Request for proposals

The semantics from image data advocacy group (SIDAG) requests cutting edge proposals for the research and development of methods to solve important real problems by inferring semantics from image or video data. Hence SIDAG has created the program CADIS (Credit for Advances in Discovering Image Semantics). The funding available for fall 2010 is up to 1.2 UA course credits per award.

1. When to apply

To apply for this funding, you need to apply to the CADIS program by midnight October 8. However, to make sure that the proposal is well received, you need to provide drafts for institutional review as described next.

2. Submitting for institutional review

To submit your proposal for institutional review, you need to send a draft of the document described below to your two institutional reviewers (to be announced soon), CC'ing the program manager whose email is kobus@cs.arizona.edu. The target date for institutional review is midnight September 24. If you need extra time, you may negotiate a different deadline with your reviewers. However, reviewers should be wary of being too generous because the program manager absolutely needs the reviews by midnight October 1.

3. How to apply

To submit the proposal email it to the program manager by midnight October 8. Make sure you address the reviewers comments, and any additional comments provided by the program manager. This information will be available by 10AM October 3.

3.1. Format.

There is no length limit for this proposal. This means that introductory material can be more extensive than for many other venues and serve as a good starting point for the final report on the project.

The document should be in PDF. If the document was developed as a word document, that should be submitted also, as it may be more convenient for some reviewers to use the "comments" facility for suggestions about how to improve the narrative. Many CADIS reviewers like to write on proposals to suggest corrections. Hence they should be at least 11pt font, and double spaced, with at least one inch margins (1.25 inches preferred).

The document should have the following components with the described specifications.

3.2. Title.

The title of the project should capture the essence of what you are doing in an appealing way.

3.3. Authors.

After the title, list the authors.

3.4. Collaborators

If you have any collaborators who are not CADIS applicants, such as your research advisor or other scientific collaborators, list them here.

3.6. Project summary (patterned after NSF requirements)

This is an abstract that is focused on selling your proposal to upper management, who are scientifically broad minded, but do not know much about your area. This is patterned after the format for NSF proposals which must ensure that the **intellectual merits** and the **broader impacts** of the proposed work are crystal clear. A suggested format follows.

A) One or more paragraphs telling the reviewers: i) what the problem is; ii) why it is important; and iii) the big points about your approach.

B) A labeled paragraph or subheading **"intellectual merits"**. This essentially makes the case for the work becoming an important and publishable contribution to science (but you should not say it is publishable---just address the intellectual merits).

C) A labeled paragraph or subheading **"broader impacts"** and one ore more paragraphs on this topic. This should relate to the potential for improving life on this planet as we know it.

Labeled paragraphs. Labeled paragraph are paragraphs like this one. It has a "mini-heading", that does not cost as much space (this program is unique in that it does not have a length limit—usually you are fighting the space limit), and does not create the same break in flow as a real heading would.

3.7. Project description

SID acknowledges that 1.2 UA credits is not sufficient funding to complete most worthwhile projects. Hence SID would like to fund innovative beginnings to worthwhile projects. The first few sections of the project description can (and often should) outline the longer term view of the project. The specific goals for the funding period should be made clear in the plan of work.

A suggested high level outline for the project description follows. It is not required that the project description follows it exactly. However, CADIS applicants are cautioned to be careful about deviating too far from it.

Remember the following key things. 1) It is a story—make sure you have the story clear in your own mind; 2) order matters; 3) you are writing to others, not to yourself. You want to be very objective when you rework your draft (preferably some time later). What would it be like to read what you wrote if you knew very little about it?

3.7.1. Introduction

The introduction should explain the problem that is being addressed and why it is important. You also need to tell the reader relatively soon the "gist" of what you are going to do. Here you are pretending that the reader has not read the summary so there will be some overlap. However, the best strategy is to take the opportunity to word it differently.

Make sure there is no doubt about what the problem you are trying to solve is. One way to make this clear is by and example where it is very clear what the input data might be (use figures!) and what the desired result is.

The introduction should also review the relevant literature on previous work that informs your thinking about your approach, and acknowledges previous researchers' efforts. In particular, it should be clear where you are building on previous work, rather than reinventing it. It should be at the back or your

mind that the reviewer of your proposal might be the author of previous work in the area, and will be negatively biased if you do not cite it. However, one will typically identify what is missing in previous efforts (i.e., why the problem is not yet "solved").

3.7.2. Approach

By now, the reviewer knows what the problem is. Thanks to the clear example and introductory material, they are in a position to think for themselves about how one might go about it. Now you want to provide some of the details, at a mid level of specificity, what you are going to try and the reasons for your choices. Of course, you do not necessarily know what you are going to do in detail. Sometimes it makes sense to use phrases such as "One way to do this is …". This tells the reviewer that you have thought about some options and could start right away, but you are not declaring that you know the best one (the reviewer might disagree with that).

3.7.3. Evaluation methodology

Describe how you will evaluate your approach. Often it is important that you compare your approach to an existing, standard approach. Alternatively, your plan might include developing several different variations. Regardless, it should be clear how you would declare that a given approach is working better than another, even if you do not plan to implement more than one approach. It is assumed that the long term goal for the project will include comparison among alternatives.

3.7.4. Plan of work

You must include a plan of work that describes specific activities and goals for this funding period. SIDAG realizes that plans change in response to the scientific process. **However, you must have an initial plan.**

The plan of work should demonstrate that the proposed work is both ambitious and feasible. It should be clear which piece of the overall plan will be undertaken during the project period. Further, any simplifications should be described. Examples of simplifications include working with synthetic data and using restricted or simplified models.

SIDAG is most interested in projects that demonstrate feasibility, rather than simply expend effort towards a long term eventual goal. Hence it is better to plan for a relatively finished product for a simplified version of the project, as this will be more informative for future efforts.

3.8. References cited

CADIS proposals need to include literary context. Most proposals will have at least six references, with ten or more being common. There is no upper limit on the number of references.

4. Review criteria

CADIS proposals will be reviewed by the criteria listed next. Reviewers will be asked to comment on each of them.

1. **Responsiveness**. Is the proposal about discovering semantics of the world from images?
2. **Impact**: Does the proposed work towards solving an important problem?
3. **Intellectual merit**: Is the proposed work scientifically worthwhile?
4. **Clarity**: Is the proposal clear? Note that lack of clarity can damage any part of a proposal because reviewers cannot appreciate what they cannot understand.

5. **Exposition**: Are there spelling or grammar errors? Does the narrative flow. Are figure captions informative? Are figures visually appealing?
6. **Technical correctness**: Are the technical details correct?
7. **Evaluation methodology**: Do the researchers have a way to evaluate the efficacy of their approach and compare it to other methods.
8. **Plan**: Is the plan ambitious but feasible?
9. **Other**: Reviewers are free to comment on any aspect of the proposal they like.

Remember----the reviewers are always right! If they are wrong, you did not explain it to them, or otherwise convince them that it does not matter, or led them in a bad direction that made them start thinking irrelevant thoughts.