Few engineers touch the lives of others in as many different ways as did Robert T.H. Alden.

Over a period of about 25 years, the evolution of IEEE, IEEE Canada and the IEEE Canadian Foundation are inextricably linked to him. Of particular note to readers, he founded the *IEEE Canadian Review* in 1988 as a means to strengthen the Canadian identity of IEEE's presence in what at that time was known only as IEEE Region 7.

We begin our multi-part coverage of his legacy with an exploration of his role in advancing the use of electronic communication across IEEE; included are remembrances related specifcally to this contribution. We also present the many awards he received over the course of his 40 years of IEEE volunteering.

In subseqent issues, we will pay tribute to his role in strengthening the IEEE Canadian Foundation and his upgrading of the IEEE Canada web site.

We will also publish a generous sampling of dozens of other remembrances celebrating and honouring this truly remarkable engineer and volunteer. Please visit this section on-line to submit a remembrance.

Remembering
Bob Alden
1937 - 2016
Tribute to a Visionary
PART I

A look in the rear-view mirror ...

For 10 years starting in late 1992, Bob Alden's column "Traveling the Information Highway" was a fixture of *The Institute*. It was a reflection of his unique skill set.

In these roughly 75 articles, Bob set out a vision of what electronic communication could achieve for individual members and IEEE as a whole, even as the technology evolved at ever-faster rates. But that vision was informed by his own direct experience: internet connection, e-mail, HTML basics, FTP, list servers, search engines, page scripts – for all of these he passed on his own tips and those of others in very practical terms.

In this section, we've excerpted portions of columns that particularly illustrate his vision of a new world of connectedness and information sharing.

Bob's last column was May 2002, in which he requests IEEE members make their views known on better serving the diverse needs of members and volunteers through IT. His credit note at the end of each column is revealing. Over the 10 years, it progressively identified him as: chair of the IEEE E-mail Committee, chair of the IEEE Electronic Communications Steering Committee, and the IEEE Electronic Communications Advisor. In signing off for the last time, Bob simply describes himself as "an IEEE volunteer interested in electronic services among other aspects of the IEEE scene". Such modesty typifies his entire volunteer and professional career. ■

This section would not have been possible without the efforts of Amanda Davis, senior editorial assistant at The Institute. *Going back 25 years into any archive is a challenge, and she kindly went back many times!*

I have known Bob for 30 years; he has always been the IEEE leader that displayed a unique ability to communicate what the average person considered techno talk into something useful.

His skill and more importantly commitment to communicate what we do is truly unique and shines a light on a path that we can only strive to model ourselves after. His articles on the Internet were years ahead of their time. ■

Ibrahim Gedeon
IEEE Northern Canada Section

Traveling the Information Highway

How to turn on to IEEE's e-mail service   *with Bob Alden*

January/February 1993

E-mail is making its way to the IEEE, you were told in the last issue of *The Institute* [November/ December 1992]. Now we want to tell our members how they may use it to contact each other, the Institute›s staff, and many of the organization›s entities. They can also use it to request and receive services electronically.

Members may access the IEEE's e-mail, begun in 1990 via the ieee.org node on Internet, through the local electronic mail capability they find most convenient... Provided at the outset, was a forwarding service to simplify the myriad of computer mailbox addresses. The service relies on several so-called aliases ...

PERSONAL ALIASES. Of the form "i.name@ieee.org", personal aliases can be requested by IEEE volunteers (members) For example, the personal alias "m.sloan@ieee.org" is that of 1993 IEEE President Martha Sloan...
SECTION ALIASES...
SOCIETY ALIASES...

STUDENT BRANCH ALIASES...
INFORMATION ALIASES...
SERVICE ALIASES...
REQUESTS TO STAFF...
NEED FOR VOLUNTEERS.
Now the IEEE is developing an electronic mail contact network, and it needs volunteers to help... Please contact your local Section executive if you are willing to help put such a system in place. We expect that IEEE members will make increasing use of e-mail once the usefullness becomes apparent.

–Robert T.H. Alden

Robert T.H. (Bob) Alden is the chair of the IEEE E-mail Committee, and a former IEEE vice president. In his other life, he is the director of the Power Research Laboratory at McMaster University in Hamilton, Ontario, Canada. He welcomes your input via email.

Commentary — Jon Rokne, IEEE VP, Publications and Services, 2010, Associate Editor, *IEEE Canadian Review*

Both in his column for The Institute and in his writings for the *IEEE Canadian Review*, Bob Alden had a vision of how the future of information would develop.

His main interest was the future of communicating technical information. Already in 1994 he realized that the future of such communication would be strongly linked to the Internet that was growing rapidly (please see column opposite). One of his ideas was that articles would be stored and accessible electronically over the Internet and he foresaw that the content would be available in a distributed manner using links from a stored article to other articles stored elsewhere on the Internet. This would mean that instead of repeating the content of a referred article there would simply be a hyperlink to the content of that article.

The hyperlink idea has been implemented in a variety of ways; some of his other ideas are still being developed. For example if one reads a current article referring to "Clinton" and if the article discusses politics then the article would most likely be referring to Hillary Clinton and automatically a hyperlink could provide information on her. As Bob stated in 1994: "Clicking on certain icons provides a graphics window with the relevant drawing (or appropriate media display). The Discussion contains highlighted words. We can click and bring up relevant results from other articles. The Conclusion completes the article. Additional items such as acknowledgements, bibliography, appendices, author biographies, etc. can be viewed by clicking on highlighted words." The full implementation of this idea involves semantic disambiguation (i.e. which "Clinton") that currently is researched.

When he was the Chair of the IEEE Electronic Communications Steering Committee he presented a brief to the Board of the IEEE that became the IEEE Internet Project. This brief envisioned that the services, membership communications and publications in the IEEE domain become available over the Internet. Details on how this was to be done and what the conditions were for use were spelled out in detail. His notion of open access was discussed as well as the kinds of restrictions that were to be placed on certain contents. His work with this committee was foundational to the development of the IEEE web presence. It also led to the development of what became the *Xplore* database that now supports roughly half of the budget of IEEE.

Bob was a true visionary in the domain of information dissemination. His forward-looking ideas and his enthusiasm for the field will be sorely missed. ■

I knew Bob Alden through his articles on Internet tools, published periodically in the Institute, from the 1980s decade on. As a Latin American volunteer, I was impressed by the value of those publications for the current communication status of the IEEE, with widely dispersed sections around the world needing to get in touch, some in remote locations.

At the beginning of the 1990 decade, I became a candidate for Region 9 Director-Elect and started to use those tools, otherwise my campaign would not be successful. In 1993, I became R9 Director-Elect and started to serve, in 1994, on the Board committees and meet most of the IEEE main top volunteers, among them, my friend Bob Alden.

In 1996, I took R9 office and the first order of business was to invite Bob Alden to give a course on Internet tools for all R9 section chairs, held in San Jose de Costa Rica, during the 1996 Regional Meeting. He presented it very well, helping meet an important communication goal of the Region 9 — to have 100% of the sections connected through e-mail.

About 12 years after that, I was very pleased to meet Bob again, when I became IEEE Foundation Director, in 2008, and he was the IEEE Canada representative in the Foundation Board. There, we worked together in the Board and in several Board committees.

Bob was a very good friend of mine. A great man, very competent and humble. A special person, an excellent example of character to be followed. I was fortunate to have known him.

I really miss Bob Alden. Requiescat in pace, my friend! ■

Antonio C Bastos
Brasil

I first met Bob Alden when IEEE held a board meeting in Calgary in 1994. Bob was chairing a Regional Activities Board meeting (now called Member and Geographic Activities Board) on the Internet Super Highway. I quickly learned this was Bob's passion and he was very instrumental in bringing IEEE into/onto the Web. Bob's other passion was volunteering for IEEE. Whether it was the IEEE Canada Board, the global organization or the IEEE Canadian Foundation — he was one of the most dedicated volunteers I have had the pleasure of knowing and working with. He also was very interested in developing other volunteers. When chatting with him, he was on the lookout for others' interests, and encouraging them to seek out opportunities to grow.

Bob's "Traveling the Information Highway" column focused attention on the need to quickly adopt this new technology. He was also often called upon by IEEE headquarters in the 1990s for advice on the establishment of e-mail services for all IEEE volunteers and members. I am certain that Bob will soon be providing his new e-mail alias to us once he gets all organized. ■

Rob Anderson
IEEE Southern Alberta Section

Traveling the Information Highway

The Web: A new way to deliver technical information

with Bob Alden

This article is prompted by Bob Lucky's "Reflections" article (IEEE Spectrum, May 1994, page 18) entitled "Keeping up." We had an e-mail chat after I read that article. We concluded that it is sad that IEEE spends so much effort producing technical articles that so few of our members read ...

Don't misunderstand me. Technical articles are important for our members, for our industry, and for the IEEE. It is the quality of the technical content in IEEE publications and the consistency of this quality that has given the IEEE its well-deserved reputation as the premier technical society in the world ...

Let's look at what we do now, then how the Information Highway can lead us to a new way of doing our business of producing technical articles.

CURRENT FORMAT. ...Each article is supposed to stand alone. Each generally contains an Introduction, Background, Theory, Results, Discussion, Conclusions, References, etc ... Many Theory sections repeat, inconsistently, what someone else already wrote ...

FUTURE FORMAT. Using hypertext (and hypermedia to include graphics and even sound), we can produce articles that are available on a compact disk or over the network using a web server ...

What might a technical article look like if written in hypertext? First of all, there is never one article but a set of articles that are dynamically linked and updated. Each article is about a page in length. We first scan (read quickly) the entire article to see what is there and whether we are interested. If we are hooked, we go back to the beginning and read carefully to understand the details.

The Introduction is short and states what is to be done, why, and generally how. It also contains a review of the necessary background that is short because key words are highlighted. Each highlighted word is a link to another article. There is no list of references at the end of the article because any reference is immediately available. Clicking on a highlighted word brings that article to our screen to read. We can read that background article if we wish, and go further back if necessary. Returning to our original article, we continue to read.

The Theory section may be next. In cases where the article uses previously developed theory, a few short sentences put that theory into perspective, and clicking on the appropriate highlighted word takes us to the original theory development. There will be a reference to Nomenclature. Again, clicking on the highlighted word provides the Nomenclature list. This is consistent for this set of articles. Perhaps such an article is only written by a task force of the relevant technical committee.

The Results section is succinct and explains the significance. Clicking on certain icons provides a graphics window with the relevant drawing (or appropriate media display). The Discussion contains highlighted words. We can click and bring up relevant results from other articles. The Conclusion completes the article. Additional items such as acknowledgements, bibliography, appendices, author biographies, etc. can be viewed by clicking on highlighted words.

THE WEB. What is the result of this electronic construction? It is a resource that is set up to help us find the information we need. Higher-level surveys of the literature organize material by subject area. This leads the reader into specific technical specialties. The cross linking of web structures (as the name implies) enable many entries to the same specific area from different starting points...

Producing this kind of new format for technical articles will not be easy. Is it worth the effort? Are there better ways to use these developing technologies for our own benefit? How can we improve our organization and distribution of technical material? Your input is needed. If IEEE is to serve your needs in this area, we need to know what you want and how you want it. –Robert T.H. Alden

Traveling the Information Highway

IEEE societies use the Web to effect change

with Bob Alden

In August I took part in the Chapters Congress of the IEEE Power Engineering Society (PES)... This was the first time an IEEE technical society has held this kind of event.

I was invited to be the facilitator on the topic of electronic communications, and together with Harold Ruchelman -- a volunteer with considerable experience in producing section and chapter newsletters -- we shared the topic of communicating with members and potential members. ...

Let's look at what they wanted PES and/or IEEE to do for them at the local chapter level.

Basic and advanced training in EC techniques. In the basic category for members: how to use e-mail and Web software to communicate and obtain information; how to use mailing lists and discussion groups properly. In the advanced category for volunteers: how to set up and manage mailing lists and discussion ...

● **Facilities.** Provide IEEE-managed servers for chapters to keep and maintain their own Web pages. Support development of e-mail discussion groups for chapters, working groups and technical committees. Make tools available to assist chapter volunteers in maintaining and disseminating information. ... Put more information on the Web -- Distinguished Lecturer Program, conference manuals, chapter manuals, directories, etc. Put membership applications on the Web.

BOTTOM LINE. ...I came away with the feeling that I witnessed a major rebirth of a society, in which those "grassroots" members knew what they wanted to do as volunteers, discussed what was important to them, made some critical priority choices and went back to their chapters to help move their society ahead. ...the society management has begun to use the Internet to change the way PES does business, and the chapter volunteers made it clear they not only approve, but want similar changes at the local level, and they came up with clear guidelines for implementation.

Robert T.H. (Bob) Alden is the chair of the IEEE Electronic Communications Steering Committee, and a former IEEE vice president.

Acco

2010 EIC John B Stirling Medal of the Engineering Institute of Canada

"For his concept, planning and implementation of a strategy that culminated in creating IEEE Canada as a Member Society of the EIC while retaining its relationship within IEEE as Region 7; and for continuing with the development of IEEE Canada by implementing major improvements to its website, a major awards program and integration with the IEEE Canadian Foundation;" presented at the Annual EIC Awards Banquet in Ottawa on February 27, 2010.

2005 Fellow of the Engineering Institute of Canada

presented at the Annual EIC Awards Banquet in Ottawa on March 5, 2005.

2005 Fellow of the Institute of Electrical and Electronics Engineers

"For contributions to eigenvalue analysis of power system stability"

IEEE Larry K. Wilson Transnational Award

"For exceptional leadership in the promotion of electronic mail worldwide and promoting IEEE as a leader in the use of communications technology," awarded by the 1992 IEEE Regional Activities Board.

2002 IEEE Haraden Pratt Award

"For outstanding and sustained leadership in many areas of the IEEE especially in the use of electronic communication," recommended by the IEEE Awards Board to the IEEE Board of Directors and sponsored by the IEEE Foundation, awarded at the 2002 IEEE Honors Ceremony held in Toronto, Ontario, on June 22, 2002.

2009 IEEE History Committee

"Recognizes the contributions to the history activities of IEEE by Robert Alden whose efforts have increased the recognition by the general public of technical achievements in IEEE's fields, and enhanced the appreciation of these achievements and their contributions to humanity"

IEEE Third Millennium Medal

"In recognition and appreciation of valued services and outstanding contributions," nominated by the Canadian Region of the IEEE, awarded at the Canadian Conference on Electrical and Computer Engineering held in Halifax, Nova Scotia, on May 8, 2000.

lades

1999 William W. Middleton Distinguished Service Award

"For challenging IEEE volunteers and staff to maximize their use of electronic communications in all IEEE activities," presented at the triennial IEEE Sections Congress held in Minneapolis, Minnesota, October 8-11, 1999.

Service and Leadership with IEEE Toronto Section

presented by Bruno DiStefano at October 25, 2014 Annual General Meeting of IEEE Toronto Section

IEEE Canadian Foundation Dr. Robert T.H. Alden Scholarship

"In recognition and appreciation of valued services and contributions" (presented jointly by IEEE Toronto Section and the IEEE Canadian Foundation, established on the occasion of the Toronto Section Centennial in 2003). To the left of Bob is Bruno DiStefano; at right, Wallas Khella; their contributions were also recognized by establishment of scholarships.
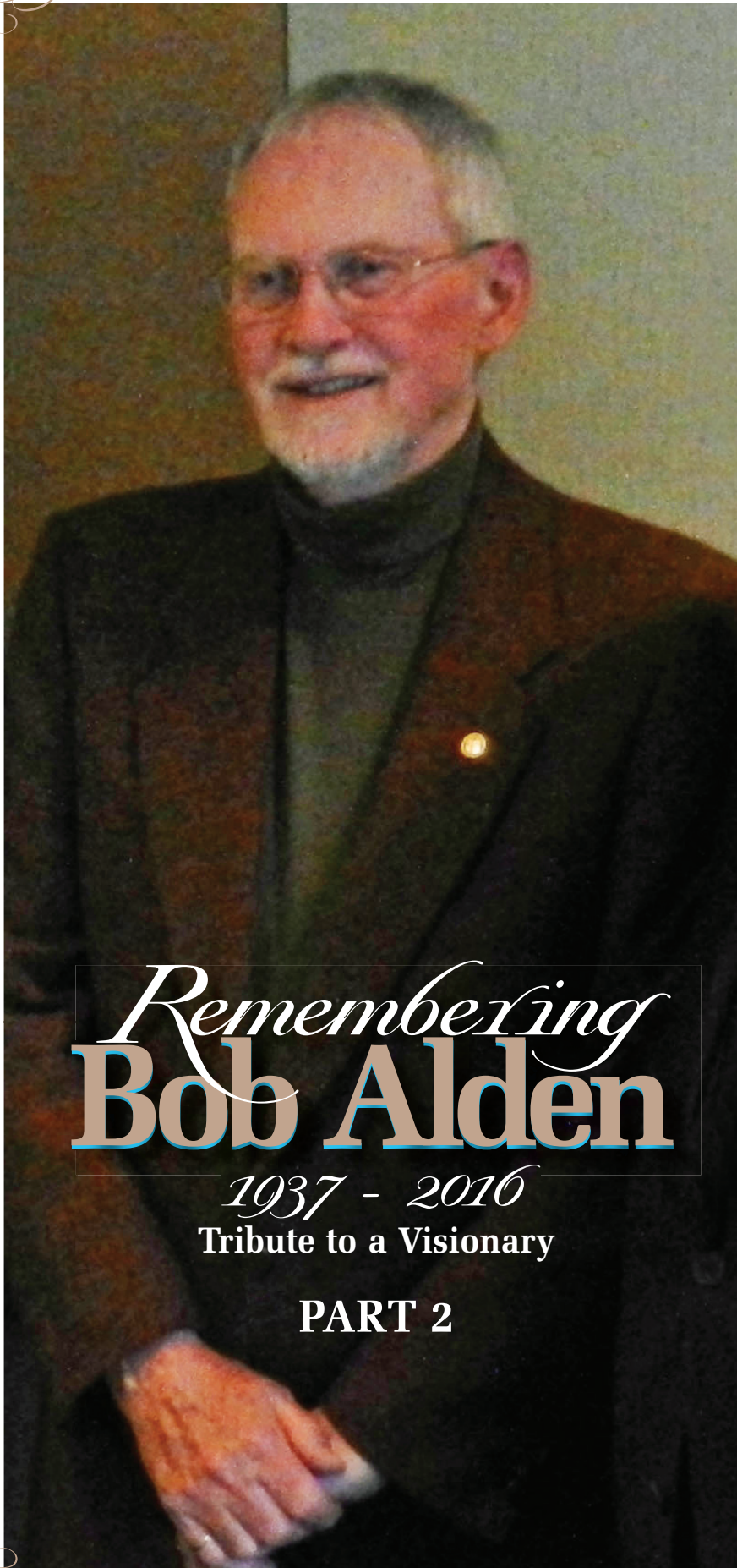
IEEE Region 7 Outstanding Service Award

"For outstanding service as Region 7 Director and for pioneering efforts in establishing the *IEEE Canadian Review*, the IEEE Canadian Foundation and IEEE Canada," presented at the Canadian Conference on Electrical and Computer Engineering held in Edmonton, Alberta, May 8-12, 1999. Also awarded to Ray Findlay that same year.

50 Years of Active Membership

Presented by Keith Brown in 2013 at Toronto Section event.

Eulogy for Bob Alden
by Raymond D. Findlay

Remembering Bob Alden
1937 - 2016
Tribute to a Visionary

PART 2

More than half a century ago I first met Robert Thomas Harold Alden—Bob to everyone he met. He was a teaching assistant at the University of Toronto while I was an undergraduate. It didn't make for a propitious beginning. Bob took pleasure in bossing me around! I joined Bob in a Master's degree program, as both of us were in electrical power. The powers that be assigned Bob and me to desks facing each other with no divider between. Put two argumentative souls together and expect fireworks. On one occasion, Professor Smith didn't have his glasses on when he read out the attendance. Prof. Smith wondered who this Ruth person was. That provided us endless opportunities to tease Bob, all of which he accepted with grace.

> **Bob fixed the problem, substituting a corrected version of my abstract that met with approval—all without telling me—so that we could graduate together. That's a measure of the man he was.**

And somehow, we worked together over the next few years until Bob thought that I might get ahead of him so he applied himself as did I. We pushed each other. Sometime later, in 1968, we both submitted our Ph.D. theses. At this time I was teaching at the University of New Brunswick. As it happened there was a problem with the abstract of my thesis. As time was nigh for the final submission, Bob fixed the problem, substituting a corrected version that met with approval—all without telling me—so that we could graduate together. That's a measure of the man he was.

Bob was born in Oxford England on March 7, 1937, and later insisted that he had immigrated to Canada with his family via

I met Bob Alden in the early '80s when I was treasurer of the then Region 7, before it became IEEE Canada. I considered him a close friend, with a connection between us that strengthened over the years the IEEE Canadian Foundation evolved. We were frequently welcomed to his home for planning the future of the foundation, and the occasional overnight stay.

Bob helped develop a streamlined process for the financial reporting to the foundation Board, to highlight the important data required to make informed decisions. He was passionate about supporting students—that being an imperative for the foundation. He promoted the idea of support for women in engineering before WIE was embedded in the IEEE, and he endowed an annual award for WIE honouring the memory of Judy Clift.

I will miss Bob's energy and enthusiasm in all that he did for his family, friends, the foundation and his community. ∎

Luc Matteau, Peterborough Section,
IEEE Canadian FoundationTreasurer

Bob Alden made many contributions to IEEE and IEEE Canada. But what I remember him most for was his advocacy of the internet and e-mail. Since he was a power engineer, this seems quite remarkable. He was passionate about history, and developed much of that section on the IEEE Canada website. He also gave much to the IEEE Canadian Foundation, accomplishing major goals.

Bob was an exceptional mentor and coach. He was patient and always positive. Bob was completely unpretentious, and never put himself at the forefront. He took on roles in local section activities as well as at region and international. All levels of IEEE were important to him. ∎

Dave Kemp, Winnipeg Section,
IEEE Canada President, 1998-1999
VP Grants, IEEE Canadian Foundation

I met Bob Alden in 1970 when I was a researcher and teaching assistant at McMaster University. Although Bob was in a different research and teaching area, his friendly approach to students was always welcomed and very helpful.

Our paths crossed many times over the years, more often after I settled in Winnipeg with a position at the University of Manitoba in 1978. I began to see him frequently while attending Region meetings, starting in 1989 as Winnipeg Section Vice-Chair. We discovered that we shared a determination to reach out to students. Both of us were keenly aware of how important it is to build connections early with the future leaders of IEEE and industry. We often spoke of how the University of Manitoba was the site of the first McNaughton Student Learning Centre as conceived by Ted Glass, and how the establishment of many additional centres could become a key part of his vision for the IEEE Canadian Foundation. We both promoted support from IEEE of university and college student activities.

Bob's interest in developing a more comprehensive presence of IEEE Canada on the internet coincided with my work on the first handcrafted Winnipeg Section website, with thousands of pages. We shared views, as well as the architecture and design components of similar sites. Bob's passionate column "Traveling the Information Highway" in *The Institute* was read by many around the globe. Bob also elevated the level of the IEEE Canada Major Awards Program. His vision in founding the *IEEE Canadian Review* remains a very important part of his legacy.

Through his groundwork for the formation of IEEE Canada, we all owe him a debt of gratitude. Like him, I came to this great country from another continent. The unique contributions made by Canadian IEEE members in academia and industry was, and still is, worthy of celebration within the larger IEEE family.

As I got to know Bob over more than four decades, I was struck by how much he achieved by motivating others with his vision—sometimes taking years, but always with an unassuming understanding of the best interests of IEEE and IEEE Canada. He is irreplaceable. ∎

Witold Kinsner, Winnipeg Section
IEEE Canada President 2016-2017

Bob Alden might be considered in some respects as a father to all of the Canadian IEEE members today. For as long as I have been an active member, which is over 30 years, I have known Bob, or at least known of him. He has encouraged many, many volunteers to remain active, and to move into bigger, more responsible roles. He was a leader in his own volunteering. Before the world discovered the internet, Bob was using it for IEEE. He taught many of the volunteers how to move into the digital age, helping Region 7 to be one of the most progressive IEEE Regions in the '90s. Bob was always active in Region 7, first in various Region positions, then in higher level IEEE positions as VP Regional Activities, and later in the IEEE Canadian Foundation, which he chaired for years. He encouraged many to participate in the Foundation. Under his leadership many grants were provided to help Canadian engineers. Bob will be remembered as a Canadian IEEE leader with strength and vision. ∎ *Celia Desmond, Toronto Section, IEEE Canada President 2000-2001*

I am privileged to have known Bob Alden as an IEEE volunteer, a colleague and as a friend. Over the years we worked on many IEEE initiatives and travelled together and this helped me to get to know him closer. There are very few people I have come to know in my entire career that are as principled, dedicated, sincere, hardworking and devoted to IEEE as Dr. Bob Alden, and I have been a member for 42 years! I admired his volunteering for IEEE, and when I couldn't meet his high standards would always say to him jokingly "I am not Bob Alden, and can never be Bob Alden." For me, IEEE is not the same without Bob Alden and I deeply miss his smile, talent and contributions. He is now in heaven most likely starting an IEEE project. Rest in peace my very good friend. ∎

Robert Hanna, Toronto Section
IEEE Canada President, 2006-2007

While I knew Bob from his many active roles in IEEE Canada, and from his forward-looking Internet columns, we connected most at the IEEE Canadian Foundation. In his time as President, he developed his great vision and ensured long term success by building the IEEE Canadian Foundation into a truly national organization. Bob's leadership in preparing a solid base for our program of national scholarships, awards, prizes and grants invites all of us volunteering now on the IEEE Canadian Foundation to live up to his ideals and realizations. No matter the opportunity or challenge, Bob was always ready to cheerfully yet firmly demonstrate leadership and at the same time be an integral part of the team in carrying things to completion. ∎

David Whyte, Toronto Section
President, IEEE Canadian Foundation

We met over forty years ago as colleagues in Electric Power Systems Engineering, and our relationship and friendship was cemented through IEEE. With a broken heart, I remember Bob's journey through life, his love, pride and affection to his family, dedication to his profession, loyalty to his friends, and above all an admirable citizen of the World. You will be remembered, Bob, and we'll meet again.

Mo El-Hawary, Canadian Atlantic Section
IEEE Canada President, 2002-2003

Remembrances from Colleagues

left to right:
Ray Findlay,
Bob Alden,
Barna Szabados,
Joseph Dableh

Bob,
you led us through those years, binding us together with a wonderful friendship with no separating wall between work and personal lives

In my last year of graduate studies at McMaster a rookie professor in "power" appeared. Usually us grad' students were wary of new faculty; they liked to boss us around... But Dr Alden—as we knew him—was a different vintage. As I was assigned to him as a T.A., he started by saying that he wanted to change everything about the laboratories, and teach practical modern approaches to power engineering. My task was to help him implement a set of new laboratories, which I enjoyed much more than sitting in a chair overseeing unmotivated students reading instruments randomly and filling out check-boxed laboratory sheets.

I followed Bob's idea when I joined U. of New Brunswick as assistant professor, about a year later. I began to completely redo the existing laboratories with much success. I credit this to him. Ten years later, having returned to McMaster, it was with delight that I joined Bob as a colleague. The first thing we did was to get another "Mousquetaire" to cover the area of design of rotating machines since we already covered power systems with Bob's extensive knowledge and my involvement in power electronics. Bob travelled to New Brunswick to steal away our

mutual friend Raymond Findlay, and that was the seed for the birth of the Power Research Laboratory (PRL). Bob spearheaded its creation—fighting the administration, procuring space and funds and spending inordinate time planning its implementation. My duties were to bring in the supporting grants and contracts, and Ray was attracting graduate students, many from industry.

We invited world-class researchers to spend a year with us. These included Dr. Poloujadoff (my former professor from France) and Ronnie Belmans from the University of Leuven in Belgium. Together with the many contacts that Bob provided through the IEEE, our PRL soon became renowned world wide.

I enjoyed helping Bob develop his specialized interactive power system modules with my plotting libraries, at the time written in assembly language. His mod-

ules became an icon in his field and he kept improving them up to his retirement.

I can barely imagine how three strong personalities could harmoniously work together for over 20 years! I cannot recollect a single instant where any one of us disagreed or felt left out. This illustrates Bob's ability to lead us through these years, binding us together with a wonderful friendship with no separating wall between work and personal lives. The PRL was a true family including staff, graduate students, and faculty.

The first time I felt a major loss was at Bob's retirement: I had to fill his shoes, and believe me they were mighty! Many times I had to call on him to help out and give advice from his invaluable experience. We had lost a colleague, but our friendship continued. So now it is devastating to have lost a friend; but what memories we carry with us! You will stay in our hearts Bob, and the Mousquetaires of the PRL will always stay together with the legacy we left, thanks to You. ∎

Barna Szabados,
Professor Emeritus,
McMaster University

I came to know of Dr. Alden and his work in power engineering from his colleagues, Dr. Raymond Findlay and Dr. Barna Szabados, while an undergraduate student at the University of New Brunswick in the 1970s. We met in person in 1982 as I started my doctoral studies at McMaster University, and was most fortunate to have him on my Ph.D. committee, along with Dr. Findlay and Dr. Szabados. I subsequently became part of this team in the Power Research Laboratory at McMaster University, staying until 1999. Our friendship only continued to grow well past my departure.

From the time I met Robert until his passing, I never stopped learning from him some of the most important life lessons, without him saying a single word. The examples he set through his own conduct and actions spoke louder than any words. Robert was one of the calmest and most emotionally intelligent persons I have ever met. His warm and pleasant smile was vividly noticeable even when dealing with the most difficult situations. During the most difficult struggles of my life, Robert was always a generous source of counsel, support and gracious advice, which had tremendous healing power and provided a solid foundation to build tenacity and perseverance.

In addition to the numerous academic and professional achievements that Robert accomplished, he will be remembered forever as one of the kindest colleagues, friend, and tireless builder of the engineering profession, unbounded contributor to The Institute of Electrical and Electronic Engineers (IEEE), and kindest human beings that walked this earth. Myself in particular and all of his friends, colleagues and anyone who got to know him are most blessed by having him as a part of our lives. His memory will be cherished forever. ■
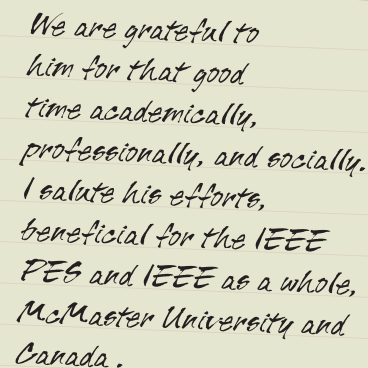
Joseph Dablehm, Fifth Light

Bob's death left us with deep sadness. However, we find some condolence in remembering his remarkable achievements, great personality and sensitivity to others, as well as his brave and persistent fight against his illness. We shall always remember Bob Alden! ■

Mohamed El-Kady,
King Saud University, colleague

I joined McMaster University during the period 1974 to 1975. I had the pleasure to work under the supervision of Dr. Alden. I graduated in 1975, and am honoured to be the first student to graduate under his supervision. There were three students who started working under his supervision at this time: namely Dr. P.J. Nolan, Dr. H.M. Zien-Eldin and myself. We and Dr. Alden established a happy group. We are grateful to him for that good time academically, professionally, and socially. I salute his effort in the IEEE, which was beneficial for the IEEE Power & Energy Society, IEEE as a whole, McMaster University and Canada. ■

We are grateful to him for that good time academically, professionally, and socially. I salute his efforts, beneficial for the IEEE PES and IEEE as a whole, McMaster University and Canada.

Dr. Adel Shaltout,
Professor of Electrical Machines,
Cairo University

Bob was always a tremendous support to new volunteers at all levels of the organization. The words that best describe him are helpful, enabling and welcoming. I experienced the benefits of his support first hand as a new member of the IEEE Canada Board of Directors and as a first-time Director of the IEEE Canadian Foundation.

More outgoing than engineers often are, Bob was always the person to seek out and speak to new volunteers, providing willing answers to their many questions, and guiding them in the ways of the IEEE Canada organization. ■

Maike Luiken, London Section,
IEEE Canada President-Elect, 2016-2017

During my tenure as IEEE Foundation Executive Director, I had the privilege of working with Bob Alden when he served on the IEEE Foundation, and several of its Committees, as Director from 2004-2009.

Bob could always be counted on to get done any job he was assigned—and in timely fashion. As one of the Foundation's webmasters, Bob worked diligently with the staff to get the first web pages up and running for what was then the newly established IEEE Foundation's Grants Committee. He was always available to provide answers to questions and was one of the most dependable people I have known.

Prior to his activities with the IEEE Foundation, I remember being introduced to Bob when he was elected as Region 7 Director of IEEE. He was a soft-spoken man and one that was very humble. One of his humblest of moments was when he was presented with the IEEE Haraden Pratt Award in 2002. Bob will surely be missed by many. ■

Fern Katronetsky,
IEEE Foundation Executive Director, 2004-2009
IEEE Staff Member, 1977-2015

Bob was highly respected and an outstanding long-term community leader who never ceased using his energy and talents to make the world around him a better place.

His vision for IEEE Canada and for the IEEE Canadian Foundation was inspiring and shared by many—his legacy will be remembered for many years to come. We miss him dearly. ■

Keith Brown,
IEEE Toronto Section,
IEEE Canada President, 2012-2013

Bob Alden. This is my memory of him, a very personal memory; as the saying goes: you will never die, as long as someone remembers you.

How can I remember all the times he was influential in my career, in my self-confident behaviour that he inspired, all the times he supported and urged me ahead?

Too many times to remember them all. This is my humble eulogy to him—a great man, educator, mentor, supporter and friend.

Our association started in the 1990s, and the one occasion I remember the most was in 1997 at the annual general meeting of the IEEE United States Activities Board (USAB), where I was attending as the liaison for the IEEE Computer Society (CS). As an American living in Canada it was a difficult position, being considered a "Canadian" and an outsider in what was a strongly USA-only-oriented group. So I was heckled and not let speak. Could it have also been my gender? A female in a group almost totally male; a group of engineers, where I was known only as a computer person, my engineering degree unknown to them?

All of a sudden, to my defence came Tom Cain (then the CS president), Chuck Alexander (then the IEEE president) and Bob Alden, who silenced the hecklers.

This brought the four of us together, and during the following discussion Bob came up with the idea of a project for me: to be the liaison for IEEE Canada to the USAB, and in such position start and define the parameters and the creation of the Professional Activities Committee and coordinator position.

Thanks to his insight on how to help the Institute and its Canadian branch, he helped not only me in my activities, but many more members who needed such a committee to facilitate their career path and enhance their potential.

To me he was always an example to follow — a shoulder to lean on when doubts and questions arose. He was always there to help, to encourage, to offer the chance to grow in a new direction. Bob gave me the assurance he had confidence in me, and in so doing, he made my self-confidence grow.

This is my memory of him, a friend. He gave me wings, and I still fly. ∎

Fiorenza Albert-Howard, Vancouver Section

In addition to Bob's many professional and volunteering qualities, he was a real gentleman and a noble soul. On every occasion, one could sense in him a person who really cared about others. He will be missed by us all.

Branislav Djokic,
Ottawa Section

I remember Bob Alden as a very supportive, kind and wonderful person. I greatly appreciated Bob's support, understanding and kind words when I lost my mother. Bob had met her at the Congress in Quebec City, as well as at a Board Meeting in St. John's Newfoundland, and he remembered her. Bob always came up to me at the subsequent Board Meetings to ask me how I was doing. I will certainly miss Bob. ∎

Mooney Sherman,
Northern Canada Section

As Director of Region 7 from 1990-91 and President of CSECE from 1993-94, I worked closely with Bob Alden in formative times. Bob was the inspiration of the idea to merge CSECE with Region 7 to form IEEE Canada. John Plant and I did much of the promotional work, with the support of Bob Alden and Ray Findlay. Following member consultation and approval within both organizations, we had a green light to proceed, and I believe the EEE profession in Canada has and will continue to benefit from it 20 years on—a credit to Bob Alden's passion and drive.

Bob was the consummate IEEE volunteer. He took initiatives, made proposals and drove them to maturity, and he pushed and prodded the rest of us to contribute to our EEE profession. It is often said that it is not just what one does, but what one stimulates others to do; and Bob did this so well. From a busy retirement on Vancouver Island, I have fond memories of working with Bob Alden in the '90s. ∎

Tony Eastham*, IEEE Region 7 Director, 1990-1991*
CSECE President, 1993-1994

Bob will always be remembered for his dedication to volunteerism and his willingness to generously help other volunteers. He will be remembered for his pleasant personality and for his countless accomplishments. ∎

Amir Aghdam*, Montreal Section,*
IEEE Canada President 2014-2015

Dr. Alden was most supportive when a couple of us approached IEEE Toronto Section with the suggestion to start a Women in Engineering Chapter. Once we got the approval and established the chapter, we benefited tremendously from Dr. Alden's unwavering support. He was truly one of a kind in his dedication to the profession as well as to IEEE. ∎

Visda Vokhshoori,
Toronto Section

We have wonderful memories of Bob at many of the neighbourhood parties. Always smiling, ever the gentleman and simply a kind, generous man. When there was a heavy snowfall, Bob would be out with his snowblower, icicles on his beard, clearing the sidewalk all the way down to the park to help his neighbours. He will be truly missed. ∎

Sabrina Arvanitis,
Friend and Neighbour

Bob was a brilliant colleague; well spoken, committed, and creative: he was a true gem. He will be truly missed! ∎

Shahram Yousefi,
Kingston Section

Australia. I always suspected he was geographically challenged. After completing his Ph.D., he took a lecturer's position at U of T before joining McMaster University in about 1971. In 1984 he formed the Power Research Laboratory at McMaster. Over the course of his career, Bob oversaw the research of 20 graduate students, and together with them produced some 75 technical papers, mostly on electrical systems design. Bob taught electrical power and machines for more than 30 years, at the University of Toronto, McMaster University, and the University of Sydney, Australia.

Bob had two daughters, Christine and Amanda, and by 1981 had met the love of his life, Judy. Bob undertook to be a step-father to Judy's two daughters Lydia and Zoe. He was significantly outnumbered on the home front! Maybe that's where he developed his powers of persuasion!

We are remembered by our accomplishments, our legacy. A sampling of the awards that Bob received will give some idea of his legacy. Most recently, in 2010 he received the John B. Stirling Medal of the Engineering Institute of Canada (EIC) for his concept, planning and implementation of a strategy that culminated in creating IEEE Canada as a member society of EIC. In 2009 the IEEE History Committee recognized Bob for his contributions to the history activities of IEEE. He was inaugurated as a Fellow of both EIC and IEEE in 2005.

In 2003, the IEEE Canadian Foundation implemented the Dr. Robert T.H. Alden Scholarship in recognition of his many contributions, particularly for the Toronto Section. In 2002 Bob was honoured with The Haraden Pratt Award, the top service award for all of IEEE. The citation referenced his "outstanding and sustained leadership in many areas of the IEEE especially in the use of electronic communication."

Let me digress for a moment to remark that one of the things that Bob was most proud of — and rightfully so — was the development of a regular column in

Bob was a significant force in establishing the IEEE Canadian Foundation, of which he was the first Vice-President and subsequently the President from 2004 to 2009. Bob also served as liaison to the worldwide IEEE Foundation.

the IEEE's *The Institute,* which is the newsletter that goes to all members of IEEE. The column was called "Traveling The Information Highway with Bob Alden" and began in 1992 and continued until 2002. This singular accomplishment introduced thousands of people to the worldwide web, taught them how to communicate effectively using it and how to make effective use of the internet. Bob also designed the first website for IEEE Canada, parts of which are still in use.

One of Bob's proudest awards was the 1999 William W. Middleton Distinguished Service Award, for challenging IEEE volunteers and staff to maximize their use of electronic communications in IEEE activities. Let me remark that this award is given only every third year.

Bob was awarded Region 7's Outstanding Service Award also in 1999.

He was awarded the IEEE Larry K. Wilson Transnational Award for exceptional leadership in the promotion of electronic mail worldwide in 1992. It is significant that most of these awards recognized Bob's leadership. We here in Canada are grateful to Bob for his vision to establish IEEE Canada. He, along with a committee of three other people, designed the IEEE Canada logo, that recognizes our merger with the Canadian Society of Electrical and Computer Engineers.

I won't go over all of Bob's positions but I will mention that as Director of Region 7, Bob decided that we needed a Canadian IEEE magazine. We still have that publication, called the *IEEE Canadian Review*.

Bob was a significant force in establishing the IEEE Canadian Foundation, of which he was the first Vice-President and subsequently the President from 2004 to 2009. Bob also served as liaison to the worldwide IEEE Foundation. Also of significance, Bob was IEEE Vice-President for Regional Activities in 1990 and 1991.

Let me remark that Bob retired from his position at McMaster University in 2001 to become a Professor Emeritus.

Bob was an avid golfer. He loved baseball, often travelling to Dunedin, Florida to watch the Blue Jays in spring training. He also listed Labrador Retrievers as a hobby, although that was mainly precipitated by his dearly beloved dog, Molly, who kept him company after Judy passed. Bob will be very much missed by all those who knew and loved him, particularly Christine, Mandy and Margaret, his sister.

Rest in peace, dear friend. ■

Raymond D. Findlay, Hamilton Section
IEEE Canada President 1995-1996
IEEE President 2002

Web Site

Written by Bob Alden for IEEE Canada's website, the text below is a description of the evolution of the use of electronic communication within the region.

In his typical modest way, Bob doesn't claim any personal credit, yet was either directly involved, or served as an advisor, in each advance. As detailed in Part I of this tribute, Bob spearheaded adoption of electronic communication by IEEE to its members world-wide. In 2002, he transitioned from a 10-year period working at the international level to leading IEEE Canada's website upgrade, serving as webmaster until 2006. ∎

The electronic services committee started with a mandate to provide leadership and assistance in increasing the use of electronic communications between Sections and Chapters in Canada, and IEEE members across the world. The objective evolved to be the development of the infrastructure to support professional networking, sharing of experiences and information through electronic media.

In 1994, Canadian government support for computer networking via the CAN-ARIE project led to the purchase and operation of a server in Ottawa under the management of Jacek and Hanna Chrostowski and the establishment of a number of electronic services such as the IEEE Canada web site, e-mail aliases for IEEE Canada members and web sites for Canadian Sections and Conferences.[1]

In 2001, IEEE Canada discontinued the use of the Ottawa server, and transfered much of its content and services to IEEE servers at the IEEE Operations Center in Piscataway, New Jersey. EWH is the entity web hosting service that provides secure, managed hosting facilities for IEEE entities such as Regions, Sections, and Societies at no charge. Similarly, e-mail aliases
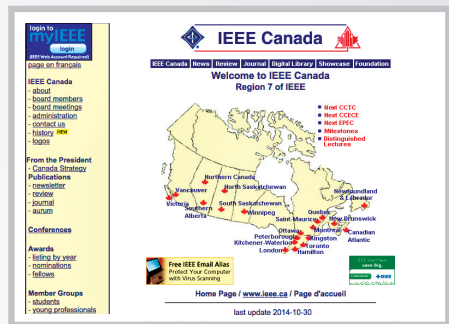

Bob Alden presents a special award to volunteer Isabel Deslauriers in appreciation of exceptional services for the IEEE Canada web translation project.

for all IEEE members are now provided on an IEEE server in Piscataway that provides virus protection for all e-mail messages that pass through that server.

May 2002 saw the start of a major upgrade of the web site, which included completion of the transfer of server content on the IEEE Canada web site, the development of bilingual content, a new volunteer webmaster and a team of dedicated volunteers. This was completed by March 2004.

In the spring of 2005, a process was started to decentralize the maintenance of the web site by involving additional volunteers. At the same time, the electronic services committee was discontinued and the responsibilities for these activities transfered to the webmaster. ∎

[1]N.Ed. Further information on these early innovations can be found in the Winter '95 issue.

Avec le décès de Bob Alden, nous avons perdu un grand bénévole visionnaire. En tant que Président du comité des activités de traduction, j'ai travaillé plusieurs années avec lui, et je peux dire que son impact sur le bilinguisme à IEEE Canada fut très important.

Ceci grâce à son travail de terrain lorsqu'il était Directeur de la région 7 et Président de la Fondation Canadienne de l'IEEE. Il a permi une expansion de celles-ci en organisation nationale opérant dans les deux langues officielles. Bob fut un joueur clé au sein de l'IEEE. Il assistait le personnel incluant moi en tant que webmestre français au niveau de la création des services de support électronique et au niveau de la planification du site web d'IEEE Canada dans les deux langues officielles.

Il aidait aussi directement les membres individuels comme moi à réaliser l'importance des bénéfices de ce nouvelle technologie de communication.

Tu nous manqueras beaucoup Bob. ∎

Christian Pépin with his 2007 Special Award for translation.

With the passing of Bob Alden, we lost a visionary, and a great volunteer. As Translation Activities Committee Chair, I worked with him many years, and I can say that his impact on bilingualism at IEEE Canada was very important.

This came about in large measure from his groundwork as Region 7 Director and IEEE Canadian Foundation President. For the latter, he expanded it into a national organization operating in both official languages.

Bob was a key player at IEEE. He assisted staff including me as french webmaster in creating electronic support services and in planning the IEEE Canada web site in both official languages.

He also directly helped individual members like me realize the benefits of this new communications technology.

We miss you so much Bob.

Christian Pépin, **St. Maurice Section**

Praise from a Rival

The IEEE Election of 1986 pitted two candidates for Region 7 Director-Elect with roughly equal credentials, each commanding the highest respect.

Tas Venetsanopoulos had been CSEE President from 1983 to 1985 and had previously chaired the IEEE Central Canada Council from 1980 to 1982. Bob Alden had held various region positions, had participated in a working group representing IEEE Region 7, the CSEE and other organizations servicing the electrical engineering profession in Canada, and had served on the administrative committee of the Power Engineering Society.

In Tas' rebuttal to Bob's candidate statement[1], he chose to allocate one-quarter of his alloted 75 words to commending Bob (see last paragraph of below).

Candidate's Rebuttal:

A.N. VENETSANOPOULOS

I agree with Bob Alden's view of IEEE, its role and service provided to the electrical and electronic engineering community.

My statement, however, carries this one step further outlining the ways we can "make a good thing even better", and I aim to pursue these objectives to establish a greater Canadian identity and improve the services provided.

In my opinion, Bob will make a good Regional Director, if elected, and I wish him all the best.

Candidate's statement:

Robert T. Alden

Active membership in IEEE is meeting other engineers, making contacts, keeping up with technical advances, learning about our ever changing business of electrical and electronic engineering (including computers!). This membership is a good deal for a couple of dollars a week. In our "Canadian Region", we have many active Sections and Chapters, we regularly hold successful conferences and trade shows, and a large number of our more experienced members contribute to the development of international standards for our manufacturing and service industries.

IEEE standards are voluntary -- they are adopted widely because they are useful; all of our IEEE activities are undertaken because they are useful to us. The role of our Canadian Regional Committee and our IEEE Canada office is to help you get the most out of IEEE. I would welcome the opportunity to represent your interests here in Canada and also as your delegate on the Board of Directors. Let's build on the successful efforts of our predecessors and make a good thing even better.

[1]Bob's statement and Tas' rebuttal come from original documents kindly supplied by Kostas Plataniotis of IEEE Toronto Section. The candidates' statements and rebuttals were published in *The Institute* in the summer of 1986. Bob won the election, enabling him to lay the groundwork for creation of IEEE Canada as we now know it.

Acknowledgements