



President's Column

Alan E. Willner



"LEOS 2017"

"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change." Charles Darwin.

I recently asked my students as to what topic they would want to read about in my LEOS Column. One bright individual was curious as to my vision concerning what he could expect LEOS to be like in the future, say in the year 2017.

"Change is inevitable - except from a vending machine." Robert C. Gallagher, Author.

Of course, it is fanciful that I could predict anything that might occur in 10 years. Therefore, I'll try to mix together some of the following ingredients:

- (i) aspects that I think might be different due to cultural and technological changes.
- (ii) aspects that I think might remain the same given that they relate to our core value proposition.
- (iii) aspects that I "hope" will be with us in 2017.

Please read below with a skeptical mind, and please do NOT show this article to me in 10 years.

Aspects That Might be Different

"He who rejects change is the architect of decay. The only human institution which rejects progress is the cemetery." Harold Wilson, former Prime Minister of the U.K.

Change brings new and potentially exciting opportunities to nearly all aspects of LEOS.

Moreover, as a warning from Gen. Eric Shinseki of the U.S. Army, "If you don't like change, you're going to like irrelevance even less."

- (1) Publications: The Internet will certainly have an impact on our publications. Will we have true "open access," in which articles will be available on-line at no cost to the reader? Perhaps. Will print still exist? Probably in a more limited form. However, there is unmistakable value from LEOS-enabled peer-review and editor-monitored revisions that adds significant quality to the publications process. Therefore, our business model will adapt so that LEOS publications flourish in the new "virtual" reality. In fact, we probably have a great opportunity to use the Internet for creating a publications model that is of maximum value to our stakeholders. Will the reader be able to electronically customize their multimedia reading experience and provide feedback to authors? I hope so.
- (2) Committee Meetings: Many committees, especially conference committees, will convene by Internet-enabled video conferencing. This will save an enormous amount of time and money, and it eliminates the problem of obtaining visas for travel. Moreover, this will effectively remove any barriers for people to accept committee memberships from anywhere on the planet. As generally pointed out by Thomas Friedman, the LEOS world will truly be "flat."
- (3) Employment: Since our field is relatively young and the commercial adoption of our technologies is fairly recent, the employment scenario for our industry has experienced dramatic and rapid changes. We have emerged from one of the worst elimination of jobs in modern history, and yet the vast majority of the uprooted people are now gainfully employed. In 10 years, the basic market value of our industry will become more fully entrenched, and the thirst for bandwidth/lumens/processing will continue unabated. The basic skills of our members will have value among a wide variety of markets (i.e., communications, data storage, health care, lighting, manufacturing, sensing), and our technologies will find ever-more applications in interdisciplinary fields. All this will enable people to migrate to different flourishing sectors, thereby reducing risks.
- (4) Exhibit Halls: Exhibit halls will still be of significant value as a meeting venue for customers and vendors. However, the exchange of specific product information will be relatively unimportant. Rather, it will be driven by the need for face-to-face contact to: (i) build a collaborative relationship, (ii) discuss specifications of next-generation products, and (iii) provide a hand-on feel of the relative user-friendliness of a product.
- (5) Membership: Given the longer and healthier lifespan, the demographics of our membership

will contain more retired “Life” members. Many of these members will still be interested in some of our activities, but they will have limited financial resources to participate as fully as they might wish. LEOS’ service and financial models will evolve to more fully serve and engage this population segment. I firmly believe that young members experience tremendous inspiration when interacting with senior members who still value our community.

(6) Interdisciplinary Activities: Information exchange will enable technological developments within one discipline to become rapidly intertwined with technologies from other disciplines. Multi-disciplinary and multi-society activities will be as common as single-society activities.

Our Immutable Core Values

“What's past is prologue.” William Shakespeare's The Tempest, Act 2 Scene 1.

Our core values bind us together, and they are manifest in our enduring characteristics. Furthermore, novelist Ellen Glasgow rightly points out that, “all change is not growth, as all movement is not forward.”

(1) Journals and Conferences: Manuscript decisions for journals and conferences will be driven, first and foremost, by quality and intellectual honesty. If this changes, we might as well close up shop.

(2) Networking: In-person meetings and conferences will remain important. Technology can fill in gaps and make communication easier, but there is no substitute for personal interactions. It will remain critical for people to directly and effectively market themselves to present and future leaders.

(3) Membership: Our members will be highly educated, highly motivated scientists and engineers. We will remain a member-driven, non-profit society, for which sound financial operation is meant to ensure that we continue to provide value to our members.

(4) Neutrality: LEOS will have no hidden agenda, other than to provide a neutral, non-profit forum for the effective exchange of high-quality technical ideas for the benefit of our community.

My Hopes for the LEOS' Future

“Things alter for the worse spontaneously, if they be not altered for the better designedly.” Sir Francis Bacon.

Some of my hopes for our future include:

(1) “Flat” Rejection Ratios: Although most manuscript submissions come from outside the U.S., the rejection ratio of non-U.S.-authored papers is higher than those from U.S. authors. This is a gentrified situation, one that should hopefully change in a “flat” world.

(2) Increased Member Retention: Each year, LEOS tends to lose roughly as many members as we gain. We will hopefully become stronger in terms of retaining members. The best way to do this is by: (i) providing clear value to professionals in our technical field, and (ii) identifying emerging LEOS-related technologies and approaches to serve these new communities.

(3) Student “Buzz”: We need to be relevant to students, such that our activities are the ones that they aspire to attend, contribute, and lead. Our activities must be the ones that students discuss among themselves. They are our future.

In summary, we all hope for positive changes, no deviation from our core values, and a bright and secure future. Any thoughts on LEOS 2027?

Respectfully submitted,

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