

Similarity Judgement User Interfaces (package evalUI)

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Introduction

The `evalUI.SimilarityJudgement` servlet allows for collecting user judgements on the similarity of media objects (images or videos). Two different evaluation cases do exist. In the first scenario, the user has to decide from two randomly chosen media objects (from a user-selected directory on the server) whether or not these objects are similar. In the second case the user gets three media objects and has to decide whether the second or third media object is more similar to the first (reference) object. The user judgements in both application cases are stored in a text file at the server. All parameters, the directory of the media collection, the type of the media objects, the name of the output file and the application scenario are specified by parameters in the query string.

Installation

`evalUI` is a Java servlet. For installation simply copy the contents of package `evalUI` to the working folder of your application server (e.g. Tomcat) and compile the sources. `evalUI` is started through class `SimilarityJudgement` (see examples below).

Application

The servlet is controlled through get-parameters. The following parameters have to be specified:

<code>numberOfMedia</code>	"2" - are two media objects similar? (default) "3" - which of two media objects is more similar to the reference media object?
<code>directory</code>	specifies the directory of the server-side media library (example: "images/animals")
<code>file</code>	textfile that stores the results (example: "feedback/result.txt"; default: "default.txt")
<code>type</code>	"image" - media objects are images (default) "video" - media objects are videos

From the resulting file various types of ground truth data for VIR-system evaluation can be computed.

Examples

1. Query-String "`<server>/SimilarityJudgement?file=result.txt&directory=image`"

compares randomly chosen sequences of two images (default parameter) of the collection located in directory `image` and store results in `results.txt`.

The results-textfile may contain two types of entries:

```
images/im1.jpg images/im2.gif no
images/im1.jpg images/im2.gif yes
```

In the first case the user rated the two media objects as similar, in the second not.

2. Query-String "`<server>/SimilarityJudgement?file=videos/result.txt&directory=videos&numberOfMedia=3&type=video`"

compares three videos located in directory `videos` and store the results in file `videos/results.txt`.

The results-textfile may contain two types of entries:

<code>videos/test1.avi</code>	<code>videos/test2.mpg</code>	<code>videos/test3.avi</code>	0
<code>videos/test1.avi</code>	<code>videos/test2.mpg</code>	<code>videos/test3.avi</code>	1
<code>videos/test1.avi</code>	<code>videos/test2.mpg</code>	<code>videos/test3.avi</code>	2

Meaning of the entries:

"0": neither the second nor the third video are similar to the first one

"1": `test2.mpg` is more similar to `test1.avi` video than `test3.avi`

"2": `test3.avi` is more similar to `test1.avi` video than `test2.mpg`