

Teaching Hacker Ethics with a Common Curriculum for “Information Ethics”



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Overview of the Session



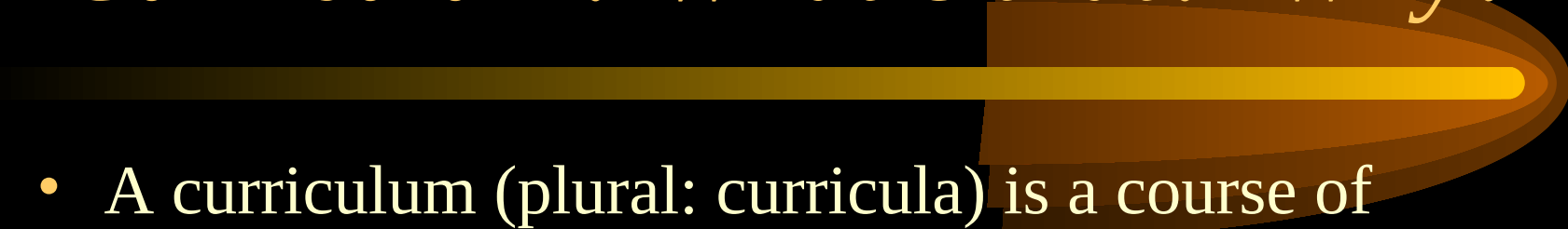
- Who is this guy?
- Why develop some sort of curriculum?
- Who is the curriculum for?
- Goals
- Implementation plan
- Feedback?

Greg Newby



- Yes, “Newby.”
- Has taught about the Internet and predecessor networks since 1988
- Writes code, does research on open source search engines
- Has given talks on hacker ethics and related topics at H2K and HAL 2001.

Curriculum? What's that? Why?



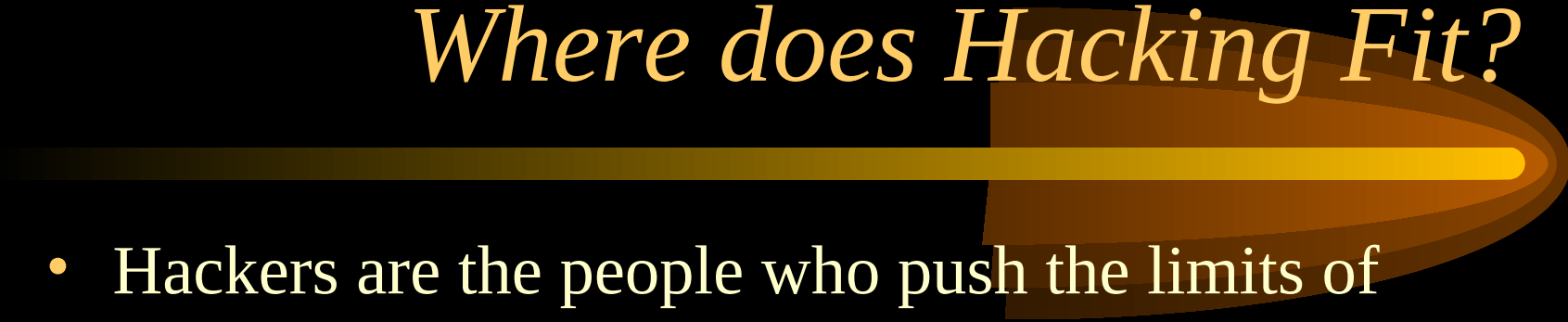
- A curriculum (plural: curricula) is a course of study. In practice, it's a set of courses or other instructional units (like a series of workshops)
- Curricula exist for nearly all academic and non-academic structured learning. For example, to get a college degree you need to follow the guidelines in the curriculum for that degree.
- K-12 schools have set curricula to enable standard quality expectations and exit requirements

Why a Curriculum for Information Ethics?



- Schools at all levels (especially high school and college) are requiring computer competency
- Very few include components of “appropriate use” – especially ethics – of computer-based tools
- Let’s fix that, by including training for information ethics in curricula at different levels: early education, high school and college

Where does Hacking Fit?



- Hackers are the people who push the limits of computer-based tools
- Hackers need to learn ethics like everyone else. (Unlike many computer users, hackers have good communication networks to help learn and share ethics.)
- By teaching information ethics, many aspects of hacking will be encouraged, not discouraged

Huh? Encourage hacking?



- Absolutely, on several levels:
 - Hackers are curious, motivated and talented. These are desirable traits for computer users
 - Hackers experiment with systems. Hackers have been behind almost every major technology innovation – this is valuable!
 - Ethics are shared through communication. Hackers learn and teach, they communicate

What are some suggested values for info ethics curriculum?



- Theme: value of information

Information has value

There are value-adding processes, such as organization, summarization, extraction...

Theme: Information privacy

People should have some expectation of privacy, but also some expectation of non-privacy. When?

Others may invade on your privacy. What can you do?

More themes

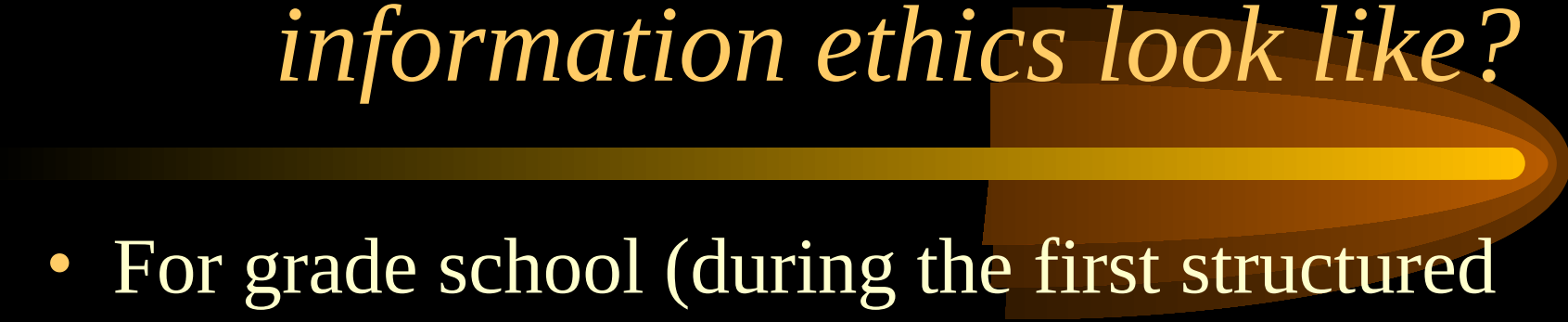


- Theme: Information security
 - You can take steps to determine how information you generate, or about you, is utilized
 - You can take steps to add value to information by data integrity, safeguarding, verifying, etc.
- Theme: Secrecy
 - What is secrecy? When is secrecy effective?

The Suggested Curriculum

- Add a few hours of instruction with contextual localized examples on information ethics to computer training
- gbn's suggestion is to do this in about the 5th grade, 10th grade and 1st year of college
- gbn is developing curriculum details to try to work with CPSR on making the curriculum happen in NC and elsewhere

What would a teaching unit on information ethics look like?



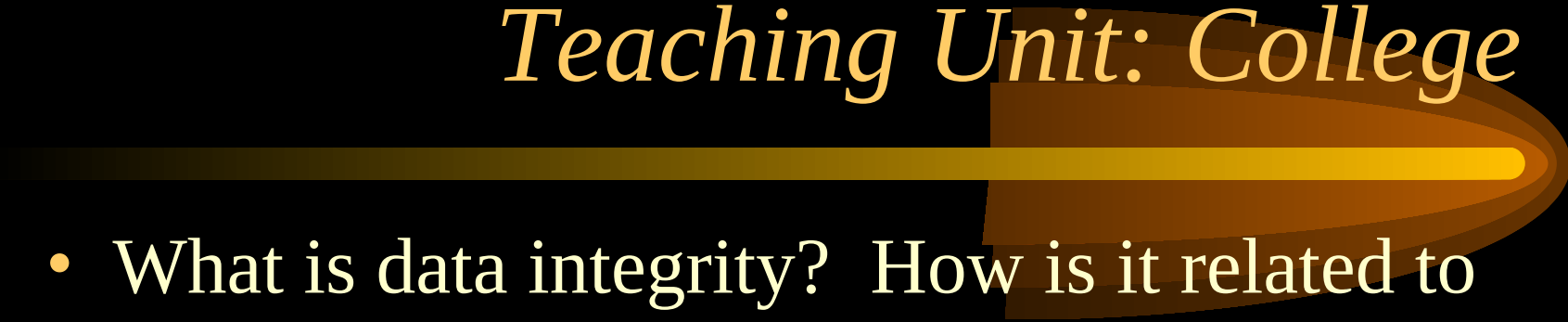
- For grade school (during the first structured introduction to computing, especially networked computing):
 - What is information about me, and who knows it?
 - Why do we keep secrets sometimes?
 - What kinds of things can I find out using computers? Is what I find on a computer always right?

Teaching Unit: High School



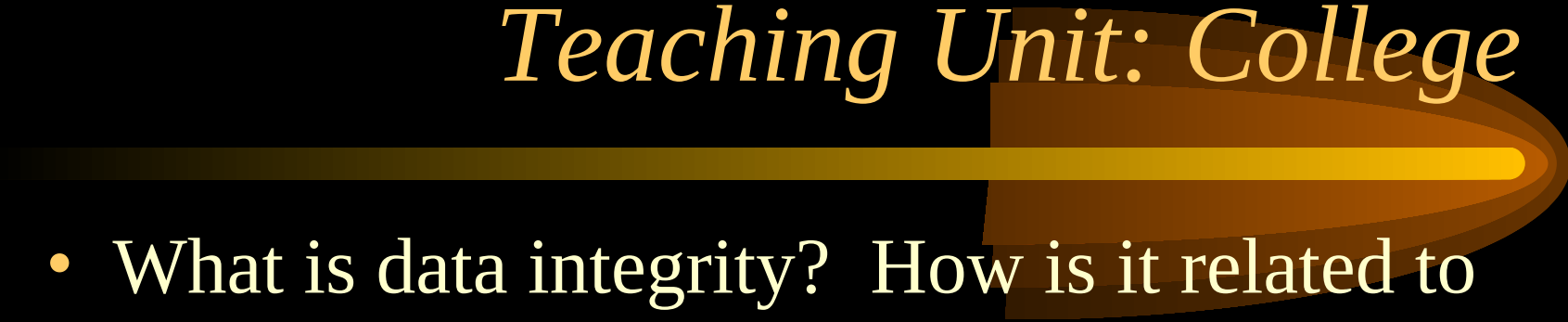
- What data about me exist, and what sort of privacy do I have?
- Why is some information secret and other information public? What “secrets” can a computer tell me?
- Find and discuss examples of erroneous information on the Internet
- What are some differences between effective and ineffective use of information tools? How can the value of information be changed?

Teaching Unit: College



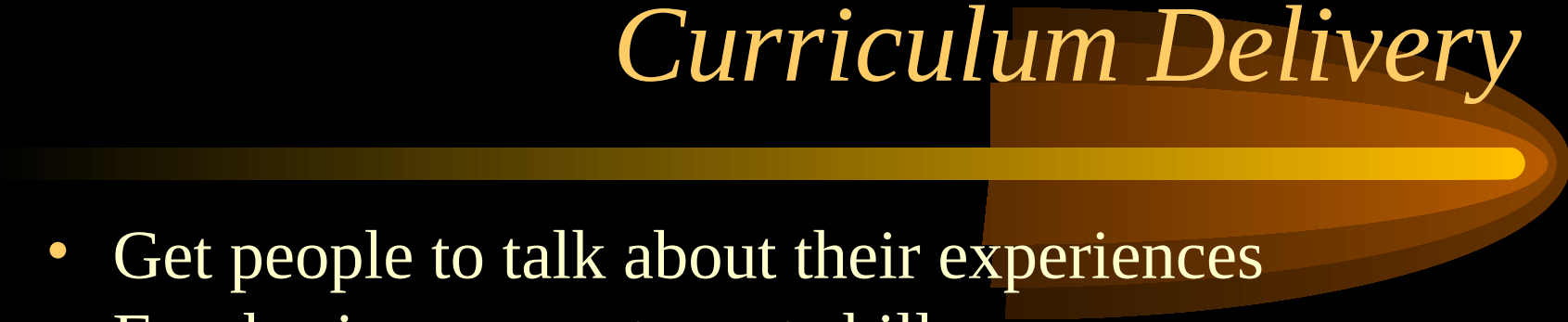
- What is data integrity? How is it related to the value of data?
- Is information a commodity? Why or why not?
- How can you evaluate an information source's credibility? Information timeliness? What other factors impact information value?

Teaching Unit: College



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Curriculum Delivery

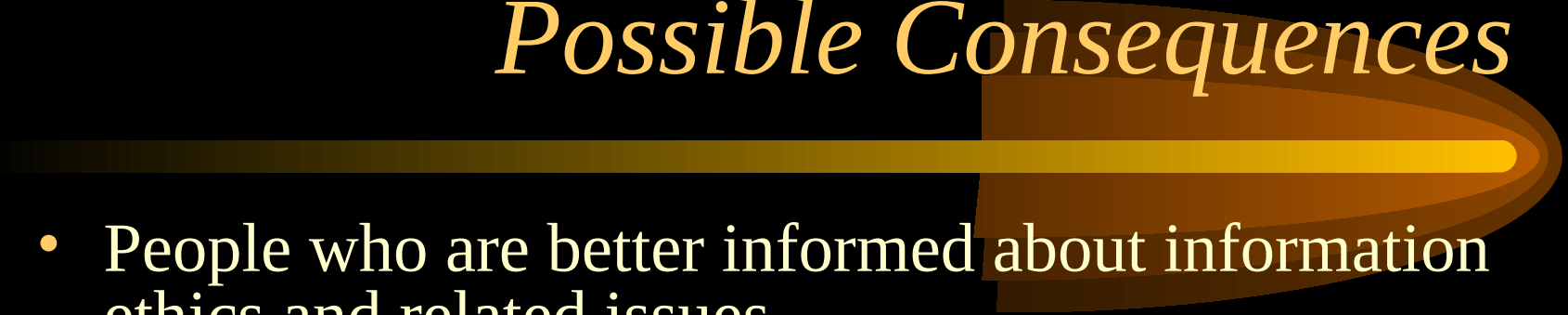


- Get people to talk about their experiences
- Emphasize concepts, not skills
- The issues of information ethics are not strictly computer-related, but computers are the major method for storing and accessing information so play a strong role
- Information ethics could be taught in far greater depth and at different times, these ideas are meant to be a minimal coverage suitable for easy implementation by educators.

Hacking Revisited

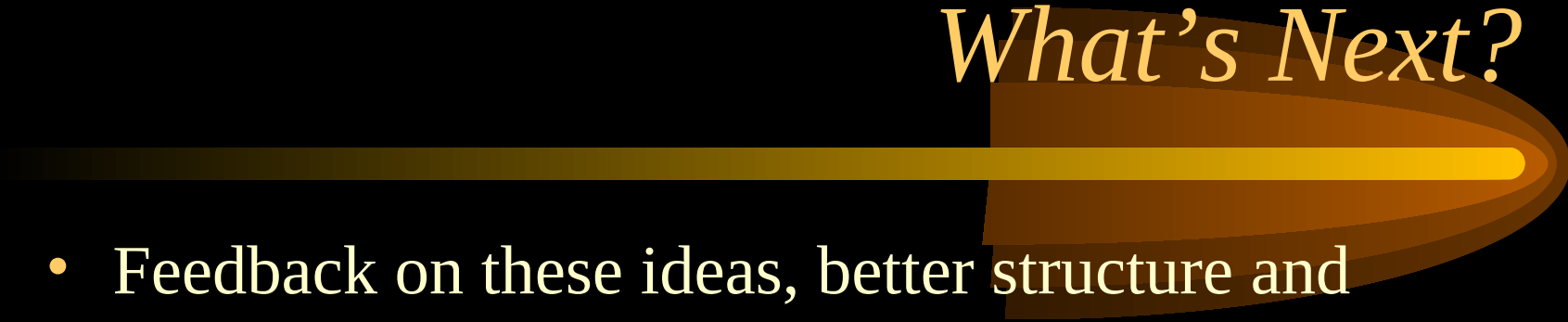
- Hackers understand the value of information better than most people
- Hackers are very interested in data integrity, security and privacy
- Hackers are able to understand systems and their shortcomings
- Therefore, teaching information ethics will make computer users more like hackers!
- We don't know if this will create more hackers, but it will reinforce core hacker values

Possible Consequences



- People who are better informed about information ethics and related issues.
- People who have thought about the concepts behind computer-based tools, not just the applications and processes.
- People stimulated to express and explore curiosity about computer systems and the people and institutions behind them.
- People who question the status quo in systems' approaches to data security and info use

What's Next?



- Feedback on these ideas, better structure and planning for curricula
- Actual creation of course modules or teaching packets, with desired outcomes or measures
- Making the modules available to interested teachers and assessing impact
- Creation and passage of curriculum standards