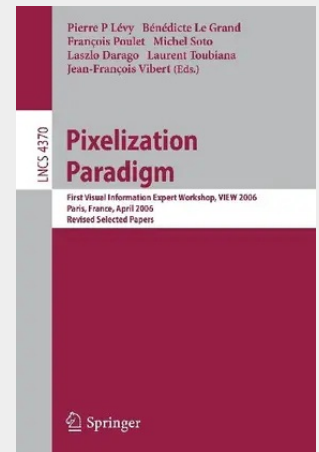


Pixelization Paradigm

Visual Information Expert Workshop, VIEW 2006, Paris, France, April 24-25, 2006,
Revised Selected Papers

The pixelization paradigm states as a postulate that pixelization methods are rich and are worth exploring as far as possible. In fact, we think that the strength of these methods lies in their simplicity, in their high-density way of information representation property and in their compatibility with neurocognitive processes. • Simplicity, because pixelization belongs to two-dimensional information visualization methods and its main idea is identifying a "pixel" with an informational entity in order to translate a set of informational entities into an image. • High-density way of information representation property, firstly because pixelization representation contains a third dimension—each pixel's color—and secondly because pixelization is a "compact" (two-dimensional) way of representing information compared with linear one-dimensional representations (Ganascia, p.255). • Compatibility with neurocognitive processes, firstly because we are three-dimensional beings and thus we are intrinsically better at grasping one- or two-dimensional data, and secondly because the cerebral cortex is typically a bi-dimensional structure where metaphorically the neurons can be assimilated to "pixels," whose activity plays the role of color (Lévy, p.3). The pixelization paradigm may be studied along two related directions: pixelization and its implementation and pixelization and cognition. The first direction—pixelization and its implementation—may be divided into two parts: pixelization theory and pixelization application.

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