

# Guidelines for Editing Detection Chains and Labelling Individuals

## 1 Human Interaction for Merging Detection Chains and Performing Recognition

This stage of the process involves manual intervention. Human edits must be:

- Encoded in a strictly defined format (detailed below).
- Stored in a plain text file located in the same folder as the input videos.

### 1.1 Purpose of the Edition File

The edition file is designed to fulfil three main objectives:

- To merge selected chains of detections.
- To correct identity switches
- To assign individual chimpanzees their actual names (when identifiable), rather than default numerical IDs. If no name can be confidently assigned, a default label of the form UNK\_X will be used.

## 2 Edition File Format (chain of detections merging and individual labellisation)

- Identifiers of detection chains to be merged must be written on the *same* line.
- Chains of detections that are to remain unmerged must each appear on a *separate* line.
- Chains that should be discarded must **not** appear in the file at all.
- If a name is to be assigned to one or more chains, it must precede the identifiers and be separated from them by a colon followed by a space: Name: ID1 ID2 ... .

## 2.1 Example 1

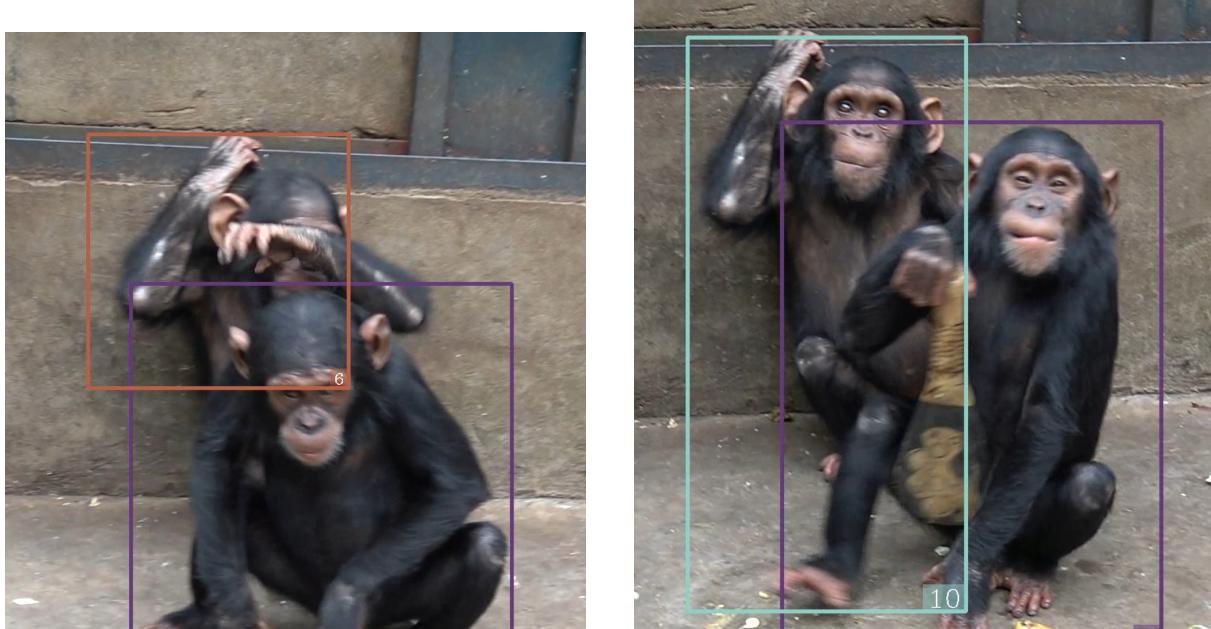


Figure 1: Example: the same individual appears in detection chains 6 and 10.

To merge these chains:

6 10

If the individual is identified as **Muke**, the corresponding line becomes:

**Muke**: 6 10

## 2.2 Example 2

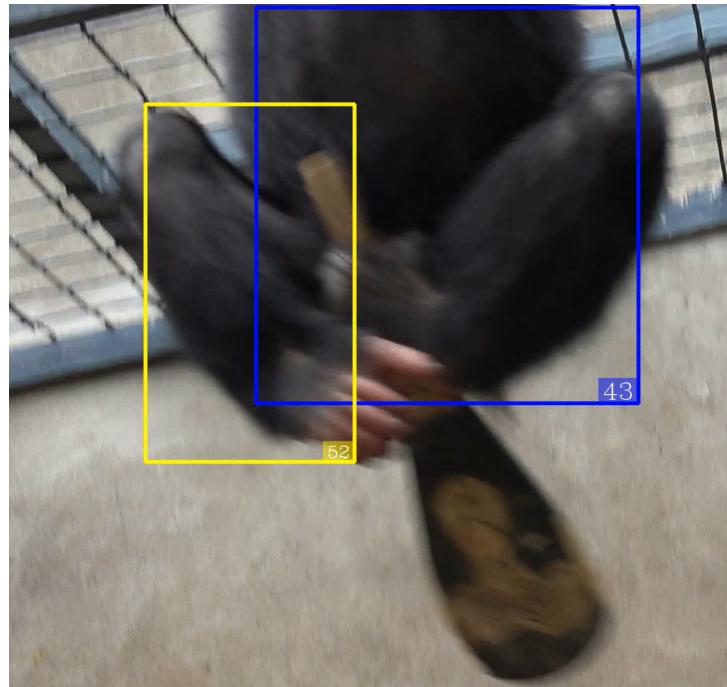


Figure 2: Example: remove box 52 and retain box 43.

In this case, the edition file must **not** mention 52. To retain 43 without merging:

43

### 2.3 Example 3

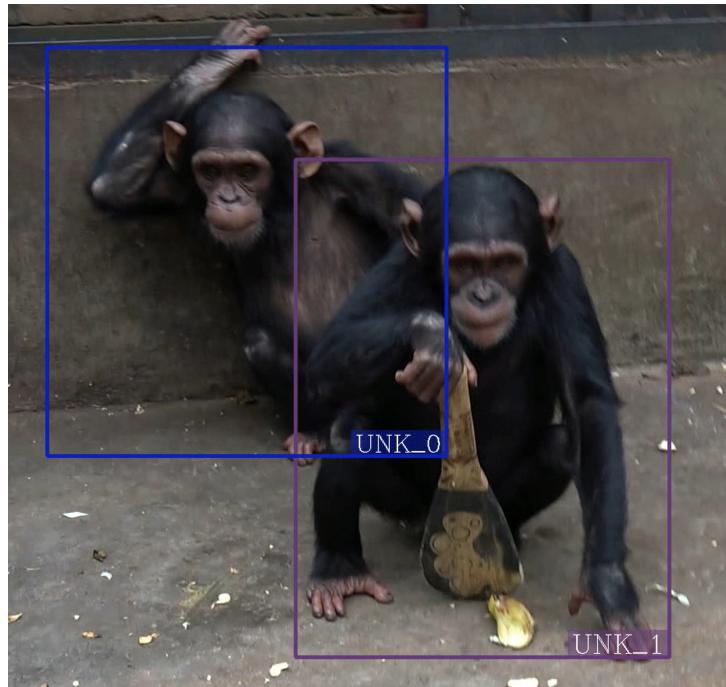


Figure 3: Example: unidentified individuals. UNK\_X is used by default.

Even if individuals cannot be recognised, chains can still be merged. A default label (e.g., UNK\_1) will then be automatically assigned.

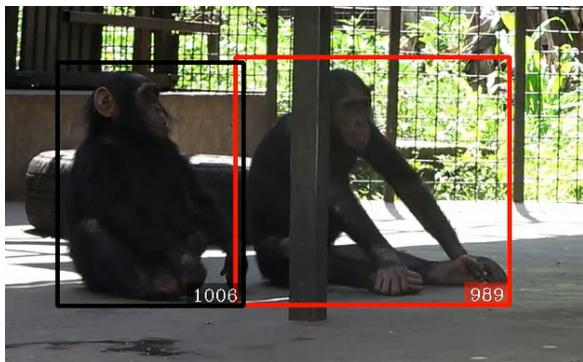
### 3 Identity switch correction

An identity switch occurs when one individual somehow steals the label of another one which by default inherits from the initial label of the first individual.

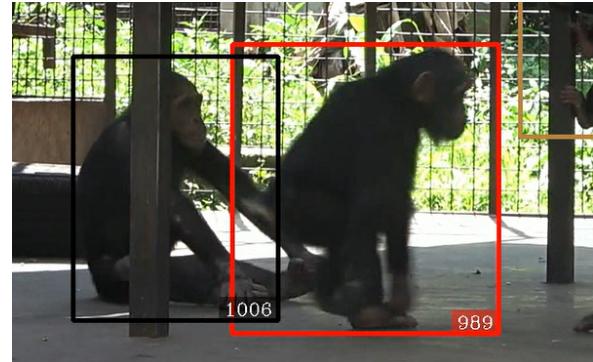
The syntax to correct an identity switch that occurred at frame 56 between individual 12 and individual 28 is the following:

SWAP: 56 12 28

### 3.1 Example 4



(a) Identity assignment before the identity switch.



(b) Identity assignment after the identity switch.

Figure 4: Illustration of the identity switch problem.

Assuming this identity switch occurred between frame 463 and frame 464, the correct line of code to fix it in the correction file would be the following:

SWAP: 464 1006 989

or

SWAP: 464 989 1006

### 3.2 Example 4



Given the same information than in the previous example, if we want to labellise the chimpanzee with the following names:

- **Initial ID:** 1006 → **Final name:** Muke
- **Initial ID:** 989 → **Final name:** Penda

One possible content of the edition file to reach this result would be the following:

Muke: 1006

Penda: 989

SWAP: 464 1006 989