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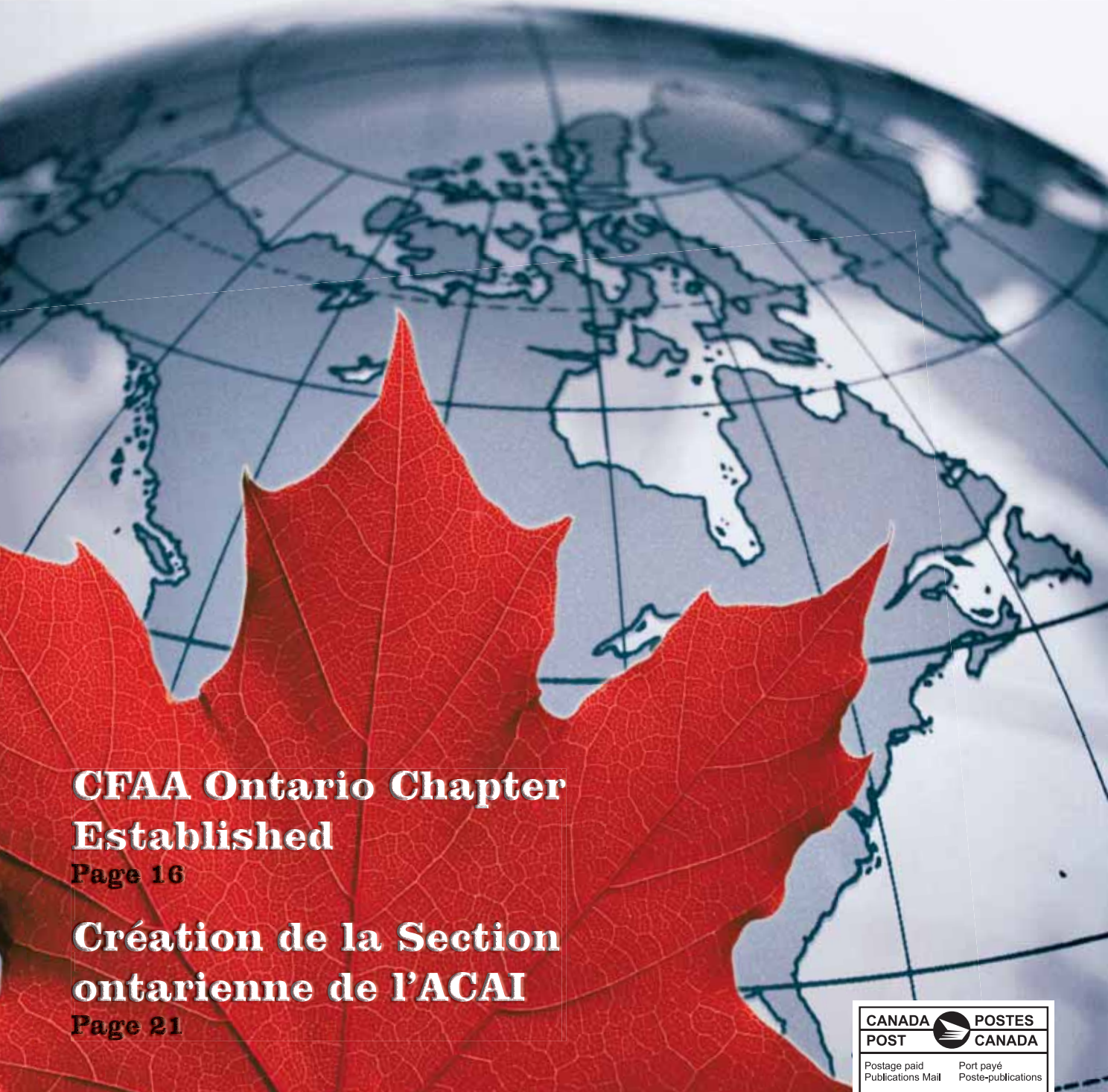
CANADIAN
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ASSOCIATION

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CANADIENNE
D'ALARME INCENDIE



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CFAA Ontario Chapter Established

Page 16

Création de la Section ontarienne de l'ACAI

Page 21

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Contents

- 2 From the Editor's Desk**
- 3 En direct du rédacteur en chef**
- 4 In Memoriam**
- 5 In Memoriam**
- 6 LEBER/RUBES INC. (LRI)**
- 7 FIRE ALARM TESTING: What a Fire Alarm Technician Can and Cannot Do**
- 9 ESSAI DES SYSTÈMES D'ALARME INCENDIE :**
Ce qu'un technicien en alarme incendie peut et ne peut pas faire
- 12 Upcoming Events 2010**
- 13 Fire Alarm System Intelligibility**
- 16 CFAA Ontario Chapter Established**
- 18 A reminder for Ontario technicians**
- 18 Un rappel pour les techniciens et techniciennes de l'Ontario**
- 21 Création de la Section ontarienne de l'ACAI**
- 26 CFAA Membership Application Form**
- 28 Report on the Technical Seminar in Montreal**
- 28 Compte rendu du séminaire technique de Montréal**
- 32 ONTARIO TECHNICAL SEMINAR Agenda**
- 33 Ontario Technical Seminar 2010 Registration Form**
- 34 CFAA 2010 Officers and Directors**
- 35 CFAA Chapters**
- 36 Advertising Rates/Index**

*Maximize the Use and Effectiveness of
Fire Alarm Systems in the Protection of
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From the Editor's Desk



We are very excited to report that the Montreal Technical Seminar (10 November 2009) was a resounding success. Almost 300 attendees filled the convention area, and the vast majority confirmed the successful blend of solid technical topics brought by excellent presenters. A great 'WELL DONE' to the members

of the Quebec Chapter for presenting a seminar that will clearly help to increase the level of fire safety knowledge throughout all adherents in the fire safety industry, and therefore help save lives. Jean Claude Boutin has penned a report giving you the details.

Speaking of Seminars, the Annual Technical Seminar in Ontario will occur on May 5, once again at York University campus. Read the preliminary details on page 32. Make sure you sign on quickly to avoid disappointment, because last year was a virtual sell-out. Also check our website for information.

Several years ago, Dave Goodyear (at that time with the Office of the Ontario Fire Marshal) created a precise list of Fire Alarm Technician CAN DO // CANNOT DO items. The topic is well worth re-visiting, and Dave has written a follow-up article that expands upon the items and the applications.

Enrollment in our *Codes and Standards Update (CSU)* Course has been continuing quite well. Upwards of 1,000 Ontario-based Technicians have now enrolled through the George Brown College website.

We remind all Ontario technicians that this mandatory up-date course must be completed by this July. We can only strongly recommend that you sign up right away to ensure that you complete the course and maintain your CFAA Technician status. Further details will be found on page 18.

What exciting times! Last fall, the National Executive Board deliberated at length about the formation of an Ontario Chapter. The decision to act was taken late last fall, and the first meeting of the fledgling Ontario Chapter was held early February. Read about it on page 16. Active Chapters in Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia ensure an exciting future for all involved in the CFAA, with its stated aims and objectives of saving lives and property through the proper use and maintenance of fire alarm systems.

We are very sad to report the loss of one of our industry's most knowledgeable members: Guylène Proulx recently succumbed to cancer. We remember her valuable research into several topics mostly related to occupant reaction to fire, and building evacuation procedures. We remember her active support of our organization, and her participation in several of our Technical Seminars. She will be sorely missed, but will not be forgotten. Please read our tribute to Guylène on Page 4.

Yours in Fire Safety,

Allen Hodgson, Editor-in-Chief

En direct du rédacteur en chef

Nous sommes très heureux de pouvoir rapporter que le séminaire technique de Montréal (qui s'est tenu le 10 novembre 2009) a remporté un succès retentissant. Près de 300 personnes ont assisté à ce séminaire, dont la vaste majorité a confirmé avoir apprécié le mélange réussi de sujets techniques intéressants présentés par des conférenciers de haut calibre. COUP DE CHAPEAU aux membres de la section du Québec pour avoir organisé un séminaire qui contribuera sans aucun doute à accroître le niveau de connaissances en sécurité incendie parmi tous les adhérents de l'industrie de la sécurité incendie et contribuera ainsi à sauver des vies. Jean-Claude Boutin a rédigé pour nous un rapport détaillé sur ce séminaire.

En parlant de séminaires, le Séminaire technique annuel en Ontario aura lieu le 5 mai prochain, une fois encore sur le campus de l'Université York. Vous trouverez des renseignements préliminaires à ce sujet à la page 32. N'oubliez pas de vous inscrire rapidement afin d'éviter toute déception; l'année dernière nous avons fonctionné pratiquement à guichet fermé! Visitez aussi notre site Web pour vous tenir au courant.

Il y a quelques années, Dave Goodyear, qui travaillait à l'époque au Bureau du commissaire des incendies de l'Ontario, a dressé une liste des tâches qu'un technicien en alarme-incendie peut faire et de celles qu'il ne peut pas faire. Il s'agit d'un sujet toujours d'actualité et Dave a rédigé un article de suivi qui décrit plus en détail les éléments de cette liste.

La participation aux *Cours de mise à jour sur les normes et les codes* se poursuit avec succès. Près de 1 000 techniciens ontariens se sont maintenant inscrits par l'intermédiaire du site Web du Collège George Brown. Nous rappelons à tous les techniciens de l'Ontario qu'il s'agit d'un cours de mise à jour obligatoire qu'ils doivent terminer d'ici le mois de juillet prochain. Nous leur recommandons fortement de s'inscrire immédiatement afin de terminer ce cours à temps et de maintenir leur statut de technicien inscrit de l'ACAI. Vous trouverez d'autres détails à ce sujet à la page 18.

Notre association traverse une période passionnante! À l'automne dernier, notre conseil d'administration national a discuté longuement de la formation possible d'une section ontarienne. La décision d'agir dans ce sens a été prise à la fin de l'automne, et la première réunion de la toute nouvelle section de l'Ontario a lieu au début de février. Vous trouverez d'autres détails à ce sujet à la page 21. Avec des sections actives au Québec, en Ontario, au Manitoba, en Saskatchewan, en Alberta et en Colombie-Britannique, les perspectives d'avenir sont excellentes pour l'ACAI, dont les buts et objectifs sont de sauver des vies et des biens grâce à l'utilisation et à la maintenance appropriées des systèmes d'alarme-incendie.

Enfin, c'est avec beaucoup de tristesse que nous vous informons de la perte de l'un des membres les plus émérites de notre industrie : Guylène Proulx a succombé récemment au cancer. Nous n'oublierons pas ses travaux de recherche de grande valeur sur plusieurs sujets concernant, pour la plupart, la réaction des gens aux incendies et les procédures d'évacuation des bâtiments. Nous n'oublierons pas non plus son soutien actif pour notre organisme et sa participation à plusieurs de nos séminaires techniques. Elle nous manquera à tous et nous garderons d'elle un souvenir inoubliable. Veuillez lire notre hommage à Guylène à la page 5.



Cordialement, en toute sécurité,
Allen Hodgson, rédacteur en chef.



In Memoriam



Guylène Proulx
1960-2009

The international fire protection community has lost an outstanding member and dedicated researcher: Dr. Guylène Proulx passed away on December 1, 2009.

Guylène received her Ph.D. in architectural planning/environmental psychology from the Université de Montréal in 1992. She became Manager of the Human Factors project within the Fire Research Program, at the Institute for Research in Construction, National Research Council Canada (NRC), and remained there for 18 years.

Her chosen specialty was scientific research on human behaviour in fire, including response to fire alarms, fire alarm audibility and signal recognition, effectiveness and impact of voice communication messages on evacuation, and many more related topics. Her research work has guided many changes that have been made to codes and standards, affecting major improvements in fire safety around the world.

She was an avid instructor, giving of her time to teach at various Colleges and Universities across Canada and abroad. Many of us will remember her for her selfless contributions to our Annual Technical Seminars where she was a highly respected presenter.

Guylène received the 2007 Public Service Award of Excellence from the Government of Canada as well as numerous awards from NRC and from the Government of Canada for her efforts in sharing research findings and promoting fire safety. On December 30, 2009, Guylène was appointed Officer of the Order of Canada, the highest civilian honour of the country. The Order of Canada recognizes people who have demonstrated excellence, and exceptional dedication to community, and service to the nation. A well-deserved award.

Dr. Guylène Proulx will be sorely missed, and long remembered by all of us at the Canadian Fire Alarm Association.

In Memoriam



Guylène Proulx
1960-2009

La communauté internationale de la protection contre l'incendie a perdu un membre exceptionnel et une scientifique dévouée : Guylène Proulx est décédée le 1^{er} décembre 2009.

M^{me} Proulx a reçu son doctorat en planification architecturale et psychologie environnementale de l'Université de Montréal en 1992. Depuis cette date et pendant les dix-huit années qui ont suivi, elle a été gestionnaire du projet des facteurs humains dans le cadre du Programme de gestion des risques d'incendie à l'Institut de recherche en construction, au Conseil national de recherche Canada (CNRC).

Sa spécialité était la recherche scientifique sur le comportement des gens en cas d'incendie, notamment la réaction aux alarmes incendie, l'audibilité et la reconnaissance de ces signaux, l'efficacité et l'impact des communications vocales pour l'évacuation, et bien d'autres sujets connexes. Ses travaux de recherche ont eu de profondes répercussions sur les normes et les codes et ont entraîné des améliorations importantes dans la sécurité contre l'incendie, dans le monde entier.

M^{me} Proulx était une chargée de cours passionnée, donnant de son temps pour enseigner dans divers collèges et universités, au Canada et à l'étranger. Bon nombre d'entre nous se souviendront d'elle pour ses contributions généreuses à nos séminaires techniques annuels où elle était une conférencière de haut calibre.

M^{me} Proulx a reçu le Prix d'excellence de la fonction publique en 2007, décerné par le Gouvernement du Canada, ainsi que de nombreux prix du CNRC et du Gouvernement du Canada en reconnaissance de ses efforts pour partager les résultats de ses travaux de recherche et pour promouvoir la sécurité contre l'incendie. Le 30 décembre 2009, M^{me} Proulx a reçu, à titre posthume, le titre d'Officier de l'Ordre du Canada, la plus haute distinction civile remise au pays. L'Ordre du Canada est réservé à ceux et celles qui ont fait preuve d'excellence, de dévouement exceptionnel envers la communauté et de service envers la nation. Une distinction bien méritée.

Guylène Proulx nous manquera à tous, à l'Association canadienne d'alarme-incendie, et nous garderons d'elle un souvenir inoubliable.

LEBER/RUBES INC. (LRI) is creating an annual scholarship that will be awarded to a Fire Protection Engineering Masters or PhD candidate at Carleton University in Ottawa. The annual scholarship will be in the amount of \$1,000.

The scholarship will be named in honour of **Dr. Gùylene Proulx** who passed away in December 2009 at the age of 48. Gùylene was a researcher with the National Research Council. She was considered by her peers to be one of, if not the leading expert in the world in the field of "Human Behaviour in Fires." Her remarkable credentials include involvement in the post-event investigation of many of the biggest tragedies over the past two decades including the 1993 & 2001 World Trade Centre bombings.

Since 1992, Dr. Proulx was Manager of the Human Factors project within the Fire Research Program at the Institute for Research in Construction. Her research included the investigation of human response to alarm signaling, voice communication messages, evacuation movement, typical actions taken, timing of escape, timing of evacuation and social interaction during an emergency.

Dr. Proulx was an Adjunct Research Professor in the Department of Civil and Environmental Engineering at Carleton University (FPE program). She was also an Adjunct Associate Professor of Fire Protection Engineering at the Worcester Polytechnic Institute, MA, USA and a past President of the SFPE-Ottawa Chapter and on the BOD SFPE-International. Dr. Proulx was involved in the publication of over 100 research papers and was a presenter at the majority of the international conferences in her field. Dr. Proulx was named to the Order of Canada in January 2010.

Gùylene was not only a leader in her field but she was a wonderful person. She always made time for others and was a fantastic promoter of FPE. This scholarship is in recognition of Gùylene's contributions and in keeping with LRI's commitment to supporting the FPE community. ☺

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FIRE ALARM TESTING:

What a Fire Alarm Technician CAN and CANNOT DO

By Dave Goodyear, D. Goodyear Fire Consulting

Testing and repairing fire alarm systems is not a field to enter without the facts. Restrictions about who is licensed or permitted to work on fire alarm systems vary among the provinces and territories. If you are qualified to work on fire alarms systems, there are accepted tasks you can and cannot do.

The Fire Code is the document that deals with the testing and inspection of fire alarm systems. Section 6.3, "Fire Alarm and Voice Communication Systems for Life Safety", specifies that testing and inspections must be done in accordance with CAN/ULC-S536 *Standard for the Inspection and Testing of Fire Alarm Systems*.

(Subsection 1.1.5. of the Ontario Fire Code [applicable only in Ontario] states that any person who performs tests or annual inspections and any person who repairs, replaces or alters components of a fire alarm system must have successfully completed a specified training program.)

Having the qualifications does not open the door to all tasks dealing with a fire alarm system. You may have the qualifications, you may have the skills, but there are restrictions. The following provides some guidance.

CAN DO

Test and inspect as required by the Fire Code

A qualified fire alarm technician can do all of the tests and inspections set out in the *Standard for the Inspection and Testing of Fire Alarm Systems*. Smoke detector testing usually requires specialized equipment to perform the sensitivity testing. Merely testing detectors with a smoke test aerosol is not sufficient to meet the requirements of the standard.

Replace fire detectors and alarm signals

A qualified fire alarm technician can replace manual pull stations, heat detectors, smoke detectors, alarm

bells, horns, speakers and visual alarm signals provided that the devices are the same model, are electrically compatible with the fire alarm system and have the same area of coverage.

Inspect, test and verify devices

A qualified fire alarm technician can inspect, test and verify fire detectors and alarm signals that are newly installed or relocated in the same fire zone. Knowledge of the requirements in CAN/ULC-S524 *Standard for the Installation of Fire Alarm Systems* and the manufacturer's specifications for the device is necessary. The ability to make sound level measurements may be required for audible signal testing.

Replace some parts

Replacement fuses, lamps, plug-in modules, relays and batteries must be done using parts defined by the fire alarm manufacturers' literature.

Maintain Batteries

Battery maintenance, such as cleaning battery terminals and replenishing battery electrolyte in wet cell batteries, can be performed. Adjustments to battery chargers can be done if those procedures are available from the panel manufacturer. The battery discharge tests described in the CAN/ULC-S536 standard, article 6.3.2 involve more than turning off the AC power and seeing if the system operates on standby battery.

Complete and sign the inspection and test records

Once testing is finished, the technician can complete the documentation and sign it. The document is a requirement of the Fire Code. It demonstrates that the system has been tested in accordance with the standard and it also identifies who took responsibility for testing the fire alarm system.

CANNOT DO

Change fire detectors or alarm signals

Changing the type of fire detector should not be undertaken. The detector type was selected for a specific reason: a mandatory code requirement, early fire detection properties, area of coverage, or environmental considerations. Adding heat or smoke detectors is also problematic. Additional detectors may exceed the detector circuit capability and impact on the power supply capacity. Any additional wiring must meet the requirements of the electrical code. System software changes may be necessary in fire alarm systems with addressable detectors.

Changing fire alarm signals may affect audibility levels. Increasing the audibility by using other signals with greater sound level output or by adding signals inevitably impacts on the signal circuit loading and demands on the power supply and standby battery. Requirement 3.6 of CAN/ULC-S536 addresses additions, deletions or alterations to field devices.

Programming

Programming changes to fire alarm systems are not tasks that a fire alarm technician should undertake alone, whether the changes are made by altering diode

panels, cutting jumper wires, changing the position of dip-switches, or keying in software changes. The fire alarm system operation was described as part of the building approval process. Alterations to programming could have a serious impact on the level of life safety in the building. Requirement 3.5 of CAN/ULC-S536 discusses additions, deletions or alterations to the control panel, whether those changes to the system are in firmware, software or hardware.

Change timer intervals

Setting the correct time on a system clock is acceptable but changing the settings of internal system timers is not. The *Building Code* establishes some timing functions for various building sizes and occupancies. Changing the duration of fire alarm functions could impact on the battery discharge. Timing changes may also impact on the approved building Fire Safety Plan procedures.

Alter auxiliary circuits and off site monitoring

Alterations to ancillary equipment and wiring can affect the established level of building life safety. The *Building Code* regulates many ancillary functions controlled by the fire alarm system, such as smoke control, electromagnetic locks and elevator recall. The *Building Code* and standards even address the connections between the building fire alarm system and a central station or monitoring company. In fact, a new ULC standard CAN/ULC-S561 *Installation and Services for Fire Signal Receiving Centres and Systems* describes requirements for monitoring fire alarm systems.

The "cannot do" list is long but does not imply that the fire alarm technician is incapable of doing the work. Indeed it will probably be this person doing the work. The point is that the individual should not be making these decisions alone or even with the building owners permission. These cannot do items impact on the building life safety and in the code driven field of fire alarm systems approval from the appropriate authority having jurisdiction is necessary before undertaking changes on the cannot do list. Ⓢ

Dave Goodyear is president of D. Goodyear Fire Consulting and is a member of many Underwriters' Laboratories of Canada fire alarm committees.

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ESSAI DES SYSTÈMES D'ALARME INCENDIE :

Ce qu'un technicien en alarme incendie peut et ne peut pas faire

Par Dave Goodyear, D. Goodyear Fire Consulting

Les essais et la réparation des systèmes d'alarme incendie ne sont pas un domaine dans lequel on peut pénétrer sans connaître les faits. Les restrictions concernant les personnes autorisées à intervenir sur les systèmes d'alarme incendie varient selon la province et le territoire. Si vous êtes autorisé à travailler sur des systèmes d'alarme incendie, il y a des tâches que vous pouvez faire et d'autres que vous ne pouvez pas faire.

Le Code de prévention des incendies est le document qui traite des essais et des inspections des systèmes d'alarme incendie. La section 6.3, Systèmes d'alarme incendie et réseaux de communication phonique, précise que l'inspection et les essais doivent être effectués conformément à la norme CAN/ULC-S536, *Inspection et mise à l'essai des réseaux avertisseurs d'incendie*.

(La sous-section 1.1.5. du Code de prévention des incendies de l'Ontario [qui ne s'applique qu'en Ontario] stipule que seules les personnes ayant suivi avec succès un programme de formation prescrit sont autorisées à effectuer les essais ou les inspections annuelles ainsi que les réparations, le remplacement ou le changement d'un élément d'un système d'alarme incendie.)

Posséder les qualifications requises n'ouvre pas la porte à toutes les tâches liées à un système d'alarme incendie. Vous avez peut-être les qualifications et les compétences requises, mais des restrictions s'appliquent néanmoins. Vous trouverez ci-après des précisions à ce sujet.

CE QU'UN TECHNICIEN PEUT FAIRE

Effectuer les essais et inspections requis par le Code de prévention des incendies

Un technicien en alarme incendie qualifié peut effectuer tous les essais et inspections mentionnés dans la *Norme pour l'inspection et la mise à l'essai des réseaux avertisseurs d'incendie*. La mise à l'essai des détecteurs de fumée exige généralement de disposer de matériel d'essai spécialisé. Se contenter de vérifier ces détecteurs avec un aérosol de fumée n'est pas suffisant pour respecter les exigences de la norme.

Remplacer des détecteurs d'incendie et des appareils de signalisation d'alarme

Un technicien en alarme incendie qualifié peut remplacer des postes manuels, des détecteurs de chaleur, des détecteurs de fumée, des cloches d'alarme, des klaxons, des haut-parleurs et des avertisseurs visuels, pour autant que les dispositifs de rechange soient du même modèle, qu'ils soient compatibles électriquement avec le système d'alarme incendie et qu'ils offrent la même surface de protection.

Effectuer les inspections, essais et vérifications des dispositifs

Un technicien en alarme incendie qualifié peut inspecter, mettre à l'essai et vérifier les détecteurs d'incendie et les appareils de signalisation qui viennent d'être installés ou qui sont déplacés à l'intérieur de la même zone. Il doit cependant connaître les exigences de la norme CAN/ULC-S524, *Norme pour l'installation des réseaux avertisseurs d'incendie*, et les spécifications du fabricant applicables au dispositif. La capacité d'effectuer des mesures de niveau sonore peut être requise pour l'essai des avertisseurs sonores.

Remplacer certaines pièces

Le remplacement de fusibles, voyants, modules enfichables, relais et batteries doit être effectué au moyen des pièces de rechange définies dans la documentation technique du fabricant du système.

Entretenir les batteries

Un technicien peut effectuer l'entretien courant des batteries, comme le nettoyage des bornes et le remplissage d'électrolyte dans les batteries à piles liquides. Il ou elle peut aussi procéder aux réglages des chargeurs de batteries à condition d'en obtenir la description auprès du fabricant du panneau. Les essais de décharge des batteries décrits dans la norme CAN/ULC-S536, article 6.3.2, exigent plus de travail que de simplement couper l'alimentation secteur (c.a.) et voir si le système fonctionne lorsqu'il est alimenté par la batterie de secours.



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Remplir et signer les registres d'inspection et d'essai

Lorsque les essais sont terminés, le technicien peut remplir la documentation pertinente et la signer. Un tel registre est exigé par le Code de prévention des incendies. Il atteste que le système a été mis à l'essai conformément à la norme et indique qui assume la responsabilité de ces essais.

CE QU'UN TECHNICIEN NE PEUT PAS FAIRE

Changer des détecteurs d'incendie ou des avertisseurs d'alarme

Il ne faut pas changer le type de détecteur d'incendie. En effet, le type de détecteur a été sélectionné pour une raison bien précise : une exigence du code, des propriétés de détection précoces, une couverture de protection ou des facteurs environnementaux. Ajouter des détecteurs de fumée ou de chaleur peut aussi poser des problèmes. En effet, avec des détecteurs additionnels, la capacité du circuit de détection pourrait être dépassée et cet ajout pourrait aussi avoir des répercussions sur la capacité de la source d'alimentation. Tout câblage additionnel doit respecter les exigences du code de l'électricité. Dans les systèmes utilisant des détecteurs adressables, des modifications pourraient aussi être nécessaires au logiciel du système.

Changer des avertisseurs sonores pourrait avoir des répercussions sur l'audibilité des signaux. Augmenter l'audibilité des alarmes en utilisant des appareils de puissance sonore supérieure ou en ajoutant des appareils aurait inévitablement des répercussions sur la charge du circuit de signalisation ainsi que sur la consommation de courant fourni par la source d'alimentation et la batterie de secours. L'article 3.6 de la norme CAN/ULC-S536 traite des ajouts, suppressions ou modifications aux dispositifs externes.

Changer la programmation

Changer la programmation d'un système d'alarme incendie n'est pas une tâche qu'un technicien en alarme incendie devrait entreprendre seul, que ces changements soient faits en modifiant des panneaux de diodes, en coupant des cavaliers, en modifiant la position de microcommutateurs ou en saisissant des changements dans le logiciel. La description du fonctionnement du système d'alarme incendie fait partie du processus d'approbation du bâtiment. Des modifications à la programmation pourraient avoir un impact important sur le niveau de sécurité incendie dans le bâtiment. L'article 3.5 de la norme CAN/ULC-S536 traite des additions, suppressions ou modifications au panneau de commande, que ces modifications soient apportées au niveau du progiciel, du logiciel ou du matériel.

Changer la durée des minuterries

Régler l'heure correcte sur l'horloge d'un système est acceptable, mais modifier les réglages des minuterries internes du système ne l'est pas. Le Code du bâtiment établit certaines fonctions de temporisation selon la taille et l'usage du bâtiment. Modifier la durée des fonctions d'alarme incendie pourrait aussi avoir un impact sur la décharge de la batterie. Les modifications aux minuterries pourraient en outre avoir des répercussions sur les procédures approuvées du plan de sécurité incendie du bâtiment.

Modifier des circuits auxiliaires et la surveillance hors site

Les modifications à l'équipement et au câblage auxiliaire pourraient affecter le niveau établi de sécurité incendie dans le bâtiment. Le Code du bâtiment contient des exigences relatives à plusieurs fonctions auxiliaires contrôlées par le système d'alarme incendie, notamment le désenfumage, les serrures électromagnétiques et le rappel des ascenseurs. Le Code du bâtiment et les normes traitent aussi des connexions entre le système d'alarme incendie du bâtiment et une centrale ou une compagnie de télésurveillance. En fait, une nouvelle norme ULC, la norme CAN/ULC-S561, *Installation et services – systèmes et centrales de réception d'alarme incendie*, stipule les exigences applicables à la surveillance des systèmes d'alarme incendie.

La liste de « ce qu'un technicien ne peut pas faire » est longue, mais elle ne signifie pas qu'un technicien en alarme incendie n'est pas capable d'accomplir ces tâches. En fait, c'est probablement cette personne qui fera ce travail. L'important est que la personne qui effectue ces tâches ne devrait pas prendre ces décisions seule ou même sans la permission du propriétaire du bâtiment. Ces « choses à ne pas faire » ont un impact sur la sécurité incendie du bâtiment et dans le domaine réglementé par les codes qu'est celui des systèmes d'alarme incendie, l'approbation de l'autorité compétente est nécessaire avant d'entreprendre tout changement mentionné dans cette liste. Ⓢ

Dave Goodyear est président de D. Goodyear Fire Consulting et membre de plusieurs comités des Laboratoires des assureurs du Canada (ULC) qui s'occupent de l'alarme incendie.

Reproduit avec la permission de SP&T News, une division de CLB Media, édition de mars 2004, sous le titre « To Test or Not to Test ».

Upcoming Events 2010

April 15 – 17

Saskatchewan Association
of Fire Chiefs (SAFC)
Conference & Trade Show
Regina, Saskatchewan
www.safc.sk.ca

April 17 – 18

Fire Service Association
of Nova Scotia Conference
Truro, Nova Scotia
www.fsans.ns.ca

April 20 – 21

CANASA Security Canada East
Laval, Quebec
www.securitycanadaexpo.org

May 1 – 5

Ontario Association
of Fire Chiefs Conference
Toronto Congress Centre
Toronto, Ontario
www.oafc.on.ca

May 4 – 5

Partners in Prevention Ontario
Health & Safety Conference
Mississauga, Ontario
www.partnersinprevention.com

May 5

CFAA Ontario Technical Seminar
Schulich School of Business
York University, Toronto, Ontario
Details on our website at
www.cfaa.ca

May 12 – 13

Security Canada Alberta
Tri-Lateral Conference
Calgary, Alberta
www.securitycanadaexpo.com

May 22 – 25

Quebec Fire Chiefs Conference
Association des chefs en sécurité
incendie du Quebec
Quebec City, Quebec
www.acsiq.qc.ca/cms

June 4 – 6

FDIC Atlantic
Arcadia University
Wolfville, Nova Scotia
www.fdic-atlantic.ca

June 6 – June 10

Fire Chiefs' Association
of British Columbia 2010
Conference & Fire Services Expo
Penticton, British Columbia
www.fcabc.bc.ca

June 7 – 10

NFPA World Safety
Conference & Exposition
Las Vegas, Nevada
www.nfpa.org

June 10 – 12

Manitoba Fire Chiefs
Conference & Exposition
Winnipeg, Manitoba
www.maafc.ca

June 16

CANASA Security Canada West
Richmond, British Columbia
www.securitycanadaexpo.org

June 20 – 23

Alberta Fire Chiefs Conference
Edmonton, Alberta
www.afca.ab.ca

June 22

CFAA Annual General Meeting
Hilton Suites, Markham, Ontario
www.cfaa.ca

July 4 – 7

Maritime Fire Chiefs Conference
Yarmouth, Nova Scotia
www.mfca.ca

October 7

CFAA Edmonton Technical Seminar
Marriott River Cree Resort
Edmonton, Alberta

September 16

Security Canada Atlantic
Moncton, New Brunswick
www.securitycanadaexpo.org

September 19 – 22

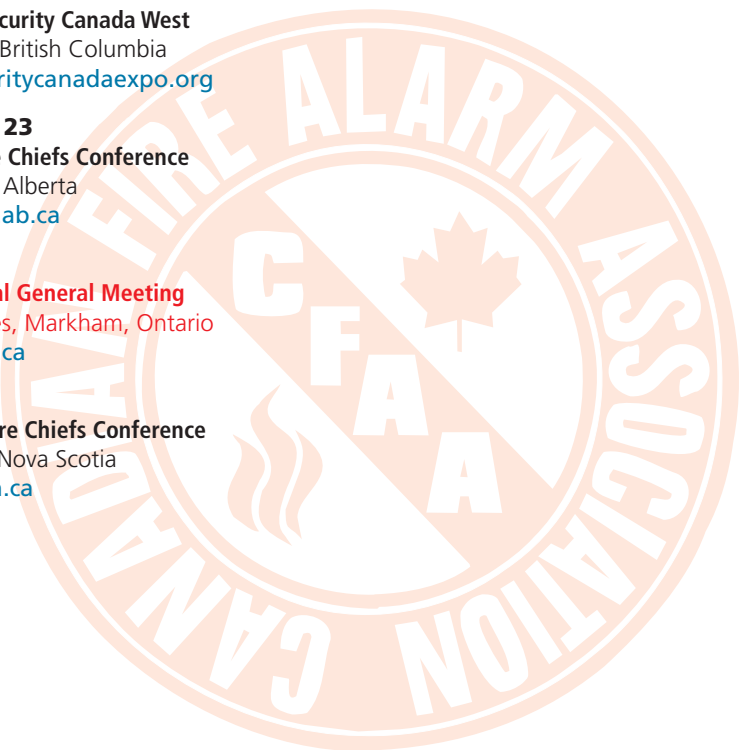
Canadian Association of Fire Chiefs
CAFC Conference, Rescue Canada
Saint John, New Brunswick
www.cafc.ca

October 5 – 12

Fire Prevention Week

October 20 - 21

CANASA - Security Canada Central
Toronto Congress Centre
Toronto, Ontario
www.securitycanadaexpo.com



Fire Alarm System Intelligibility

A review of design strategies, in achieving what is required by the Building Code.

By David Sylvester, Morrison Hershfield

Voice messages are generally accepted as being superior to conventional evacuation tones, as a means of notifying building occupants of an emergency. A voice message announcement instead of just a temporal horn tone gives enough information to cause a reaction. Take for instance the following two scenarios:

Scenario 1:

You are visiting the new company systems consultant on the 83rd floor of a high rise office tower and you hear:

“Chime Tone..... Chime Tone..... May I have your attention please; a fire alarm device has been activated on the 80th Floor, authorized persons are investigating. Please stand by for further instructions.”

Scenario 2:

You are visiting the new company systems consultant on the 83rd floor of a high rise office tower and you hear:

“Chime Tone.....Chime Tone..... Ma-h-av-ooo-on-pla f--arm d-ice as-en act--ad o t-e 8---th -oor, a---rize-d eron are in-v-e-stig-ati-ng. ease and b-or ur-ther instructions.”

By experiencing scenarios one and two, we can understand the differences between intelligible speech messages and speech messages that are not intelligible.

Speech intelligibility is not a physical quantity like resistance, amperes or volts. Intelligibility is the degree to which the occupants understand the spoken language. Speech is not particularly intelligible simply because it is audible. We all have experienced non-intelligible voice messages that are loud enough but suffer from echoes or room distortion and therefore are not understandable. Standing on an underground

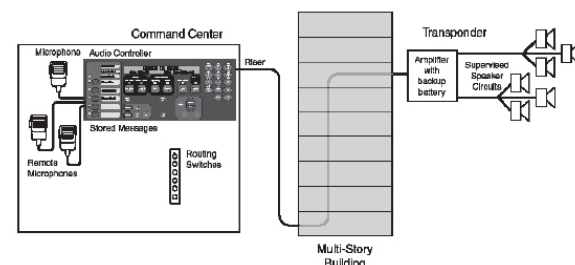
subway platform during a message broadcast has lived the experience of a non-intelligible voice message.

Typically, fire alarm design engineers and the Authority Having Jurisdiction agree that intelligible voice evacuation systems are vital to protecting building occupants during emergency events.

Intelligible Speech and the Building Code

Our industry is driven by codes and standards! The *Building Code* requires emergency voice communication systems in specific types of buildings; such as high-rise buildings; and in specific occupancy classifications.

For example, places of public assembly, such as theatres, require emergency voice communication systems. Even in buildings where voice systems are prescribed, the *Building Code* is still rather vague in regards to how to confirm that the emergency voice system provides intelligible voice messages.



Let's take a closer look at the 2005 *Building Code*.

3.2.4.22. Voice Communication Systems

(1) A voice communication system required by Subsection 3.2.6. or Clause 3.3.2.4.(14)(f) shall consist of,

Sentence (1) tells us where voice communication systems are required; high rise and assembly for example:

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- (a) a 2-way communication system in each floor area, with connections to the central alarm and control facility and to the mechanical control centre, and

Clause (a) prescribes the fire fighter emergency telephones connected from each floor to the Central Alarm and Control Facility.

- (b) loudspeakers operated from the central alarm and control facility that are designed and located so as to be audible and the messages intelligible in all parts of the building, except that this requirement does not apply to elevator cars.

Clause (b) prescribes that the emergency voice page messages be both audible (we can hear it) and intelligible, (we can understand it) in all parts of the building; (except inside the elevator).

- (2) The voice communication system referred to in Sentence (1) shall include a means to silence the alarm signal in a single stage fire alarm system while voice messages are being transmitted, but only after the alarm signal has initially sounded for not less than 30 s.

Sentence (2) prescribes the requirements for a single-stage fire alarm system. Sentence (2) requires the system to turn off the audible evacuation tones being broadcast in the building in order to enable an emergency voice page announcement. If both the evacuation tones and the speech signal were to be broadcast at the same time, confusion could ensue. In other words the emergency voice announcement overrides the evacuation tones. Therefore it is critically important that the speech signal is intelligible and therefore understood.

- (3) The voice communication system referred to in Sentence (1) shall include a means to silence the alert signal and the alarm signal in a 2 stage fire alarm system while voice messages are being transmitted, but only after the alert signal has initially sounded for not less than,

- (a) 10 s in hospitals that have supervisory personnel on duty for twenty-four hours each day, or
(b) 30 s for all other occupancies.

Sentence (3) is similar to the requirements in Sentence (2). However Sentence (3) prescribes the requirements for a two-stage fire alarm system. Sentence (3) requires the system to turn off the audible alert and/or evacuation tones being broadcast in the building in order to allow an emergency voice page speech announcement. Sentence (3) also dictates when the

alert or evacuation tone can be turned off to allow the voice message: after 10 seconds of tones in hospitals, and 30 seconds of tones in all other occupancies.

- (4) The voice communication system referred to in Clause (1)(b) shall be designed so that the alarm signal can be selectively transmitted to any zone or zones while maintaining an alert signal or selectively transmitting voice messages to any other zone or zones in the building.

Sentence (4) prescribes the requirement to have audible signal zone selectivity. Also, sentence (4) requires the system to be able to broadcast tones on selective floors, while transmitting voice messages on any one or group of selected floors.

This indicates that the *Building Code* is conscious of the potential for a controlled evacuation of the building. Tones on some floors and evacuation instructions on other floors are based on the priority of the off-normal event.

Based on sentences one to four, we see the importance of intelligible speech utilized in fire emergencies.

Intelligible Speech and the Designer

How do we design emergency voice systems so that they provide intelligible speech? Do we need more loudspeakers at lower output or do we need fewer loudspeakers with higher output?

Information such as room dimensions and its surface materials as related to reflection or absorption are key initial considerations. Also, the room's ambient noise levels, and the types of speakers intended to be installed are all important ingredients to consider during the design process.

In the distributed speaker system typical of fire alarm emergency communication applications, echoes are typically not problematic. Room reverberation (the bouncing or reflecting of sound from floor to walls to ceiling) can have a major negative impact on intelligibility. Reverberation is an integral contributing factor to poor speech intelligibility.

Reverberation Is Trouble

When the sound is reflected off walls and other surfaces, reverberation is produced. The reverberation in a room is dependent on the following:

- Room dimensions
- Construction type and materials
- Objects within the room
- Number of occupants.

...continued on page 23

CFAA Ontario Chapter Established

Vaughan, Ontario – February 1, 2010

It is with great pleasure we announce the creation of a NEW CFAA Chapter in Ontario!

After approximately 16 months of discussion, debate and deliberation, the inaugural meeting of the CFAA Ontario chapter came to order on February 1, 2010.

The Ontario Chapter meeting was pre-empted with a meeting to establish the new Ontario Chapter Executive. It began with a presentation from CFAA National President Gerry Landmesser, who described the growth and progress the CFAA has experienced since its inception in 1973, approximately 37 years ago. The CFAA National Board, as it is based in Toronto, has always paid attention to issues central to Ontario. However, over the last few years the CFAA has witnessed many new Chapters forming across Canada and the time was ripe for Ontario to split from the National Board to focus on the issues specific to Ontario.

Al Hess and Michael Hugh, as members of the CFAA National Board's Strategic Planning Committee, described the logistics associated with running a CFAA Chapter, including the feedback received from CFAA Ontario members during a preliminary meeting held back in July, 2009. During that meeting, Ontario members requested a number of efforts be undertaken to further benefit the CFAA in Ontario. The top five requests were:

- 1) *Technician Benefits Workstream*
- 2) *Ontario Technician Licensing Workstream*
- 3) *Authorities Having Jurisdiction Relations Workstream*
- 4) *Ontario Code Development Workstream*
- 5) *Ontario Training Workstream*

Their presentation also explained CFAA Chapter Bylaws, budgeting process and requirements for the CFAA Ontario Chapter executive board and sub-committee participation.



Bill Lane, CFAA Ontario Chapter President

We are pleased to announce that a new CFAA Ontario Chapter Executive was subsequently elected. The new Executive consists of:

- President:** Bill Lane (Siemens)
- Vice President:** John MacDonald (Mac1 Industries)
- Secretary:** Pasquale (Pat) Carito (Direct Fire Protection Systems)
- Director at Large:** Peter Bell (ACE Fire and Security)
- Director at Large:** Victor Repovz (Centra Protection Systems)
- Director at Large:** Luciano Condarcuri (GE Security)
- Director at Large:** Chris Coates (Siemens)

Furthermore, the Chapter held its first meeting following the elections and determined that 2 of the 5 workstreams suggested during the meeting in July 2009 would be merged into one common workstream. In result, the new Chapter decided that 4 workstreams would be undertaken immediately.

...continued on page 22

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A reminder for Ontario technicians who have not yet completed the Codes and Standards Update Course!

This CSU Course is available through the George Brown College website, and must be completed by end-July 2010. (See the CFAA website for complete details.)

Individual Technician Registration Renewal Cards will reflect the fact that the Technician has successfully completed the CSU Course and is compliant with provincial requirements.

Enroll now, and join the rest of the Technicians who have achieved this important accomplishment. Ⓜ

Un rappel pour les techniciens et techniciennes de l'Ontario qui n'ont pas encore suivi le cours de mise à jour sur les codes et les normes!

Ce cours est offert par l'entremise du site Web du Collège George Brown George et doit être complété d'ici à la fin de juillet 2010. (Voir le site Web de l'ACAI pour plus de détails.)

Les cartes individuelles de renouvellement de l'inscription de technicien reflèteront le fait que le ou la titulaire a réussi ce cours et respecte les exigences de la province de l'Ontario.

Inscrivez-vous dès maintenant et rejoignez les rangs des techniciens qui ont déjà remporté ce succès important! Ⓜ

KNOWLEDGE IS POWER

**CFAA Ontario
Technical Seminar
Wednesday May 5, 2010
York University, Toronto**



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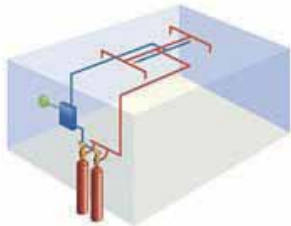
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Création de la Section ontarienne de l'ACAI

Vaughan (Ontario) – Le 1^{er} février 2010

C'est avec grand plaisir que nous annonçons la création d'une nouvelle section de l'ACAI en Ontario!

Après quelque 16 mois de discussions, débats et délibérations, l'assemblée inaugurale de la section ontarienne de l'ACAI a été officiellement convoquée le 1^{er} février 2010.

Cette assemblée inaugurale a été précédée d'une réunion de mise en place du conseil d'administration de la nouvelle section ontarienne. Cette réunion a commencé par une présentation du président national de l'ACAI, Gerry Landmesser, qui a décrit la croissance et les progrès accomplis par l'ACAI depuis sa création en 1973, il y a près de 37 ans. Traditionnellement, le conseil national de l'ACAI, parce qu'il est basé à Toronto, a toujours prêté attention aux questions qui concernent l'Ontario. Néanmoins, avec la création de nouvelles sections de l'ACAI dans diverses provinces du Canada au cours des dernières années, le moment est venu pour l'Ontario de se séparer du Conseil national et de créer sa propre section dont les activités seront axées sur les questions spécifiquement ontariennes.

Al Hess et Michael Hugh, en tant que membres du Comité de planification stratégique du conseil d'administration national de l'ACAI, ont décrit les aspects logistiques liés à la gestion d'une section de l'ACAI et ont fait part des commentaires formulés par des membres ontariens de l'Association au cours d'une réunion préliminaire qui avait eu lieu en juillet 2009. Au cours de la réunion en question, les membres ontariens avaient demandé d'axer les efforts sur un certain nombre de champs de travail qui profiteraient à l'ACAI en Ontario. Les cinq principales demandes étaient les suivantes :

- 1) *Avantages pour les techniciens*
- 2) *Qualification (licence) des techniciens en Ontario*
- 3) *Relations avec les autorités compétentes*
- 4) *Élaboration des codes ontariens*
- 5) *Formation en Ontario*



Bill Lane, CFAA Ontario Chapter President

Dans leur présentation, ils ont aussi expliqué en quoi consistait le règlement intérieur d'une section de l'ACAI, comment établir un budget ainsi que les conditions à remplir pour faire partie du conseil d'administration de la section ontarienne de l'ACAI et de ses sous-comités.

Nous avons le plaisir d'annoncer qu'un nouveau conseil d'administration de la section ontarienne de l'ACAI a ensuite été élu. Sa composition est la suivante :

- Président :** Bill Lane (Siemens)
Vice-président : John MacDonald
 (Mac1 Industries)
Secrétaire : Pasquale (Pat) Carito
 (Direct Fire Protection Systems)
Membre : Peter Bell
 (ACE Fire and Security)
Membre : Victor Repovz
 (Centra Protection Systems)
Membre : Luciano Condarcuri
 (GE Security)
Membre : Chris Coates (Siemens)

De plus, à la suite des élections, la section a tenu sa première assemblée officielle et décidé que deux des cinq champs de travail suggérés au cours de la réunion de juillet 2009 seraient regroupés. Par conséquent, la nouvelle section a décidé d'axer immédiatement ses

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Those workstreams will be chaired by:

- 1) **Chris Coates** - Technician Benefits Workstream
- 2) **Peter Bell** - Ontario Technician Licensing and Training Workstream
- 3) **Victor Repovz** - Authorities Having Jurisdiction Relations Workstream
- 4) **Luciano Condarcuri** - Ontario Code Development Workstream

Congratulations to CFAA Ontario! This new executive board is ready, willing, and able to drive forward with the concerns of CFAA Ontario members. They invite all members to contribute to the success of CFAA Ontario – so get involved! ☺

...continued from page 21

efforts sur quatre champs de travail, qui seront présidés par les personnes suivantes :

- 1) **Chris Coates** - Avantages pour les techniciens
- 2) **Peter Bell** - Formation et qualification des techniciens en Ontario
- 3) **Victor Repovz** - Relations avec les autorités compétentes
- 4) **Luciano Condarcuri** - Élaboration des codes ontariens

Félicitations à l'ACAI Ontario! Son nouveau conseil d'administration est prêt, résolu et capable de faire avancer les choses qui intéressent plus particulièrement les membres ontariens de l'ACAI. Il invite tous les membres ontariens à contribuer au succès de l'ACAI Ontario – alors, à vous de jouer... Participez! ☺

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...continued from page 15

Typically, the reverberation levels in occupied or fully furnished rooms are significantly lower than reverberation levels in empty or unfurnished rooms. People and furniture are good sound absorbers! They reduce the reverberation and therefore, if quiet, can improve speech intelligibility during an emergency condition. Designers often consult reverberation equations to determine the extent of reverberation and its ill effects on intelligibility.

The equations for estimating the amount of reverberation that can be expected in a room, generally consider the room's dimensions and surface materials.

Solving Environmental Acoustic Issues

Designers can counter the ill effects of room reverberation by taking the following measures into consideration:

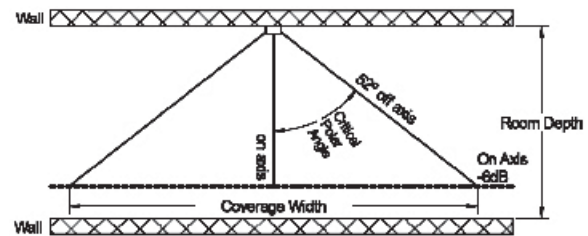
- Enlist the Architect or interior designers to provide more drapes, wall hangings, carpeting, or even include specially designed diffusers that can absorb sound and reduce environmental reverberation;
- Strategically place the speaker at locations that minimize stray energy;
- Place the speakers toward the centers of rooms, away from walls and other hard surfaces;
- Direct speakers towards known soft surfaces such as carpets;
- In high-ceiling areas, specify a more directional speaker; a speaker that is more focused, concentrates most of the sound energy in a tighter beam of directional sound output;
- Move the speaker closer to the listener and reduce the wattage output of the speaker;

Selecting the right speaker for the job is where the rubber hits the road. Generally the beam of sound output is more focused for the higher frequencies and very wide for the lower frequencies. The speaker's beaming effect is referred to as the directivity or 'polar response' of the speaker.

Fire alarm designers often determine the coverage area, by utilizing the speaker's cut sheet's 'polar response' information. Fire alarm speakers produce the highest output in the 800 to 4 kHz frequency range. Using the speaker polar response information in combination with the distance between the speaker

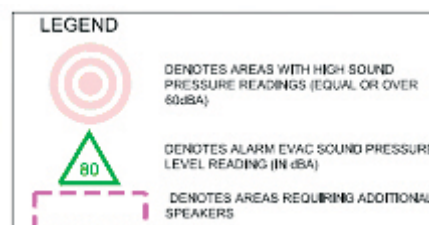
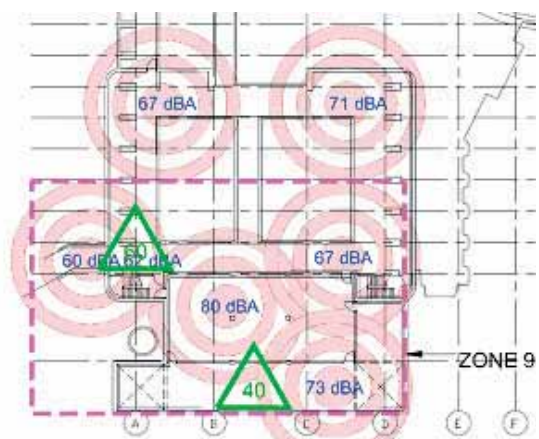
and the intended listener, fire alarm designers determine the area that a speaker can cover. This careful design effort is extremely valuable. After all, top-notch speech intelligibility provides critical information to the occupants, and further protects Canadians from the ravages of fire.

Once the speaker has been selected, the next task is to determine the quantity of speakers required, and how to lay them out. We have many layout patterns to choose from; each layout is suitable for different room geometries, background noise and reverberation times. Many rooms require more than one speaker.



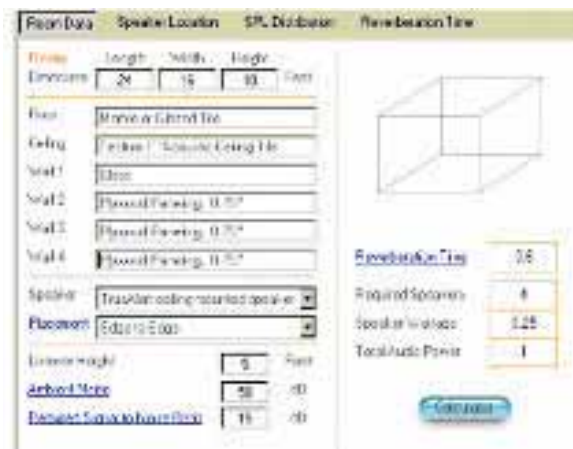
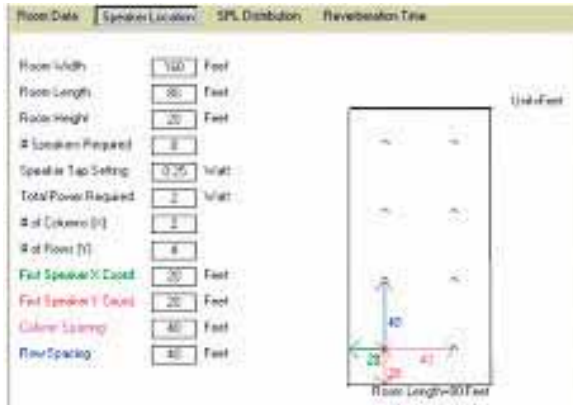
Speech Intelligibility Testing

The best thing to do for fire alarm retrofit is to test the existing fire alarm emergency voice speaker system for both tone audibility and speech intelligibility. We then map the determined suspect audibility locations and set up for our intelligibility tests. This work will help us design the new speaker layout using real time on-site data and speaker layout computer modeling.



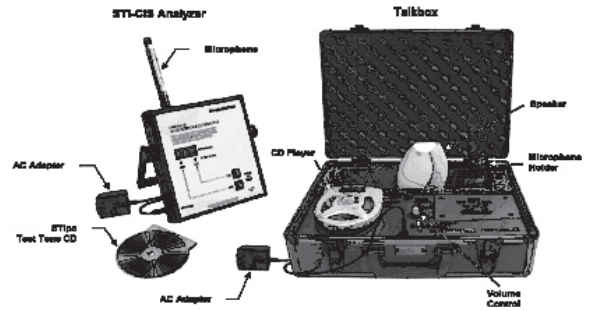
Tablet Screen Capture of Suspect Audibility Areas

Over the last five years, intelligibility meters have made their way into the life safety systems industry. As such, now routine measurements of intelligibility, that are necessary to comply with the *Building Code* are easier to obtain.



Speaker Layout Computer Modeling

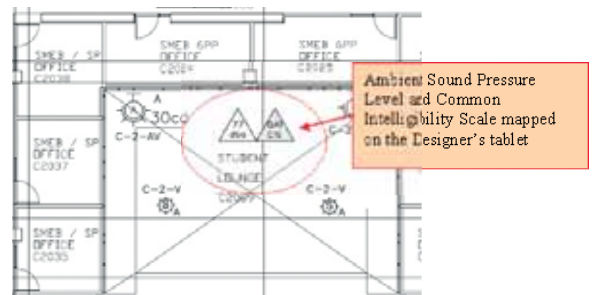
The speech intelligibility meter test set-up is really simple and easy to do. We take the fire alarm emergency voice paging microphone and place it into the STI (Speech Transmission Index) meter Talk Box cradle. We then turn on the unit and send the signal through the system to the area where we are testing. We then take readings, utilizing the intelligibility meter, at specific locations where poor intelligibility is expected.



STI Analyzer and Talk Box

With this proven approach, and brought into our team's field review process, utilizing the speech intelligibility meter is a natural process. We can accurately measure speech intelligibility according to international standards. This analysis makes it possible for our designers to quickly measure intelligibility.

Tablet Screen Capture of a SPL and CSI

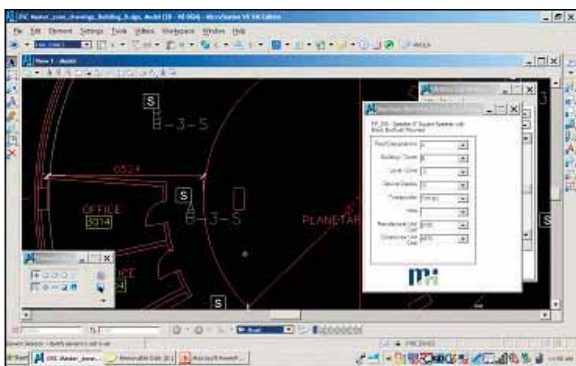


Testing and Designing with Value Engineering Focus

The design results show clearly the feasibility of this metering instrument utilized in concert with the real time on-site data and the artificial intelligibility speaker layout computer modeling.

Our fire alarm designers geospatially lay out the speakers on a digital tablet during the site review, intelligibility tests and existing device markup process. No 1920's, slide rule, pencil and paper engineering in this shop! Intelligent life safety design starts with focused attention to detail and first class design tools to speed up the process.

Geospatial Design Screen Capture of a Speaker Layout



There are many advantages to this information technology, intelligent design approach.

First of all we can see in real time all the ambient environmental issues that could adversely affect the broadcast emergency message or room speech intelligibility.

Secondly, we can drill down into our speaker layout modeling software to view the recommended quantity of speakers as applied to the environment.

And thirdly, once the speakers have been placed on the digital tablet, we can run our cost estimate algorithm to value engineer the speaker layout solution. Should it be eight speakers at ¼ watt, or four speakers at ½ watt? The eight speakers provide the best intelligibility, however the four speakers at ½ watt is also a very good solution and works within our overall installation budget.

Leveraging Proven International Standards

The ISO 9921 standard on the 'Assessment of Speech Communication' defines speech intelligibility as: 'a measure of effectiveness of understanding speech'. This standard describes and compares several of these measures for determining the intelligibility of a given speech transmission system.

One of the most important and widely applied standards, IEC 60849: *Sound Systems for Emergency Purposes* allows the use of a number of different methods (including the STI) for measuring speech intelligibility.

The IEC 60849 standard identifies two specific and different methods for speech intelligibility assessment that can be utilized:

- (1) Subjective assessment, based on the use of speakers and listeners; ("Hey did you understand the scenario 2 message? You did? Perhaps I wasn't paying attention".)
- (2) Objective assessment based on physical parameters of the transmission channel utilizing specialized metering equipment.

Because hearing ability varies widely from person to person, just as vision does, one listener might understand 95% of a speech message while a second person might only understand 75% of the same speech message.

The speech intelligibility meter is designed to measure what a 'normal' listener (as defined by international standards) would actually hear or understand.

Speech Transmission Index (STI) and Common Intelligibility Scale (CIS)

Speech Transmission Index (STI) is a proven method of predicting speech intelligibility based upon physical quantities. It was developed at TNO Human Factors in the Netherlands. Its accuracy, robustness, diagnostic capabilities, and wide applicability have made it an international standard.

The STI meter manual states: **"The STI method measures the modulation transfer function for 14 modulation frequency bands spaced at 1/3-octave intervals from 0.63 Hz to 12.5 Hz, across seven frequency bands from 125 Hz to 8 KHz. These 98 measurement points (7 x 14) are weighted and combined to create a number between 0.0 (totally unintelligible) and 1.0 (perfectly intelligible)."**

We have performed many voice intelligibility tests over the past four years. Were I to try to describe what it sounds like while we take the CIS readings with the speech intelligibility meter, I would have to say the following: Imagine a thousand Australian didgeridoos in an aquarium, all playing different tunes, at the same time.

In order to relate the results of the readings, a Common Intelligibility Scale (CIS) was created. The actual language in IEC 60849 calls for a minimum CIS value, which is therefore what the meter designers selected to display. The meter computes the STI and then converts it to the CIS.

The bottom line in all of this, is that, when there is a fire condition, the Authorities require understandable emergency voice messages – and so do the building occupants! After all, the requirements are in the

	EXCELLENT					GOOD			FAIR		
CIS	1.00	0.98	0.95	0.88	0.80	0.87	0.84	0.81	0.78	0.74	0.70
RASTI	1.00	0.98	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50
STI	1.00	0.98	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50
%ALcons	0.0	1.0	1.3	1.7	2.2	2.9	5.0	6.0	6.6	8.7	11.4

	POOR					BAD				
CIS	0.65	0.60	0.54	0.47	0.39	0.29	0.18	0.00	0.00	0.00
RASTI	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.05	0.00
STI	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.05	0.00
%ALcons	14.0	19.5	25.6	33.6	44.0	57.7	75.7	100	100	100

Building Code, remember
Division B Clause 3.2.4.22(1)(b)?

Methods to determine speech intelligibility are now readily available. Designers are mindful of the fact that leveraging new technology, while mobile, and in the building's environment, is now easier than ever. There simply is no excuse for extremely poor speech intelligibility, with today's top-quality speakers and amplifiers driving intelligible, life safety voice communication systems.

All of this engineering effort reflects the fact that we are driven to provide the best possible system design for achieving speech intelligibility as per Code, and within the client's project budget. Now if we could only get the interior designers to add more carpet and drapes, this place would exceed our expectations for speech intelligibility. ☹



CFAA Membership Application Form (February 2010)

YES, I wish to join the CFAA as a member!

This application is for membership as a:

- | | |
|---|---|
| <input type="checkbox"/> Sustaining Member (\$ 1,050.00 annual dues) | <input type="checkbox"/> Sustaining Chapter Member (\$ 525.00 annual dues) |
| <input type="checkbox"/> Participating Member (\$ 236.25 annual dues) | <input type="checkbox"/> Associate (individual) Member (\$ 52.50 annual dues) |
| | <input type="checkbox"/> Student Member (\$ 21.00 annual dues) |

All of the above dues include GST.

Company Name: _____

Personal Name: _____

Address: _____

City: _____ Prov.: _____ Postal Code: _____

Type of work performed: _____

Return your membership application with cheque payable to:

The Canadian Fire Alarm Association, 85 Citizen Court, Unit 5, Markham, Ontario L6G 1A8

Report on the Technical Compte rendu du séminaire

Please read the article on page 31



David Sylvester, Ralph Coco, Shelley Whetren, Paul Jewett



Jean Claude Boutin - Moderator (on the left)



Seminar in Montreal

technique de Montréal

Veillez lire l'article à la page 30



Members of the Quebec Chapter



Sylvain Carrière



Pierre Noel
(ViKing Fire Protection)



Lou Pedicelli (QC Chapter President) & Sylvain Carrière (Montreal F.D.)



Jean Claude Boutin & Gaétan Frenette *(Technorm Inc.)*



Lorsque les directeurs du conseil d'administration de la section du Québec de l'ACAI ont décidé d'organiser une journée de séminaire technique à Montréal, ils prévoyaient accueillir un auditoire de 75 à 150 personnes. Étant donné qu'il s'agissait de la toute première fois qu'un tel séminaire était présenté à Montréal, les directeurs du conseil d'administration croyaient, avec un optimiste prudent, qu'environ 120 personnes s'inscriraient, ce qui devenait donc la mesure pour estimer le succès de cette activité. Un plan de communication détaillé a d'abord été mis en œuvre pour joindre les gens de l'industrie et s'assurer que cette activité soit connue par le plus grand nombre possible de personnes. Le bouche à oreille a fait son œuvre et ce sont 287 personnes qui se sont présentées le 10 novembre dernier pour s'enrichir de connaissances et d'information ainsi que pour faire du réseautage avec d'autres acteurs de l'industrie.

Lou Pedicelli, président de la section du Québec de l'ACAI, a ouvert le séminaire en nous faisant un compte rendu de l'historique et des activités récentes du conseil telles que la participation à la modification des codes et des normes qui régissent notre industrie, les programmes de formation et les partenariats.

Ralph Coco de Potter Electric a offert la première présentation technique qui démystifiait les techniques pour une installation conforme des avertisseurs visuels. En commençant par nous expliquer comment mesurer l'intensité lumineuse il a poursuivi son exposé afin de permettre à ceux qui se trouvaient dans la salle ce jour-là de savoir pourquoi, quand, où et comment installer des stroboscopes

Paul Jewett de Mircom a enchaîné en nous dévoilant une série d'outils et de trucs pour les techniciens en alarme-incendie afin que ceux-ci soient plus efficaces dans l'exécution de leurs tâches. Que ce soit pour trouver les courts-circuits, mesurer la charge du circuit des haut-parleurs ou mettre à l'essai le rendement des batteries, Paul connaît toutes les méthodes, mais surtout, il nous a démontré quelles sont les bonnes pratiques.

Pour Stéphane Lapierre de Siemens, le défi était de taille. Comment nous entretenir sur les changements à la norme ULC-536-04 et être intéressant? Sa présentation nous a fait connaître les applications, les objectifs ainsi que l'évolution de la norme, mais surtout elle nous a démontré les écarts actuellement présents dans son application au Québec. Défi bien relevé par Stéphane!

Sylvain Carrière, chef aux opérations en gestion de projet aux services de sécurité incendie à la ville de Montréal, nous a expliqué la nouvelle réglementation sur les alarmes non fondées. L'origine, les objectifs et les principaux éléments de cette réglementation ont pris tout leur sens, et cela aura permis aux personnes présentes de mieux comprendre les bienfaits de celle-ci avec faits à l'appui.

Après un dîner bien apprécié, les convives ont eu droit à un doublé; Gaétan Frenette, conseiller technique chez Technorm Inc. et Pierre Noël de Viking Protection Incendie nous ont entretenus sur le code de construction et le code de l'électricité du Québec. Notre duo nous donnant ainsi un éclairage nouveau pour être à jour sur certaines des normes actuellement en vigueur au Québec. Le sujet est si vaste que l'heure et demi nous aura convaincu qu'il y a matière pour plusieurs autres séminaires à venir sur ce seul sujet.

Le dernier de nos conférenciers, Dave Sylvester de Morrison Hershfield, nous a tous conquis avec son plaidoyer pour des pratiques adéquates en alarme-incendie. Les dix choses à savoir concernant l'inspection des réseaux avertisseurs d'incendie, où chacun de ces points était démontré dans un contexte plus large pour nous faire apprécier sont importance. Mais surtout, Dave nous aura réaffirmé dans notre conviction que notre industrie est l'une des plus noble et des plus importantes dans son dévouement à protéger les personnes et les biens.

Après la remise du prix de présence au gagnant, Lou Pedicelli a terminé la journée par les remerciements de mise et nous a invités à nous inscrire au deuxième séminaire technique de l'Association canadienne d'alarme incendie qui se tiendra l'an prochain à Montréal. Objectif atteint. Cette première édition fut une réussite qui démontre le niveau d'intérêt et d'engagement des gens de notre industrie. ☺



By Jean Claude Boutin, *SimplexGrinnell*

When the Board of Directors of the Quebec Chapter of the CFAA decided to organize a one-day Technical Seminar in Montreal, it was expecting 75-150 attendees. Since this was the very first time such a seminar was being held in Montreal, the Directors were cautiously optimistic that about 120 people would sign up, and this became the gauge of the success of the symposium. First, a detailed communications strategy was rolled out to reach people in the industry and make sure as many as possible knew about the seminar. Word of mouth did its job and 287 people attended on November 10, 2009 to expand their knowledge and acquire additional information and to network with other stakeholders in the industry.

Lou Pedicelli, President of the Quebec Chapter of the CFAA, opened the seminar with a report on the Board's history and recent activities, including participation in the process of changes to the codes and standards that govern our industry, and our training programs and partnerships.

Ralph Coco of Potter Electric delivered the first technical presentation, which demystified the techniques for code-compliant installation of visual alarms. He began by explaining how to measure light and then outlined, for those who were there that day, why, when, where and how to install strobe lights.

Paul Jewett of Mircom was next, with some tools and tips for increasing the efficiency of fire alarm technicians. Whether it's locating short circuits, measuring speaker circuit loads or testing battery performance, Paul knows every method, but most importantly, he demonstrated best practices for us.

Stéphane Lapierre of Siemens took on a sizeable challenge: how to tell us about the changes to the CAN/ULC-536-04 standard and keep it interesting. His presentation outlined the applications and objectives

of the standard, and the changes to it, but focused on current discrepancies in its application in Quebec. Stéphane rose handsomely to the challenge!

Sylvain Carrière, project manager for the City of Montreal fire department, explained the new by-law concerning false alarms. The origin, objectives and highlights of the by-law were thoroughly explained, giving those present an opportunity for a fuller understanding of its benefits, with supporting information.

After a lunch that was enjoyed by all, the guests were treated to a "twofer": Gaétan Frenette, technical consultant at Technorm Inc., and Pierre Noël of Viking Fire Protection spoke about Quebec's building and electrical codes, shedding new light on the updates to some of the standards that are currently in force in Quebec. This topic is so huge that after the hour-and-a-half session, we realized we could easily offer several future seminars on it alone.

Our final speaker, Dave Sylvester of Morrison Hershfield, won us all over with his plea for proper fire alarm practices, the ten things we need to know about fire alarm systems inspections, each point placed in a broader context to highlight its importance. Above all, Dave strengthened our belief in the nobility and importance of our industry in its dedication to protecting people and property.

After presenting the door prize to the winner, Lou Pedicelli ended the day with the necessary acknowledgements and invited us to sign up for the second Technical Seminar of the Canadian Fire Alarm Association to be held next year in Montreal. Mission accomplished. This first seminar was a success, demonstrating the interest and commitment of the people in our industry. ☺



ONTARIO TECHNICAL SEMINAR

KNOWLEDGE IS POWER

May 5th, 2010

- 8:30 – 8:40 am Moderator's Welcome and Introductions
By: Allen Hodgson, CFAA
- 8:40 – 8:50 am The CFAA; A brief update on our activities.
By: Gerry Landmesser, CFAA President
- 8:50 – 9:30 am Fire Alarm System Intelligibility; A review of design strategies, in achieving what is required by the *Building Code*.
By: David Sylvester, Morrison Hershfield Inc.
- 9:30 – 10:10 am The perspective from a City Plans Examination Department; The most common problems we see, and recommendations to overcome them.
By: Mike Seiling, City of Kitchener Buildings Department
- 10:10– 10:30 am Coffee Break**
- 10:30 – 11:15 am A review of Section 6 of CAN/ULC-S537 The Standard for the “Verification of Fire Alarm Systems”
By: Ken Baird, Leber/Rubes Inc.
- 11:15 – 12:00 pm Mass Notification Systems, trends, and requirements.
By: Don Boynowski, Siemens Building Technologies
- 12:00 – 1:00 pm Buffet Lunch**
- 1:00 – 1:30 pm Choosing the right smoke detector type for fire alarm applications, their differences explained, and the do's and don'ts of detector sensitivity.
By: Phil Anderson, System Sensor Canada.
- 1:30 – 2:00 pm A fire investigation case studies; the lessons learned.
By: David Goodyear, D. Goodyear Fire Consulting
- 2:00 – 2:30 pm The perspective from the Risk Insurance Industry; The most common problems we see, and recommendations to overcome them.
By: Nicole LeBlanc, Intact Insurance (Formerly ING)
- 2:30 – 2:45 pm Coffee Break**
- 2:45 – 3:30 pm Fire Stop Systems and materials, and their application in the containment of fire, smoke, and toxic gases.
By: TBA
- 3:30 – 4:00 pm Air Aspiration systems; The technology explained, and the how, what and where. VESDA Air Aspiration systems.
By: Andrew Turchet, Xtralis
- 4:00 – 4:30 pm The most common testing mistakes made by Technicians performing verifications to ULC S537, and how to perform them successfully.
By: Paul Jewett, Mircom Technologies

The CFAA Ontario Technical Seminar 2010

Information & Registration Form

LOCATION

The Executive Learning Centre in the Schulich School of Business, York University will host the 2010 Ontario Technical Seminar on Wednesday, May 5. This is a state of the art facility, and is designated non-smoking. Registration begins at 7:30am in the Schulich School of Business Main Entrance which faces Ian MacDonald Blvd.

OVERNIGHT ACCOMMODATIONS

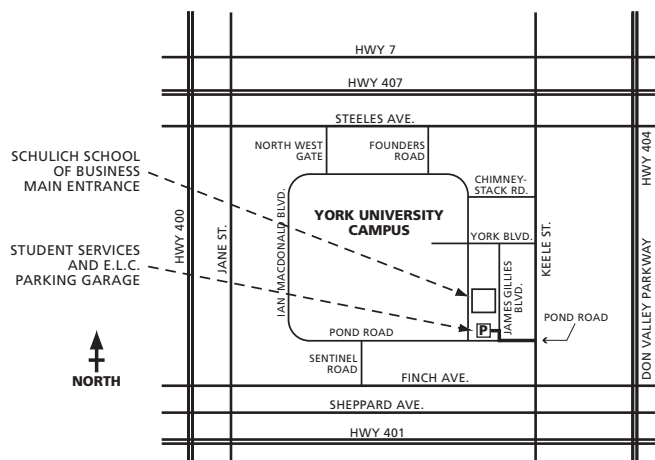
The Executive Learning Centre houses 60 hotel rooms for overnight accommodations. The cost is \$150.00 plus tax and includes a continental breakfast served in the dining room. For reservations call 416-650-8300 or visit www.elc.schulich.yorku.ca.

PARKING

Again in 2010, Parking is complimentary in the stacked parking building located directly across from the E.L.C. on James Gillies Blvd. Parking details will be provided in your confirmation package.

DIRECTIONS

- Enter York University Campus from Keele Street.
- From Keele turn onto Pond Road.
- Take Pond Road to the first street, which is James Gillies Blvd.
- Parking is in the first building indicated as Student Services and E.L.C. parking garage.
- The Executive Learning Centre is in the building next door to the garage.



REGISTRATION FORM for the 2010 CFAA ONTARIO TECHNICAL SEMINAR

Registrant's Name: _____

Company Name: _____

Bus. Tel.: _____ Bus. Fax: _____

E-mail: _____

Bus. Address: _____

City: _____ Prov.: _____ Postal Code: _____

Yes, please provide a complimentary parking pass for me.

SEMINAR FEES (GST Reg. No. R124389750)

Member: \$165.00 + \$8.25 GST = \$173.25 / Non-Member: \$197.00 + \$9.85 GST = \$206.85

Methods of payment accepted: cash, cheque, money order, VISA/Mastercard/American Express. **REGISTRATIONS WILL NOT BE ACCEPTED WITHOUT PAYMENT.** Register early to allow for the return mailing of your confirmation of registration, receipt and location map. Please make cheques payable to the **Canadian Fire Alarm Association** and mail to: 85 Citizen Court, Unit 5, Markham, Ontario L6G 1A8 • Tel: 1-800-529-0552 • Fax.: 905-479-3639

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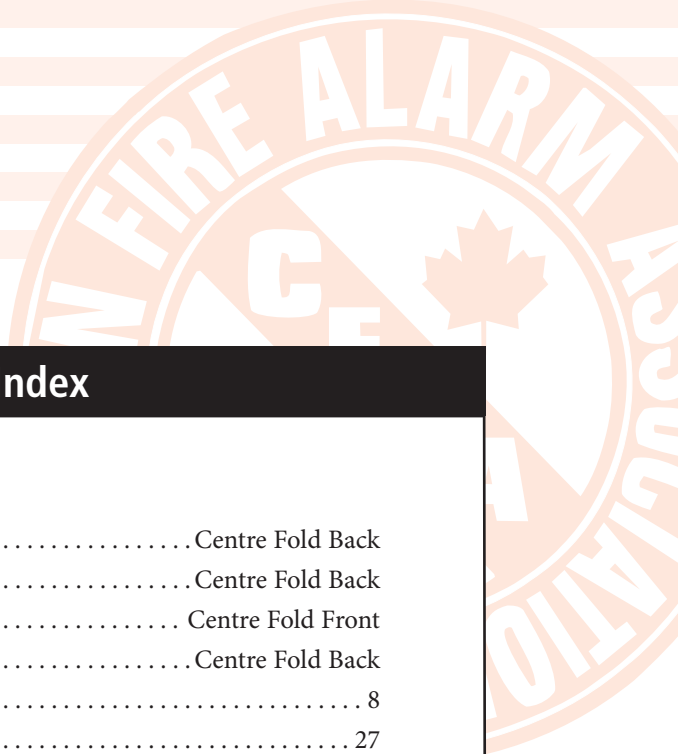
- Canadian Electrical Code, Section 32 Committee – *Dennis Weber*
- National Building Code, Committee on Use and Egress – *Dennis Weber*
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GE Security	10

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Inside Full Page	\$ 859.00
Inside ½ Page	\$ 445.00
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