Read indexing
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Read indexing

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The question of read indexing remains broadly unexplored. However, the increase in sequence
throughput urges for new algorithmic solutions to query large read collections efficiently. We pro-
pose a solution, named Gk arrays, to index large collections of reads, an algorithm to build the
structure, and procedures to query it. Once constructed, the index structure is kept in main memory
and is repeatedly accessed to answer various types of queries. We compare our data structure to
other possible solutions to investigate its scalability and computational efficiency. Gk arrays are im-
plemented in a general purpose library, which may prove useful for assembly purposes, for evaluat-
ing the expression level in RNA-seq, and others high throughput sequencing applications.

References
1. Querying large read collections in main memory: a versatile data structure. N. Philippe, M. Salson, T. Lecroq,

Relevant Web sites