1. Called to order at 9:33 A.M.
2. The Minutes from the 13 November 2002 meeting were approved as written.
3. Bruce Weide presented the Course Proposal Subcommittee’s recommendations to the Committee.
3.1. The new course requests for BME 701, 761, 762, 731, Chem Eng 769, CIS 616, and EE 620 were recommended to be approved by the subcommittee with the following contingencies. BME 761 and Chem Eng 769 both need concurrence from ME. BME 762 needs concurrence from ME, MSE, Biophysics. BME 732 needs concurrence from IWSE, ME, MSE. CIS 616 needs concurrence from EE, ME, IWSE. A motion was made by Bruce Weide to approve the requests with these contingencies. Rob Wagoner seconded the motion. A vote was taken: 11 approved, 0 opposed, and 0 abstentions.
4. Mark Ruegsegger informed the committee that progress is being made on the Biomedical Engineering Department proposal but that it will be a while before it is completed.
5. The proposal to change the name of the Electrical Engineering Department to Electrical and Computer Engineering was discussed. All committee members have had an opportunity to read the reports from the EE and CIS components of the Ad-Hoc Subcommittee on the Department of Engineering Name Change Proposal. Both reports are attached to the minutes of this meeting.
5.1. Kim Boyer, representing Electrical Engineering, presented oral arguments to allow the name change to take place. Some of his arguments were:
5.1.1. EE has a long history of research in computer engineering.
5.1.2. EE offers a degree entitled Electrical and Computer Engineering.
5.1.3. EE has a large amount of research funding for computer engineering.
5.1.4. EE faculty publish a large number of computer engineering related papers.
5.1.5. EE feels that the name change would increase their visibility, improve recruiting of new faculty and students, and better reflect what the department does.
5.2. Stu Zweben, representing CIS, presented oral arguments to not allow the name change to take place. Some of his arguments were:
5.2.1. CIS is the computer department.
5.2.2. Students in the ECE program take a large number of CIS courses.
5.2.3. If the name change occurs there will be internal competition between the two departments.
5.2.4. There should only be one home for computing.
5.2.5. CIS feels that the name change is unnecessary and will be divisive.
5.3. The floor was then open for questions.
5.3.1. The question was asked as to what degrees the two departments offer.
5.3.1.1. EE responded by saying that they offer a Bachelor of Science degree in Electrical and Computer Engineering (ECE). On the student’s transcript it is designated whether they specialized in Electrical Engineering or Electrical and Computer Engineering.
5.3.1.2. CIS responded by saying that they offer a Bachelor of Science degree in
Computer Science and Engineering as well as BS and BA degree in CIS in Arts & Science and Business although nearly all of the students in Arts & Science take the BS degree.

5.3.2. The question was asked as to how many faculty are in each department.
5.3.2.1. EE has 48 tenure track positions
5.3.2.2. CIS has 30 tenure track positions

5.3.3. The question was asked if there are joint faculty positions between the two departments
5.3.3.1. The answer was yes but only a few.

5.3.4. The question was asked about many EE faculty would consider themselves as working in computers.
5.3.4.1. The answer was maybe 20-25% fully but at least 50% have some interest.

5.3.5. The question was asked as to how much of the disagreement over the name change is associated with the recent course proposals in applied software engineering.
5.3.5.1. The answer was the while it is not directly related it is a sub issue.

5.3.6. The question was asked as to how EE is being ‘punished’ by its current name.
5.3.6.1. The answer was that this was an unknown quantity and it would be impossible to give a figure to it. It is a hidden lost cost.

5.3.7. The question was asked if there was competition between the two departments for incoming freshmen.
5.3.7.1. The answer was no. The degrees are different enough that different students are attracted to each of them.

5.3.8. The question was asked that if the disagreement was not about turf, enrollment, or financial what was the disagreement about.
5.3.8.1. EE answered that for them the issue was about truth in labeling. They want their name to be changed to match the actual mission the department is doing.
5.3.8.2. CIS answered that the issue is mission and that they do not want to become subsumed by EE.

5.4. All non-members and the representatives from EE and CIS were asked to leave the room so that a closed session could be held to discuss the issue. Comments made during the closed session were:
5.4.1. Metallurgical went through a similar situation as EE a number of years ago. Metallurgical wanted to change its name to Materials Science and Engineering to keep up with how its discipline was viewed. Ceramics objected and continued to object to any other potential name. In the end, the two programs merged. While merger is not being suggested departmental names do need to change to keep up with their perceived mission.
5.4.2. It was observed that there was no real pattern of how Electrical and CIS were separated in other universities. There are examples that can be used to support both arguments.
5.4.3. One suggestion is to let EE change their name and to let CIS include engineering in their department title also.
5.4.4. It was suggested that the committee not comment on the issue and just send it on for a faculty vote. It was decided that the committee had an obligation to make a recommendation to the full faculty.
5.4.5. It was felt that the gain to the University, College and to the Electrical Department would be greater with the name change than the perceived loss by CIS due to the change.
5.4.6. It was felt that the new name would also be more consistent with EE’s degree name. It was pointed out that CIS had not objected to EE changing the name of their degree.

5.5. The representatives from EE and CIS were invited to rejoin the committee.

5.6. A motion was made by Rob Wagoner that “CCAA recommends to the faculty of the College of Engineering approval of the Electrical Engineering proposal to change the department name of Electrical Engineering to Electrical and Computer Engineering; that both sides of the issue be presented by representatives from Electrical Engineering and Computer and Information Science at a faculty meeting before it is sent to all faculty for a vote; that CCAA’s recommendation is with the understanding that Electrical Engineering be receptive to a corresponding name change for Computer and Information Science if it is proposed.” Vish Subramaniam seconded the motion.

5.7. Bruce Weide asked if the committee could explain to him the reasoning behind the motion. The response was that the motion was based on three major reasons:

5.7.1. Unless there is an overwhelming reason not to change the name of a department then the burden of explaining why a change should not take place is on the objecting unit. The objecting unit must show that damage will take place, not just that they believe damage will take place.

5.7.2. Allowing EE to change their name will bring their name in line with the name of their undergraduate degree.

5.7.3. Allowing EE to change their name will bring their name in closer alignment to what the department is actually doing.

5.8. Bruce told the committee that CIS is concerned about EE's name change leading to their hiring a number of new computer engineering faculty. These faculty will certainly want to develop and teach courses similar or identical to those now offered by CIS. Once "computer" is officially part of the name and mission of the EE department, the concern is that CCAA will likely find little merit in CIS's objections to such proposed curriculum changes, leading to needless duplication.

6. A roll call vote was taken:

6.1. AA – Approved
6.2. BME – Opposed
6.3. CHE – Approved
6.4. CEGS – Not present
6.5. CIS – Opposed
6.6. EE – Approved
6.7. ENG PHY – Abstain
6.8. FAB – Approved
6.9. IWSE – Approved
6.10. MSE – Approved
6.11. ME – Approved
6.12. Graduate Student – Approved
6.13. Undergraduate Student – Not present

7. The vote being 8 Approved, 2 Opposed, and 1 Abstention, the motion passed.

8. There being no further business the meeting was adjourned.
Attendance:
AA –
Aero – R. Yedavalli
AVN – Not present
BME – M. Ruegsegger
CHE – J. Chalmers (Chair)
CEGS –
CIV – Not present
EGR – Not present
GSS – Not present
CIS – B. Weide
EE – K. Breeding
ENG PHY – R. Scherrer
FAB – J. Martin
IWSE –
ISE – Not present
WLD – C. Albright
MSE – R. Wagoner
ME – V. Subramaniam
Graduate Student – R. Clark
Undergraduate Student – Not present
Secretary – E. McCaul

Guests – S. Zweben, F. Ozguner, T. Long, C. Patterson, K. Boyer

C: College Faculty
CCAA File

Report of the Ad Hoc Committee
on the
Electrical Engineering Name Change

Electrical Engineering Component

Prof. Kim L. Boyer

Prof. Fusun Ozguner

Prof. Stanley C. Ahalt

13 June 2002
Background in Brief

In Spring 2001 an ad hoc committee was formed, consisting of three members each from the departments of Electrical Engineering and Computer and Information Sciences to discuss the request by Electrical Engineering for a name change to Electrical and Computer Engineering. This change was requested to more accurately reflect the composition, research, and teaching activities in the Department. This committee has thoroughly examined this issue in numerous meetings over the ensuing year and, although the discussions were substantive, informative, and without rancor, our best efforts have failed to produce agreement on the specific issue of the name change. This report summarizes the position of the EE Department, outlining the reasons the change should be supported by the College Committee on Academic Affairs.

The Electrical Engineering Position

The Department of Electrical Engineering hereby respectfully renews its request for a change of name to The Department of Electrical and Computer Engineering. This request has been approved unanimously by the Department Faculty, on multiple occasions. The faculty consider the current name, Electrical Engineering, to be inaccurate and misleading on several counts:

• The Department currently offers an ABET-accredited program in Computer Engineering; this program should be reflected in the name.
• The degree granted by the Department is “Electrical and Computer Engineering.” Again, this should be reflected in the name as a simple matter of accuracy.
• The Department is currently undergoing an internal reorganization, in keeping with our Strategic Plan, into an Electrical Engineering division, and a Computer Engineering division. Most of our academic support activities (undergraduate and graduate studies, etc.) will be bifurcated along these lines. This internal reorganization will serve our students more effectively by aligning the Department structure in accordance with our ongoing activities, “catching up” with the reality of our current pedagogical foci.

In addition to the programmatic misrepresentations above, the current department name also underrepresents the education and skills of our alumni and faculty, to the detriment of both groups. We find this unacceptable. It is time to address this problem, because:

• We risk losing potential students to other institutions where it is clear (to them) that they can study computer engineering.
• It has been problematic to attract and retain faculty in the computer engineering area because they are skeptical of the institutional commitment to the discipline.

Historical Perspective and the Status Quo

Most of the body of intellectual endeavor now categorized as “computer engineering” has its roots in the prior discipline of electrical engineering. In addition to such obvious areas
as computer architectures and logic design, this includes networking, multimedia, distributed sensors and systems, medical informatics, embedded systems, sensor analysis and computer vision, pattern recognition, image processing, and more. The Department currently has well-recognized research activities in nearly all these areas, and continued growth is natural and expected.

This issue has long been settled at nearly all peer institutions, in keeping with the same realities. Among the other Big Ten institutions, only Penn State retains the department name Electrical Engineering, and theirs is a much smaller, more narrowly-scoped department than ours. This pattern is repeated in the Pac 10 and across the other major groups of high-caliber institutions. Indeed, the Electrical Engineering Department Head’s Association has changed its name to the Electrical and Computer Engineering Department Head’s Association, because there are so few departments still carrying the antiquated name of “Electrical Engineering.”

In summary, we request the name change to reflect the realities as they already exist on the ground in the Department. We are, and have been for quite some time, a de facto department of Electrical and Computer Engineering. This status has been achieved through a natural, evolutionary process that has OSU roots at least as far back as the pattern recognition work of Cosgriff (1960), and which today branches over machine design, image processing, computer vision, robotics, signal processing, networking, real-time computing, parallel and distributed architectures, embedded systems, fault-tolerant computing, microarchitectures, and much, much more. Again, the name change is required to let our public representation catch up with reality. Electrical and Computer Engineering is more than a name; it’s who we are.


Computer and Information Science Component

Anish Arora

Timothy J. Long

P. Sadayappan

DeLiang Wang
Executive Summary
The Department of Computer and Information Science (CIS) faculty are unanimously opposed to the Department of Electrical Engineering’s (EE) request to change its name to Electrical and Computer Engineering (ECE). We understand EE’s arguments in favor of the name change and why, from their perspective alone, a name change seems attractive and justifiable. There is, however, a larger perspective that their report does not mention. Deeper analysis shows that granting the proposed name change is both unjustified and likely to harm both the College of Engineering and The Ohio State University.
The EE request is not a trivial matter, and our objection is not just another turf battle or a battle over the definition of “computer engineering”. Common sense (plus academic freedom) keeps a university from trying to control faculty interests by using the names of its academic units. If some EE faculty wish to engage in computer engineering activities, then that is a fine choice; nothing stops them. We enjoy collaborating with these faculty. Yet as a university decides how to organize its faculty and especially how to name an academic unit, it must consider not just the perspective of that one unit but the overall good of the institution. As we see it, the question at hand boils down to this: Computer engineering can either have no designated “home” academic unit, one home, or multiple homes. Which shall it be?
That is, the EE name change request is really about whether to continue to designate one home academic unit for computer engineering at OSU (i.e., CIS), or to designate two homes—not just in the university but in the very same college. For the good of both the college and the university, computer engineering should have only one designated home. Physics should have one designated home; mechanical engineering should have one designated home; materials science should have one designated home; computer engineering should have one designated home. The wisdom of a “one-home” policy is evident from an analysis of the approaches taken both by OSU’s peer institutions and by highly-ranked engineering colleges that we strive to be like. The vast majority—with good reason—have only one designated home for computer engineering.
Computer engineering, as our EE colleagues have noted, is a fundamentally important field of study and is destined to remain so indefinitely. Making an informed decision on the above question—based on what is the right thing to do, not on political expediency—is vital to college and university aspirations for excellence.

1. CIS is the Designated Home for Computer Engineering at OSU
The EE Strategic Plan, much like the EE report to CCAA, defines “computer engineering” very broadly:
On the Computer Engineering side, the area of Computer Systems includes traditionally core areas of Computer Engineering such as Computer Architecture, Computer-Aided Design, Parallel Computing, Real-Time Systems, Algorithms, Computer Networks, and Software Engineering, while Computational Systems covers new and emerging areas related to computation such as Computer Vision, Data Compression, Data Mining, Bio-
Computation, Multimedia Compression and Communication, Robotics, etc.

In other words, EE views computer engineering today as encompassing not just “traditional” computer engineering activities, which we think of as the design of electronic computers and of computer systems with electrically-related applications such as signal processing. They argue that computer engineering includes even algorithms and software engineering. In fact, perhaps the only traditional computer science topic that does not seem to be covered by the modern computer engineering umbrella is computability and complexity theory (although it may be included, too, because the last clause above clearly is not meant to be an exhaustive list of “areas related to computation”). In other words, computer engineering effectively includes computer science by this definition, which casts a net comparable in scope to that of the new joint curricular recommendations of our main two professional societies, ACM and the IEEE Computer Society.

It is pointless to object to any such attempt to characterize computer engineering because there is no “official” definition. What we do object to is changing the name of any unit on campus to introduce a term such as “computer” or “computing”. There is already a natural computer engineering unit on campus: CIS. If CIS were in the College of Computing (as at Georgia Tech) or in the College of Computer, Mathematical, and Physical Sciences (as at Maryland) or in the School of Science (as at Purdue), then it might be argued that the research and instructional activities of the CIS faculty officially are not “engineering” and therefore not “computer engineering”. However, at OSU, the CIS Department is in the College of Engineering and always has been. By the above definition of computer engineering, all CIS faculty are engaged in computer engineering research and instruction.

Put otherwise, since the department’s inception some 35 years ago, CIS has been the one designated home at OSU for the intellectual area now called computer engineering. The term “computer engineering” is not in our department name only because of the dramatic morphing of that term over recent years. The department would not have been accurately described by the more limited 1960s meaning of computer engineering, and over the years we have seen no compelling reason to change our name to reflect current fashion. But the fact remains that CIS is the only academic unit on campus with the word “computer” in its name, and it is in the college of “engineering”. Indeed, this fact seems to be part of the EE argument for a name change: CIS appears to be the home of computer engineering at OSU, which is confusing because EE also offers an accredited undergraduate computer engineering degree and some EE faculty also engage in computer engineering research.

2. Why Have Multiple Designated Homes for Computer Engineering?
Since EE proposes to change the status quo, the burden is on EE to present a compelling case why there should be multiple designated homes for computer engineering at OSU. What problems would the proposed change fix, other than an internal identity crisis? The EE report to CCAA suggests that so many EE departments have changed their names to ECE that the EE name is “antiquated”—an albatross that hinders the department’s quest for research and instructional excellence. Specifically, the report claims that EE faces two substantive problems with its current name:

1. “We risk losing students to other institutions where it is clear (to them) that they can
study computer engineering.”

2. “It has been problematic to attract and retain faculty in the computer engineering area because they are skeptical of the institutional commitment to the area.”

Claim #1 is puzzling. Both the ECE computer option (in EE) and CSE (in CIS) majors are filled to over capacity, with GPA restrictions in effect for both. Any student even remotely interested in OSU should have little doubt that it is possible to study computer engineering at OSU, which advertises that it offers 170 majors. That computer engineering is among them is easily checked. Anyone reaching the OSU home page can simply search for “computer engineering”; in fact, they probably have to do that if they hope to find their way around this page. The first three hits for this query are:

- “Eta Kappa Nu at Ohio State: ... the largest honorary for electrical and computer engineers”
- “Honors Program in Electrical and Computer Engineering”
- “Electrical and Computer Engineering at Ohio State”

The sixth hit is a page titled “Department of Electrical and Computer Engineering” . (We were distressed to see this, as the proposed name change has not been approved.) The first CIS-related site is #17, suggesting that CIS is certainly not overshadowing the EE presence on the OSU home page with regard to potential computer engineering majors. And what if a student doesn’t have access to the web, and calls OSU instead? As a test, a CIS faculty member recently (and anonymously) phoned the College of Engineering to ask whether his high school student could major in computer engineering at OSU. He was transferred to an advising office, where someone quickly explained that there are two such undergraduate degree programs at OSU: one called CSE, the other called ECE. It is hard to imagine how adding the word “computer” to the name of the EE Department could make anything easier or clearer than this. Indeed, the proposal would change nothing as far as a prospective computer engineering student is concerned.

Regarding claim #2, the argument would be far more persuasive if CIS were not facing precisely the same problem in faculty recruiting and retention. There is reason for current and prospective computing faculty to be “skeptical of the institutional commitment to the area”—but this perception has little to do with department names and a lot to do with department budgets and administration commitment to faculty growth. In fact, the proposed name change with this as a rationale is likely to be counterproductive by trivializing both departments’ recruitment and retention problems. The administration might view the name change as an easy and inexpensive way to (appear to) address the problem of institutional commitment. Only after several years would it become clear that the name change had little to do with faculty recruitment and retention.

EE’s report also says that, because it offers an ABET-accredited program and a degree including the term “computer engineering”, that this should be reflected in the department name. A little historical perspective is in order. When OSU created the two undergraduate degree programs named ECE and CSE, it did so by renaming existing degree programs that previously were called EE and CIS, respectively. The program name changes were agreed to in partnership and with full understanding that no changes to either EE’s graduate program names nor to its department name were contemplated. It was agreed that EE would deliver to both sets of undergraduate students those topics from the core that involved electronics, digital logic, and circuits, while CIS would deliver to both sets of students those topics from the core that involved software
engineering, programming fundamentals, operating systems, and algorithms. Each department kept its own curriculum in computer architecture and organization and in social and professional issues. The math department provided the discrete structures curriculum needed by both sets of students. As an electrical engineering program as well, the ECE program had a significant additional circuits and electronics component in its core; as a computer science program as well, the CSE program had a significant additional computation component in its core. It was agreed that both programs would seek ABET accreditation and this was obtained (for both programs) two years ago. Note that it is very rare to have two accredited computer engineering programs on the same campus. We believe this to be a strength of OSU, and we so inform parents and prospective students regularly when they come for Engineering Exploration Day. They seem to respond positively to this. There are only three other such instances of two accredited computer engineering programs on the same campus, and in two of them, both programs are run out of a single department.

Both the history behind these degree programs and OSU’s nearly unique two-program situation therefore make it far from evident that “computer” ought to be added to the EE name merely because it offers a degree program whose name includes the word.

3. Why Not Have Multiple Designated Homes for Computer Engineering?
There is no good reason to change the name of EE to ECE. But what harm could it do? Anyone thinking of voting for the proposed EE name change should ask, “What if a department wanted to claim the critical piece of our department name? For example, what if Chemistry petitioned to become Chemistry and Material Science?” The institutional policy should be that there is either no designated home for some intellectual focus area (i.e., the university has decided not to establish a significant presence in the area), or there is only one designated home. At a time of encouragement for interdisciplinary and multidisciplinary activities, it is hard to resist the temptation to proliferate designated homes by using especially popular words and phrases in the names of multiple academic units. But most institutions muster the courage and do not succumb. Why?

There are many reasons a university should not sanction academic unit names that overlap with those of other units. Especially if all core elements of a given unit’s intellectual focus also are part of the core of another unit—as would be the case if EE were renamed ECE, since ECE would then contain not only traditional electrical engineering but (by definition of computer engineering) virtually the entire intellectual focus of the CIS Department—then the first unit suddenly lacks a clear mission that is distinct from that of the second. This can prevent the first unit, or indeed each unit, from establishing or retaining its research and instructional identity both within the institution and externally. In areas of overlap, the units involved typically end up competing for faculty in the same areas of research and developing parallel curricula covering substantially the same sets of topics (because that is what the faculty hired by the units want and expect to teach in order to pursue their common areas of intellectual interest). Moreover, each unit’s reputation is diluted because strength in its discipline is not concentrated in that unit.

These are some of the general reasons for having a one-home policy. What about the particular question of computer engineering? Don’t many universities have ECE departments? If so, then according to the EE report to CCAA, approval of the proposed
name change is a simple matter of following the crowd. But not so fast. Every university faces a unique situation not only in terms of faculty interest areas but in terms of overall institutional organization. Which institutions have designated more than one home for computer engineering? A deeper analysis, which accounts for the consequences of overlapping unit names on other departments and on the entire institution, tells a different story than the EE report. The conclusion is still clear—but it’s not the one EE recommends.

OSU has identified nine “peer institutions”: Arizona, Illinois, Michigan, Minnesota, Penn State, Texas, UCLA, Washington, and Wisconsin. All are active in computer engineering. However, like OSU, seven of them have only one home for computer engineering. Five of the nine have departments named ECE, but only two of those five have another computing department in the College of Engineering; at the other three, the “other computing department” is not in engineering and their academic programs are not accredited computer engineering programs. Of the remaining four institutions, two have computer engineering only in a CSE department; one has computer engineering only in a CS department, and at the last one, computer engineering is in a combined EECS Department.

OSU’s Peer Institutions with One Home for Computer Engineering
Arizona ECE in Engineering, CS in Science
Michigan EECS in Engineering
Penn State EE in Engineering, CSE in Engineering
Texas ECE in Engineering, CS in Science
UCLA EE in Engineering, CS in Engineering
Washington EE in Engineering, CSE in Engineering
Wisconsin ECE in Engineering, CS in Science

OSU’s Peer Institutions with Multiple Homes for Computer Engineering
Illinois ECE and CS, both in Engineering
Minnesota ECE and CSE, both in Institute of Technology

A similar analysis of the top 20 engineering schools reveals that exactly half have departments named ECE. Notably, however, 17 of the 20 have only one home for computer engineering (Illinois, UCSD, and Northwestern are the exceptions). If OSU seeks to be counted among such highly regarded institutions, diluting computer engineering by designating two homes for it would be a step in the wrong direction. Interestingly, all but one of the departments named EE in this list (Texas A&M is the exception) are ranked among US News’ top 20 (plus ties), which sheds even more doubt on EE’s claim that its “antiquated” name somehow limits the potential for excellence.

We also note that the National Science Foundation recognizes the relationship between computer science and computer engineering in its organizational structure, with the Computer and Information Science and Engineering (CISE) Directorate separate from the Engineering Directorate. Within Engineering, there is an Electrical and Communication Systems Division, but nothing with a computer engineering title. Again, there is but one designated home for computer engineering: CISE.

4. Conclusion
We strongly urge rejection of the EE name change request. Should computer engineering have more than one designated home at OSU? No. The arguments presented by EE in its
report do not make a compelling case for changing the name to ECE. Moreover, based on analysis of OSU’s peer institutions and highly ranked engineering colleges, the proposed change is more likely to be harmful than helpful to both the College of Engineering and to The Ohio State University. If any change is needed at all, then there are other organizational options that could bring the computer engineering activities at OSU into a single academic unit (not necessarily by combining EE and CIS into EECS) and that make far more sense from the institutional standpoint.