

Cleveland State University

EEC 414/503

Writing in Electrical and Computer Engineering

Lecture 2 – Ethics in Communication

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Ethics in Communication

1. Relevant Laws
2. Common Types of Deception
3. Plagiarism
4. Quotations and Referencing

1. Relevant Laws

- Copyright law
- Trademark law
- Contract law
- Liability law

1. Relevant Laws

Copyright Law

- If you write a paper, the **publisher** owns the copyright
- Only the copyright owner is allowed to copy
- **Exception:** “Fair Use” – You can copy small portions of copyrighted material for research, teaching, etc.
 - Fair Use is a general term
 - Fair Use does not apply to graphics

1. Relevant Laws

Copyright Law: Determining Fair Use

- What is the nature and purpose of the use? Does it involve profit?
- What is the amount or proportion of the use?
- What effect does the use have on the copyright owner?
- Even if your use meets the Fair Use guidelines, you still **must** acknowledge your source, otherwise you are guilty of plagiarism

1. Relevant Laws

Copyright Law: Fair Use Guidelines

- When in doubt, seek permission
- Cite your sources accurately
- Discuss authorship questions openly
- Get advice if you have questions

1. Relevant Laws

Trademarks

- Trademarks are a way for a company to claim a name, phrase, or symbol as its own
- *Trademark*: A word, phrase, name, or symbol that is identified with a company
Example: Control System Toolbox™
- *Registered trademark*: A word, phrase, name, or symbol that a company has registered with the U.S. Patent and Trademark Office
Example: MATLAB®

1. Relevant Laws

Trademarks

- Use a trademark symbol (TM or [®]) the first prominent time that the name appears
- Use the trademarked name in a way that is distinctive from surrounding text
 - **Wrong:** Let's build a lego robot
 - **Right:** Let's build a Lego robot
 - **Right:** Let's build a LEGO robot
 - **Right:** Let's build a *Lego* robot
 - **Right:** Let's build a "Lego" robot

1. Relevant Laws

Trademarks

- Use the trademarked name as an adjective, not as a noun or a verb
 - **Wrong:** I googled a phrase
 - **Wrong:** I used Google
 - **Right:** I performed a Google search
 - **Wrong:** I used MATLAB
 - **Right:** I used the MATLAB product family
 - **Right:** I used the MATLAB environment
 - **Right:** I used a MATLAB m-file
- But sometimes companies use their own trademarks as nouns (for example, MATLAB)

1. Relevant Laws

Trademarks

- Do not use the plural form or the possessive form of the trademarked name
 - This goes along with the earlier guideline of not using the name as a noun
 - **Wrong:** I used Google's search engine
 - **Right:** I used the Google search engine
 - **Wrong:** I used LabVIEW's math functions
 - **Right:** I used the LabVIEW math functions

1. Relevant Laws

Trademarks

- Use the company's preferred form of the trademark, if they have a preference
 - Not matlab, not Matlab, but **MATLAB**
 - Not LabView, not Labview, but **LabVIEW**

1. Relevant Laws

Trademarks

- Sometimes trademarks lose their identity
 - If the trademark owner stops using it
 - If the trademark is misused often enough that it becomes commonly used in a generic way
 - Examples from *a* to *z*:
 - aspirin
 - escalator
 - kerosene
 - thermos
 - zipper

1. Relevant Laws

- Commonly misused trademarks
 - Band-Aid
 - Kleenex
 - Scotch Tape
 - Tupperware
 - Xerox
 - MATLAB
 - Simulink

Ethics in Communication

1. Relevant Laws
2. Common Types of Deception
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2. Common Types of Deception

- Proposals
 - Exaggerate previous accomplishments
 - Promise more than you can deliver
- Papers, articles, and theses
 - Make unfair comparisons (try to “sell” your idea)
 - Exaggerate the shortcomings of competing ideas
- Deceit by omission

2. Common Types of Deception

- A. False implications
- B. Exaggerations and overstatement
- C. Euphemisms

2. Common Types of Deception

A. False implications

“We compared our new controller to our competitor’s controller, and both gave satisfactory performance. However, it should be noted that our new controller has only two tuning parameters.”

(The author neglects to note that the competitor’s controller has only one tuning parameter.)

2. Common Types of Deception

B. Exaggerations and overstatement

Results: The tracking error of our new controller is 0.001%, and the tracking error of the competitor's controller is 0.002%.

Overstatement: "Results show that our new controller reduces tracking error by a full 50%."

You need to emphasize the benefits of your new method in an honest, objective way.

2. Common Types of Deception

C. Euphemisms are similar to false implications

Example: “The existing state-of-the-art algorithm failed a full 25% of the time, while our new algorithm succeeded three out of four times.”

Ethics in Communication

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3. Plagiarism

- Plagiarism: Using someone else's words or thoughts without proper referencing
- Why not plagiarize?
 - Plagiarism is lazy
 - Plagiarism is stealing
 - Plagiarism is lying
 - Plagiarism is cheating
 - You will get caught ... eventually

3. Plagiarism

- Two types of plagiarism
 - **Word-for-word:** Quoting directly from another work without enclosing the quote in “quotation marks” and providing a reference
 - **Paraphrasing:** Using a source without providing a reference
- The ECE Department’s ethics policy is available on their web site (look under the *Resources* → *Forms and Policies* link)

3. Plagiarism

- **Word-for-word plagiarism:** Quotations require both “quotation marks” *and* a reference to the original source.
- **Paraphrasing plagiarism:** If you don’t provide a reference, it is still plagiarism even if you change the words.
- **Missing reference:** It is still plagiarism, even if the original source gave you permission.

3. Plagiarism

- It is still plagiarism, even if it is accidental
- Proper paraphrasing
 1. Read the material
 2. Set the material aside
 3. Rewrite it in your own words
 4. **DO NOT CUT AND PASTE!**
- Paraphrasing still needs a reference; without a reference, it is plagiarism



3. Plagiarism

- This plagiarism test is adapted from Indiana University Bloomington www.indiana.edu/~istd/plagiarism_test.html
- Specify if the writing on the following pages is plagiarism. If so, is it word-for-word plagiarism or paraphrasing plagiarism?

3A. Plagiarism Test

- **Original Source Material:** The concept of *systems* is really quite simple. The basic idea is that a system has parts that fit together to make a whole; but where it gets complicated - and interesting - is how those parts are connected or related to each other.
- **Student Version:** Systems, including both business systems, and educational systems, are actually very simple. The main idea is that a system has parts that fit together to make a whole. What is interesting is how those parts are connected together.

3A. Plagiarism: Word-for-Word

- **Original Source Material:** The concept of *systems* is really quite simple. The basic idea is that a **system has parts that fit together to make a whole**; but where it gets complicated - and interesting - is **how those parts are connected** or related to each other.
- **Student Version:** Systems, including both business systems, and educational systems, are actually very simple. The main idea is that a **system has parts that fit together to make a whole**. What is interesting is **how those parts are connected** together.

3A. Corrected Version

- **Original Source Material:** The concept of *systems* is really quite simple. The basic idea is that a **system has parts that fit together to make a whole**; but where it gets complicated - and interesting - is **how those parts are connected** or related to each other.
- **Student Version:** Systems, including both business systems, and educational systems, are actually very simple. The main idea is that a **“system has parts that fit together to make a whole.”** What is interesting is **“how those parts are connected”** together [19].

3B. Plagiarism Test

- **Original Source Material:** Given similarities between software design and instructional design, we argue that rapid prototyping is a viable method for instructional design, especially for computer-based instruction.
- **Student Version:** Rapid prototyping could be an advantageous methodology for developing innovative computer-based instruction (Tripp & Bichelmeyer, 1990).

3B. Not Plagiarism

- **Original Source Material:** Given similarities between software design and instructional design, we argue that rapid prototyping is a viable method for instructional design, especially for computer-based instruction.
- **Student Version:** Rapid prototyping could be an advantageous methodology for developing innovative computer-based instruction (Tripp & Bichelmeyer, 1990).
- This is **not** plagiarism because the student paraphrased and included a proper reference.

3C. Plagiarism Test

- **Original Source Material:** The study of learning derives from essentially two sources. Because learning involves the acquisition of knowledge, the first concerns the nature of knowledge and how we come to know things.
- **Student Version:** The study of learning derives from essentially two sources. The first concerns the nature of knowledge and how we come to know things [23].

3C. Plagiarism: Word-for-Word

- **Original Source Material:** *The study of learning derives from essentially two sources.* Because learning involves the acquisition of knowledge, *the first concerns the nature of knowledge and how we come to know things.*
- **Student Version:** *The study of learning derives from essentially two sources. The first concerns the nature of knowledge and how we come to know things [23].*
- The student is correct to give a reference, but still plagiarizes due to the lack of quotation marks.

3C. Corrected Version

- **Original Source Material:** The study of learning derives from essentially two sources. Because learning involves the acquisition of knowledge, the first concerns the nature of knowledge and how we come to know things.
- **Student Version:** “The study of learning derives from essentially two sources ... [T]he first concerns the nature of knowledge and how we come to know things” [23].

3D. Plagiarism Test

- **Original Source Material:** The tools available today for creating learning materials are much more powerful than those of a few years ago. Soon teachers will be able to use computer technology to produce their own materials. All it takes is time, know-how, and some funds.
- **Student Version:** Computers are so powerful that educators and students are now able to produce their own multimedia learning materials. They just need to take the time to learn to use the related technologies.

3D. Plagiarism: Paraphrasing

- **Original Source Material:** The tools available today for creating learning materials are much more powerful than those of a few years ago. Soon teachers will be able to use computer technology to produce their own materials. All it takes is time, know-how, and some funds.
- **Student Version:** Computers are so powerful that educators and students are now able to produce their own multimedia learning materials. They just need to take the time to learn to use the related technologies.
- The student did not properly reference the source.

3D. Corrected Version

- **Original Source Material:** The tools available today for creating learning materials are much more powerful than those of a few years ago. Soon teachers will be able to use computer technology to produce their own materials. All it takes is time, know-how, and some funds.
- **Student Version:** Computers are so powerful that educators and students are now able to produce their own multimedia learning materials. They just need to take the time to learn to use the related technologies [14].

3E. Plagiarism Test

- **Original Source Material:** Major changes are usually initiated by those in power. There is often the assumption that training will “solve the problem.” The result is that potentially effective innovations suffer misuse, or even no use, in the hands of uncommitted users.
- **Student Version:** When major changes are initiated, “[t]here is often the assumption that training will ‘solve the problem’ ” (Dormant, 1986, p. 238).

3E. Not Plagiarism

- **Original Source Material:** Major changes are usually initiated by those in power. There is often the assumption that training will “solve the problem.” The result is that potentially effective innovations suffer misuse, or even no use, in the hands of uncommitted users.
- **Student Version:** When major changes are initiated, “[t]here is often the assumption that training will ‘solve the problem’ ” (Dormant, 1986, p. 238).
- The source is properly quoted and referenced.

3F. Plagiarism Test

- **Original Source Material:** The philosophical position known as *constructivism* views knowledge as a human construction. *Constructivism* is based on the premise that knowledge is not part of an objective, external reality that is separate from the individual. Instead, human knowledge is a human construction.
- **Student Version:** Does knowledge exist outside of, or separate from, the individual who knows? Constructivists hold that human knowledge is not part of an objective, external reality that is separate from the individual (Gredler, 2001).

3F. Plagiarism: Word-for-Word

- **Original Source Material:** The philosophical position known as *constructivism* views knowledge as a human construction. *Constructivism* is based on the premise that **knowledge is not part of an objective, external reality that is separate from the individual.** Instead, human knowledge is a human construction.
- **Student Version:** Does knowledge exist outside of, or separate from, the individual who knows? Constructivists hold that human **knowledge is not part of an objective, external reality that is separate from the individual** (Gredler, 2001).

3F. Corrected Version

- **Original Source Material:** The philosophical position known as *constructivism* views knowledge as a human construction. *Constructivism* is based on the premise that **knowledge is not part of an objective, external reality that is separate from the individual**. Instead, human knowledge is a human construction.
- **Student Version:** Does knowledge exist outside of, or separate from, the individual who knows? Constructivists hold that human **“knowledge is not part of an objective, external reality that is separate from the individual”** (Gredler, 2001).

3. Plagiarism

Summary

- When in doubt, err on the side of too many references rather than too few
- When in doubt, check with your professor or the CSU Writing Center:
<http://www.csuohio.edu/writingcenter/>
- www.turnitin.com identifies plagiarism

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4. Quotations and Referencing

Quotations must be not only technically correct, they must also convey the author's original intent.

- **Original Source Material:** "I did not have sexual relations with that woman" (Bill Clinton, January 26, 1998).
- **Correct quote:** Bill Clinton said that he "did not have sexual relations with [Monica Lewinsky]."
- **Correct quote:** Bill Clinton said that he "did not have sexual relations" with Monica Lewinsky
- **Incorrect quote:** Speaking of Monica Lewinsky, Bill Clinton said that he had "sexual relations with that woman."

4. Quotations and Referencing

Credibility of references

1. Academic journals
 2. Academic books
 3. Academic conferences
 4. Theses and technical reports
 5. Trade publications (magazines)
 6. Web sites (avoid, except for supplementary material)
- ...
999. Wikipedia – it should **never** be used *as a reference*

4. Quotations and Referencing

For additional details about Fourier series, see [14].

...

[14] C. Alexander and M. Sadiku, *Fundamentals of Electric Circuits*, Fourth edition, McGraw-Hill, 2008, Chapter 17.



For additional details about Fourier series, see [14, Chap. 17].

...

[14] C. Alexander and M. Sadiku, *Fundamentals of Electric Circuits*, Fourth edition, McGraw-Hill, 2008.



4. Quotations and Referencing

For a proof of flux capacitor stability, see [14].

...

[14] E. Brown, “New results on Geisler tube design,” *Journal of Time Travel and Applications*, vol. 7, pp. 18–36, Sep. 1985, Section 2.



For a proof of flux capacitor stability, see [14, Section 2].

...

[14] E. Brown, “New results on Geisler tube design,” *Journal of Time Travel and Applications*, vol. 7, pp. 18–36, Sep. 1985.



4. Quotations and Referencing

For additional details about flux capacitor design, see [14, 17, 22–25].



For additional details about flux capacitor design, see [14], [17], [22]–[25].



4. Quotations and Referencing

“sic” means “intentionally so written,” and indicates that a quoted passage is written exactly as it appears in the original text, errors and all.

- **Original Source Material:** The key feature of the flux capacitor is its three separate Geissler tubes.
- **Correct quote:** The flux capacitor enables time travel because of its “three separate [sic] Geissler tubes” [14].
- **Correct quote:** The flux capacitor enables time travel because of its “three [separate] Geissler tubes” [14].

4. Quotations and Referencing

- **Original Source Material:** The key feature of the flux capacitor is its three separate Geissler tubes.
- **Correct quote:** “[T]hree seperate [sic] Geissler tubes” in the flux capacitor enable time travel [14].
- **Correct quote:** In his first publication on the flux capacitor, Emmett Brown says that its “key feature ... is its three [separate] Geisler tubes” [14].

Conclusion

- Honor trademark and copyright laws
- Don't mislead your readers
- Write clearly
- Avoid discriminatory language (he/she)
- Acknowledge sources and assistance
- Do not plagiarize!

Acknowledgments

- Much of the material in these slides is based on Mike Markel's PowerPoint slides
- Trademark information:
www.ebstc.org November 2003 newsletter
www.inta.org FAQ
- Plagiarism resources:
 - The CSU Writing Center, www.csuohio.edu/writingcenter
 - Ohio U., www.ohiou.edu/Esl/help/plagiarism.html
 - Purdue University, owl.english.purdue.edu
 - Indiana University, www.indiana.edu/~istd
 - turnitin[®] plagiarism detection software, www.turnitin.com