

Team-Marking Manual

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Team-Marking allows to compare the output of a group of team members who specify objects in a single image via Weibel markings.

Typically, a 'moderator' sends to each member a) the 'source image' to be analysed and b) an ObjectJ **.ojj** project file as prepared for this task.

Each member then marks objects in the source image and sends the resulting **.ojj** file back to the moderator. Later, the team can discuss the results in a group meeting and make use of the following features:

- Populate the source image with colour-coded user-IDs
- Show a cluster of user IDs in enlarged 'Focus' window
- Browse through output of team members
- Show 'Visited Islands' as white contours (clouds)

A. Marking

- team members start with identical **.ojj** project files
- in this test phase, they link and analyse a single source image.
- In our test, we have ca. 14 team members (Arie, Anders, Merete...), who all mark the same image. This results in 14 **.ojj** files containing the individual judgements.

B. Build observer pattern 'Team.tif'

Before the collective marking can be compared, the 'moderator' performs the following steps:

1. The names of the **.ojj** project files should contain 3 underscores and contain ID and observer name as follows:
ID: single character between 2nd and 3rd underscore
name: part between last underscore and **.ojj** extension.
Example: `Weibel_xxx_b_Bob.ojj`
2. Put the source image and all '**.ojj**' files into same folder (here, we call it "Pool1" folder)
3. Open one of them (e.g. `Weibel_xxx_b_Bob.ojj`)
4. Open the ImageJ macro file (currently 'TeamMacro_1j.txt')
5. Install it via menu **Macros> Install Macros**

note A: this is a normal (non-embedded) macro which can install different .ojj project files

note B: before installation, an .ojj project must be open

note C: grid constant (e.g. Zvalue = 165) must be same as in .ojj file

6. Choose **Macros>Create Team.tif**

This creates **Team.tif**, a stack with one slice per observer. Observer names appear as metadata user IDs (e.g. 'b'). Via macro you can decide to toggle back to whole name 'b_Bob'. Team.tif is an 8-bit stack with custom LUT.

A JavaScript will be created (and shown in the Log window if Caps Lock was down)

The script periodically calls macro "Populate Team.tif" which paints colored spots into the corresponding "observer" slices. The used colors correspond to "item colors" in the .ojj project. Values (8-bit integer) correspond to the 'Code' field in the member's .ojj project results

7. Team.tif is automatically saved in the Pool folder.

Steps A and B as described above need only to be performed once. Whenever you want to start a meeting later, start at C.

C. Before Starting the Session

The moderator performs the following steps:

- Open one of the 14 .ojj projects in folder Pool1 (which also contains Team.tif and the source image)
- If not done yet, Load and install **TeamMacro-xx.txt** (it is a normal = non-embedded macro). In the ImageJ tools, now a blue magnifier tool marked with **F** should appear.
- Choose **ObjectJ>Project>Close Project** (From now on, ObjectJ is not active anymore)
- Choose **Macros>Add User-IDs as Overlay** Opens the source image and adds the observers' code letters
- Optionally, choose **Macros>Show/Hide User Names** Shows either full name or only single character in the label field of Teams.tif

D. Session with all team members

- Browse through the slices of "Team.tif" and observe individual patterns with name or code as slice label
- optionally select the blue Focus (**F**) tool and click on a cell, either in the source image, or in Teams.tif. This will create a square focus window for enlarged view (always occupying the left half of the screen).
- choose Show/Hide Visited Islands[o] to show an outline of visited islands

