DNA Compression Algorithms

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Standard compression algorithms are not able to compress DNA sequences. Recently, new algorithms have been introduced specifically for this purpose, often using the detection of the long approximate (direct or reverse) repeats.

After presenting the best existing algorithms, we present a new algorithm, DNAPACK, based on dynamic programming approach. In comparison with the former existing programs, it compress DNA slightly better, while the cost of the dynamic programming is almost negligible using different speed-up techniques.