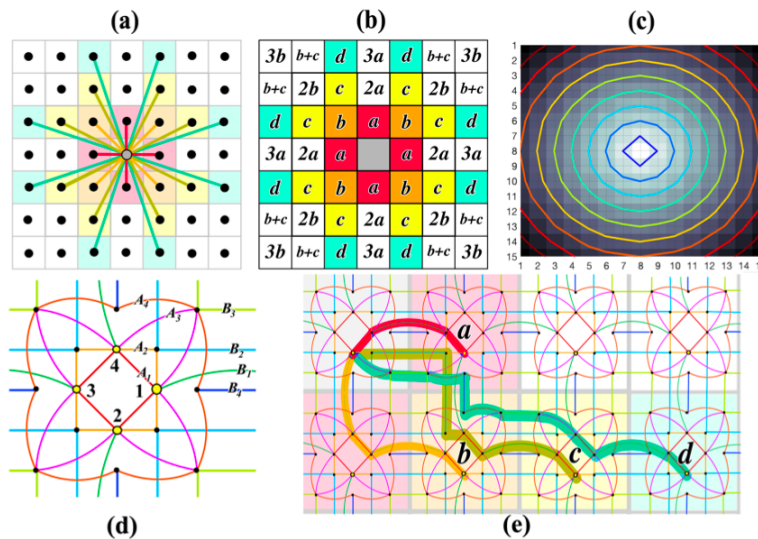


Waving Goodbye (Artwork) - by Art Terlep

This gift of 4 4x6in images will be included in the physical exchange: Martin Gardner, Elwyn Berlekamp, John Conway, and Richard Guy. This digital version also features Les Shader.

If you've ever traveled in a grid, you might have noticed that the areas you can reach for a fixed time form a diamond shape. For example, if you can travel 6 blocks, you might go north 6 and 0 east, or 3 east and 3 north. These lines of equal distance, or iso-distance curves, annoy my sense of Euclidean geometry and personally, I like to have more circular distances whenever I play a board game on a grid. Well, chamfering is one solution in which weighted edges are drawn to nearby neighbors to approximate Euclidean distances. In the image (a) below, red = 1, orange = $\sqrt{2}$, yellow = $\sqrt{5}$, and so on. (c) Shows the iso-distance curves. So, you can generate pretty roundish minimum distances this way!

Terlep-Art-GiftExchange-WavingGoodbye-G4G14

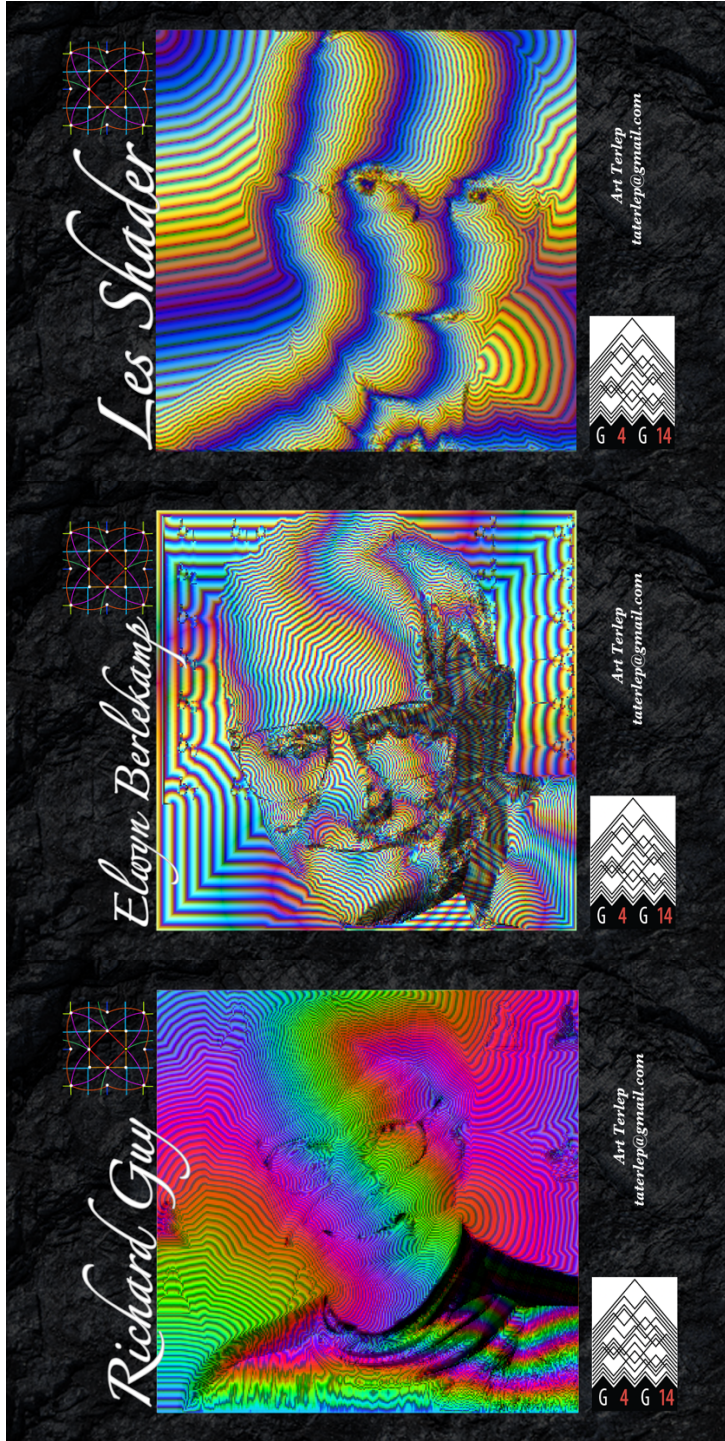


Well, I found another way to make the same chamfer with a special kind of graph (network) called a replacement product. Basically, instead of drawing lines out from a single point, a little network is used inside each pixel to “process” the Euclidean distance through a handful of channels (some of you may be noticing at this point that there’s an eerie similarity to my PUZZLE gift here and you aren’t wrong!). The catch is that you start and stop on the same vertex (node). The graph in (d) has 4 operating modes, or options for the start/stop point (yellow dots), which when composed together give a wavy, shadowed version of the original. Although it’s constructed similarly to a kind of Fourier transform, it actually sort of puts you *back* in the image space (isn’t that spooky?). By using the phases to select color gamuts and adjusting the frequency over the image space, surreal artistic interpretations of the original image can be imagined. I decided to apply this to the images of some familiar faces and that is my gift to you.

One other thing, I owe my entire G4G experience to Leslie Elwyn Shader and his family and this work is inspired by conversations with Elwyn Berlekamp over 10 years ago regarding the concept of “influence” in the game of Go which occurred some time after he gifted me an entire Go board - a great story you should ask me about sometime. For them, I have a very special gift, and that is the name of my fourth child, Elwyn Douglas Terlep (though I admittedly found out after the fact that Elwyn was also Les’s middle name! The infinitely improbable odds!). Questions about his rather unique name always give me a reason to talk about some great people in my life and the mathematical conference that inspired so many things over my years of absence from it.

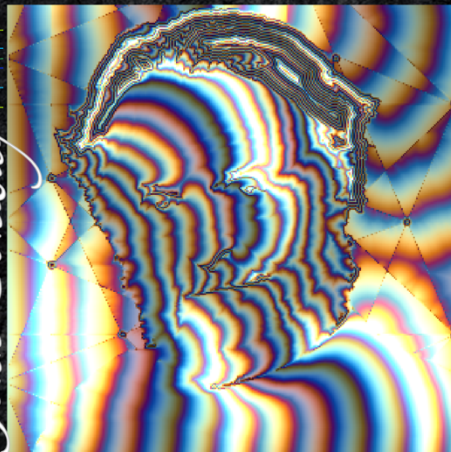
If you want to know more about my clown car chamfers, just email me and I’ll send you copies of my recent work in this area! I think it’s a lot of fun and I hope you do too. It’s good to be back. I missed you all.

Please contact me at taterlep@gmail.com for additional (free) print copies of the original or the raw image or .mat file. Cheers!





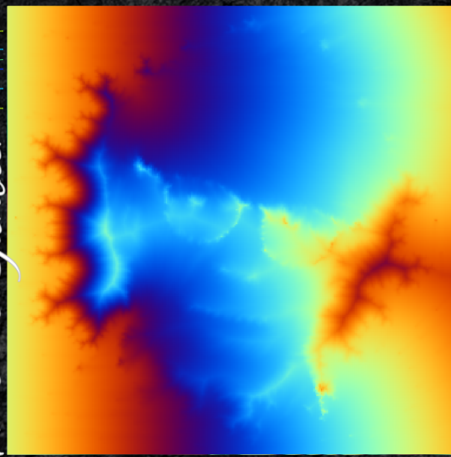
John Conway



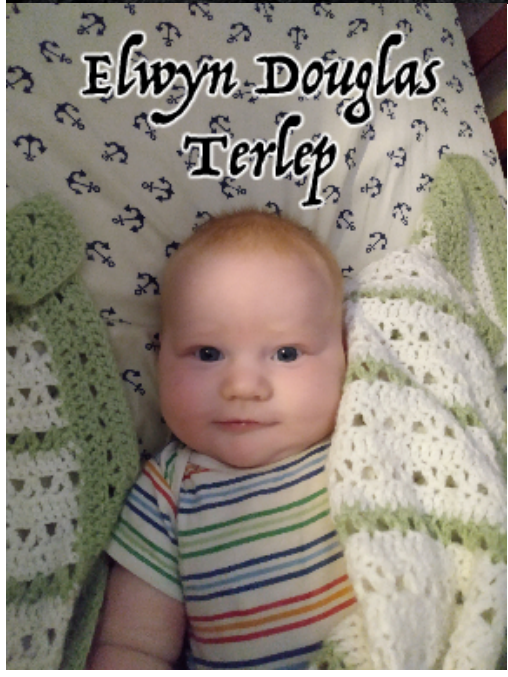
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