henderson@nrc.ca).

Our final paper for the day was from one of the founding members of inFIRE, Scott Mellon. Scott is the Project Coordinator for the CISTI Virtual Library concept. This library is a collection of networked resources available on the desktops of all staff of the National Research Council of Canada and this spans a 5000-mile range from the Atlantic to the Pacific Oceans. The history and rationale for the creation of the virtual library was discussed, along with the necessary technology to make it work, what is currently available and importantly, the impact the virtual library has had on the evolving roles of library staff.

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Protective Clothing for Firefighters was presented by Dr. David Torvi, from research being conducted at the National Research Council of Canada. Research is being conducted in three areas, heat transfer models, test standard development and durability research project. Dr. Torvi discussed a computer program for statistics dealing with flammability called COFIRES. He presented a visual program showing tests performed on protective clothing and results; showed methods of recording heat levels, and discussed proposed guidelines for suggested replacement of protective clothing for fire departments.

Teaching Fire Science to Engineering Students was presented by Dr. David Torvi. Dr. Torvi was asked to teach a course in fire science as an elective for the engineering program at the University of Waterloo. He searched for institutions, mainly in the U.S., offering fire science programs for model curriculums to incorporate into his class. Areas covered included fire fundamentals, fire dynamics, and active fire protection. He discussed how he dealt with teaching fire science to students who were used to engineering curriculums. He found that tours of area fire test facilities such as the one at NRC and the burn facility at Almonte, Ontario, proved to be very successful. He also discussed the use of instructor evaluations and suggestions to improve his course when he offers it again.

InFIRE - A Short History presented by Nora H. Jason, Manager of Fire Research Information Services, Building and Fire Research Laboratory, NIST. Nora's slide presentation of the history and evolution of inFIRE was a very popular session. She incorporated slides of the annual meetings, locations, officers and both official and candid photos of members and discussed presentation topics. It was interesting to see how the conference and the membership have grown through the years, and how the member's hairstyles have changed.

The Canadian Fire Service by Gary Richardson, Ottawa Fire Chief and Peter McBride, Safety Officer. As is common in the fire profession, Peter was paged out to a fire at the beginning of the presentation. Chief Richardson discussed the history of the fire department in Ottawa from its beginnings in 1837 to the present. The department is largely volunteer with 76,290 volunteer, or part-time, paid on call and 23,977 career firefighters and is a strong union department. He discussed the growth of the city and the increase in large fires and high injury and death statistics that led to the Fire Protection and Prevention Act of 1997, Ontario Bill 84. Public fire and safety education is now a high priority for the department. More information can be found on their web site [www.fire.ottawa.on.ca](http://www.fire.ottawa.on.ca)

Fire and Emergency Services - Western Australia by Elizabeth Hides, Manager, Information Resources, Fire & Emergency Services Authority of Western Australia  
A Customer-Defined Library Service for Emergency Services Personnel, Jill Don, Librarian for the Department of Emergency Services, Queensland, Australia.

Elizabeth discussed the consolidation of the fire and emergency services in Western Australia and how this led to changes and challenges for the library and their decision to control of their own future. She discussed the use of the

Intranet to link the parts of the services and how the consolidation affects the format of the library in the future. They have requested a new library system to be installed in the next five years and she outlined the steps and the sources she used to research possible library products to meet her goals for the future. She also discussed the use of scanning, electronic journals and cdrom products.

Jill's' presentation was a discussion of the challenges of providing library services to emergency services personnel. She gave an overview of FESA (Fire and Emergency Services Authority) and the role of information resources for them. FESA covers emergency management, unexploded ordinance and volunteer marine rescue. In Information Resources, all the departments had either different systems or none at all and they had to be standardized. This meant merging resources for a one-stop search and the ability to manage more information. She presented examples of the standardized terminology that they developed. They decentralized the filing system and now can provide desktop access. They found with their new system, training the user was imperative. She sees in the future the increased use of electronic documents, scanning images and IT connections and operational requirements.

Virtually Yours: Searching the Web by Ann Kelly, IAFC and Chris Dahms, Nuclear Service Organization  
This was an interactive presentation with input from the conference attendees as to their favorite sites in various areas of searching. As a member gave their url, Chris would go to that site on the Internet and everyone discussed the pros and cons. Ann and Chris are compiling a list of the sites, which will be made available through the conference proceedings.

Friday, May 12

Tour of the Library of Parliament and the inFIRE business meeting.