



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 specifically to this contribution. We also present the many awards he received over the course of his 40 years of IEEE volunteering.

In subsequent 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 usefulness 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 organiza-

tion 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



**T**his 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



**I**n 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.



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.

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”

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.

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.

