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| **Paper # 17 (Download paper of type application/pdf, 1633416 bytes)** | |
|---|---|
| Title: | Randomized Algorithms for Optimizing Large Join Queries |
| Abstract: | |

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| Attribute | Value |
|---|---|
| Are you finished with this review? | Finalize, I am done editing |
| Provide a short summary of the paper | This paper presents a new randomized optimization algorithm for join ordering. The authors present an introduction providing an overview of the problem as well as an introduction to their work.<br><br>The authors next present a description of the iterative improvement (II) and simulated annealing (SA) optimization algorithms. A brief overview of the two-phase optimization algorithm (2PO) that is being proposed in this paper is also presented. 2PO combines early II followed by SA with a low temperature on the output from II.<br><br>An extensive performance evaluation is provided and discussed by the authors. 2PO performs faster than SA and II as well as providing an answer at least as good as SA.<br><br>The authors conclude with a discussion of some related work and some summary remarks. |
| What is the strength of the paper? (1-3 sentences) | This paper presents an approach to combine two randomized optimization algorithms to form a much more efficient algorithm that produces a more accurate result. This paper is very easy to read and provides good detail. |
| What is the weakness of the paper? (1-3 sentences) | This paper is missing some detail or reference to the cost formulas used to evaluate neighbour state costs. |
| Your qualifications to review this paper | I know the material, but am not an expert |
| Writing Quality | Excellent |
| Relevance to query processing? | The paper is relevant to query processing |
| **Experimental Methodology** | **Good** |
| Novelty of paper | Incremental improvement |

| | |
|---|---|
| **Overall paper merit** | **The paper is a novel or new contribution with average/weak methodology, or an incremental contribution that has good methodology. Someone in the area should read it** |
| In your opinion, will this paper be important over time? | Good |
| Provide additional detailed comments to the author | Your paper is very well written and provides a new way to combine two well known algorithms for better performance. In general, the performance anaylsis was quite comprehensive.<br><br>More time should have been spent explaining some of the underlying concepts of your algorithm (i.e. why you decided to run II before SA, how you arrived at the tuning parameters, etc.). Also, some unanswered questions remain:<br><br>-Is there another paper where the reader can be referred to for the cost formulas missing from section 2.2.3?<br>-If you are performing heuristic reduction before II, should you not call your method 3-phase optimization?<br>-Your algorithm can take upwards of 100 minutes to complete! Is this really acceptable? |
| **Additional comments to PC (not seen by author)** | **Overall, this paper appears to boil down to tuning the parameters of two already established methods. Although this is not earth shattering in contribution, I do believe that it warrants sharing with the community as it does significantly reduce the processing time taken by the other algorithms.** |