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Paper # 21 (Download paper of type application/pdf, 572276 bytes)	
Title:	STHoles: A Multidimensional Workload-Aware Histogram
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 STHoles: a method of generating multidimensional histograms based on feedback from user queries. The authors begin by discussing some background information on multidimensional histograms, as well as some related work on their generation. The authors then begin to present the STHoles method of multidimensional histograms. STHoles relax the assumption of uniform distribution of data within buckets by allowing each bucket to contain a set of sub-buckets that each hold density information about the range within the sub-bucket. Thus, a histogram of varying degrees of accuracy can be generated for multiple dimensions. The authors discuss how candidate buckets are chosen for expansion, as well as how buckets can be merged to reduce the amount of memory they consume. The authors present the experimental setup and results for their method. STHoles has a much lower absolute error than many techniques in this comprehensive analysis. The authors conclude with some summary remarks and future work.
What is the strength of the paper? (1-3 sentences)	This algorithm presents a manner of generating histograms that can be done without looking at the data sets themselves. The algorithm has a fixed amount of memory and optimizes the histogram to fit within that memory.
What is the weakness of the paper? (1-3 sentences)	Early queries will not benefit from the histogram as the histogram will only contain the one large, or several moderately sized buckets without much detail. The paper is difficult to follow due to highly technical writing.
Your qualifications to review this paper	I know the material, but am not an expert
Writing Quality	Good

Relevance to query processing?	The paper is relevant to query processing
Experimental Methodology	**Excellent**
Novelty of paper	This is a new contribution to an established area
Overall paper merit	**This is spot on relevant query processing, and a novel or new contribution to boot. Everyone should read this paper.**
In your opinion, will this paper be important over time?	Excellent
Provide additional detailed comments to the author	You have presented a fantastic concept for generation of multidimensional histograms. Your experiments were well designed and compared your technique to many others. I only have two general comments for improvement: -Are there any ways you can improve the histogram to benefit early queries? Can some basic (possibly incorrect) assumptions be made to attempt to provide some accurate information before you have a chance to build your histograms from user queries? -Your writing is highly technical at parts, making it difficult for the reader to follow. In future, care should be taken to ensure that readers of all technical levels can follow your work. Overall, your paper was very well done and will surely be a benefit to the area!
Additional comments to PC (not seen by author)	**No additional comments.**

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