

Data Compression Based Accelerated Evolution

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The process of evolution is based on random mutation and natural selection. This concept can be applied to many things, even to computer software.

In the realm of software all software executable files take up a certain amount of information space. If you were to randomly generate binary code and then check it to see if it acts the way you wanted it to; it would take an astronomical amount of time. If the result you are searching for is compressible, then the fastest way to find it is by creating random data sets followed by decompression. This significantly decreases the search space, making evolution much more efficient and practical.

Figure 1A is an uncompressed bitmap image of a face. Figure 1B is a compressed PNG image of the same face, utilizing lossless compression. The non-compressed image is 301 kB in size. The compressed image is 221 kB in size. If you were to generate random uncompressed bitmap image files until your result is the image in Figure 1A or Figure 1B, it would take a very long time because the search space is 301 kB in size. However, if you were to randomly generate compressed PNG files, it would take much less time due to a smaller search space. This only works when the result you seek is highly compressible.

Because plants and animals are highly compressible in terms of structure, this opens the possibility that life was created as a self-extracting, dictionary based, structure. A self-decompressing structure would also come before a structure made of raw uncompressed data, due to a smaller search space.

Some evidence that human and animal development is based on dictionary compression, is that in some tumors often teeth, bone and hair are found as well as other organs. This condition is known as teratoma. This suggests that structures in the body are defined only once and then used many times throughout the body. This is the way that dictionary compression algorithms work on a computer.



NO COMPRESSION (301 kB)

Figure 1A: Uncompressed bitmap.



PNG COMPRESSION (221 kB)

Figure 1B: Compressed using loss-less PNG encoding.

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