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<b>Paper # 23 (<a href="#">Download paper of type application/pdf, 644056 bytes</a>)</b>	
Title:	Selectivity Estimation using Probabilistic Models
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	<p>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.</p> <p>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.</p> <p>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.</p> <p>The paper concludes with some final thoughts and summary notes.</p>
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
<b>Experimental Methodology</b>	<b>Good</b>
Novelty of paper	This is a new contribution to an established area
<b>Overall paper merit</b>	<b>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.</b>
In your opinion, will this paper be important over time?	Good
Provide additional detailed comments to the author	<p>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:</p> <p>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.</p> <p>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.</p> <p>Overall, your writing style is very good. Some minor typos and grammatical errors are present, but not enough to make the paper unreadable.</p>
<b>Additional comments to PC (not seen by author)</b>	<b>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.</b>

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