# Face shape annotations for the RWTH-PHOENIX corpus

The archive contains face shape annotations – along with the corresponding images – for the seven signers who appear in the RWTH-PHOENIX corpus. The archive contains one directory per signer, each of which contains an “images” subdirectory and a “points” subdirectory. All image files are 300×260 **PNG** images. All face shape annotation files are **ASCII** files with the filename extension ”.pts”.

Download RWTH-PHOENIX face shape annotations here!

### Distribution of the annotated images among the signers

In total 369 images from the RWTH-PHOENIX corpus have been manually annotated with the face shape.

| Signer | # annotated images |
|---|---|
| Signer01 | 61 |
| Signer02 | 65 |
| Signer03 | 62 |
| Signer04 | 51 |
| Signer05 | 35 |
| Signer06 | 42 |
| Signer07 | 53 |

### Structure of a face shape annotation file (".pts" file)

For each image the face shape annotation consists of the ordered list of the positions of 38 facial landmarks. Each facial landmark – or face shape point – has two coordinates in the coordinate system originating at the top-left corner of the image, with the x-axis pointing right and the y-axis pointing down. The actual structure of a ”.pts” file is as follows:

```
version: 1
n_points: 38
{
  x_1  y_1
  x_2  y_2
  ...
  x_38 y_38
}
```

A possible interpretation of the shape points as face parts is as follows (using zero-based indexing in the list of points of a ”.pts” file):

| Shape point indices | Face part |
|---|---|
| 0-1-2 | upper part of the left eyebrow |
| 3-4-5 | upper part of the right eyebrow |

| | |
|---|---|
| 6-7-8-9 | eyelids of the left eye |
| 10-11-12-13 | eyelids of the right eye |
| 14-15 | nasal ridge |
| 16-17 | nasal base |
| 18-19-20-21-25-24 | upper lip |
| 18-23-22-21-26-27 | lower lip |
| 28-29-30-31-32-33-34-35-36-37 | cheeks and chin |

Note: The original images from the RWTH-PHOENIX corpus do not have square pixels and come in 210×260 image resolution. Therefore the annotated data provided here should be scaled appropriately if the goal is to use them to build models that are relevant to the entire corpus. Scaling both our images and our shape annotations by a factor 210/300 *in the horizontal direction only* (x-coordinates) will do the trick!

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