Global Brand Database

Speaker: Mona Remlawi, Head, Global Brands and Designs Databases Section, Global Infrastructure Sector
Agenda

- Quick introduction
- 2018 - What’s new
- 2019 - What’s coming
What are Global Databases
<table>
<thead>
<tr>
<th>Names:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Applicant</td>
</tr>
<tr>
<td>- Representative</td>
</tr>
<tr>
<td>- Holder</td>
</tr>
</tbody>
</table>

| Goods & Services          |

<table>
<thead>
<tr>
<th>Status</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Origin</th>
</tr>
</thead>
</table>

| Designation               |

<table>
<thead>
<tr>
<th>Dates:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Application</td>
</tr>
<tr>
<td>- Registration</td>
</tr>
<tr>
<td>- Expiration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Numbers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Application</td>
</tr>
<tr>
<td>- Registration</td>
</tr>
</tbody>
</table>
Complex Querying:

\[(A \text{ OR } B) \text{ AND NOT } C\]
In a glance ...
Global Brand Database Tutorials

How to create an account

Sorting your results

How to save, share and download

Reading the result list

Finding a similar brand
Or join one of our bi-monthly webinars
Global Coverage

- Trademarks from
  - 38 national offices
  - 2 international offices
- International Emblems
- Appellations of Origin
Global Coverage

- Industrial Designs from
  - 12 national offices
  - 2 international offices
What’s new in 2018
Data Integration Workflow Improvement

Robust

Reliable
Increase data coverage for both databases

Global Brands
- Bahrain
- Sudan
- Kuwait
- UAE
- Tunisia
- Italy
- WHO INNs

Global Designs
- Germany
- France
- Georgia
- Moldova
- Mongolia
- EUIPO
- China ...
- Rep. of Korea ...
Research and Application of AI

Image Similarity Search
Image Similarity Search - 2014

- Released in **2014**

- Based on **Image Features**
  - **Shape**
  - **Color**
  - **Texture**

- Can be very effective on simple geometric shapes
Image Similarity Search - 2014

Search For
- Owl
- Superman
- Apple

Find (in top results – without Vienna Class)
- Owl
- Superman
- Apple
- Peach
Limitation

Shape, color and texture cannot cover semantic similarity

Result set is likely to contain noise - images that have visual similarity, but semantically are very different
Image Similarity Search - 2014
Image Similarity Search - 2014
Image Similarity Search - 2018/2019

- AI (machine learning) based image similarity search
- **Semantic** Search by definition
- Based on **automated classification** of images

- Release date planned for **end of 2018**
# Image Classification

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>06.09.05 Other cultivated areas</td>
<td>15.1</td>
</tr>
<tr>
<td>2</td>
<td>01.05.01 Sun, rising or setting (partially exposed or partially o...</td>
<td>13.8</td>
</tr>
<tr>
<td>3</td>
<td>06.03.03 Open sea, stretches of water without shore, multiple wav...</td>
<td>12.9</td>
</tr>
<tr>
<td>4</td>
<td>26.01.06 Semi-circles</td>
<td>11.8</td>
</tr>
<tr>
<td>5</td>
<td>06.01.04 Mountains, mountain landscapes</td>
<td>10.9</td>
</tr>
<tr>
<td>6</td>
<td>06.09.03 Farms</td>
<td>10.2</td>
</tr>
<tr>
<td>7</td>
<td>01.15.01 Rainbows</td>
<td>10.1</td>
</tr>
<tr>
<td>8</td>
<td>01.05.25-Other representations of the sun</td>
<td>9.9</td>
</tr>
<tr>
<td>9</td>
<td>07.11.11-Roads without lines or dividers</td>
<td>9.5</td>
</tr>
<tr>
<td>10</td>
<td>01.15.13-Single wave of water</td>
<td>9.4</td>
</tr>
</tbody>
</table>
Image Classification

1 03.01.08 Dogs (14.8)
2 03.01.24 Stylized cats, dogs, wolves, foxes, bears, lions or tigers... (14.5)
3 18.13.05 Yokes, collars, leashes, and harnesses for other animals (13.8)
4 03.01.07 Shadows or silhouettes of dogs (13.5)
5 03.01.04 Domestic cats (10.9)
6 03.03.24 Stylized elephants, hippopotami, rhinoceri, giraffes, al... (9.8)
7 03.03.01 Elephants, mammoths (9.7)
8 03.01.26 Costumed animals and those with human attributes in this... (9.6)
9 02.11.01 Hearts (9.2)
10 03.01.17 Cats, dogs, wolves, foxes, bears, lions or tigers with f... (8.6)
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heads, portraits or busts of women in profile</td>
<td>13.2</td>
</tr>
<tr>
<td>2</td>
<td>Women wearing ribbons or flowers in their hair</td>
<td>11.6</td>
</tr>
<tr>
<td>3</td>
<td>Stylized women, including women depicted in caricature</td>
<td>10.3</td>
</tr>
<tr>
<td>4</td>
<td>Heads, portraits, busts of women not in profile.</td>
<td>10.0</td>
</tr>
<tr>
<td>5</td>
<td>Shadows or silhouettes of women</td>
<td>9.9</td>
</tr>
<tr>
<td>6</td>
<td>Other flowers including daffodils and irises</td>
<td>8.9</td>
</tr>
<tr>
<td>7</td>
<td>Other jewelry, including pendants, earrings and brooches</td>
<td>8.5</td>
</tr>
<tr>
<td>8</td>
<td>Other women including hobos, women holding fans and women</td>
<td>8.4</td>
</tr>
<tr>
<td>9</td>
<td>Groups of females</td>
<td>8.2</td>
</tr>
<tr>
<td>10</td>
<td>Romans, Greeks or Egyptian women (ancient dress)</td>
<td>8.1</td>
</tr>
</tbody>
</table>
Image Classification

1. 05.09.13 Slices or quarters of fruits, open fruits
2. 05.09.04 Lemons, limes
3. 05.09.03 Oranges, tangerines and the like; grapefruit
4. 01.15.18 More than one drop including teardrops or raindrops
5. 01.15.08 A single drop (including a single raindrop or a single t...
6. 05.05.25 Other flowers including daffodils and irises
7. 05.03.25 Other leaves
8. 01.01.04 A single star with six points
9. 02.11.01 Hearts
10. 18.03.06 Baby carriages and strollers
AI Proof-of-concept

- Geometric figures or combinations of geometric figures representing a person Score: 10.81
- Grotesque men formed by letters, numbers, punctuation or geometric shapes Score: 10.74
- Heads, portraits, busts of men not in profile. Score: 10.16
- Heads, portraits or busts of men in profile Score: 9.71
- Smiley faces Score: 9.68
- Plain single line circles Score: 8.8
- Stylized men, including men depicted in caricature form Score: 8.52
AI Proof-of-concept
AI Proof-of-concept

- 03.15.12-Pleasants, peacocks, quail Score: 17.37
- 03.15.24-Stylized birds and bats Score: 16.51
- 01.15.18-More than one drop including teardrops or raindrops Score: 13.28
- 05.05.25-Other flowers including daffodils and irises Score: 12.87
- 03.15.25-Other birds Score: 12.27
- 03.15.19-Birds or bats in flight or with outspread wings Score: 12.25
- 03.15.06-Ducks, geese, swans Score: 12.19

Prominent images:
- US73555119.png Similarity: 0.976
- US7457601.png Similarity: 0.943
- US7216922.png Similarity: 0.824
- US7333343.png Similarity: 0.823
- US78559200.png Similarity: 0.803
- US75331965.png Similarity: 0.781
- US7232999.png Similarity: 0.775
- US73211286.png Similarity: 0.743
- US73763915.png Similarity: 0.737
- US78097086.png Similarity: 0.732
- US76716387.png Similarity: 0.723
- US72045901.png Similarity: 0.721
- US72150521.png Similarity: 0.714
- US72264550.png Similarity: 0.714
What’s coming in 2019
• Image Similarity with AI

• Arab Brand Database

• More data coverage from
  • South America
  • Africa
  • Europe

• User Interface Improvements
Thank you!

mona.remlawi@wipo.int
gbd@wipo.int