



**National Science Foundation  
Online Dispute Resolution  
Research Grant**

**University of Massachusetts Amherst  
&  
The National Mediation Board**

Progress Report for Year One

December, 2005

## **BACKGROUND**

In November, 2004, the National Science Foundation awarded a three-year research grant to the University of Massachusetts at Amherst. The grant was designed to facilitate research into the development of ODR tools, and the impact of ODR on dispute resolution processes. The National Mediation Board joined Umass as a partner in the research, offering its grievance mediation program as a testing ground for the computer science and dispute resolution research questions. The Board offered the grievance mediation program as a testing ground because the mediation environment in that program is the one most transferable from the NMB's work to mediation in a larger context.

Primary researchers for Umass are Leon Osterweil (Computer Science), Norman Sondheimer (Computer Science), and Ethan Katsh (Legal Studies). The Board assigned Daniel Rainey (Director, Office of ADR Services) as the liaison to Umass for the project, and authorized up to twenty five percent of his time to be spent on the Umass ODR project. The NMB also funded some work by Umass concentrated in the development of online software that would be available to the NMB for use in its ADR and Mediation programs generally.

## GOALS FOR YEAR ONE

The Umass goals for year one, or the "first iteration," as it is labeled in the grant proposal, are generally defined in the proposal itself.

The first iteration will be essentially a prototype development activity, one of whose key goals will be helping to integrate our research team. The technical focus will be on adding network-based communication support to document interchange aspects of the IBB process. It will also suggest needed improvements to the process technology. The evaluation phase of this iteration will both lead into the next development iteration and indicate needed process technology research.<sup>1</sup>

These first year goals have been met, and the time line suggested in the proposal has been followed.<sup>2</sup> By the end of November, 2005, a working prototype of ODR software was in place and being tested by Umass and the NMB. Work to integrate the research team was carried out throughout 2005, and the level of documentation regarding the NMB grievance mediation process is supportive of further development in the next iteration.

The NMB supported the NSF/Umass first year goals, but the agency's goals for the first year of the grant project were slightly different. The NMB first year goals were:

- *To complete a survey of literature and review of the state of ODR -*  
During FY 2005, Umass and the NMB completed a literature survey, and conducted a survey to establish the current attitudes and uses of

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<sup>1</sup> Process Technology for Achieving Government Online Dispute Resolution, March 1, 2004, p. 13.

<sup>2</sup> The timeline for the project is found on p. 13 of the proposal.

ADR and ODR within the airline and railroad labor-management communities.

- *Working with Umass, to develop a process model of grievance mediation based on the Little JIL programming language* – During FY 2005, Umass and the NMB held numerous working sessions to define and document the NMB grievance mediation/interest based bargaining process. From the NMB, ADRS Director Daniel Rainey, Senior Mediator ADR Linda Puchala, Mediator Fred Leif, and Mediator Denise Hedges, all directly participated in the development of the process model. Using participant narratives and notes from observation of mock mediation sessions, the Umass team was able to produce a detailed process model of the grievance mediation process, and they were able to use that process model as a design base for the first prototype ODR application.
- *To integrate NMB mediators into the development process* – During FY 2005, the mediator corps was updated on the progress being made by the ODR team, and in October, 2005, the core ODR group underwent training in the use of the ODR application, and supplied feedback to Umass regarding the utility of the application.
- *To test new software and make a determination regarding the basic package to be used as the field testing begins in January, 2006* – During FY 2005, Umass produced a series of “first iteration” applications, all of which were tested using Umass students and NMB staff. The penultimate testing of the application, conducted on the Umass campus in October, 2005, was deemed a success, leading to the decision to use the first iteration prototype in field testing by the NMB in FY 2006.

- *To engage in outreach and public awareness efforts regarding the grant and the NMB's development of ODR* – During FY 2005, the NMB presented information about its ODR program to the following groups:

-  Long Island Rail Road (January)
-  Railroad Section Three Meeting (February)
-  ABA Labor and Employment Law Conference (February)
-  NIH (February)
-  LRAPR (March)
-  ABA Section on Dispute Resolution (April)
-  AA/Overland (April)
-  BLE/ATDA/UTU (April)
-  Short Line Railroad Conference (April)
-  International ODR Conference (Leeds) (May)
-  ICAR (May)
-  DC ACR (May)
-  NAA (May)
-  ALRA (July)
-  ACR (September)
-  DC ACR (October)
-  NARR (October)
-  ABA Administrative Law Conference (November)

## **SUMMARY**

The first year of the NSF grant can be called, by any usual measure, a success. The researchers at Umass have offered the observation that, in their considerable experience, this is one of the few grant projects they have seen that has accomplished what is presented in the proposal, on the time line presented in the proposal.

The NMB has in hand an application that it can use for field testing and conducting grievance mediation, and there is a clear plan to improve the application and make it more widely available to NMB parties.

The upcoming year's goals build on the first year's success. NSF/Umass' second year goals are:

The second iteration will focus on providing process support for the face to face caucuses. This iteration will incorporate the use of the Stakeholder Process Design method during the design phase of the iteration. There will also be considerable experimentation with existing process definition technology in defining various alternative caucus processes. Process analysis will be applied both during design and build phases of this iteration to evaluate how well this technology can verify trust-determining process properties. It is likely that this second iteration will itself be iterative. This iteration will also end with the initiation of new process technology activities that start during evaluation and overlap with the early phases of the third iteration.

The NMB's second year goals are simpler:

- to integrate ODR software into the normal course of grievance mediation;
- to test the applicability of ODR software in other mediation environments; and
- to begin to push our findings out to other Federal agencies and to the dispute resolution community at large.