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Communications of the
Association for **I**nformation **S**ystems

THE ART AND SCIENCE OF NON-DISCLOSURE AGREEMENTS

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ABSTRACT

This article presents an initial set of guidelines to assist IS researchers in creating, negotiating, and reviewing non-disclosure agreements, in consultation with appropriate legal counsel. It also reviews the use of non-disclosure agreements in academic research environments from multiple points of view. Active academic researchers, industry practitioners, and corporate legal counsel all provided input into the compiled guidelines. An annotated bibliography and links are provided for further review.

KEYWORDS: non-disclosure agreement, confidentiality, intellectual property

DISCLAIMER

This article is not represented to be, nor should it be construed as, legal advice. You will need to consult with appropriate legal counsel to obtain a proper assessment of any legal document with which you are presented.

I. BACKGROUND

The material in this article grew out of a need to discuss a simple non-disclosure agreement (NDA) with an organization that was a potential research subject. The following steps led to recognition of the need for the study:

1. It was important to be able to talk intelligently with the organization about the parameters in the NDA that were important to a researcher, even before engaging an attorney for further negotiations and a final review.
2. My experience with NDA's was all in the commercial world. Given this lack of experience with NDA's in academia, a search was made for some source that might provide

- guidance as to the kinds of things an academic researcher needed to consider when evaluating an NDA.
3. Very little published information was available, leading to a project to solicit input from a community of researchers, aggregate that information, and then publish it back to the community.

A Non-Disclosure Agreement is an “agreement restricting the use of information by prohibiting a contracting party from divulging data.” [Beyer, 2001] The intent is to restrict the use and disclosure of confidential information by the other party, which requires definition of what information is confidential, and how the other party will and will not be allowed to use the information. Non-disclosure agreements are an aspect of contract law, and explicit, specific language is important [Grossman, 2004].

The research was conducted as an e-mail-based survey, using open-ended questions. A request for suggested guidelines went to the ISWorld distribution list, an e-mail distribution delivered to a global community of Information Science (IS) researchers, students, and faculty members. The request was not country-specific, nor specific to any particular segment of IS.

Eleven contributors, including 10 in academia, self-selected and responded to the initial request. Of those 10, at least two had some industry experience as well. One contributor is a corporate legal counsel who provided significant reviews and provided guidance both from the corporate perspective and what academics should consider.

Of the 11 contributors, 9 were based in the United States, one in the United Kingdom, and one in Canada. Of the 10 in academia, 8 were faculty members, and 2 were students.

The research is exploratory in nature, and is not intended as an exhaustive guide to the topic.

II. LITERATURE REVIEW

The literature review provides a framework for other researchers to consider as they review their own needs for confidentiality agreements. While little in the way of concrete guidelines exists in the literature, much is published on the topics of industry-university research collaboration, intellectual property, and the impact of confidentiality agreements on various parts of the research community.

At least since the mid-1980's, universities struggled with how to balance the needs of openness and proprietary control [GUIRR, 1997]. This dilemma came about because of the 1980 change in US federal law that made copyright the primary protection for computer software [Peterson, 1985], with its somewhat less rigorous protection for ideas rather than embodiment [Oppedahl & Larson LLP, 1995]. The issues that arise generally center on the classic tension between the academy's desire for open, free sharing of information, and the commercial world's desire to maintain trade secrecy of certain information for commercial purposes.

The reality, however, is rarely so clear cut. Academics also need to keep certain information secret (e.g., confidentiality of the identity of research subjects, delays to allow patent filing). Commercial researchers are sometimes motivated to publish and make a name for themselves or for their employer, both in academic and in trade journals [Newberg and Dunn, 2002]. An institution that wishes to commercialize the results of its research may impose publication restrictions both to allow time for patent filings and to allow establishing spin-off business units to bring an idea or invention to market.

Newberg & Dunn [2002] documented several organizational models for Industry-University Research Collaboration, each of which may impact the need for and use of non-disclosure agreements. These include:

1. University to Industry Technology Licensing, where the university clearly owns and is selling or licensing a technology to industry for commercialization
2. Industry-Sponsored University Research, where it is important to establish intellectual property ownership, given that industry is sponsoring and paying for the research
3. Spin-off Companies, often with lead researchers and students taking academic research into the commercial domain, that require appropriate confidentiality and intellectual property ownership agreements; and
4. Idea Labs, such as MIT's Media Lab [Newberg and Dunn, 2002, p. 205], where ongoing cutting-edge research is conducted in an established organizational setting.

Each of these organizational models carries with it potentially different implications about the ownership of intellectual property, and the level of protection that must be accorded to its information. As such, the organizational context of the research must be considered as an aspect of the design of any non-disclosure agreement.

In the case of a formal research consortium inside the university, it may be appropriate to require separate NDA's between the consortium and its researchers, employees, and visitors [Newberg and Dunn, 2002]. This approach simplifies relationships with organizations (their NDA could be with the consortium), and may serve to enable free exchange of information among the researchers within the consortium.

The process of establishing ownership of intellectual property is one that can be dealt with in an ad hoc fashion, or can be a very structured part of the campus research environment. Carnegie Mellon University (CMU) is often cited for its highly structured approach. CMU [2001] uses a detailed model identifying the various ways in which intellectual property can be created, and who contributes to that process. From this model, the policy then dictates the ownership of the property. It further prescribes how any economic benefits from that property are to be shared between the researchers, the university, and the sponsors.

Confidentiality agreements may impair the researcher's ability to publish – either by constraining what can be published, by delaying the publication, or by preventing it entirely. NDA's may also impact the researcher's legal right to do the ethically correct thing (e.g., publish results of a study showing impact of chemicals on public health) [GUIRR, 1997].

It is also important for the researcher to understand that even data that is provided under an NDA may lose its confidential status in a number of ways. For example, information that is generally known in the industry of the provider of the information, or information that is generally available to the public, may not need to be treated as confidential by the researcher [Volonino, 2005]. These conditions may vary based on the applicable laws. Therefore, it is important to seek appropriate legal counsel.

At least one study out of the dot-com era also identified potential negative impacts to students. Based on confidentiality agreements signed with one professor, students were in some cases unable to complete assignments given by another professor due to the overlap in the assignment vis-a-vis the confidential information [Marcus, 1999]. There remains some dispute about the cause of this issue; it has been represented that the assignment was given as a deliberate form of industrial espionage against another professor, but the potential remains for this problem to occur.

Figure 1 shows a sample of the various entities and constraints that may need to be considered as a non-disclosure agreement is negotiated (modeled after [Newberg and Dunn, 2002, p.225]).

Legal and Regulatory factors impact both the researcher and the organization, and may drive some aspects of the non-disclosure agreement, particularly related to the level of protection required. Institutional requirements impact the researcher as well (e.g., intellectual property creation and ownership policies).

Figure 1. Factors to Consider in Negotiating a Non-Disclosure Agreement

Vendors may provide technology and services for a project, and the researcher needs to consider, before launching the project, how and whether any confidential data may be shared with them. Lastly, other people may be exposed to confidential data through participation in the project in a variety of roles, and it may be appropriate to establish constraints around what may or may not be shared with them. Students involved in the research project should also sign an NDA. Stim and Fishman [2001] provide a sample NDA to be used with students to protect confidential information held by a professor.

III. GUIDELINES

The following guidelines represent the collective wisdom of the respondents to the original query to ISWorld, along with an informal review by a corporate attorney [Anonymous, 2005, Clay, 2005, Edgington, 2005, Kaiser, 2005, Kitchens, 2005, McLaren, 2005, Newman, 2005, Overby, 2005, Straub, 2005, Westerman, 2005].

STARTING POINTS

1. Note that the NDA is not the same as a contract for employment. The NDA defines what each party can and can't disclose to others. An employment contract may or may not

cover the same ground, but will also cover such issues as compensation, deliverable expectations, and ownership of intellectual property.

2. Treat the relationship with the organization as a relationship, not as a transaction [Grossman, 2004, pp. 35-38]. Take the time to build relationships with your sponsor and with other key participants, so that the NDA is more of a natural part of the process, rather than being the very first step in a relationship.

"In other words, don't view the NDA as a contract for a single transaction by which you get some data, publish something, and then move on. Develop a relationship in which you provide interesting analysis and insight to the organization, help them understand some questions, etc. If you develop a group of organizations that enjoy working with you and will share data over time, what a great asset to have as a researcher!" [Overby, 2005]

3. Expect to work from the organization's standard NDA. In general, that will make the process simpler than asking them to sign yours. However, if the organization is small and doesn't have a standard NDA, having one of your own as a template is to your advantage.
4. It is also helpful to create standard wording elements that you would like to see in the NDA so that you can suggest specific clauses for their legal counsel to respond to.
5. Be clear about why you need changes: e.g.,

"I want to make these changes because our situation is different from the typical situation covered by this NDA. Of course, I need to protect your confidentiality. But, as an academic, I also need to be free to use my research outputs in teaching and publishing. So, let's see if these changes can protect your interests while also giving me the freedom I need for my career." [Westerman, 2005]

6. Consider making the agreement only between yourself and the organization, and exclude your university. This separation also simplifies the process. That said, it is important to understand your university's policies and ensure that they are not liable by implication for your work, and that its policies don't require any specific clauses or process.
7. Consider whether the relationship might become one of mutual disclosure, and whether your or your university's confidential information needs to be protected as well, possibly for commercialization. Particularly in this latter case, the Bayh-Dole Act of 1980, which affects ownership of intellectual property developed under federal funding, should be factored into the language of the NDA [Foley, 2004].
8. Avoid vague language in the agreement, and gain an understanding of such common legal terms as "prorated" and "reasonable".

TIME LIMITS

9. If possible, obtain permission to publish freely after three years (this is the standard timeframe, though it can be negotiated). Some organizations will have difficulty with such a clause. Even though technology does move quickly, legacy systems often don't, and you could still be in possession of information of value to the organization which could be detrimental if freely disseminated.
10. The organization may view a time limit as unacceptable, but it is still worth asking.

APPROVAL REQUIREMENTS

11. If you can, avoid a requirement for explicit approval by the organization. It will certainly simplify the publication process. Many respondents were more vociferous than that. Approval requirements were, in their minds, something to be avoided at all costs. Alternatively, you might seek agreement that the organization has a right to review how they are identified (or disguised), and will have the opportunity to comment (for correctness, within a reasonable timeframe) on any other part of the work. That would be a reasonable compromise.
12. A planned review of the findings by the organization can both strengthen your validity as well as improve the possibility of approval by your local Institutional Review Board.
13. Consider an annotation in the NDA that you retain the right to publish your research, with the exception of the organization's right to retain anonymity and prevent publication of proprietary information, and that both parties will work in good faith to make that possible.
14. Consider offering to co-author with an organization employee if you will be publishing in a trade journal as one of your outlets. This option could help build their stature in the market, and motivate them to participate.
15. Be careful that any approvals language does not require a new approval each time you speak or write about the research you conducted with this data.

COURTS AND JURISDICTIONS

16. Note that laws vary from state to state and from country to country. You will need to be sure that your agreement is appropriate for the laws that govern it.
17. Some respondents indicated that courts will often find in favor of the party that did not write the agreement. However, the corporate counsel who participated in this study indicated that this assumption is generally a myth, and that courts in general will not infer a position if the agreement is silent on a particular point. It's also worth noting that the party with the burden of proof is more likely to lose the case.
18. The agreement should specify both what laws apply (generally, in the U.S., which state's laws), and in which court system (generally, in the U.S., which county's courts).

ORIGINAL DOCUMENTS

19. It is commonplace to be asked to return originals. It's also reasonable for the organization to request return, especially if the relationship sours for any reason. Don't offer this option in the NDA if it is not requested.
20. Be careful to define clearly what needs to be returned, as your working material needs to be retained to document your work.
21. Don't allow either an implication or an explicit statement that everything coming from the organization is proprietary. Consider asking for proprietary documents and works to be explicitly labeled as such.
22. If your research data includes personal information, try to get that data "anonymized" before you take possession. Anonymization helps protect the organization and you from liability.
23. Ensure that you understand and adhere to any regulatory requirements that apply to the industry under research (e.g., health care and banking privacy regulation).

DISGUIISING THE ORGANIZATION

24. To help smooth the process of obtaining publication approval, consider disguising the name of the organization(s). Even if the financials and other demographics might make

it identifiable, you might be able to reduce those numbers by some factor. If there are multiple organizations involved, reducing all numbers by the same factor for all subject organizations might achieve the same result.

25. It is likely the organization would view this request as reasonable. However you need to ensure that the disguising you provide is real and permanent.

DERIVATIVE WORKS

26. Make sure you own your work product and all derivative works¹, unless you're being paid for the work, in which case ownership should be defined by the contract for the work.
27. You need to establish your right to create research papers, and derivative works based on those papers, from the information obtained from the organization.
28. The organization will likely take the position that they own your work product and derivative works from those, so you'll need to establish that ownership explicitly.

IV. DISCUSSION

This article provides guidelines based on practical, real-world experience from researchers in Information Science. In addition to the views provided by the corporate counsel and other researchers, the guidelines were tested in a negotiation for a non-disclosure agreement with a small non-profit organization in Boston, MA.

The organization initially asked for a clause requiring formal approval of all publications. Based on Guidelines 11 and 12, the organization agreed to the right to constrain publication until after they had taken their site live (with a hard final date), and to allow the organization to comment on, but not formally approve, the article.

The organization also asked for return of all original documents, all copies, and all working material. Again, based on Guideline 19, once it was clear why they wanted this provision, and why it was important as an academic to retain the working material, it was simple to work out a mechanism whereby their identity was hidden on all working material, thus limiting the risk of exposure.

The organization also became much more cooperative when the mutual benefits of the research became clear (Guideline 2). In return for access to their data, the organization received consultation on the usability of their product and test results from usability testing.

Other parts of the organization's standard NDA met the guidelines that were appropriate for this research project.

The 28 guidelines are posted on a Wiki², originally created on June 17, 2005. The Wiki can be edited and added to by readers. Through July 2, 2005, the Wiki was downloaded 185 times by 140 unique visitors of whom 136 were first-time visitors, and 4 returning visitors (excluding the author). Sixty-one percent of the visitors are from the US, 7% each from Germany and Canada, and 4% from Australia, with smaller numbers from countries in Europe, Asia, the Middle East, and

¹ A derivative work, for copyright purposes, is a new work that is created substantially from an original work [Radcliffe & Brinson, 1999]. Examples might be a translation of a book into another language, or in research terms, reusing a large portion of an existing paper to create a new paper with theoretical extensions.

² The URL of the Wiki is <http://academicnda.schtuff.com>

Africa. No contributions were made to the Wiki from the community from posting through July 4, 2005.

V. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Contributors to this set of guidelines were not country-specific in their suggestions. This research could be extended to look more closely at laws and regulations outside the United States, and to the effects of cross-border research teams [Shippey, 2002]. The Wiki containing the living version of this paper is shown in Appendix I, and other researchers may contribute to the knowledge base residing there. Formal review by representative legal counsel from the university and corporate settings would be valuable to strengthen the validity and reliability of the data.

A data base of best practice clauses, accessible based on the characteristics that the researcher is seeking, might be built to provide a robust collection of material from which to craft future agreements. A survey of the users of these guidelines might also be conducted to evaluate their value to the community, and to further enhance and build on the collected expertise.

AUTHOR'S NOTE

The author is an employee of Digital Insight Corporation. The material presented in this article is the responsibility of the author and does not represent the opinions of Digital Insight Corporation.

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- Editor's Note:* The following reference list contains hyperlinks to World Wide Web pages. Readers who have the ability to access the Web directly from their word processor or are reading the paper on the Web, can gain direct access to these linked references. Readers are warned, however, that
1. these links existed as of the date of publication but are not guaranteed to be working thereafter.
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APPENDIX I. ADDITIONAL SOURCES

SAMPLE NON-DISCLOSURES FROM INSTITUTIONS

- From the University of Wisconsin - Milwaukee's Center for Industrial Mathematics. Commentary on non-disclosures and a sample NDA: <http://www.uwm.edu/Dept/CIM/indmath8.html>
- From the University of Connecticut's Office of Sponsored Research. Provides three forms of NDA, including one-way disclosure in each direction, and mutual exchange: <http://www.osp.uconn.edu/non-disclosure.html>

SAMPLE NON-DISCLOSURES FROM THE VIEW OF RESEARCHER AS DISCLOSER

- NDA from Columbia University's Science and Technology Ventures. Assumes that the University is disclosing *its* confidential information to a third party: <http://www.stv.columbia.edu/guide/agreements/nondisclosure>
- NDA from Southern Methodist University, Focusing on the researcher's work as an "Inventor": <http://www.smu.edu/research/Limited%20Use%20and%20Non-Disclosure%20Agreement.doc>.

SAMPLE NDA FOR CLINICAL TRIALS

- University of Minnesota's Research Services Organization guidelines. Focuses to some extent on clinical trials, but basic guidelines are provided that could be applicable to other fields:

<http://www.ahc.umn.edu/research/rso/information/sponsors/instructions/home.html>

WIKI FOR DISCUSSION

The basic guidelines presented in this paper are captured on a Wiki, located at <http://academicnda.schtuff.com> where they can be edited and extended by anyone in the community.

ABOUT THE AUTHOR

Paul Witman is a Ph.D. student in the School of Information Systems and Technology at Claremont Graduate University. Witman holds a Master's degree in Computer Information Systems from Claremont Graduate University and a Bachelor's in Math/Computer Science from UCLA. Witman currently serves as the Director of Integration Engineering for Digital Insight Corporation. His research interests include information security, usability, technology adoption and continuance, and electronic banking and finance.

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