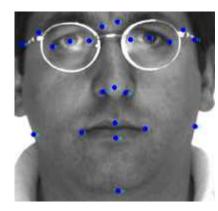# Manual Landmarking

To enable detailed testing and model building the AR face images have been manually labelled with 22 facial features on each face. The 22 points chosen are consistent across all images. The landmark scheme is shown below:-

Click on the image or [here](#)
to see a larger version of this image

It is intended that these marked up points will be used for a variety of purposes:-

- **Facial Feature Finding** - The markup provides ground truth to test automatic face and facial feature finding software.

- **Face Model Building** - Sophisticated object models, such as the Active Appearance Model approach require manually labelled data, with consistent corresponding points as training data.

- **Face Recognition/Verification** - The marked up points could be used to test face recognition or verification performance, when the exact location of the face and features are known (i.e. removing the registration error)

Points Data

Currently the 22 point markup is currently available for expressions 01,02,03,05. We are currently working on the markup for other expressions. This data is zipped up into the following file :-

[ar_face_22pt_markup.zip](#)

The filenames of the AR face images have the following format:-

X-Y-Z.raw

Here:-

- X= m or w depending whether the subject is male/female
- Y= person id
- Z= expression id

The image files and point files have corresponding names. e.g. "m-016-06.raw" has points in file "m-016-06.pts"

The points file format is as follows:-

```
version: 1          (This points file version no. can be ignored)
n_points: 22        (The number of labelled points on the image)
{
```

```
xxxx  yyyy
.....
}
```

For each point xxxx is the x co-ord starting from the top-left corner and yyyy is the y co-ord similarly starting from the top-left corner of the image.

All points files contain 22 points with each point representing a specific point on the face (see diagram above).