Remarks made at the National Academies' workshop on the Impact of Copyright Policy on Innovation in the Digital Era, October 15, 2010, Washington, DC.

Good morning. First I would like to thank the committee for the opportunity of being invited here today. It's an honor to be here. The issues being discussed here are ones that I have studied and cared deeply about for years. I'm thrilled to see the potential for research to solve some of the pressing issues around copyright policy in the digital age.

My name is Bill Rosenblatt. I'm president of GiantSteps Media Technology Strategies, a consulting firm based in New York. I consult on rights technologies, among other things. I'm the author of a book on DRM, which is ancient history by now, I suppose. I've worked with clients from across the spectrum of these issues for many years.

As a consultant, I try not to take sides in this debate. My only personal bias is that I was raised by professional musicians, so I am in favor of content creators being able to make a living. I'm a computer scientist by training, but also an author and editor, and someone who has worked in the content as well as technology industries.

The prospectus for this Workshop notes that debates over digital copyright have been philosophical and emotional rather than economic or fact-based. I was happy to see this acknowledged, because it's absolutely what I see too.

I would like to draw attention to two particular issues that I have focused on, and that I believe are particularly in need of objective research.

1. The economic imbalance that I perceive between demands for rights technologies and the costs of implementing them.
2. Something I call the trap door between laws and technologies.

For each of these, I'd like to describe the problems that I believe can be addressed by appropriate research.

Regarding the first one, the economic imbalance: copyright owners demand that downstream entities in the content value chain, such as distributors, retailers, and consumer electronics makers, implement digital rights technologies in order to get licenses to use content. But in general, the downstream entities pay for those technologies; the content owners don't. This has led to two common outcomes, both of which are not optimal: first, downstream entities implement the cheapest and simplest rights technologies that they can get away with, or second, in many cases, they implement technologies that benefit them at least as much as they benefit content owners.

One example of the first outcome is the CSS protection for DVDs, which was, in my view, designed primarily to be cheap to implement rather than to actually

protect content well. It was hacked in a matter of weeks after its release, the hack was applicable to all protected DVDs worldwide, and it was easy to use. An example of the second outcome is Apple's FairPlay DRM technology for iTunes, which was designed to promote platform lock-in as well as content protection. I don't mean to pick on these particular technologies; they are just examples, and there are others.

No one really knows how to fix this problem, because no one actually understands the value of these technologies – to content owners, to retailers, device makers, or to consumers. Various studies have been done on related subjects, such as losses to content industries from copyright infringement, the effect of DRM on content pricing to consumers, the effect of file-sharing on music piracy, contributions that Fair Use has made to the Gross Domestic Product, and so on.

How helpful are these studies? Well, the Government Accountability Office released a report this past April that not only cast doubt on their validity but expressed skepticism that the economic impact of IP infringement can be measured at all with any kind of accuracy. I had seen some of the studies mentioned in the GAO report and also felt that their methodologies and objectivities left much to be desired.

I'm not the only one who sees this imbalance. A couple of years ago, Professor Jonathan Zittrain of Harvard Law School said at a conference that the key issue in Viacom's copyright litigation against YouTube was the cost and responsibility of implementing copyright filtering technology. Litigations such as that one and similar ones like *Universal Music Group v. Veoh* are really attempts to obtain or rebuff technological mandates, so that the government decides (or doesn't decide) who has to pay for what technology. There may well be legal and philosophical principles that guide such decisions, but there are economic ones as well, and these go largely unexplored.

Despite the GAO report's pessimism, I believe that if the questions are posed carefully and the research is done well and objectively, we can get some answers to questions like these:

- How much better is a content protection system that costs more to implement, in terms of both content security and the consumer experience?
- What are the differences in cost-effectiveness and user experience between proactive and reactive solutions to infringement? (DRM is an example of a proactive technology. Forensic watermarking is an example of a reactive one.)
- What is the appropriate economic consideration or incentive in requiring network operators to be accountable for their users' copyright infringements through means such as filtering technologies and "progressive response" laws?
- And many others that I could think of.

The second issue that I'd like to mention today is what I call the trap door between laws and technologies.

It's the digital age; everything about digital content is automated and instantaneous: copying, distribution, storage, searching, browsing, playback, etc. Everything, that is, except decisions about copyright infringement. You can do whatever you want with content, but in a large and growing number of cases, you have to call lawyers in to decide questions of legality. Or as Larry Lessig once said, "Fair Use is the right to hire a lawyer."

I prefer to say that Fair Use is a trap door into the legal system. Whenever you get to a copyright gray area, you fall through the trap door, and you have to stop doing what you're doing.

The problem is not just that people have to hire lawyers and embark on potentially long legal proceedings. It's also that consumers and especially entrepreneurs tend to shy away from activity that may or may not be legal, because of the fear of going through a legal process to get the question decided.

My view is that the trap door is itself a chill on expression and innovation. It's as if you're driving; speed limits aren't posted, and you have to guess how fast you can drive based on the width of the road, type of road surface, presence of pedestrians, and so on – and if you aren't sure, you could pay a traffic lawyer to go spend a year figuring it out for you — all so that you can drive to the mall one afternoon or, as Google apparently just did, invent a new type of self-driving car.

Wouldn't it be easier if we had a copyright legal system that enabled at least some degree of automation of decisions on fair use and other issues? Apparently not, according to most lawyers. When I raised this possibility on a panel at my last conference, the attorneys on the panel – who represented a broad range of copyright interests – reacted with a mixture of bemusement and annoyance.

But my view is that this step is unavoidable given the realities of the digital age. And in fact, like it or not, our legal system does introduce rule-based judgments about appropriate use. For example, the Copyright Office's triennial rulemaking on DMCA 1201 produces a list of legally permitted uses. But of course these are severely constrained and don't have much practical impact.

The problem, once again, is that arguments are being made on philosophical or emotional rather than fact-based grounds. People say that Fair Use shouldn't be made more automatable because business models and technologies change too rapidly, and it's the flexibility that gives the law its staying power. That may be true, but to me it's a cop-out.

The issue has just not been explored properly. It may well be that our principle-based Fair Use system is better, in some sense, than, say, the European system or some other type of copyright regime. But we don't really know one way or

another. And by the way, what I've said applies not only to Fair Use but to Section 109 and other parts of the copyright law.

A nonprofit organization called the Digital Media Project tried to solve this problem several years ago. The DMP was created by Leonardo Chiariglione, the founder of the MPEG standards body. They tried to do something that could have been great, if only they had finished the job.

The DMP created an open standard DRM technology. One of its design goals was that this technology should support what they called Traditional Rights and Usages (TRUs), which vary from one country to another according to copyright laws. From what I can tell from reading their documents, the DMP made some progress on mapping TRUs to digitally expressible and automatable constructs, but it essentially abandoned the effort three years ago. They did create a long list of TRUs but only came up with a few examples of the mapping.

Someone ought to try to continue the work that the DMP started — though with a different goal: not to try to shoehorn existing copyright constructs into a DRM system, but just to see how far it could reasonably go. Right now — the Copyright Office's DMCA rulemaking notwithstanding — rules about appropriate use arise primarily from a very ad hoc combination of settled case law precedents (such as parody or criticism being fair use) and industry convention (such as for music sampling). Research could be done to explore both the boundaries of how current copyright law can be made more amenable to technological implementation and the pros and cons of changing copyright law so as to make the trap door smaller.

Those are the two sets of issues in digital copyright that I believe would benefit from the research that the committee contemplating. Thanks for your attention, and thanks again to the committee for inviting me today.