

Prediction options

p0 – no prediction

Program computes iterations for each pixel. The output is absolutely accurate, but it is slow.

Animation time: 1min 7secs



Figure 1: p0 - no prediction

p1 – simple prediction

Default option

Program loads 3 pixels in row, computes first and third. If the number of iterations is the same, it predicts that the second pixel will be the same as first and third one. Output is very accurate.

In some cases, this can be slower than **p0**.

Animation time: **49secs**



Figure 2: p1 - simple prediction

p2 – fast prediction

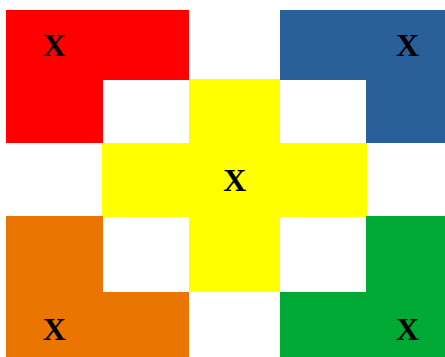
Always computes only 20% of pixels. Loads 25 pixels (5x5), computes 5 of them and predicts the rest.

Output is not so accurate.

Animation time: **21**secs



Figure 3: p2 - fast prediction



p3 – very-fast prediction

Always computes only 8% of pixels. Loads 100 pixels (10x10), computes 8 of them and predicts the rest.

Animation time: **11secs**

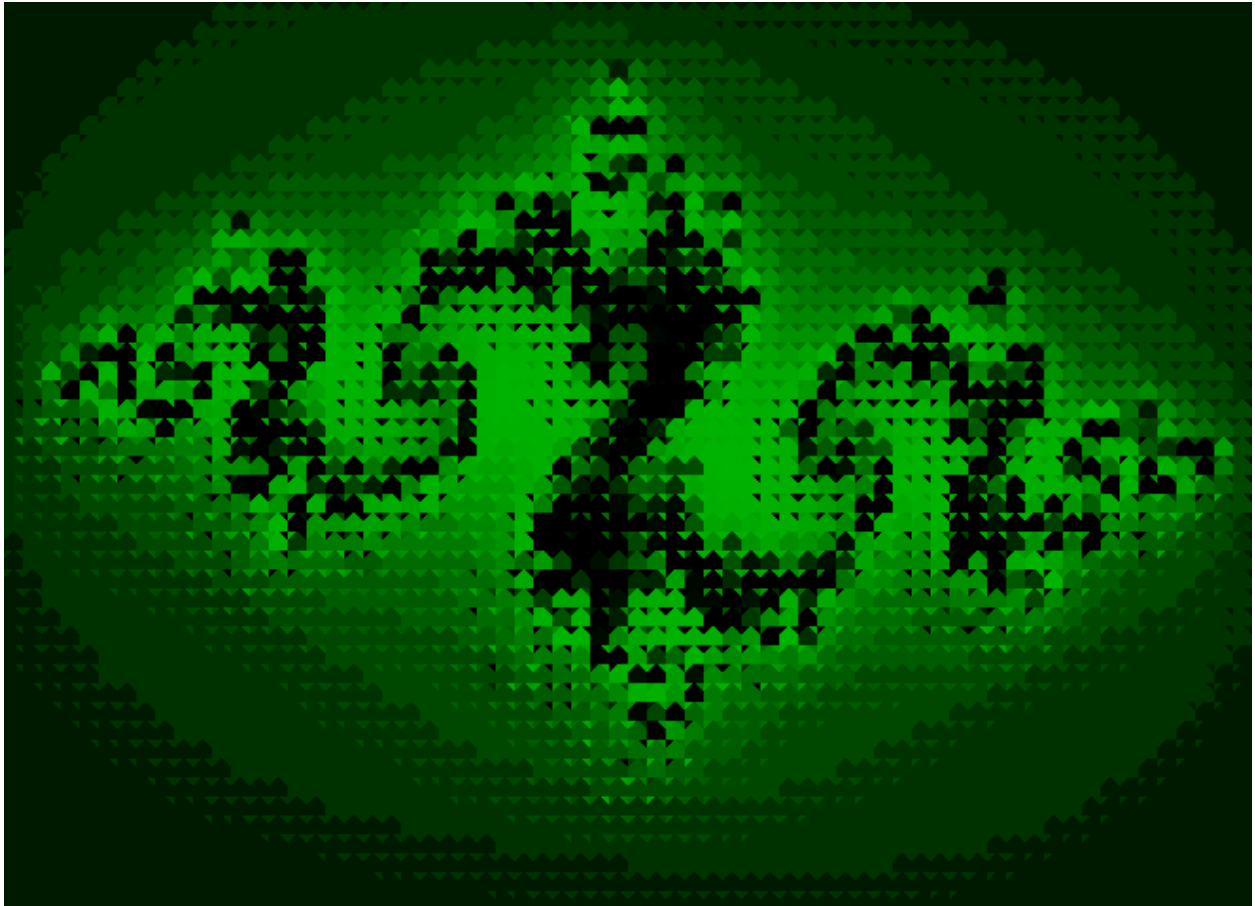
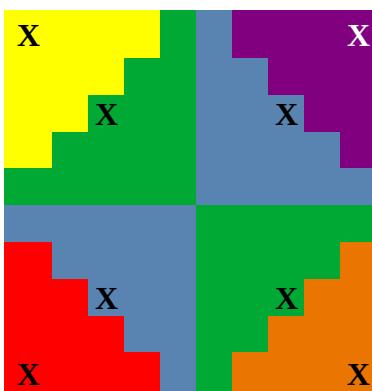


Figure 4: p3 - very-fast prediction



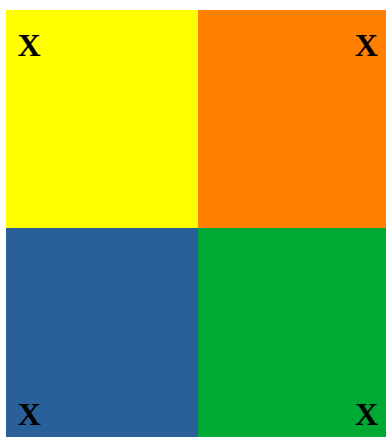
p4 – super-fast prediction

Always computes only 4% of pixels. Loads 100 pixels (10x10), computes 4 of them and predicts the rest.

Animation time: 9secs



Figure 5: p4 - super-fast prediction



p5 – ultra-fast prediction

Always computes only 2% of pixels. Loads 100 pixels (10x10), computes 2 of them and predicts the rest.

Animation time: 8secs

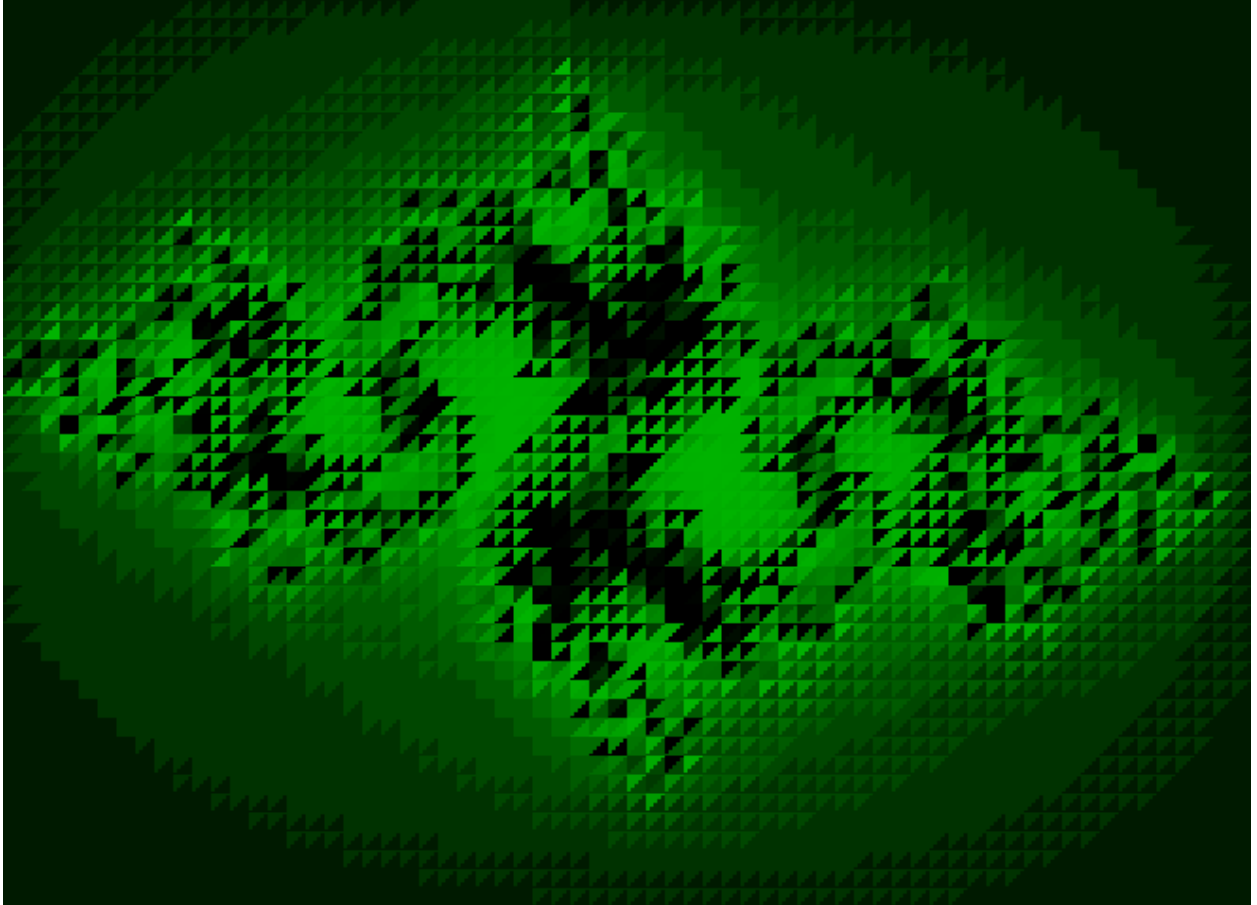
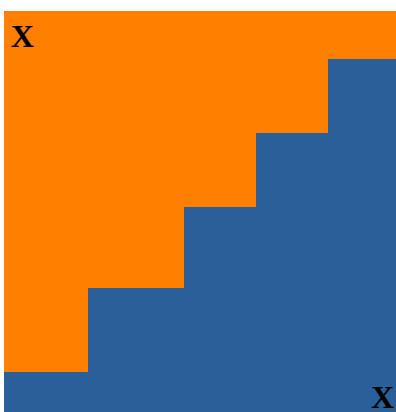


Figure 6: p5 - ultra-fast prediction



p10 – animation cheat

Computes the selected part of pixels. While computing animation, computes only

$$100 \cdot \frac{1}{\text{distance_between_pixels}} \%$$

of each frame. Rest remains from previous frames.

If the frames are small (frame rate is not bad) and *distance_between_pixels* is not too high, the animation looks accurate.

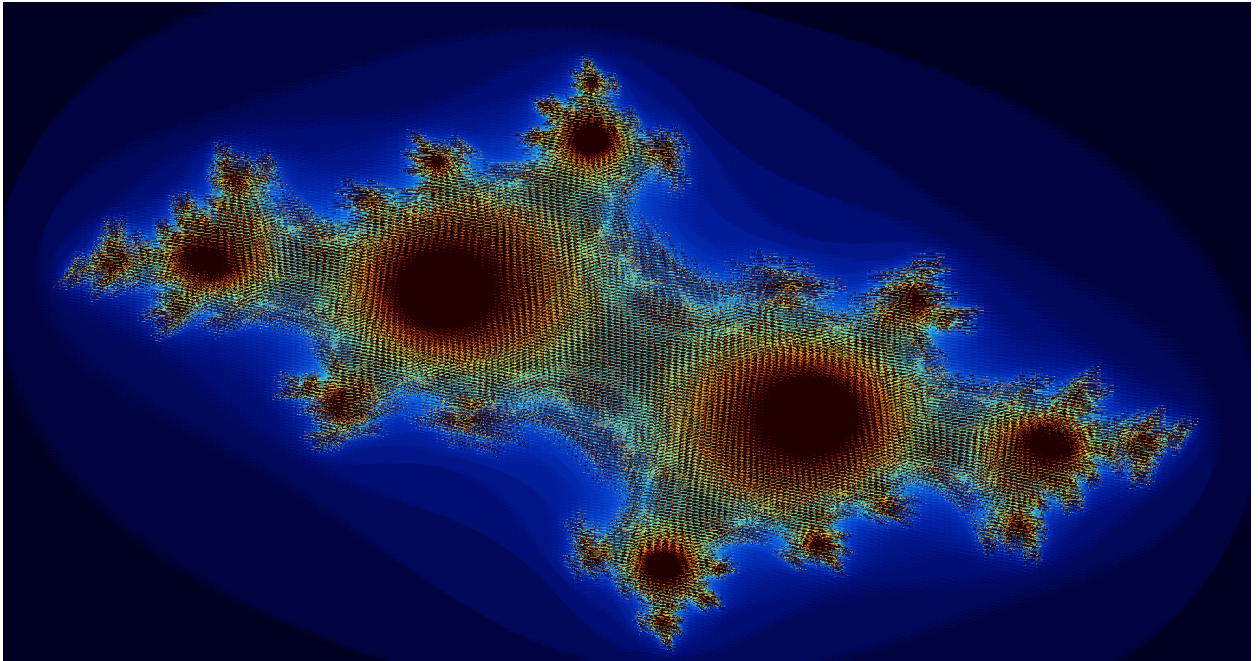


Figure 7: p10 - animation cheat

p11 – brightness cheat

Same as p10, but no pixels remain from previous frames.

$$100 \cdot \frac{1}{\text{distance between pixels}} \%$$

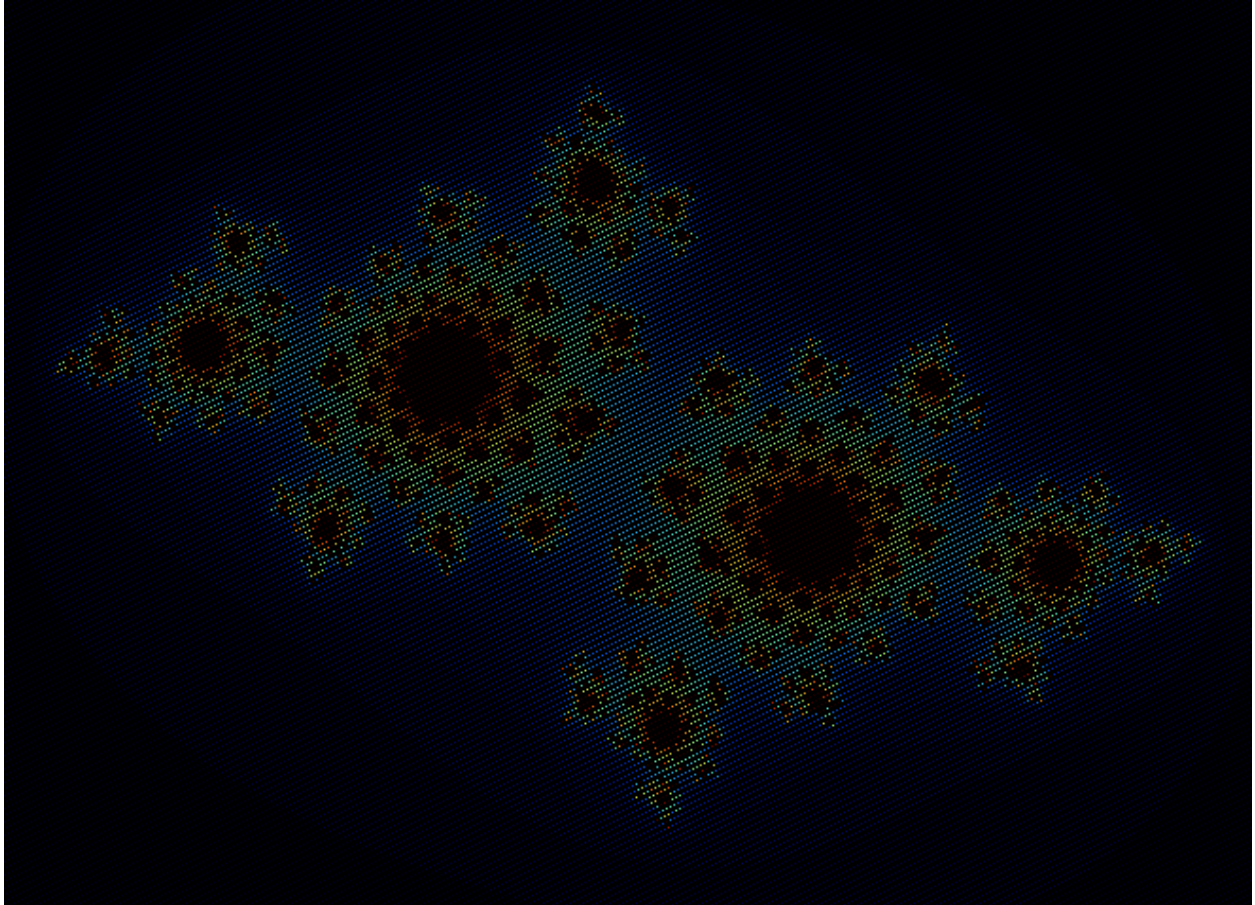


Figure 8: p11 - brightness cheat

p12 – adjustable prediction

Similar to p1, but user can adjust length of the predicted area. Unpredictable arts of the picture remain black.

$$100 \cdot \frac{1}{\text{distance between pixels}} \%$$

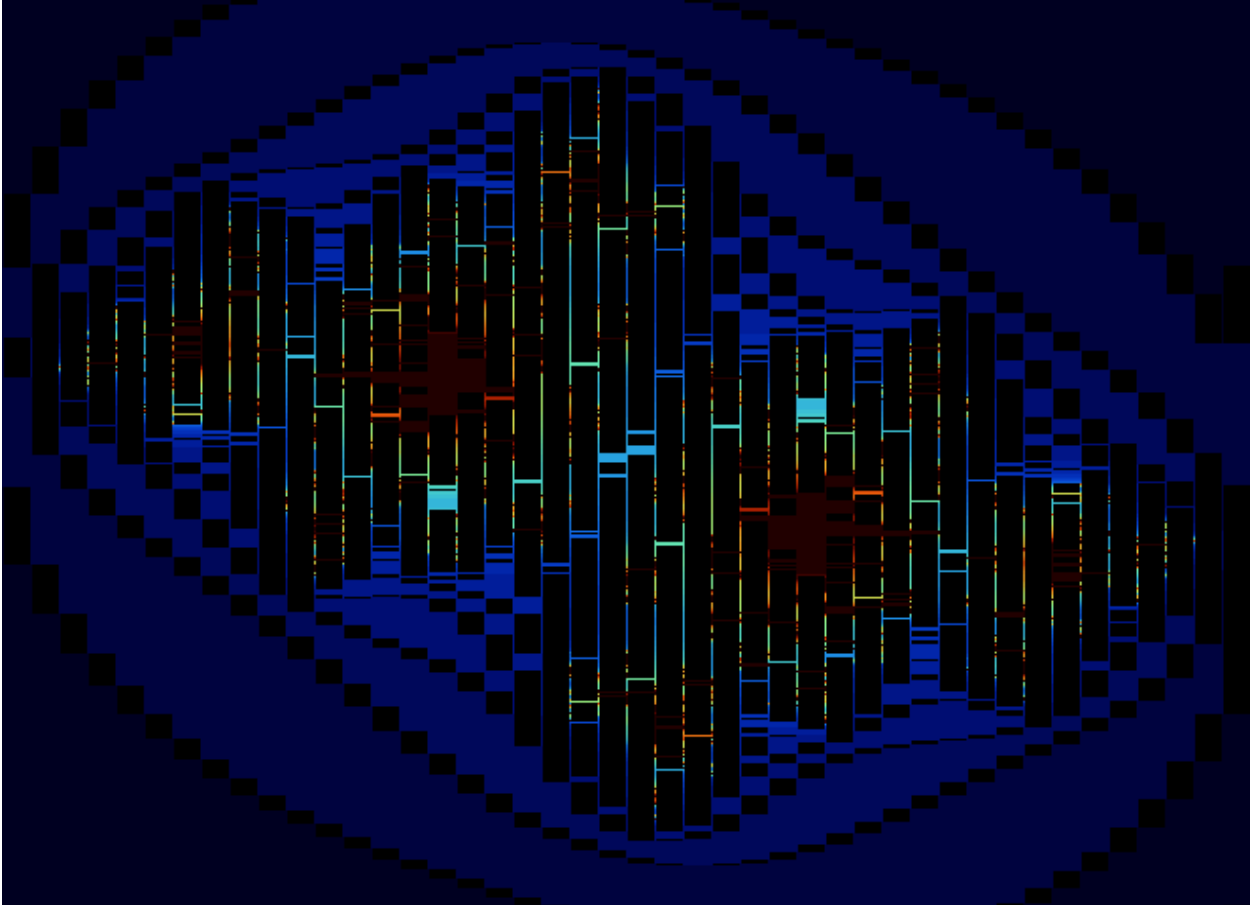


Figure 9: p12 - adjustable prediction

p13 – adjustable prediction with error correction

Same as p12, but unpredictable pixels are computed. Much slower than p12.

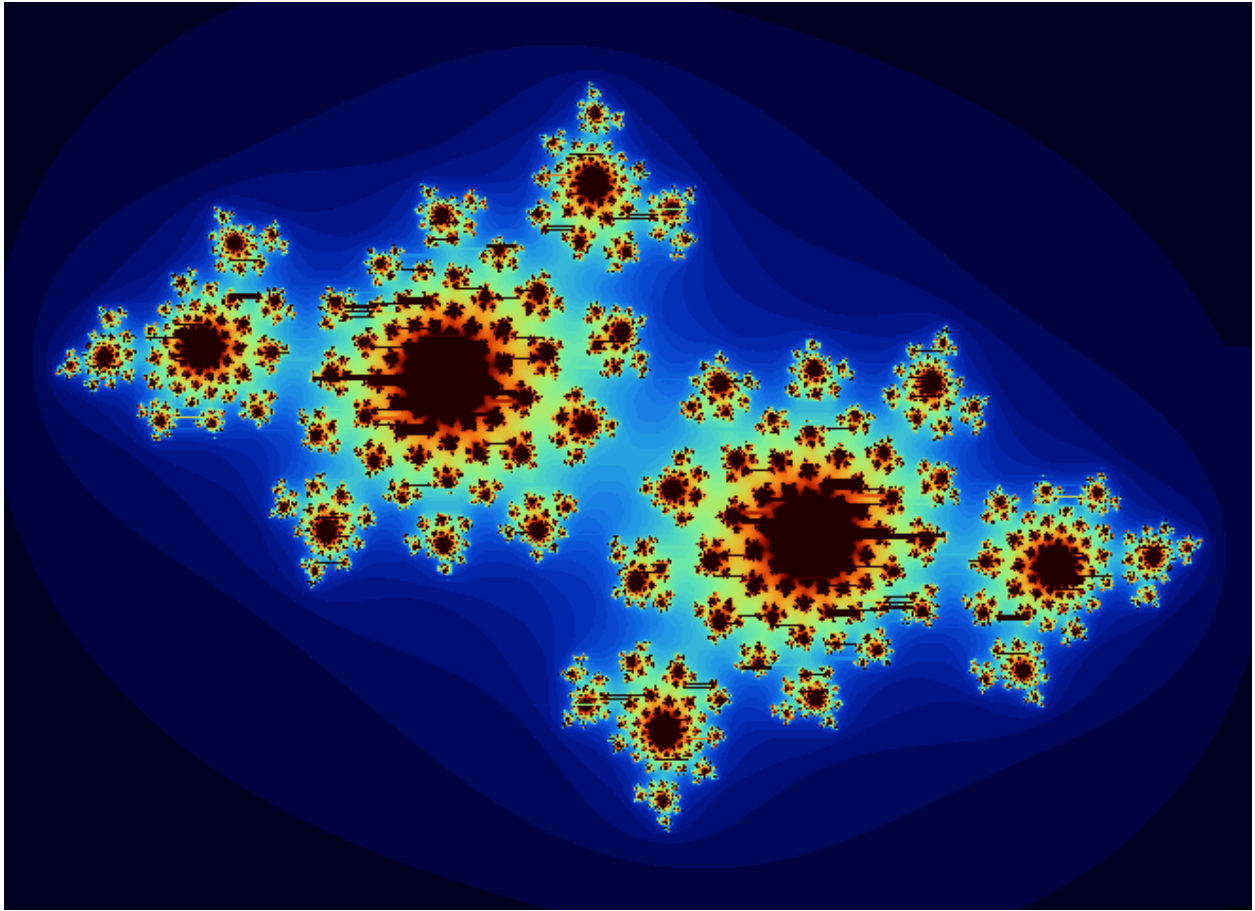


Figure 10: p13 - adjustable prediction with error correction