Ivan Sarajčić:
Flag Identifier - Flag Identifying Tool and Vexillological Database
An Attempt of Vexillological Classification

Abstract: *The first version of the Flag Identifier website was made in 2003, with the aim to enable simple identification of a flag according to graphical parameters. Idea for this online vexillological tool originated from lack of such a specific tool on the internet. It is conceived for use both by vexillologists and those who have just seen a flag and would like to find out more information than just graphical attributes.*

New Flag Identifier (version 2) at www.flagid.org went another step ahead. Now, it enables database building through administration interface, so registered editors-vexillologists can add specific data about flags. The database is comprised not only of graphical characteristics, but the data concerning geographical background of the flag, its history, way and kinds of use, as well as the meaning of the elements of the flag.

Considerable attention was paid to distribution of the partitions of the flag, which was inspired by standard heraldic partitions, but is well suited to vexillology.

The aim of the presentation is to show and explain the way Flag Identifier works.

Flag Identifier is a web tool for identifying different flags regardless of design, usage, geographic descent and historical background. It consists of a large database of relevant facts about flags. First version was made in 2003. This version was developed during 2006, and is online since January 2007.

Data are collected with permission mostly from Flags of the World website, as well as from vexillologic literature. Contents of the database are maintained by FI editors, through FI administration interface. There are about 1000 flags in the database as for today.

The main goal of Flag Identifier was to answer the questions about flags primarily to people, knowing only little of vexillology. When they want to know the background of the flag that is not familiar to them, this tool shall help them to identify it through several steps. First of all, FI is conceived as a data base with all relevant details concerning a flag, such as division of the fields, colors and devices. The first version was focused only to graphical data, with intention to replace so-called „descriptive search" through the existing search engines on the internet. Results of such a search, for example. „blue and white flag with cross"

were quite wide and chaotic unlike the results gained by FI, which are strict and categorized.

Naturally, the main weakness remained, and it is a fact that the wide field of vexillology can not be completely encompassed, so the results are always based on the number of flags already packed in the database, and that number is only a part of the whole potential corpus. Priority in building and updating the FI database was to include all current and historical national flags and ensigns, as well as international and sub-national flags.

Along with graphic characteristics, new features in FI are non-graphic characteristics: usage, geographical and historical characteristics.

GRAPHIC CHARACTERISTICS

Graphic characteristics included in FI are: area divisions, shapes, colors and devices. The shapes of the flag are new to latest version of FI, as well as newly detailed organization of divisions.

1. Flag area divison

Flag area division is the term equivalent to shield partition in heraldry. However, due to impossibility to use heraldic models for division of all flags, this systematization is an attempt to make some kind of detailed "vexillological" blazoning.
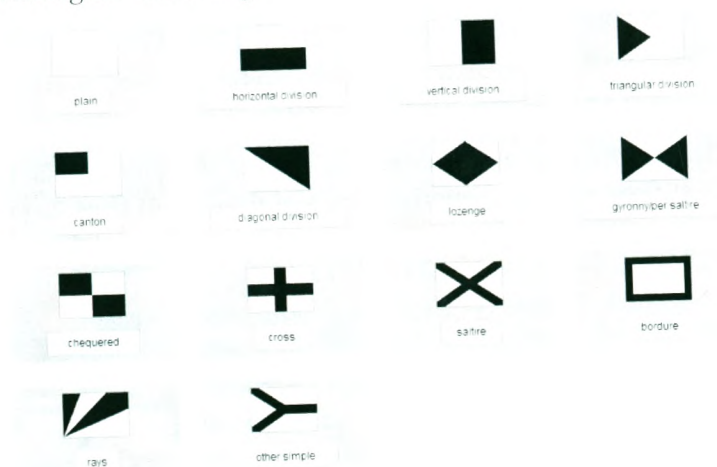
There are 14 basic area divisions, each includes up to 6 separate attributes, introduced to make more detailed distinction of the designs.

To distinguish flags with and without charges, attribute dealing with charge presence is introduced. For example, horizontally divided flags with three stripes could be without charge or have one or more charges.
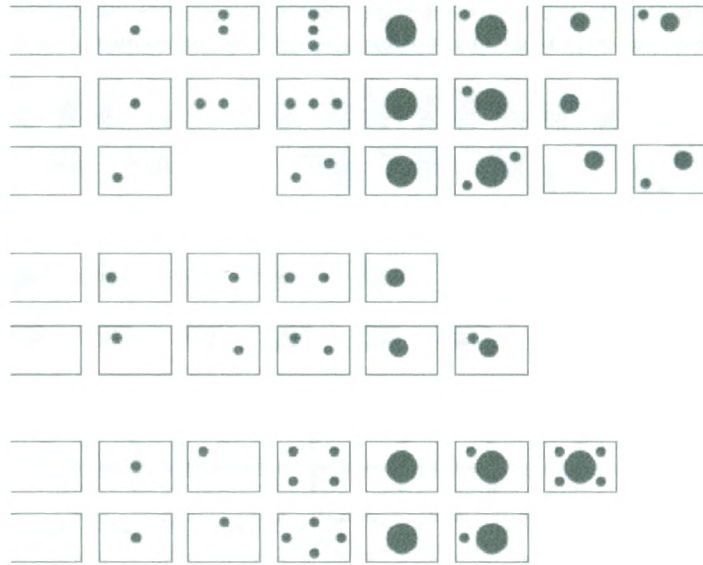
Query using combination of area division and charge presence can give interesting results.

Let us present 14 basic area divisions and their possible attributes:

1.   Plain flags - flags whose main area reaches all 4 sides of the flag. Plain flags are plain armorial flags, seal flags, LOB flags (logo on bedsheet). This division prevails among state flags of USA and prefecture flags of Japan. (PLAIN FLAGS)

2.   Horizontal division – flags with horizontal stripes. It is furthermore described using six attributes: number of stripes, stripe symmetry, stripe areas (describes relative thickness of stripes), division lines, additional area (describes absence or

horizontal division
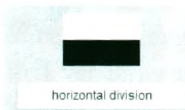
presence of specific shape) and position of additional area (if any). This division prevails among national flags.

by number of stripes

by stripe symmetry

by stripe areas

by division lines

by additional area

by position of additional area
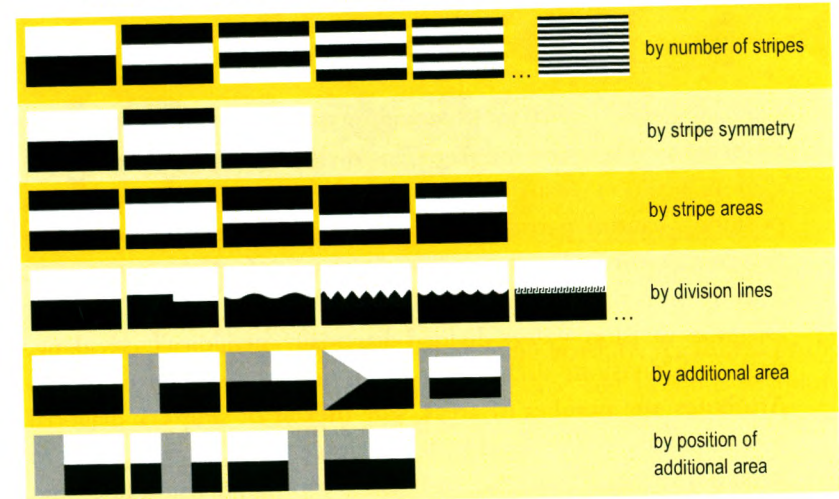
3.   Vertical division – flags with vertical stripes. Attributes are the same as above mentioned horizontal division. Some flags belong to both vertical and horizontal division, if they include combination of vertical and horizontal stripes. (Madagascar, Texas, Benin)

4.   Triangular division – flags with triangle (or trapezium) with one side of the triangle being the rim of the flag. Attributes are: triangle spread (part or whole flag cz, er), triangle

triangular division

orientation (from hoist, fly, top or bottom), triangle partition, area partition (the area representing the rest of the flag – all but the triangle) and shape.

by triangle spread

by triangle orientation

by (triangle) shape

by triangle partition

by area partition
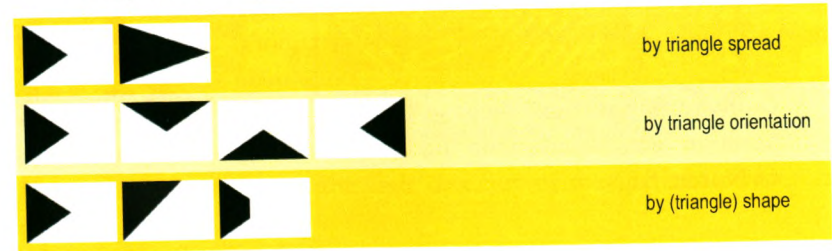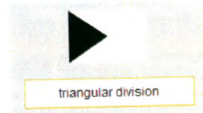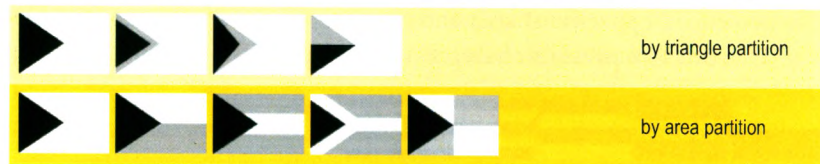
5. Canton division – flags with canton, meaning rectangular area touching two sides of the flag. This division contains 3 attributes: canton position (usually top-hoist, very few flags with other position), canton partition (usually describes the division of the flag in canton) and area partition (presence of stripes, cross etc.). This division prevails among UK ensign inspired flags.

6. Diagonal division – flags divided diagonally, heraldically speaking, flags with divisions such as per bend, per bend sinister or bendy. Attributes are: number of areas, side (dexter or sinister), diagonal spread (minor differences like for example Congo – from hoist to fly and Tanzania from bottom-hoist to top-fly), division lines and additional area.

7. Lozenge division – flags divided in form of "diamond". Attributes are: lozenge partition and area partition. The example of the flag of Brazil, where the lozenge does not touch the rim of the flag is also put into this category, for it is visually close to the strict lozenge division.

8. Gyronny or per saltire division – covers all flags divided like rays from the center part of the flag. Attributes are: number of areas, division lines and additional area. This division (gyronny of 8) is frequent among Portuguese municipal flags.

9. Chequered division – chequered flags or flags divided quarterly. Attributes: number of areas, angle of areas and additional area.

10. Cross division – cross flags have following attributes: cross position (centered or not), cross division (plain, fimbrated, counterchanged etc.), division lines and area partition (area representing the rest of the flag). Prevailing design of Nordic flags.

cross

by cross position

by cross division

by area partition
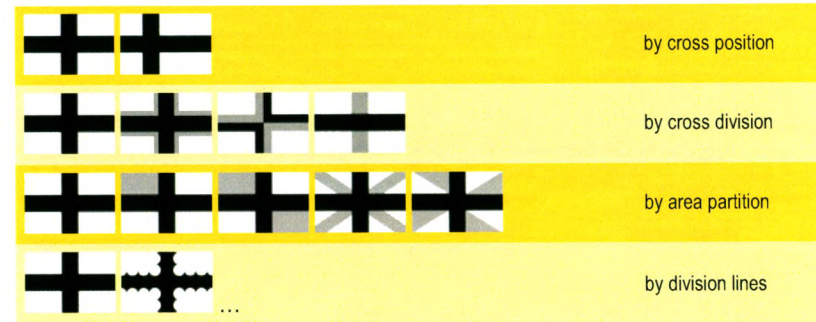
by division lines

11. Saltire division – flags with diagonal cross, or saltire. Attributes are: saltire type, area partition, division lines.

12. Bordure division – Any flags containing bordure, regardless of the division of main central field. Attributes are: bordure partition, bordure shape (normal, partial or multiple), division lines and area partition.

13. Ray division – covers all flags divided like rays from the rim part of the flag. Attributes are: spread position, number of rays, additional area.

14. Other – All other styles of division containing pall, chevron and other flags that don't match above mentioned 13 area divisions.
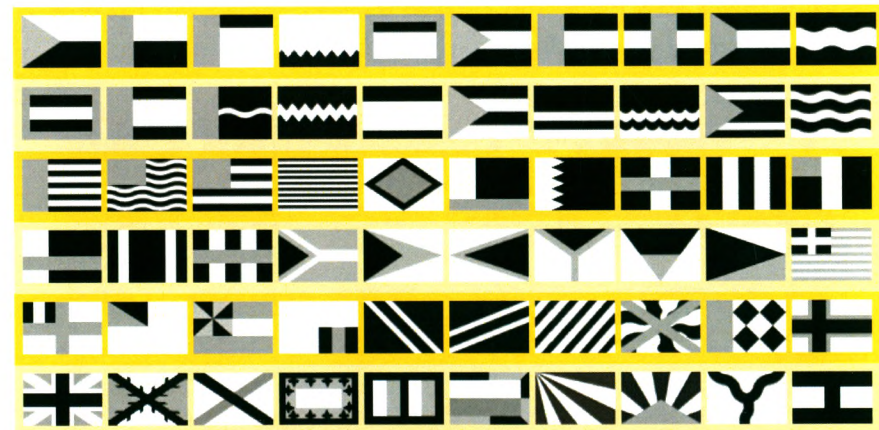
Using all these attributes, the wide diversity of specific area division is achieved.

Some query examples using area division and charge presence attributes:

EXAMPLE OF QUERY (1)

- by number of stripes
- by stripe symmetry
- by stripe areas
- by division lines
- by additional area
- by position of additional area

What is called party per fess in heraldic shield partitions, in FI is used under the term horizontal division with following attributes:

- number of stripes set to five stripes
- stripe symmetry set to symmetric, but not equal
- stripe areas set to central thicker
- division lines set to straight
- additional area set to none

number of stripes: **5 stripes**
stripe symmetry: **horizontal symmetry, non equal**
stripe areas: **central thicker**
division lines: **straight**
additional area: **no additional area**

Results:

| African Union | Boyacá | Costa Rica | Costa Rica - State Flag | Drenthe | Israel |
| Kenya | North Korea | Suriname | Swaziland | Thailand | Uzbekistan |

EXAMPLE OF QUERY (2)

- by canton position
- by canton partition
- by area partition

canton position: **top hoist**
canton partition: **cross/saltire**
area partition: **plain or charged**

charge presence: **within area**

Results:

Anguilla	Australia	Australia - Merchant Ensign	Australia - Naval Ensign	Bermuda	British Antarctic Territory
British Virgin Islands	Cayman Islands	Cook Islands	Falkland Islands	Fiji	Fiji - Civil Ensign
Fiji - Naval Ensign	Fiji - State Ensign	Manitoba	Montserrat	New Zealand	New Zealand - Civil Ensign
New Zealand - Naval Ensign	Ontario	Saint Helena and Dependencies	South Georgia and South Sandwich Islands	Tanganyika (1919-1961)	Turks and Caicos
Tuvalu					

2. Shapes

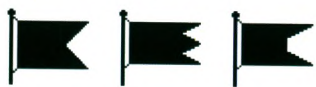Shapes are organized in several categories. Apart from the shape of the fabric itself, the position of the flag concerning the pole is taken into account. Thus, apart from rectangular, square, swallow-tailed, swallow-tailed with tongue, double triangle, square-tongued there are also vertically hoisted, framed flag, gonfalons, gonfanons, etc.
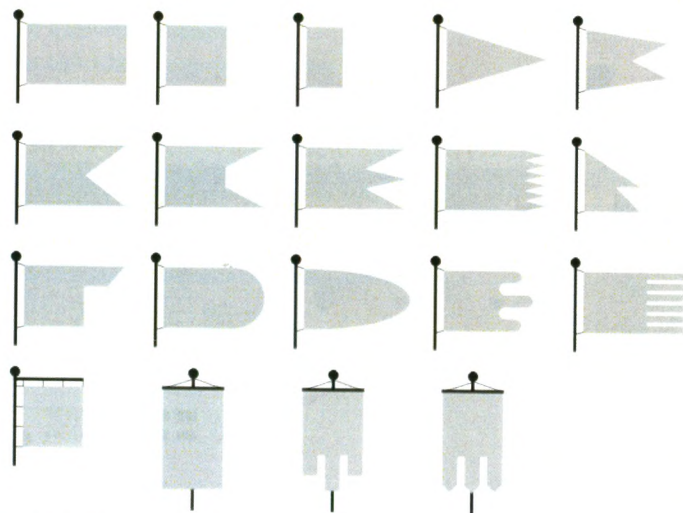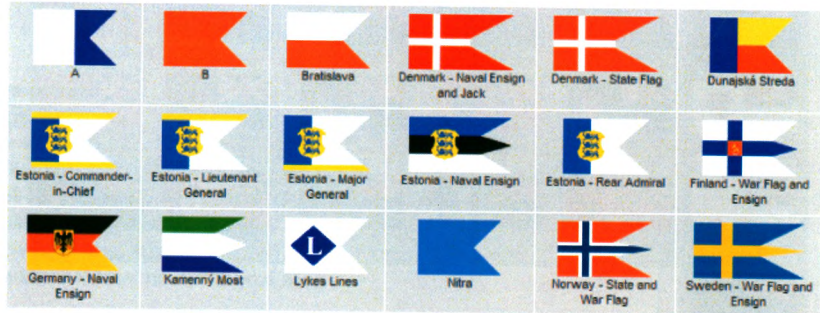
EXAMPLE OF QUERY

shape:
swallow-tailed
swallow-tailed with tongue
swallow-tailed spaced

Results:

3. Colors

This section covers main colors of the flag. In querying, there is possibility to choose between ten basic colors, or to specify specific color shade. That enables finding of the flags with more then one shade of the same color, for example flags of Fiji and Tuvalu, which contain two shades of blue.
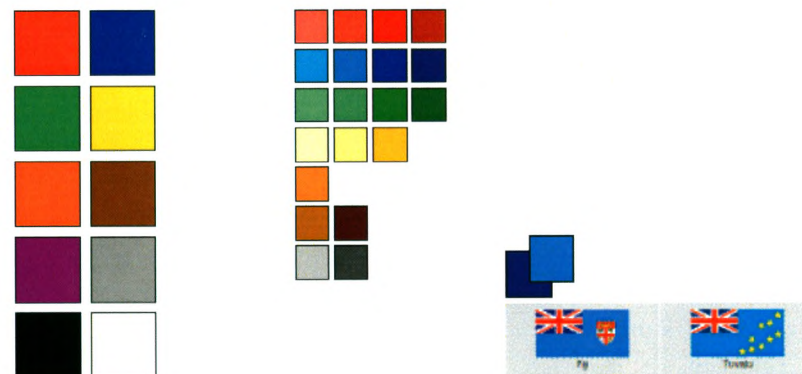
There is also a feature which enables the searcher to specify if he wants to see the flags that contain only selected colors, or selected colors and some other not included in the query.

Minor colors such as parts of coats-of-arms, almost invisible outlines etc. are omitted. However, these colors are linked to the devices.

EXAMPLE OF QUERY (2)

colors: **white, black, red and green only**

Results:

4. Devices

What are the devices featured on flags? Unlike heraldry, where blazoning can strictly describe the charges and parts of arms, the situation in vexillology is less organized. Therefore, categorization of devices is more complicated, but in some parts it is similar to heraldic blazoning. For every device, there are some basic parameters such as number of devices, color of device and parameter to select wether it is primary or secondary device. Color of device could be proper, the term taken from heraldry.
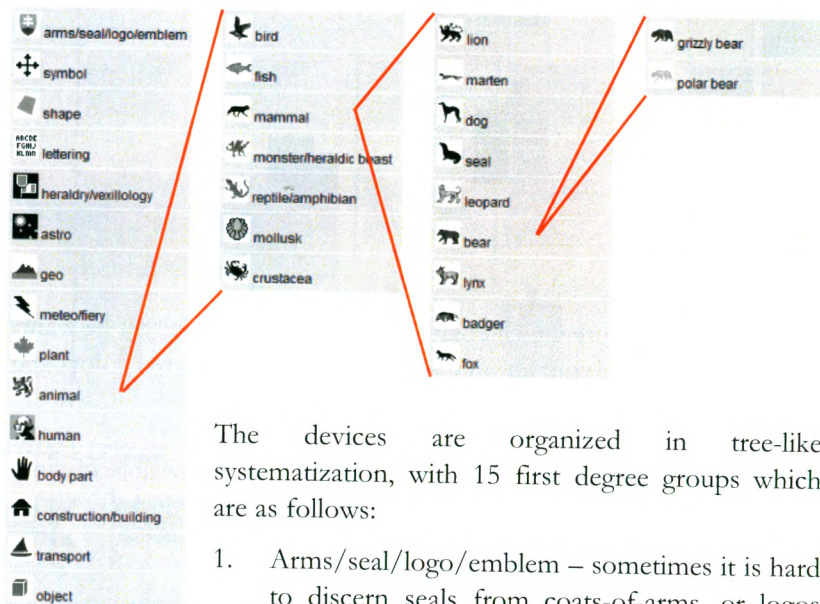
The devices are organized in tree-like systematization, with 15 first degree groups which are as follows:

1. Arms/seal/logo/emblem – sometimes it is hard to discern seals from coats-of-arms, or logos from emblems, however, in the second degree there are these four categories.

2. Symbol - common symbols such as cross, star or crescent are listed here, and the only criteria for a device to belong to this category is that it bears certain significance, unlike the devices listed within shapes category. However, other devices almost always bear certain significance and meaning, but this group is comprised only of symbols, which can not be grouped as beings, objects etc.

3. Shape - strictly geometrical meaning of shape, circle, quadrilateral, triangle, star polygon etc, with each of these having subcategories with sub-subcategories, e. g. star polygon is further divided into more specific categories regarding number of points.

4. Lettering – divided into two main terms, text/motto and script. The first one describes the type of the text (motto, date, toponym, monogram, letter), and the other one is about the alphabet concerned (latin, greek, cyrillic, arabic, hebrew, Kanji, Hiragana, Katakana)

5. Heraldry/vexillology – this category tries to encompass all heraldic terms and is usually used for description of the coat-of-arms as a part of the flag. Vexillological terms in this category are related to the fields of the flag, making additional description of them, covering terms such as main flag field vertical/horizontal or diagonal stripe, canton field, cross field etc.

6. Astro – celestial bodies and other astronomy features (sun, moon, star constellation)

7. Geo – geographic and geologic features such as map (subgroups globe and stylized map), mountain (subgroups mountain peak, volcano and hill), water (subgroups sea, lake, river, falls, wave), landscape, grassland, island, rock etc.

8. Meteo/fiery – meteorological and other physical terms: cloud, fire, ray, rainbow

9. Plant – Organized to answer to two questions – what is the kind of the plant and what part of the plant is shown. So the terms in the subgroups of this group could be leaf, wreath, branch, ear, tree, sheaf, flower, but also maple, oak, pine, fur, coffee, cactus, maize, rice, rose etc.

10. Animal – frequent on flags both as primary devices, and as parts of the coat-of-arms, divided according to zoological rules, with the addition of monster/heraldic beast.

11. Human – any human or humanoid being is listed under this group. This group is mainly organized according to occupation (farmer, soldier, miner), but also according to sex.

12. Body part – parts of human and animal bodies, frequently appearing on the coat-of-arms. Therefore, this group comprises head, arm, hand, leg, horn, feather, face...

13. Construction/building – this group comprises of man-made structures such as house, castle, tower, church, arch, mosque, windmill, dam, even some non-human made such as nest.

14. Transport– includes vehicles, vessels, aircraft and spacecraft.

15. Object – this group is the largest among subgroups and is comprised of different objects such as tools, weapons, crowns, regalia, wheels, keys, books etc. Under subgroup weapons, for example, one can find spear, arrow, shield, sword, sabre, bow, cannon etc.

EXAMPLE OF QUERY (1)

device: **animal > mammal > carnivora > bear**
number of devices: **any**
device color: **any**

Results:

Appenzell Ausserrhoden	Appenzell Innerrhoden	Bern/Berne	California	Missouri	Norilsk

EXAMPLE OF QUERY (2)

device: **shape > star polygon**
number of devices: **any**
device color: **white**
only as primary device

Results (part):

Madrid	Magdalena	Marshall Islands	Mellieħa	Mellieħa (former)	Micronesia
Mississippi	Missouri	Morocco - Merchant Flag (1937-1956)	Myanmar	NATO	Nauru
Nepal	Netherlands Antilles	Nevada	New Zealand - Civil Ensign	North Carolina	Northern Mariana Islands
Ohio	Pakistan	Papua New Guinea	Puerto Rico	Qrendi	Risaralda
Saint Kitts and Nevis	Samoa	Santander	Secretariat of the Pacific Community	Singapore	Solomon Islands

INTRODUCTION OF NON-GRAPHIC CHARACTERISTICS

In the course of time, the idea appeared that some new features should be introduced such as non graphic characteristics: usage, geography and history. This data provides numerous variations of queries, either combined with graphic characteristics or not.

5. Usage characteristics

Naturally, the first of these properties is good, old FIS (Flag Identification System), originally introduced by Mr. Whitney Smith, and then adopted by FIAV. Part of this system, well known as "grid of six" is applicable mainly for national flags, sometimes for sub-national flags, but not for other types of flags such as personal standards, signal flags, pennants, houseflags, ethnic flags etc. Because of that, FI introduces new, compatible, but more descriptive categorization suitable for querying certain usages.

It is organized into tree-like scheme, where the main distinction lies on some questions: what is the usage spread of flag, of flag questions which are more or less descriptive kind of FIS, as well as what is its genetic background.

Usage spread of flag deals with what kind of entity uses it. First degree of this flag property includes whether the flag is:

- international flag
- national flag
- sub-national flag - in second degree divided into specific administrative or regional units such as: state flag (states of USA, Australia, Malaysia, estados of Brazil, Venezuela or Bundesländer of Austria and Germany) and flags of province, canton, municipality, city etc.
- ethnic flag
- personal or rank flag - in second degree divided into more precise usage description such as: presidential flag, royal standard, prime minister flag, as well as rank flags divided into specific ranks for example: general flag, colonel flag, lieutenant flag, rear admiral flag

- organizational or institutional flag – in second degree divided into terms like: government institution, educational/science institution (in third degree divided into college, university, institute), trade union, political party, sport organization (in third degree divided into specific sports), vexillological organization etc.

- houseflag (shipping companies)

Second question, some kind of descriptive "grid of six" FIS, along with already existing answers whether the flag is used on the land and/or on the sea, and whether its usage is civil, governmental or military, also gives answers which have not been included in this system. Some specific forms of usage are:

- air force, civil air flag, national guard, military unit, police flag

EXAMPLE OF QUERY

usage: **national flag > navy**

Results:

Third question – so-called genetic background includes terms such as banner of arms, broad pennant, burgee, pincel, club pennant, command pennant, gonfalon, guidon, lance flag, masthead pennant etc.

6. Geographical background

Narrowing the query with specific geographic background of flags can make the results of search more precise. First degree division is by

continent. Second is regional, where official United Nations geo-scheme is used to divide continents by regions, and the third is by specific country.

EXAMPLE OF QUERY

- by continent   continent: **Australia and Oceania**
- by region   region: **Polynesia**
- by country

7. Historical background

Narrowing the search to a certain historical period also gives useful data. FI now covers partial data about flag adoption, legislation, approval etc. By choosing a certain period, the results could be obtained to show flags of that period. Also such a query could be set up to give the answer to the question of use of certain flags before or after a particular year.

Dates: adopted or in use: **in 2004 or after**
- adoption
- approval
- legislation
- abandonment

Combined queries

Combined queries are composed of several, or all types of characteristic mentioned above. They can render interesting results.

COLORS
white, red and blue only

DEVICE
star polygon

GEOGRAPHY
North America

Results:

★

About the author

Ivan Sarajcic, born 1971. Interested in vexillology since childhood. BSc in geography at Belgrade University 1997. Member of FOTW since 1998. Member of Serbian Heraldry Society "White Eagle" since 1999. Author of Flag Identifier web site (www.flagid.org, online since 2003) and of Flags and Arms of Serbia web site (http://www.zastave-grbovi.com, online since 2007)
Main area of interest: regional and municipal flags, administrative divisions of countries.

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