## What the Technologists are Saying: DRM is Ineffective, Impossible, Stupid, Futile, Snake Oil, a Non-Starter

## (DRM Quotes from 1996 to 2004) collected by Volker Grassmuck

If the people who know what they are talking about are saying *that* why is all that public, research and industry effort still being put into DRM? Once you reach the realization that DRM isn't going to solve our problems, then you begin to embrace the alternatives.

(You know of similar statements like the following by technologists, cryptographers, or DRM designers? Please let me know at vgrass@rz.hu-berlin.de. Thank you.)

"It's a polite fiction. ... Lawyers and technologists continue to sell this snake oil of control, whether it's from the court and the police [RIAA legal jihad], or whether it's coming from technology [DRM]. ... When I was 14, I told girls I loved them to sleep with them too. It was a fiction. Steve Jobs just leaves a little money on the table. We see Jobs and Gates making promises to the content industry that they have no intention of keeping. It's the promise you make to move forward. The content owner wants to hear it. If we're honest we'd say to the content owners, ,we're not going to succeed from what we can tell. ...' But we don't say it. We'll say what we need to say to get it. ...

Once you reach the realization that it isn't going to solve our problems, then you begin to embrace the alternatives."

("Why wireless will end 'piracy' and doom DRM and TCPA - Interview with Jim Griffin" (former director of Geffen's technology group, now CEO of Cherry Lane Digital), by Andrew Orlowski, The Register, 11/02/2004, http://www.theregister.co.uk/content/6/35498.html)

"We said [to the record companies]: None of this technology that you're talking about's gonna work. We have Ph.D.'s here, that know the stuff cold, and we don't believe it's possible to protect digital content."

(Steve Jobs: The Rolling Stone Interview, December 03, 2003, http://www.rollingstone.com/features/featuregen.asp?pid=2529)

"They [rights holders] also recognized that those approaches would be ineffective unless the law itself provided enhanced protection for those processes and systems."

"The development of the Internet has ... created significant challenges to any distribution model which depends on scarcity. ... The financial and skill barriers to making content available globally have simply fallen away.... The application of technology to this problem, if it is to be effective, must therefore in some way reestablish a point of scarcity on behalf of the rights holder. However, this raises a fundamental paradox, ... – that ... the business of publishers lies in providing access rather than in preventing it. ... Nevertheless, unless copyright is to be abandoned as a mechanism for trading in intellectual property entirely, it will be essential to find an answer to this paradox."

(WIPO Report: Current Developments in the Field of Digital Rights Management, prepared by Jeffrey P. Cunard, Keith Hill, and Chris Barlas, 1. August 2003, http://www.wipo.int/documents/en/meetings/2003/sccr/pdf/sccr 10 2.pdf)

"It's baffling to me that the content industries don't look at the experience of the software industry in the 80's, when copy protection on software was widely tried, and just as widely rejected by consumers."

(Tim O'Reilly interview: Digital Rights Management is a Non-starter, Stage4, 27/07/03, http://stage4.co.uk/full story.php?newsID=272)

"We conclude that given the current and foreseeable state of technology the content protection features of DRM are not effective at combating piracy."

(Stuart Haber, Bill Horne, Joe Pato, Tomas Sander, Robert Endre Tarjan (Trusted Systems Laboratory, HP Laboratories Cambridge), If Piracy is the Problem, Is DRM the Answer? HPL-2003-110, Mai 27 th, 2003,

http://www.hpl.hp.com/techreports/2003/HPL-2003-110.pdf)

"We see no technical impediments to the darknet becoming increasingly efficient. … We believe it probable that there will be a few more rounds of technical innovations. … Finally, consumers themselves are likely to rebel against ,footing the bill' for these ineffective content protection systems. … increased security (e.g. stronger DRM systems) may act as a disincentive to legal commerce. … In short, if you are competing with the darknet, you must compete on the darknet's own terms: that is convenience and low cost rather than additional security."

(Peter Biddle, Paul England, Marcus Peinado und Bryan Willman (cryptology experts, Microsoft Corporation), "The Darknet and the Future of Content Distribution", 2002 ACM Workshop on Digital Rights Management, November 18, 2002, Washington DC, http://crypto.stanford.edu/DRM2002/darknet5.doc)

"My personal opinion (not speaking for IBM) is that DRM is stupid, because it can never be effective, and it takes away existing rights of the consumer."

(David Safford (cryptology expert, IBM Research), "Clarifying Misinformation on TCPA", October, 2002, http://www.research.ibm.com/gsal/tcpa/tcpa\_rebuttal.pdf)

"Wir können nicht weiter vertrauen, dass die Technik von den Konsumenten fair benutzt wird."

(Intel-Vizepräsident Don Whiteside, nach Sven Scheffler, Schluss mit Raubkopien, Sonntags Zeitung, 22. September 2002, S. 143)

"Digital files cannot be made uncopyable, any more than water can be made not wet."

(Bruce Schneier, The Futility of Digital Copy Prevention, in: Crypto-Gram Newsletter, Mai 15, 2001, http://www.schneier.com/crypto-gram-0105.html#3)

"Why should self-interested companies be permitted to shift the balance of fundamental liberties, risking free expression, free markets, scientific progress, consumer rights, societal stability, and the end of physical and informational want? Because somebody might be able to steal a song? That seems a rather flimsy excuse." (John Gilmore, What's Wrong With Copy Protection, 16 February 2001,

http://www.toad.com/gnu/whatswrong.html)

"By treating Napster as the copyright antichrist, the industry is simply insuring that the vector of Internet technological development will move rapidly toward a lawsuit-proof, free-for-all distributed network of file-sharing -- the very outcome the owners of intellectual property wish to avoid. How stupid can you get? ... The good news is that the brain-dead, colossally wasteful, artistically homogenizing old order of the recording industry is committing collective, time-delayed suicide in court."

(Scott Rosenberg, Why the music industry has nothing to celebrate. Napster's shutdown will only cause a thousand alternatives to bloom, Salon Magazine, July 27, 2000, http://www.salon.com/tech/col/rose/2000/07/27/napster\_shutdown/print.html)

"Dieselben technischen Mittel, die die globale Nutzung der Netze ermöglichen, werden auch die globale Kontrolle dieser Netze ermöglichen."

(Reinhold Kreile (director of GEMA), in: GEMA News, 157, 1998, S. 6.)

"Trusted systems presume that the consumer is dishonest."

(Mark J. Stefik (Xerox PARC), Letting loose the light: igniting commerce in electronic publication. In: Stefik, M., ed. Internet Dreams: Archetypes, Myths, and Metaphors, MIT Press, Cambridge, MA, 1996 -- no online anymore.)

"The answer to the machine is in the machine."

(Charles Clark, The copyright environment for the publisher in the digital world (General Counsel, International Publishers Copyright Council & Copyright Representative, Federation of European Publishers), held at Joint ICSU-UNESCO International Conference on Electronic Publishing in Science, UNESCO, Paris, 19-23 February 1996, http://www.icsu.org/5\_abouticsu/CDSI\_web/EPS1/clark.htm & "The answer to the machine is in the machine ", in The Future of Copyright in a Digital Environment, Bernt Hugenholtz (ed.), Kluwer, 1996, p. 139-146)