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Paper # 23 (Download paper of type application/pdf, 644056 bytes)		
Title:	Selectivity Estimation using Probabilistic Models	
Abstract:		

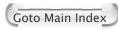
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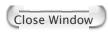
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Attribute	Value
Are you finished with this review?	Finalize, I am done editing
Provide a short summary of the paper	This paper presents the use of probabilistic relational models (PRM's) and bayesian networks (BN's) to estimate selectivity for select and join operations. The authors begin with a description of the problem as well as some related work. After providing some background information and statistical theory, the authors present an overview of the BN: a model that shows dependence between data items and the statistical relationship between each node in the model. A discussion of how BN's can be applied to determine statistical dependence between relation columns is presented using examples. The following sections discuss construction of a PRM, as well as how one may be used in order to calculate selectivity and perform joins. An extensive discussion of parameter estimation and structure selection are presented. The authors present a thorough analysis of their work, which appears to reduce relative estimation error below 10% for the average case with sufficiently large storage space for structures. The paper concludes with some final thoughts and summary notes.
What is the strength of the paper? (1-3 sentences)	This paper presents a novel method for reducing the error in selectivity estimates. The performance analysis is fairly well done.
What is the weakness of the paper? (1-3 sentences)	This paper is extremely dry and hard to follow due to its highly technical content. Missing from the performance evaluation was a discussion of the overhead of performing this analysis.
Your qualifications to review this paper	I know the material, but am not an expert
Writing Quality	Average

Relevance to query processing?	The paper is relevant to query processing
Experimental Methodology	Good
Novelty of paper	This is a new contribution to an established area
Overall paper merit	A novel or new contribution to this area with good methodology, or an incremental contribution paper that has excellent methodology. A must read for anyone in the area.
In your opinion, will this paper be important over time?	Good
Provide additional detailed comments to the author	You have presented a very novel method for reducing the relative error in selectivity estimates. However, there are two major points I would like to make: 1) Missing from your performance evaluation is a discussion of the overhead incurred by your algorithm. This is very important in determining how well it will behave in an online setting. 2) Your presentation is extremely technical in nature, making it very tough to follow for novice readers. I would suggest taking care in future publications to present your material at a more neutral level. Overall, your writing style is very good. Some minor typos and grammatical errors are present, but not enough to make the paper unreadable.
Additional comments to PC (not seen by author)	I believe the authors have presented a novel concept that warrants publishing. Despite the missing overhead information and difficult reading level of this paper, I believe it should be published.





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