

# NANO BIO COMPUTING – SYNTHESIS OF A NANO BIO COMPUTER USING DNA AND NANOROBOTS

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## ABSTRACT

- 1) The paper is on interfacing *nanotechnology* with *bio technology* to result a nano bio computer.
- 2) This technology will be capable of replacing the present generation laptops.
- 3) **DNA** is used as a memory storage device instead of hard disks.

Data's are encoded and decoded in DNA strand by converting the text message to DNA language (a, c, g, and t).

- 4) The invention of *nano processor* which is eco friendly too has helped our way to design this nano computer.
- 5) The processing unit consists of nano processors and nanorobots are made to carry the signals from one unit to another.

## MEMORY UNIT:

- DNA is used as a memory storage device.
- It can understand only the sequence of **A, C, G, T** and act accordingly.
- Thus, the data that has to be encoded are converted to a string of ACGT and embedded on the DNA strand and we can decode it whenever we want to retrieve the data.

## Conditions:

- DNA should be stable, no mutation should occur.
- Replication process should be halted.
- The shape and size of the DNA should be maintained.

Data can be secured without any losses only when these conditions are achieved.

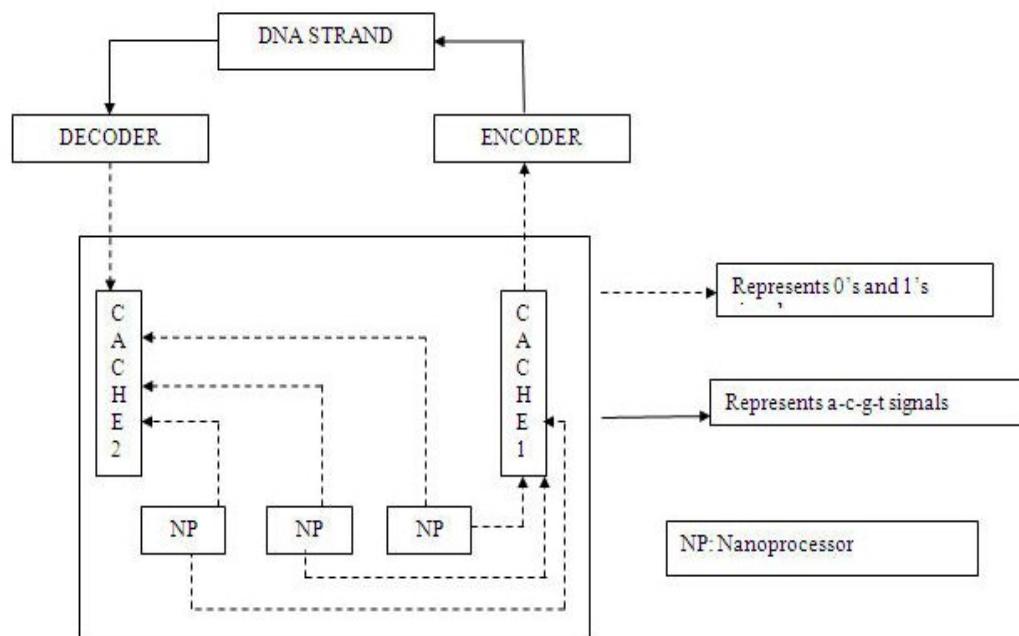
**PROCESSING UNIT:** The arrival of nano processor to the market has made our job easier. The nano processors are programmed as per the requirement and it can be interfaced with other units through nanorobots.

*Nanorobots* can carry signal from one unit to another.

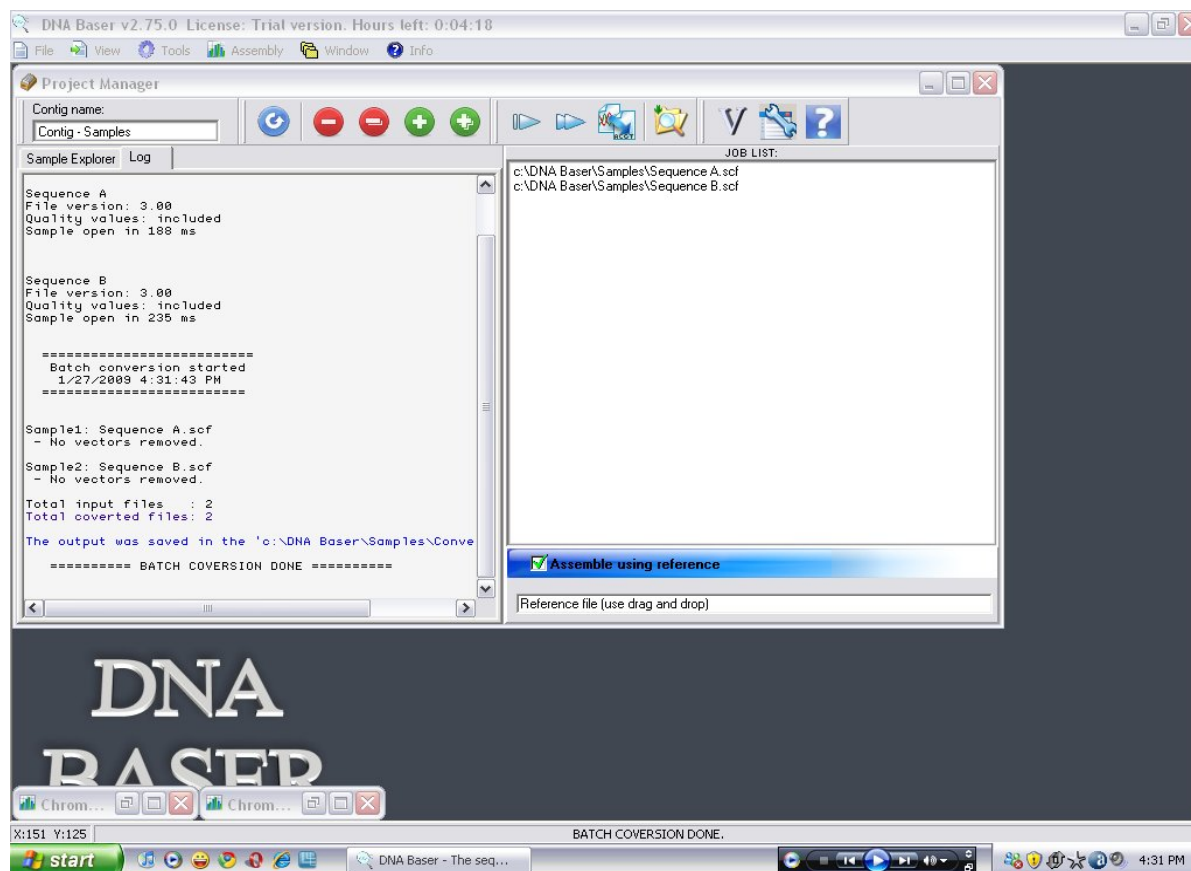
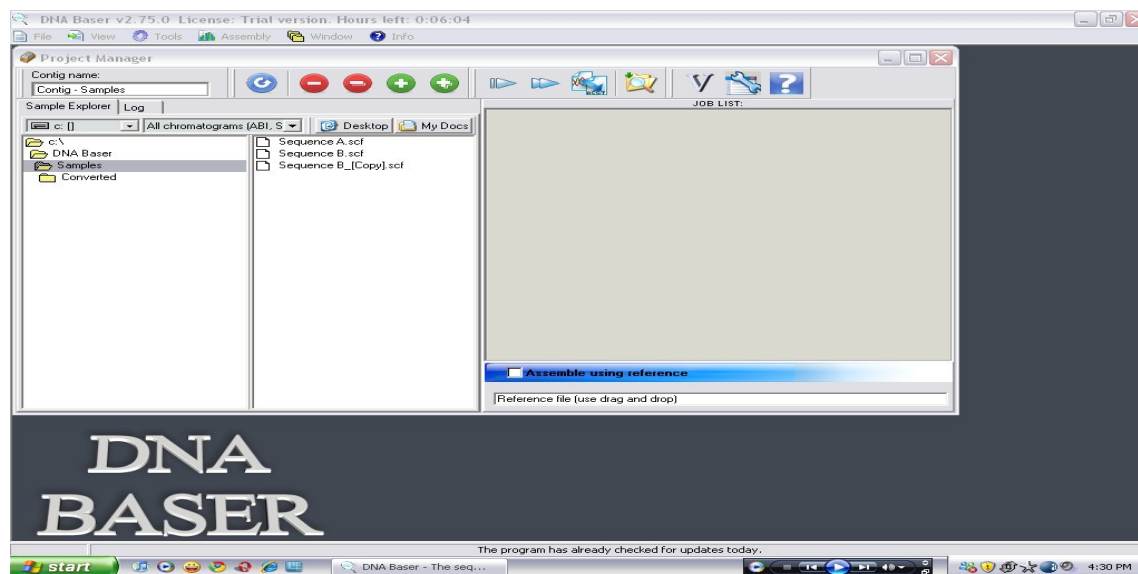
The output display is done using end projectors so that the user can project the output in wall. This makes the computers size will be as small as a pen.

**Keywords:** nano-biotechnology, DNA, nanoprocessor, nanorobots

#### ARCHITECTURE:



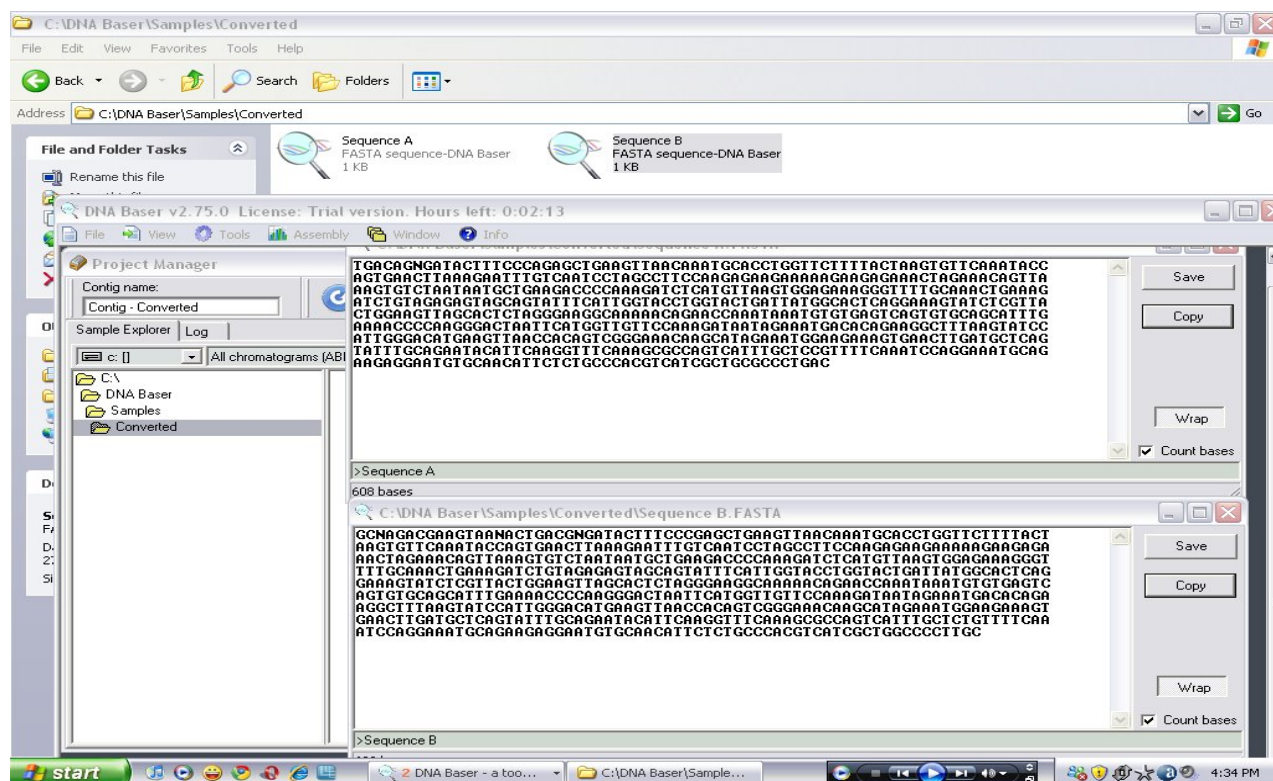
## RESULTS AND DISCUSSIONS:



- 2) Processing time and simulation process shown in the log.**



### 3) ACGT chromatography simulation



- 4) Text being converted to ACGT codes.**