

A Top-Down Method of Patent Mapping

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Abstract

Patent mapping [1] is an attempt to present competitive patent information in graphical form for strategic decision-making purposes. Currently, patent mapping is a bottom-up process, starting from the structured data recorded in patents, through data mining, and ending at multidimensional graphs. A problem is that, as databases expand and consequently mining methods become complicated, the resultant increase in dimensions of visualisations make interpretations more difficult. In fact patent mapping need not be a bottom-up process, as we propose a new top-down approach that is based upon the widely accepted Theory of Innovative Problem Solving (TRIZ) [2]. In order to avoid statistical analysis of many patents, this TRIZ-led patent mapping, first, begins with comprehension of patent competition rules using simple gaming models before visualising competitive environments and technical correlations; then key patents are probed for relevant techniques finally reaching an analysis of technical innovation (Figure 1 below). The research addresses: (i) a critical review of current patent mapping; (ii) explanation of how TRIZ can inform a new patent mapping method; and (iii) application of this new method to a case study in aluminium beverage can manufacturing. The conclusion is that a TRIZ-led mapping method reveals synergistic relationships between patents that are not identified by current methods. [205 words]

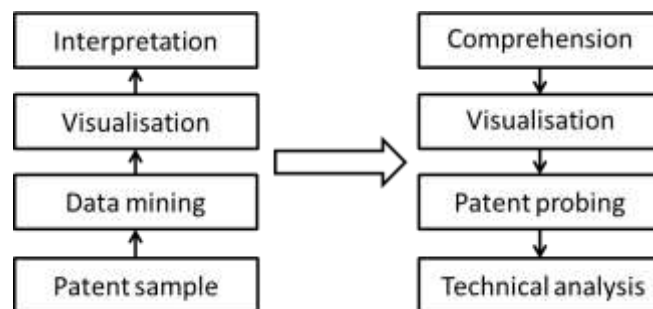


Fig 1: Comparison of patent mapping approaches: conventional bottom-up (left) and proposed top-down (right)

Keyword Patent Map; TRIZ; Design Management, Innovation, Can Manufacturing

Biography

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