

Free Software Matters: Free Software and the Broadcast Media

Eben Moglen*

December 5, 2002

Just as free software has been a particularly scary subject for the music and film industries in the past several years, threatening their control over their content, it is about to become excessively frightening to their television and radio lordships as well.

Here in the United States we are awaiting rulemaking by the Federal Communications Commission concerning the possibility of copy protection for digital television content. In 1996, Congress legislated a ten-year plan for the conversion of the US broadcasting system to a digital TV standard. Every owner of an existing analog TV station was given, at no cost, an additional place on the spectrum for a second, digital broadcast operation. When, in 2006, every station in the US is supposed to be fully operational in digital broadcast, the operators are supposed to return to the public their original analog television spectrum locations.

But, although many broadcasters have made the expensive investments in the digital broadcast chain, from the cameras through the studio equipment to the transmitters, Americans have shown a predictable unwillingness to replace all their inexpensive TV sets with new digital sets that cost on the average ten times as much. Their reluctance has been understandable in part because Hollywood has not made available all the supposedly smashing dramatic and sexy content that was supposed to make watching digital television such a wonderful experience.

As usual, the reason has been concern from the content moguls that their digital content would leak out into the world in the form of perfect copies for peer-to-peer sharing. A long round of inter-industry negotiations

*Eben Moglen is professor of law at Columbia University Law School. He serves without fee as General Counsel of the Free Software Foundation. You can read more of his writing at <http://moglen.law.columbia.edu>.

last year concluded with a proposal for a “broadcast flag” in digital content, which all hardware that handles digital video is supposed to recognize, and treat as an instruction not to permit copying of the attached content.

Having reached this supposedly “consensus” result (largely by ignoring the objections of consumers, librarians, and other representatives of the users of video content and the general public), the content industries and the broadcasters have lobbied the Federal Communications Commission to make administrative rules requiring manufacturers of consumer TV equipment (which in this context means everything from digital tuners, digital video recorders, and even digital television displays themselves) to treat as uncopyable all data streams with the “broadcast flag” turned on.

Enter, as so often, free software. After all, digital TV is just a bitstream that a general purpose computer equipped with an antenna can take out of the air and decode. One can write for oneself a program that will perform that task, and which will do so without paying any special attention to the “broadcast flag.” Such a program is GNU Radio, a development project of the Free Software Foundation. GNU Radio can already receive and decode US-standard digital television signals. Thus, as the FCC considers the order for special-interest regulation handed to it by the Masters of MegaMedia, GNU Radio is going to cause quite a headache. The FCC is accustomed to telling the manufacturers of TV sets how they should work, but whether it has the authority (or the imprudence) to attempt to control software running on ordinary personal computers is entirely uncertain. If the FCC attempts to implement broadcast copy protection, in other words, it will have to attempt to control the free software movement. If it does not risk an extension of its authority into the domain of ordinary software, the “broadcast flag” favor it is being asked to do for Hollywood will be worthless.

So my colleagues and I are currently urging the FCC to reconsider the “broadcast flag” proposal. If they don’t, the stage is set for a confrontation between the free software movement and the media industries over GNU Radio, and the idea of “software-controlled radio” overall. That confrontation would test the power of the FCC to make rules governing ordinary computer software, and would raise very substantial freedom of speech issues, because the Commission would be trying to limit the distribution of general technical information. The next few months will tell whether the FCC is prepared to take on that challenge. The Free Software Foundation and the developers of GNU Radio certainly stand ready to challenge any regulation that prohibits the distribution of our software. And, as I shall explain in my next column, the confrontation could result in a profound

shock to the very system of broadcasting itself.