FIRESIDE CHAT & COFFEE TIME DIARIES WITH

MR.THOMAS COUGHLIN

IEEE PRESIDENT AND CEO





IEEE EDUCATION SOCIETY YOUNG PROFESSIONALS ADHOC COMMITEE

FIRESIDE CHAT & COFFEE TIME DIARIES FEATURING MR. THOMAS COUGHLIN, IEEE PRESIDENT & CEO



1. Can you share with us your journey to becoming the IEEE President and CEO? What motivated you to achieve and pursue this position?

I joined IEEE as a student for a conference discount, which sparked my interest. I've been a member for around 45 years, starting in Minnesota where I published papers and attended conferences.

In California, I chaired a local chapter in the Santa Clara Valley (Silicon Valley) section. After a ten-year break, I returned as chair and got more involved in the section, eventually becoming treasurer, vice chair, and then chair of the Santa Clara Valley section.

In 2007, I got involved with the IEEE Sections Congress, proposing and successfully hosting the 2011 Sections Congress in the San Francisco Bay Area, raising \$250,000 from local companies for the event. This allowed us to organize various activities and expose attendees to different IEEE societies.

I ran for and was elected IEEE Region 6 Director, initially serving as an area chair. A notable project was commemorating the first Trans-Pacific cable milestone, where I wore an aloha shirt inspired by local customs. This led to creating IEEE aloha shirts for Region 6, which added a sense of joy and engagement. We also organized joint events with other regions, such as a large regional meeting with Region 4, fostering community and shared purpose.

In 2017, I ran for and became IEEE-USA President. We created a popular red, white, and blue tie-dye shirt and focused on outreach activities, including the "My IEEE" video series, which aired on TV stations across the U.S., helping with member recruitment and retention.

During the pandemic in 2020 and 2021, I ran for IEEE President and was elected in 2022. Last year, I served as President-Elect, and this year I am the President. Throughout my journey, I've been involved in numerous conferences and societies, particularly the Consumer Technology Society, where I served on the board for 12 years and was the Vice President of Conference Planning and a Distinguished Lecturer. I've also participated in various standards activities.



2. As the IEEE President and CEO, what are your goals and priorities for the organization, more specifically in IEEE 2024 and beyond?

We are developing a strategic plan for the next five years, aimed at defining our goals and creating an actionable plan to achieve them. This involves extensive discussions within the board and with external stakeholders to shape our vision and strategies.

The average age of IEEE members has been increasing. Despite having over 170,000 student members, we struggle to retain them post-graduation. My priority is to engage and retain more young members to ensure IEEE remains a vital and dynamic organization. This is crucial for developing new leaders and sustaining our activities beyond our 140-year history.

Enhancing our connection with industry and those involved in practical applications of technology is essential. Most of our student members end up working in industry, so we need to make IEEE relevant and valuable to them. This includes building partnerships with companies and providing benefits that appeal to professionals involved in applying technology.

We need to improve public awareness of IEEE and its mission. Many of our members are introverted and focused on their technical work, so we need to be better at publicizing who we are and what we do. This involves individual members acting as ambassadors to communicate the value and impact of our mission to advance technology for the benefit of humanity.

Open access will impact IEEE publications in the coming years. Since publications are a major revenue source for IEEE, we must find new ways to fund our mission. Exploring applications of artificial intelligence and other algorithms to IEEE content could lead to new products and services, helping sustain our financial health.

Many IEEE members are educators who are training the next generation of technologists. Education, particularly in the U.S., has become very expensive. We need to leverage technology to lower educational costs, making technical knowledge and skills more accessible, especially to marginalised communities and those in developing areas. This includes continuous education to keep up with rapid technological changes. We have an ad hoc task force on the future of education, exploring ways to make it more affordable and available to all.



3. Collaboration is a key in the tech industry. How does IEEE help foster collaboration among its members and with other organizations? How do you see the role of IEEE evolving in the rapidly changing landscape of technology and innovation?

Collaboration is crucial for achieving our goals, especially within a complex and expansive organization like IEEE, which has over 470,000 members in more than 190 countries. Given our wide array of activities, fostering collaboration among IEEE members is vital.

I envision using technology to enhance how we connect and collaborate. We should leverage existing tools and develop new ones to help members find and collaborate with each other more effectively. While we already have collaborative activities like conferences and publications, we can improve individualized interactions and provide more opportunities for collaboration.

Externally, it's essential to partner with other organizations. For instance, the future of education is a significant area where we cannot work alone. Collaboration with diverse communities, governments, and other professional organizations is necessary to achieve our goals. Our members, with their vast networks, are a significant strength, facilitating these interactions.

One example is the global semiconductor ad hoc committee, which involves members worldwide and addresses initiatives like the U.S. CHIPS Act. This committee brings together members to leverage their connections and enhance collaborative efforts.

We continue to address global challenges, such as climate change, initiated by previous presidents. Our members and organizations have ongoing initiatives that can significantly contribute to mitigating or solving these issues.

Standards development is another area where collaboration is fundamental. Since 2015, IEEE has focused on ethical design and artificial intelligence, emphasizing ethics, sustainability, and third economies. These initiatives highlight the value of collaborative efforts in achieving meaningful progress.

In summary, fostering collaboration within IEEE and with external partners is essential for addressing global challenges and advancing technology for the benefit of humanity.

4. What are some of the biggest challenges in the tech industry today and how is IEEE addressing them?

One of the biggest challenges facing technology today is how quickly it's changing, especially with all the developments in artificial intelligence. I think IEEE needs to help our members and others understand AI and how it can be used. Many of our members are already working with AI, so there's a real opportunity there.

Another big challenge in the industry is finding people with the right knowledge in these emerging areas. Companies are laying off people but also hiring in these hot fields. That's where IEEE can really help with continuing education, helping our members and the general public get up to speed on new technologies and get involved.

We should encourage advancements and awareness of new technologies. Our Future Directions Committee is great at focusing on emerging technologies that will impact us. It helps our members understand and engage with these new areas. Getting involved in IEEE as a member or a leader is really valuable—you learn a lot, not just about technology but also about working with others.

Standards development is another area where IEEE plays a big role, helping our members stay current and be the best employees they can be. And like I mentioned before, we need stronger connections with the industry. Our Industry Engagement Committee has the Institute Partnerships program, and I want to expand that. By offering customized services and capabilities to companies, we can build stronger ties and help their employees become engaged IEEE members. This benefits both the companies and helps us pursue our mission of advancing technology for the benefit of humanity.

5. Can you tell us about any recent initiatives or projects within IEEE that you are particularly excited about?

Yes. Number it up. We've got this in our Strategy and Planning Committee. The Strategy and Planning Committee is a board committee. We're developing a strategic plan for 2025 to 2030. We're doing a lot of outreach to members all over the world, including IEEE leadership, to find out what people value and what we should be pursuing. This excites me because we're not just setting aspirational goals but creating concrete plans for the next five years.

We also have a task force on engaging students and young professionals, especially those in industry. This involves multiple IEEE committees and regions, including Member Geographic Activities and the Industry Engagement Committee.

Another task force on the future of education is out of our Education Activities Board and includes other groups as well. This task force aims to explore how we can make education more affordable and accessible. This is something we must do with other people to have an impact. We have several other committees working on important activities. For example, IEEE Future Directions is exploring new technologies and their potential impact. The global semiconductor activity is particularly exciting, given current efforts to rebuild local supply chains.

One of the great things about IEEE is that if you're really engaged, there's always something new going on. There's a lot of positive, creative activity at the local section level and within societies. Being in a leadership position allows me to support and engage in these exciting initiatives. It's inspiring to be part of an organization that makes a real impact.

One other thing I think is very important is the initiative to have the current, past, and incoming presidents work together. I was the chair of the IEEE New Initiative Committee last year, which funds many projects. I was able to secure funding for my initiatives, and I'm working with Kathleen Kramer, who will be the president next year, to help her get her initiatives going. We need to support continuity because many of these projects can't be completed in one year. The role of the president is like a "bully pulpit," where you can influence and excite people about getting things done. You can't do it all yourself; you need others to be on board. I'd like us to build a tradition of helping each other achieve great accomplishments and make IEEE better. That's another thing I'm excited about.

6. Diversity and inclusion have become increasingly important topics across all industries. How is IEEE working to promote diversity and inclusion within the technology field?

IEEE has a dedicated diversity and inclusion committee that has organized various activities aimed at fostering a more inclusive environment. The organization strives to maintain a balance in its positions and awards, considering both gender and diverse backgrounds. IEEE, being a global community, values and respects the different origins, perspectives, and backgrounds of its members, aiming to celebrate and integrate them into the broader community.

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Additionally, there are outreach efforts to collaborate with various groups, and plans to visit different countries, including Africa and India, to connect with younger members and explore opportunities for engagement. The goal is to inspire young people to see themselves as future leaders of IEEE and to provide them with resources that support their careers. This project is ongoing, with continuous efforts to make IEEE more inclusive, engaged, and vital for all its members.

Engagement is crucial, and as IEEE members, everyone is united under the same banner, working towards the common goal of advancing technology for humanity's benefit. Promoting diversity and inclusion is essential for progress in any field, and it is encouraging to see IEEE's commitment to creating a more inclusive environment for all its members.

7. What advice would you give to the young professionals and the students who are aspiring to have a successful career in the technology sector?

This ties into some of the priorities I've been discussing. I would love for young professionals and students to see IEEE as an essential part of their career path and life. IEEE should be a valuable source of technical information and help them stay updated with the latest developments. Additionally, it offers opportunities for volunteering, which can be highly rewarding.

As we navigate through different stages of life, including family commitments, the time available for volunteering may vary. However, I have found that being an IEEE volunteer, whether in leadership positions or general roles, is immensely fulfilling. It allows you to meet and connect with many intelligent people worldwide, enriching your knowledge and experience.

Volunteering with IEEE also helps develop social skills, which can be beneficial in various aspects of life, including your job. For instance, being able to collaborate effectively with others, even when they are not being paid, is a valuable skill. These social skills can also help in personal relationships and family life.

IEEE provides technically oriented individuals with the opportunity to develop social skills in an environment that aligns with their interests. I encourage you to excel in your job, do good work, and be an active part of IEEE. Let IEEE support you in achieving success, fulfilling your dreams, and making a positive impact in the world.

8. Finally, on a lighter note, what are some of your hobbies or the interests outside of the world? How do you unwind and recharge yourself whenever you feel stuck or stressed out?

I enjoy reading and often listen to audiobooks when I'm not reading physical books. Staying physically active is important to me, and lately, I've been doing a lot of hiking. Interestingly, I met my wife through dancing, which is another activity I love. I've also had some unique experiences like crawling into caves, and I'm an old rock collector. Additionally, in recent years, I've taken up brewing beer as a hobby.

I recall a memorable event in 2016 at a big YP Region 10 gathering in Bangalore. The event featured young professionals and possibly some students showcasing different foods. In the evening, they dressed in traditional costumes and performed dances from their regions. Some of us in the audience joined in, trying to imitate the dances. It was a wonderful experience.

9. What would be your exact vision for the YP's to grow up in the scale from a normal leader, I mean, at a student level, to becoming president? What should the wide range of scope for in this timeline as a volunteer at IEEE?

The Volunteer Leadership Training Program, also known as the Volt Program, is a great way to gain visibility within IEEE. IEEE is a complex organization with many layers, and this program helps you learn about its various parts and how they operate. Often, we start with knowledge of only one aspect of IEEE, but the Volt Program provides exposure to many different activities and functions within the organization.

When volunteering, doing a good job gets you noticed. Expressing interest in helping with projects can lead to more opportunities. However, it's important to recognize your own limitations and pace yourself. Don't let IEEE commitments harm your personal relationships or well-being. Everything should work together harmoniously, allowing you to be happy and fulfilled without neglecting other important aspects of your life.

Remember to collect good stories along the way. An important part of life is having memorable experiences to share. Even if you can't participate in everything all the time, you can still recount stories from when you were more active. Enjoy your IEEE activities and find happiness in what you do.

10. What's your advice for the future generation of engineers and new IEEE members?

First and foremost, do your job well. Whatever task you undertake, strive to excel in it. Stay alert for opportunities, and pay attention to how things are evolving. An organization like IEEE can be incredibly beneficial in helping you stay engaged with the latest advancements in technology and in learning new things.

IEEE leadership and engagement operate on the principle that the more effort you invest, the more you will gain. Getting involved in IEEE means engaging with other people. Life is about working with people to achieve goals, and IEEE is an excellent platform for bringing together individuals who are passionate about various technological fields. It's a great way to connect with others, discover new developments, receive mentoring and advice, and find opportunities. Personally, I've even secured work through my IEEE connections.

Involvement in IEEE helps you learn new things, stay active, develop your skills, and make a significant contribution.

11. With artificial intelligence increasingly dominating the realm of technology and automation, how do you envision engineers and technologists adapting and evolving in order to remain relevant and impactful in the industry?

I recommend experimenting with new technologies yourself to understand their capabilities and limitations. If you have the skills, you might even contribute to their development. Familiarity and hands-on experience with new tools can help you make better decisions regarding their use, both personally and within your organization. This approach applies to any emerging technology, not just AI.

Staying informed and conversant with new technologies enables you to engage in meaningful discussions about them, which can raise your visibility as a knowledgeable individual. This increased visibility can lead to new opportunities. Learning about and engaging with new technologies, such as AI, can bring opportunities your way.

AI, despite its limitations, has significant capabilities and will play an increasingly important role in our work lives. Gaining knowledge about AI sooner rather than later will benefit your career and help you recognize new opportunities that arise from these advancements.