Column Stores VS Row Stores: How different are they really?

As the title indicates, the purpose of this paper is to dispel the assumption that row stores perform similarly to column stores and have similar levels of performance. It answers if row store schema is done by vertical partitioning or accessing every column independently through their indices.

The paper compares and contrasts the performances of a C-store database with models of row-store systems on a data warehousing benchmark. The benchmark considered here is a Star Schema Benchmark which is abbreviated as SSBM. SSBM uses textbook star-schema. It is linenint on the forms of allowed tuning .

The comparisons are made to emulate a column store in a store that usually underperforms. It has also been shown that when it comes to selecting and extracting data from a single denormalized table, the execution of invisible joins can sometimes be as efficient or even better than executing physical joins.

The paper concludes by giving extensive analysis of the numerous experiments that were performed to detail out the column stores performance and row store performance. It concludes that even though it is possible to perform column store in a row store, it is not well suited for today’s row store systems compared to column store systems.