Call for "Practice Articles" for IEEE Computer Graphics & Applications

The purpose of this call is to increase the number of articles devoted to the & Applications part of the title of this magazine. The title was originally chosen very carefully to emphasize the importance of applications of computer graphics, as well as computer graphics technology, to our readers. Unfortunately, we do not receive as many good applications articles as we would like.

This call solicits three kinds of "practice articles" for CG&A: Application system articles, which recount comparisons conducted to make decisions about systems or automation; case study articles, which recount experiences related to a decision along with the rationale, alternatives, etc.; and application briefs, which are shorter than traditional articles.

Application system comparisons

These articles are accounts of comparisons used to evaluate two or more alternative systems. These articles may or may not identify the vendors. Of greatest importance, however, are the framework used in the comparison and the process used to apply the framework. These are often of higher value to others than the actual conclusions from the comparison. Yet the framework and process often need a specific example to be clear. The key is to make the comparison from the standpoint of the problem to be solved (represented partially by the decision criteria), rather than from the technology perspective. The comparisons can be of two major types: among competing equipment, or between an automated and manual solution.

A, B, C comparisons. These comparisons are made among competing equipment or software packages, usually for purposes of purchase by the author's company or institution. The difficulty in these comparisons is the selection of a "proper" benchmark. For scientific applications where performance is critical, several standardized benchmarks exist. In such interactive applications as Computer Aided Drafting, however, the whole process is much more subjective, and the choice of a relevant benchmark is pivotal. As a result, the decision criteria and the rationale for their choice must be adequately described so the reader can determine their relevance.

Manual versus automated system. These comparisons represent the basis for decisions for automation, i.e., the evaluation of the expected savings (productivity improvements) from the purchase of product X and its introduction into process Y. Benchmarks are simply not available in these cases, yet our readers are keenly interested in comparison of the projected savings over current costs, due to automation.

Case study experiences

These articles describe useful experiences that occur again and again because nobody takes the time to document them. The question to ask yourself as an author is, "Will my article change the way the reader does his or her job?" The valuable articles are those that have impact on our readers in their work. To be generally useful, the article must contain several key pieces of information:

- What we did. This is the easiest part. It is a description of what was done. But more is needed. The readers want to know if they should follow your path, what the difficulties may be, and whether it is worth it.
- Description of the problem that started it all. This is a description of the problem that was eventually solved and what motivated the search for a solution. Problem descriptions have the property that they are consistent with several different solutions. What were the key concepts/assumptions/principles that framed the problem?
- Alternatives that were considered and rejected, and rationale. These are descriptions of the several alternatives that were also considered. Their reasons for rejection, compared to the reasons for the adopted solution, are VERY valuable to the readers of your article. They describe WHY the solution was such a good idea.
- Evaluation of what we did. This is a look back on the selected solution and describes the "goodness" of the decision. Often, important additional information comes to light after the implementation is in place. The original criteria may have been incomplete. This evaluation is typically qualitative and provides additional insight into the benchmark selection.
- Conclusion and future plans. If we had it to do over again, we would have done... And next we plan to do...

Application briefs

A third case of high interest to CG&A readers is a very short version of either of the above application descriptions, i.e., an "application brief." Typically, these are just a couple of pages and show the application of computer graphics to some interesting or unusual application. While many of our current briefs are written by the staff, we are very interested in authors providing such articles. These briefs are not formally reviewed.

Summary

CG&A readers really want to know about your application-oriented work. These articles have high reader interest and complement the more typical, technology-oriented articles.

Potential authors should know that the review criteria for applications articles are just as thorough as for other papers, but different. For additional information or to submit an article, contact:

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