Copy-and-Paste Papers Put Profs On the Offensive

BY ANNA BOGDANOWICZ

More incidents of college students plagiarism others' work are popping up today than ever before, according to engineering professors queried by The Institute. And a recent U.S. survey released by the Center for Academic Integrity of 50,000 undergraduates shows the problem is on the rise. According to the center, 20 percent admitted to plagiarizing in 1999, whereas almost 40 percent said they did so in 2005.

And last year, for example, 21 mechanical engineering graduates from Ohio University, in Athens, were found to have plagiarized their master's and doctoral theses, and others at the school are now under investigation. The problem is growing at universities around the world as well.

Many professors place the blame on the Internet, which has made plagiarizing a simple copy-and-paste process. But there are other reasons for the increase, they say, including a misunderstanding of what plagiarism is. Other factors include differences in how plagiarism is perceived, a lack of basic education in ethics and, to put it simply, the ability to get away with it because professors are too busy to check every paper.

The consequences of growing up with little feel for ethical behavior could be devastating, says IEEE Member Richard Wiltshire, a former part-time lecturer in electrical engineering at Queensland University of Technology, in Brisbane, Australia. "I find plagiarizing at Stevens Institute of Technology, in Hoboken, N.J., sets strict limits. For McNair, using more than four consecutive words or lifting an uncommon phrase may be plagiarizing.

PERCEPTION PROBLEM: That plagiarism is unethical is not universally understood. According to several professors,

In one of Wiltshire's classes, 15 students were copying each other's papers. "They didn't think they were plagiarizing—they thought they were just pooling resources from each other," he says.

And when McNair confronted one of his students with plagiarism, he said the student told him it's an honor for the sources when someone takes their words without attribution.

But students at India's Pune Institute, for one, are being taught that copying another's work is unethical. "Plagiarism is a very serious offense at my university," says an engineering student.

Although spotting plagiarism has gotten easier with search engines such as Google and special detection software, professors don't always apply the technology. They rarely run every paper through a plagiarism check because it's so time-consuming, Wiltshire says.

"Instead, we look for telltale signs—an inconsistent writing style, say, or a paper that is suspiciously well-written—and then either search for the phrase on the Web or use a detection program such as Turnitin. That program checks papers against other student manuscripts submitted through Turnitin, and it also checks the Internet.

At most schools, punishments vary from having students rewrite their paper to, in extreme cases, expelling them. In most cases, students are given a second chance.

Still, some professors say plagiarism has little to do with a lack of understanding. "Students ought to know if they're stealing somebody else's work. I think sometimes it's a temptation because they think it's an easy way out," says Life Senior Member Charles Hickman, an adjunct professor in the electrical and computer engineering department at the University of Alabama at Birmingham.

Others say that in the end it's just a culture of getting away with it. "Students think if they're not caught, then plagiarism is not a bad thing," Hoffmann says.

FOR MORE INFORMATION on the plagiarism survey of students conducted by the Center for Academic Integrity, a consortium of more than 350 institutions affiliated with the Kanon Institute for Ethics at Duke University, in Durham, N.C., visit http://www.academicsurvey.org/ical_research.asp.
The Plagiarism Problem: Now You Can Help

BY ANNA BOGDANOWICZ

Plagiarism is a growing concern for many organizations, including the IEEE. The number of instances reported in IEEE publications has been rising steadily, with 14 in 2004, 26 in 2005, and 47 in 2006.

The Internet is largely to blame for the increase, according to Bill Hagen, the IEEE's intellectual property rights (IPR) manager, in Piscataway, N.J. Digital search engines have made plagiarizing easier because finding information is simpler, and it takes only the swipe of a mouse and a couple of keystrokes to highlight text and paste it into a new document.

AUTHORS TAKE NOTE Plagiarism is defined by the IEEE as the "reuse of someone else's prior ideas, processes, results, or words without explicitly acknowledging the original author and source." To deal with the problem, the IEEE is encouraging members, authors, and publication editors to report cases of plagiarism when they find them. And the IEEE has developed two new online tools that make identifying and reporting plagiarism easier. "Plagiarism can be a bit daunting, so we tried with the new tools to explain it in an engaging way," Hagen says.

The first tool is an animated PowerPoint tutorial that explains the fundamentals of plagiarism, why it is a serious offense, how to avoid it, and how to report it. The second is a Flowchart that illustrates the process used to investigate a plagiarism complaint [right].

So why is plagiarism so serious? Besides being a form of copyright infringement and therefore illegal, it constitutes, according to the PowerPoint presentation, a "serious breach of professional and ethical conduct" by denying original authors credit for their contributions. Plagiarism also can apply to materials besides publications, including conference proceedings, photographs, and charts.

Cases of plagiarism vary in severity. According to the IEEE, the IEEE has established five levels. The most extreme, Level 1, is the "uncredited (to the original author) verbatim copying of a full paper" or at least half of an article. The least severe, Level 5, is the "credited verbatim copy-

Punishment varies according to severity. Authors guilty of the most severe plagiarism are prohibited from contributing work to IEEEopyrighted publications for up to five years. Those guilty of the least severe level are required to write a letter of apology to the original author.

If you suspect plagiarism, or if you're an author who finds your work plagiarized, send your complaint to the IEEE IPR Office (visit the URL at the end of the article for contact information), along with a copy of the original work and the work of the alleged plagiarist, much as a lawyer would submit evidence in a case. The IPR Office records the complaint and sends it to the editor in chief of the publication where the suspected plagiarism appeared.

The second tool is the Flowchart. "The motivation behind putting up the Flowchart is that authors, members, and editors will now know how the process of investigating plagiarism works," says Saffar Rahman, former chair of the IEEE Publication Services & Products Board (PSPB), and the person instrumental in developing the Flowchart.

The IPR Office is important to the process because it can provide a journal editor with advice on the IEEE's plagiarism policies and procedures, Hagen says. The editor also forms an ad hoc committee of experts from the technical field of the material allegedly plagiarized. Experts can identify what might simply be wording commonly used to describe a technical concept—which is not plagiarism. The committee's job is to decide whether plagiarism occurred and to recommend the appropriate corrective action, if necessary.

SEVERITY LEVEL From that point it's up to the editor to decide just how severe the plagiarism is. If it's serious—Level 1 or 2—the editor sends the ad hoc committee's recommendations to the PSPB chair for action. If it's less severe, the IPR Office and the plagiarizing author are notified of the decision and the corrective action to be taken.

If the process does move to the PSPB chair, the chair reviews the editor's decision and gets advice from the newly established Publishing Conduct Committee. Rahman appointed the committee in June to assist in handling misconduct cases involving publishing, including plagiarism.

If the conduct committee agrees with the editor's decision on punishment, the PSPB chair notifies the author and Hagen's IPR Office. But if the committee disagrees, the editor receives its recommendations and the cycle repeats until a course of action is agreed upon.

Besides informing members of how to avoid and report plagiarism, the IEEE is considering steps for detecting it more easily, Hagen notes. For example, the institute is considering using plagiarism-detection software that would check submitted manuscripts against those in the IEEE Xplore digital library. And it might also engage a plagiarism-detection service to check submissions against a large database of manuscripts from other science and technology publishers.

The two plagiarism tools developed by the IEEE's IPR Office can be found on the recently developed plagiarism guidelines page, at http://www.ieee.org/web/publications/rights/Plagiarism_Guidelines_Intro.html.