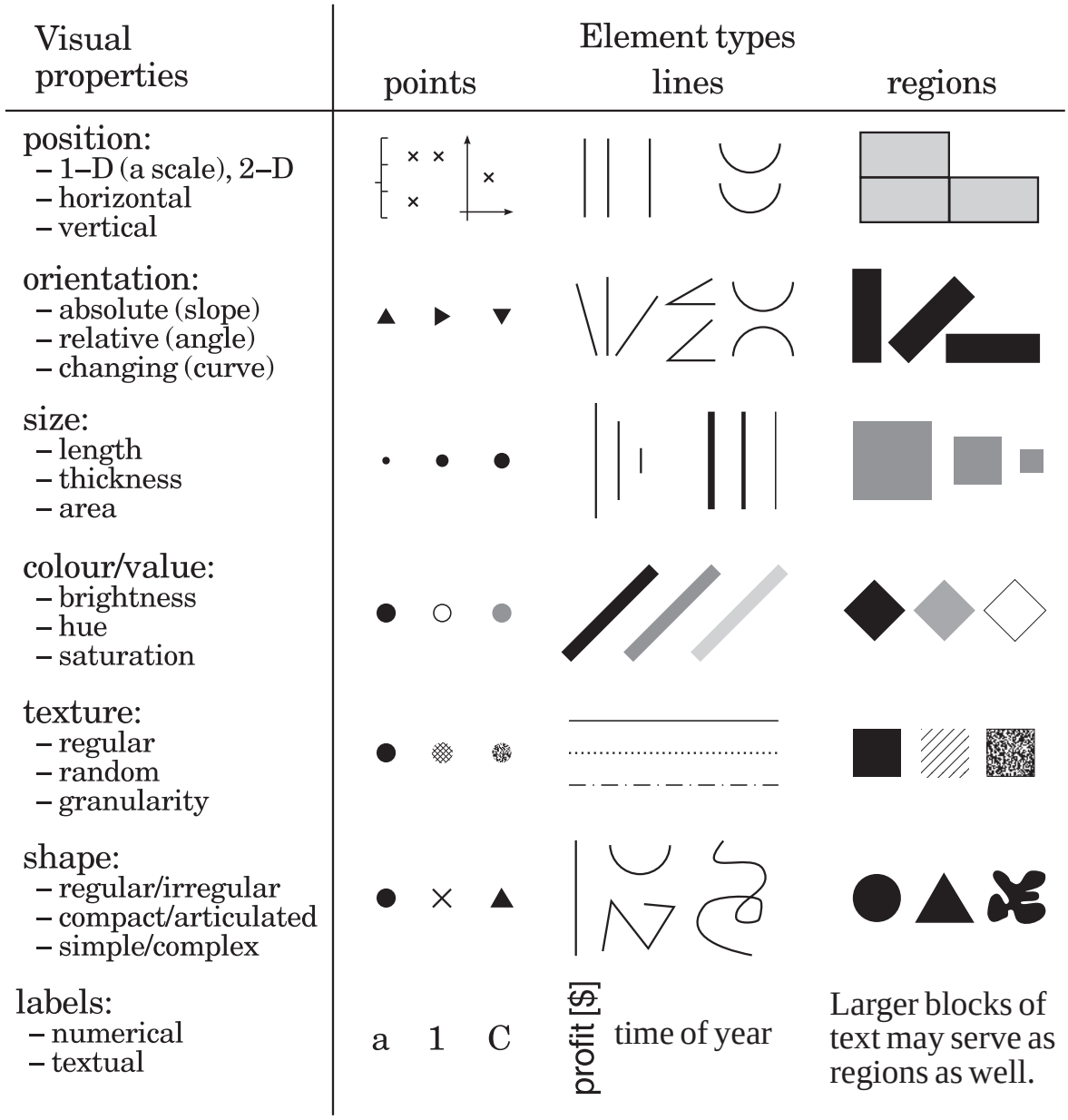

Figure II.4: A repertoire of basic elements of graphical vocabularies for visual languages.

elements of lines and regions (like endpoints, cross-points, corners, centres) can play a role of explicit or implicit points.

The main kinds of visual properties of elements are listed in the left column in Fig. II.4. Within the listed classes, there are many subclasses of properties as well as different methods of specification of descriptors for these properties. The most important of these are listed in Fig. II.4 as well. For example, the space of colour values is generally three-dimensional, and any, or all, of these dimensions can be used independently to convey useful information, while shape is a rather elusive property, without established and generally useful quantitative descriptors (see [da Fontoura Costa & Cesar 2001, Leyton 2001]).

The meaning of some properties may vary for different element types, e.g., size of a line may mean its length or its thickness, but for a region it usually means its area. For most