Class 4. Patent Map

1. Analyzing Patent Information

1) Quantitative Analysis
   The method understanding and analyzing patent through numerical statistic of patent information. Most usable data comes from bibliographical information including the number of patent applications, assignees, inventors, or patent classification codes, etc
   - Quantity-based Analysis
   - Time-Based Analysis
   - Ranking Analysis, etc.

2) Qualitative Analysis
   The method understanding and analyzing the content of patent. Generally, this analysis method is performed by the inter-relationship of technology content or patent classification code, assignee, application date, etc
   - Selection of core patent
   - Technology development map, etc.

2. Patent Map (Technology Road Map)
   Patent Map is the visualized expression of total patent analysis results to understand complex and various patent information easily and effectively. The patent map is produced by gathering related patent information of a target technology field, processing, and analyzing it.

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3. The Process of Patent Map
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4. What advantages can be taken from Patent Map?

1) **Administrating / Planning**
   - Development Trend
   - Market Research
   - Relation of Companies

2) **Researching/Technology Promoting**
   - Technology Trend
   - Technology GAP
   - Technology Portion
   - Technology Relation

3) **Technology Management**
   - Possible Infringement
   - Analyze Claims
   - Set up new patent application direction

5. The Kinds of Patent Map Results

1) **Quantitative Analysis Map (Statistical Analysis Map)**
   - Rate Map
   - Number Map
   - Trend Map
   - Relation Map
   - Radar Map
   - Portion Map, etc.

2) **Qualitative Analysis Map**
   - List Map
   - Matrix Map
6. The Examples of Quantitative Analysis

1) Portion rate Map  
2) Ranking Map

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3) Trend Map (2D)  
4) Trend Map (3D)

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5) Portfolio Map  
6) Citation Statistical Analysis

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7. The Examples of Quantitative Analysis

1) Matrix Map

Matrix map shows the correlation between technical elements (such as purpose and technical item) obtained from patent information in the form of matrix. It helps to find important problems affecting the development of a technology field. Moreover, with the addition of a time axis, trends in problems affecting technological development can also be observed.

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2) TEMPST Map (1)
TEMPST Map shows the technology analysis or classification based on different points of analysis views.
(Treatment, Effect, Materials, Process, Products, and Structure)

<table>
<thead>
<tr>
<th>The point of Analysis view</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>T  Treatment</td>
<td>Temperature, Velocity, Time, Frequency, Pressure, etc</td>
</tr>
<tr>
<td>E  Effect</td>
<td>Purpose, performance, Efficiency, etc</td>
</tr>
<tr>
<td>M  Material</td>
<td>Material, Component, Compound, Addition, etc.</td>
</tr>
<tr>
<td>P  Process</td>
<td>Manufacturing Methods, System, Procedure, etc.</td>
</tr>
<tr>
<td>P  Product</td>
<td>Product, Parts, Results, Outputs, etc.</td>
</tr>
<tr>
<td>S  Structure</td>
<td>Structure, Form, Device, Component, Circuit, etc</td>
</tr>
</tbody>
</table>

3) TEMPST Map (2) - Example

<table>
<thead>
<tr>
<th>Patent No.</th>
<th>TEMPST</th>
<th>Technology</th>
</tr>
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<tbody>
<tr>
<td>55-10855</td>
<td>O</td>
<td>METHOD OF MANUFACTURING COMPOSITE ROTOR</td>
</tr>
<tr>
<td>58-153775</td>
<td>O</td>
<td>PREPARATION OF THIN FILM</td>
</tr>
<tr>
<td>60-89530</td>
<td>O</td>
<td>PRODUCTION OF COMPOSITE SUPERCONDUCTIVE COMPOUND WIRE ROD</td>
</tr>
<tr>
<td>60-210531</td>
<td>O</td>
<td>PRODUCTION OF THIN FILM OF SCHEVREL PHASE COMPOUND BY REACTION METHOD ON SUBSTRATE</td>
</tr>
<tr>
<td>60-216592</td>
<td>O</td>
<td>LEAD-OUT DEVICE FOR SUPERCONDUCTIVE COIL</td>
</tr>
</tbody>
</table>

4) Technology Development Map

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5) Problems vs. Solutions Map

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Software for practicing and reproducing patent information in many different ways to make user approach to patent information easily and obtain optimized information by sorting / mixing / interconnecting / rearranging raw patent information.

<table>
<thead>
<tr>
<th>Software Name</th>
<th>Provider</th>
<th>Website</th>
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<tbody>
<tr>
<td>PM-Manager</td>
<td>WIPS</td>
<td><a href="http://www.wips.co.kr">www.wips.co.kr</a></td>
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<tr>
<td>PIAS (Patent Information</td>
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<td><a href="http://www.kipo.go.kr">www.kipo.go.kr</a></td>
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<tr>
<td>Analysis System)</td>
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<tr>
<td>Patent-Lab</td>
<td>WISDOMAIN (Delphion)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://www.delphion.com">www.delphion.com</a></td>
</tr>
</tbody>
</table>


1) Data Download
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2) Data Uploading & Deleting
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3) Normalizing Assignee Name
4) Classification
Error! Unknown switch argument.

5) Analysis

6) Direct link to abstract in analysis graph
7) Automatic report creation for core patents