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(54) **TACTILE OUTPUT DEVICE**

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(57) **ABSTRACT**
A tactile output device including an electro-active polymer layer and first and second sets of coplanar conductors arranged proximate to the layer. The first and second sets of conductors are approximately at right angles to each other, and the conductors in each set are spaced apart and parallel to each other. The conductors can be selected individually to convey current to expand and contract the electro-active polymer in vicinities where the conductors intersect. The selection can be according to pixels in an image to product a three-dimensional contoured surface corresponding to the image.

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