to my question about this problem on stackoverflow. They made the point that using an index for a hint can't really buy you anything when doing grouping operations. If the index doesn't cover the entire string then the partial index might be able to tell if they are different, but it can't tell for sure if they are the same. It'll have to go to the table itself for confirmation, and if it is having to go to the table a bunch for confirmation then it might as well just to a table scan. The table scan will be more likely to have the nicer properties of a sequential read while using a partial index for hints and then going to the table for confirmation could create a bunch of random reads. There is probably some tipping point here that would make using the partial index's hints favorable, but one would probably be better served shrinking the size of the column and indexing the full thing if you want to use the index with grouping operations. Update (10/30/2011): Turns out this post shows up when some searches for mysql partial index in Google. Figured I might want to make it a little more helpful for those who end up here. – The most basic way to create a new partial index on a column – CREATE INDEX <index name>