We’d Like to Hear from You

Letters to the Editor:
Send letters, including a reference to the article in question, to intelligent@computer.org. Letters will be edited for clarity and length.

Articles:
If you’re interested in submitting an article for publication, see our author guidelines at www.computer.org/intelligent/author.htm.

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Revising Our Mission

Intelligent Readers,

As I write this, IEEE Intelligent Systems has just completed its editorial-board meeting. This is when members of our editorial and advisory boards discuss the magazine’s status, make strategic decisions about the magazine, and brainstorm about what topics to cover in special issues and departments.

This year, one of the more interesting things we did was revisit the words we use to describe our magazine in various places, updating them to better reflect what we do and what our magazine’s special competences are. To do so, we also had to discuss where we see the field going and how we fit into it. Essentially, we were revisiting the magazine’s vision and exploring whether we’re still providing the right kind of material to our readers, especially given trends and changes in AI and related fields. I share some of our discussion here, hoping that it will help you better understand where we see the magazine going and give you a chance to provide feedback if you feel we are missing a trend or are otherwise misinformed.

Impact

There’s one piece of text that we are quite proud of and decided not to change. If you go to our Web site (www.computer.org/intelligent), you will see that we claim to be “The #1 Magazine in Artificial Intelligence!” If you click on the text, you will see why:

IEEE Intelligent Systems’ 2004 Journal Citation Reports impact factor is 2.86, placing it 9th among ranked AI publications (the top-ranked magazine), 10th among all IEEE publications (the 2nd magazine), and 20th among all computer science publications (the top-ranked magazine). The impact factor measures the frequency with which an average article in a publication has been cited in a particular year, thus indicating the publication’s relative importance in its field.

We thank you, our contributors and readers, for making this possible, and we’re happy not to change a word.

Mission

The IEEE requires us to have a mission statement, and for years we’ve used this one: “IEEE Intelligent Systems’ mission is to provide its readers with high-quality, peer-reviewed research covering intelligent systems theory and applications in a readable, accessible format.” Not wrong, but pretty vague and somewhat circular, defining intelligent system in terms of intelligent systems. Readers who read my editorial “Systems, Systematically Speaking” in our May/June 2005 issue know that I’ve been grappling with a better explanation. So, at the editorial-board meeting, we tried to write a statement that would explain more clearly what we are.

We started with this preliminary version: “IEEE Intelligent Systems provides its readers with high-quality, cutting-edge research on the theory and applications of systems that understand, reason, and learn. It presents this research as peer-reviewed articles that are readable and accessible.”

The group felt that this was a step in the right direction but didn’t quite cover our maga-
zine’s areas of interest. For example, we publish articles about language and language-based interactions. We include articles about robotic systems that can be integrated with other systems. We’ve become a key publisher of Semantic Web research (some of our most-cited recent articles). And, we’ve published a number of articles on agent-based systems that interact with real-world sources. Although you could say that these systems understand, reason, and/or learn, we didn’t feel that wording was quite sufficient.

As you might imagine, given a group of AI experts in one room, the list of words we wanted to use grew rapidly as we tried to be inclusive. We publish articles on systems that “communicate, interact, effect, describe, and sense.” We’re interested in articles about getting computers to “mine, summarize, process, collect, and filter” information. We explore programs that do these things via “logic, representation, evolution, adaptation, and cognition.” AI is a large domain, and we cover quite a lot of it.

However, the more we attempted to expand the definition, and the more words we added, the more we worried about whether we were leaving anything out. Trying to fully describe our coverage simply made it less and less clear what the higher concepts were. A story from the Talmud, the guide to Jewish learning, relates that at a certain point someone leading the praying went on and on with more and more adjectives about how wonderful the Creator was. The rabbis chastised him afterward and asked, essentially, “is that all?” Their point was, of course, that the more you say, the more likely you will leave something out. Instead, the rabbis chose a smaller set of adjectives and designated them as the terms that should be used from then on. We didn’t have any rabbis with us, but I think we realized we were in the same situation.

Finally, we decided that the preliminary version had almost captured it. “Understand” was a bit too broad, but “reason” and “learn” really did capture a significant portion of what we cared about. It did, however, seem to leave out the many aspects of the field that concern interacting with users, other sources, and the physical world. We decided that if we added “perceive” to capture the many aspects of input, and “act” to cover the many ways a program can interact with other entities, we would cover the spectrum at a level where almost everything we publish will fit.

So, our new mission statement reads, "IEEE Intelligent Systems provides peer-reviewed, cutting-edge articles on the theory and application of systems that perceive, reason, learn, and act intelligently."

This, I think you’ll agree, is a pretty good summary of what this magazine is all about.

Name that magazine

We also needed to address one other issue: Is Intelligent Systems the right name for our magazine? This magazine, which is now publishing its 21st volume, started during the expert systems explosion of the mid-1980s and was called IEEE Expert. As the years went by, however, the editorial board felt that this name was narrower than what the magazine covered. So, in 1998, the title officially changed to IEEE Intelligent Systems. I asked the board members if they felt this was still the right name, given that

• our coverage has been expanding to include more from what our friend Rodney Brooks calls the “New AI,”
• we’re starting to branch more into issues dealing with the ethics and politics related to AI and its use, and
• we’ve gone beyond AI’s traditional boundaries in our coverage of such areas as information retrieval, data mining, and human-language technology.

Pondering this, advisory-board member Dave Waltz commented that he actually liked the name “Intelligent Systems.” Dave pointed out that we’re still one of the few publications that doesn’t just concentrate on AI for AI’s sake but also emphasizes research into tools and techniques that can lead to AI’s use in real-world applications. We don’t focus primarily on the applications themselves, but we certainly aim for research that will inform those working on applied projects and that is transitioning from the laboratory to use. There really is no better current term, Dave opined, than “intelligent systems” to cover the wide area that is encompassed in our pages.

Dave Waltz is a very smart man. So, I announce that from here into the foreseeable future our magazine’s title is, and will remain, IEEE Intelligent Systems, and we’re proud of that.

James Herdler