Should We Teach Virus Writing?

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- **Introduction**
- **What Is Wrong With the Particular Proposal?**
- **What Is Wrong With the General Idea?**
- **How to Do It Properly**

Problems of the Proposal

- *The course will prepare the newest computer professionals with the expertise needed to work in a computing environment which includes more than 80,000 computer viruses and other forms of malware.*
- You don't need to write viruses in order to do that.
- *A critical element of a complete education for the graduating professional computer scientists must include knowledge about viruses, their nature, and their destruction.*
- But not their creation.

- *It is time for critics to take their heads out of the sand and work with us to start developing the next generation of computer professional who will be proactive in stopping computer viruses.*
- "Proactive" does not mean "make them before they come".
- *The current approach of reacting to the viruses is simply not working.*
- But not due to a lack of virus writers.

- *Let's be honest: any reasonably intelligent individual can get this information from the internet without having to spend four years at University.*
- Why teach it, then?
- *It is naïve and dangerous to think that virus writers can be stopped without a better understanding of how they operate.*
- We stop viruses, not virus writers.

- *Some detractors claim that teaching students about viruses is "wrong" or "dangerous" because this kind of software is bad.*
- It is not wrong to teach about viruses. It is wrong to teach virus writing.
- *The simple fact is that viruses and malware exist. It is an undeniable fact of the modern computing environment.*
- That's no excuse for making more of them.

- *We are interested in producing computer professionals who have the expertise necessary to stop computer viruses.*
- Then you shouldn't try to produce virus writers.
- *Further, a critical element of being able to stop these viruses is to have sufficient knowledge about them to be able to write them.*
- Not so.

- *That will come as no surprise to IT professionals who understand that to solve a computer problem it helps to understand what caused the problem.*
- But it doesn't help to cause more of it.
- *It is clear that anyone who claims they understand computer viruses well enough to stop them also understands them well enough to write them. Anyone who claims otherwise is simply wrong.*
- Yeah, right.

- *This course is not about creating new viruses but about understanding how they function with the ultimate goal of stopping them.*
- Then there is clearly no reason to teach virus writing.
- *A necessary step in stopping viruses is that the computer professional could also write one so we are using the "writing" of computer viruses as a teaching method.*
- Nonsense.

- *Is there another way to teach about stopping viruses without providing adequate knowledge so that the students could write a virus? The answer is simple: No.*
- The answer is much more complicated than that.
- *Anyone who claims they can fight a virus but could not write one is either uninformed or trying to mislead for other reasons.*
- Or simply knows what he is talking about.

- *We have to wonder why the anti-virus software companies are so opposed to development of software that could prevent viruses from proliferating.*
- But they aren't.
- *No removable media will be taken out of the laboratory once it is brought in so there is no risk of viruses leaving on a floppy or removable hard disk.*
- What about USB storage devices? What about the students' brains?

- *When the course ends - the computers used will be completely cleaned by having all removable media destroyed and all hard disks completely scrubbed down to the BIOS.*
- "Down to the BIOS"? The hard disks? No, really?
- *We have been in contact with members of the anti-virus community and they have offered to help us in delivering the course and in developing its curriculum. Most of this community accepts the argument that stopping viruses requires sufficient knowledge to also write a virus so they are willing to work with us.*
- Not quite.

Problems of the Idea

- **Encourages Virus Writing and Legitimizes It**
- **Decreases Employment Opportunity**
- **Brings Legal Responsibilities**
- **There Are No Good Viruses**

How to Do It Properly

- **Study Solutions, Instead of How to Create Problems**
- **Use Existing Viruses, Instead of Creating New Ones**
- **Create Viruses for a Virtual Environment**

Questions?