Fractal Image Compression

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A Ground Breaking Method ...

The Snake algorithm, a completely new approach for recreating fractal images of faults in the bedrock. The recreation can be done with an incredibly low amount of inputs making the compression extraordinary efficient.

... for Compression ...

The table below shows the compression rates for images of different sizes.

The columns shows the image size in pixels, the storage space for the image before and after compression and the gain in %.

size (pixels)	storage(byte)	comp	gain(%)
4x4	64	24	62.5
8x8	256	40	84.4
16x16	1024	60	94.1
32x32	4096	84	98.0
64x64	16384	112	99.3
128x128	65536	144	99.8
256x256	262144	180	99.9
512x512	1048576	220	>99.9
1024x1024	4194304	264	>99.9

The original images

Snake Algorithm

Recreated images
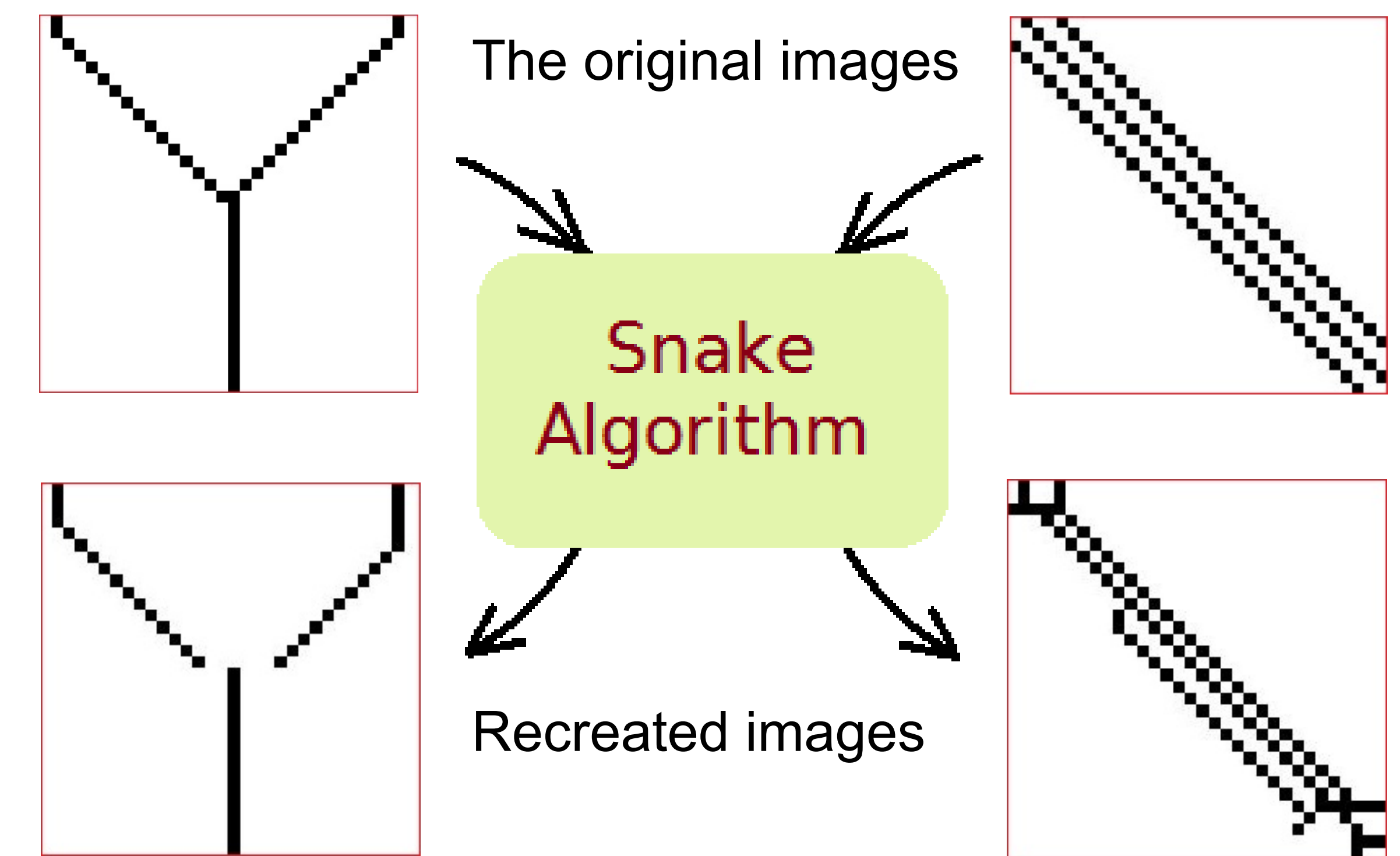
... of Fractal Images

We see the fractals as snakes crawling into the image. The algorithm handles multiple snakes, taking care of their growth, collisions and more. The result is then compared with the original image to determine quality.

Conclusions

The Snake algorithm is still in its cradle, but with more development and better understanding of the bedrock, this method has all possibilities to be the best compression algorithm on the market.

The compression is astonishing, as shown in the table. For larger images one could definitely introduce more data to the algorithm, dramatically increase its accuracy, and still get a fantastic compression rate.

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