protocols.io

# Microscope video recording

Daniel Vaulot[1]

[1]Station Biologique, Roscoff, France

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Working

Ecology of Marine Plankton (ECOMAP) team - Roscoff    Roscoff Culture Collection

Daniel Vaulot
Station Biologique, Roscoff, France

ABSTRACT

Protocol to record videos on SBR Microscope

GUIDELINES

**Equipment needed**

**Hardware**

- Inverted microscope IX-70 or IX-71
- Connecting tube between Microscope and C-mount
- Infinity X Camera (acquired in 2016)
- Infinity 3-6 UR (acquired in 2018)



**Softwares**

- Image Capture software
- Video de Luxe sotware

BEFORE STARTING

- Connect camera to microscope using C-mount connector
- Install Image Capture software on PC
- Connect USB cableto PC



**First steps**

1
- Prepare your sample
  - Cultures flask
  - Drop between slide and coverslip and invert the slide so that the objective is on side of coverslip
- Use x 40 objective for most cultures and x20 for dinoflagellates
- Install and start Infinity Capture software

Acquisition with Infinity Capture

2   Advantage : Very easy to do
    Disadvantage : Files are store as avi and are very very large...

3   - Infinity X - Full resolution **1920x1080** (16:9) - Note : very large AVI files ! 30 sec = 700 Mo
    - Infinity 3UR-6 - Full resolution **2752 x 2192**
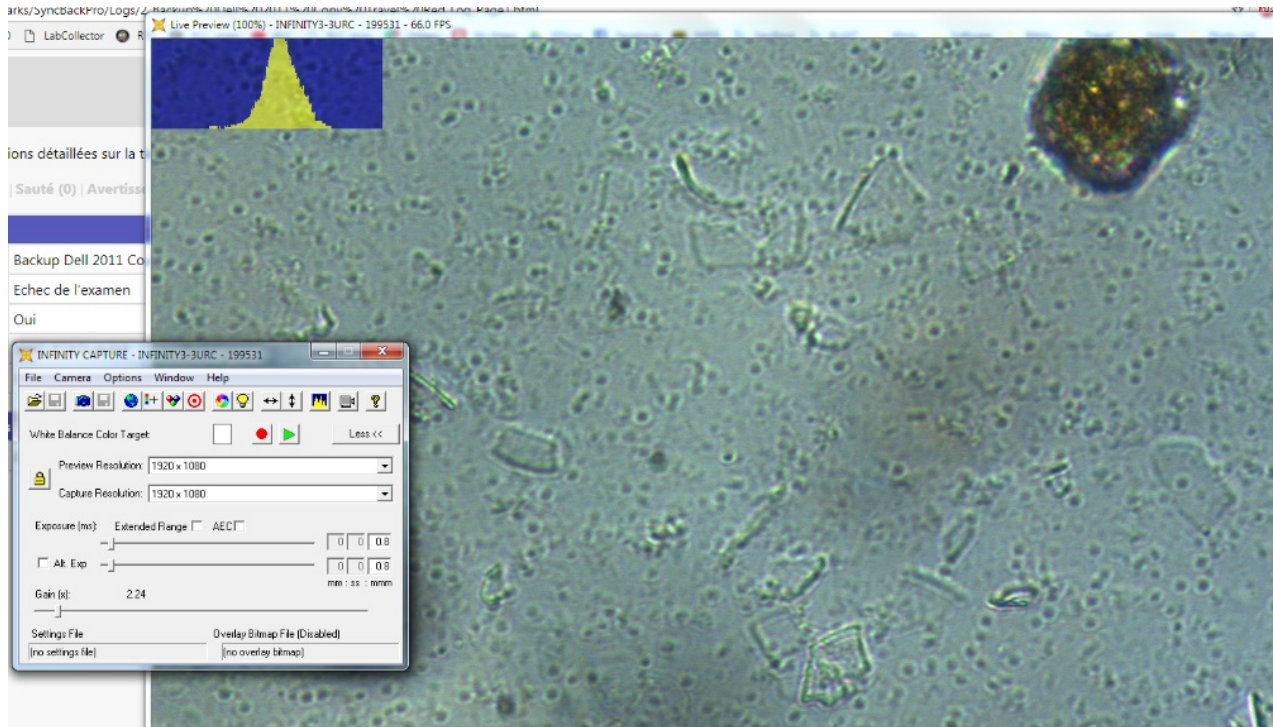


4   - Infinity X - **800x608** (4:3) resolution for color videos - Note that only part of the field is visible but files are smaller than with full resolution
    - Infinity 3-6 UR **1024x768** ou **1600x1200**
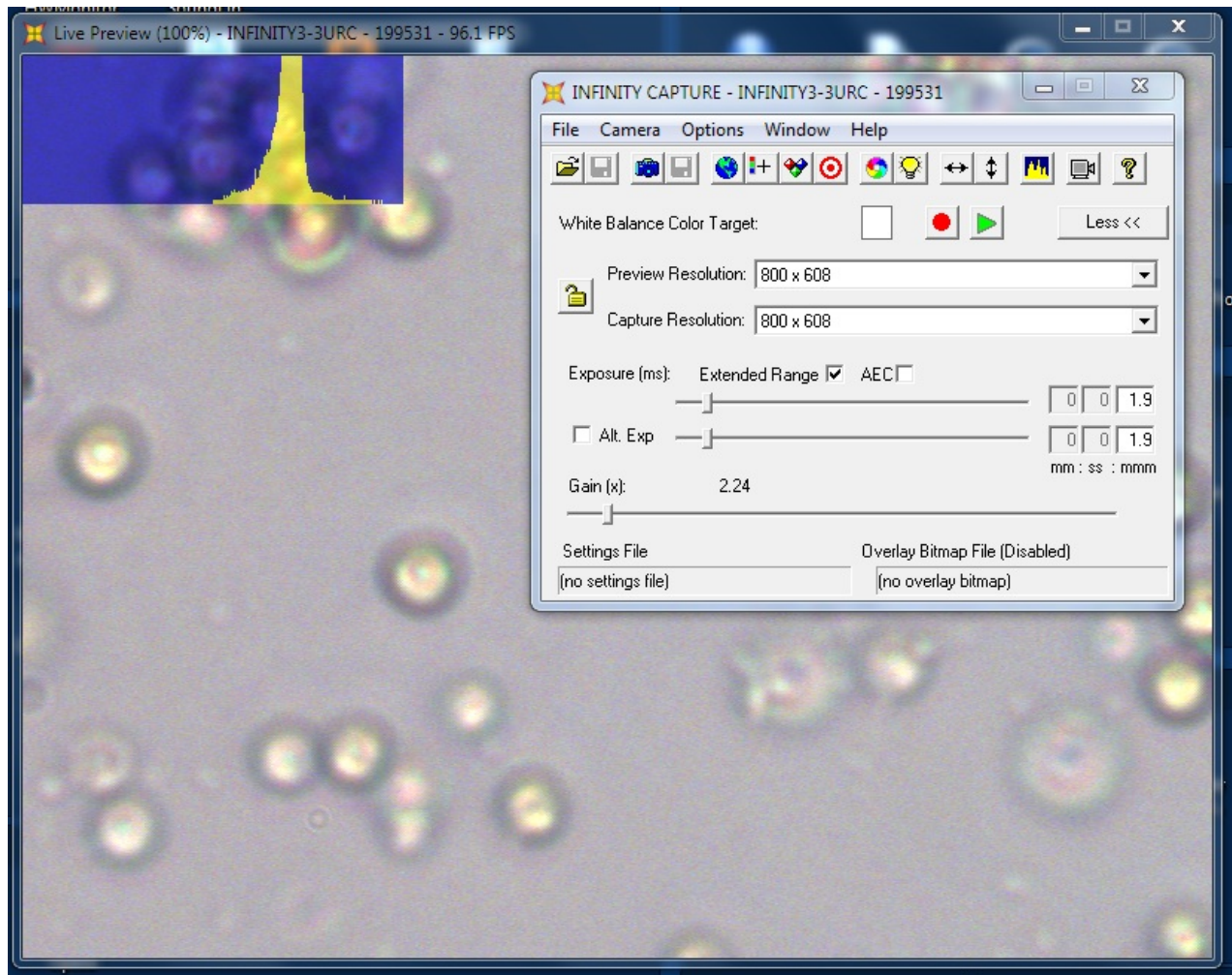
5   ■ Use 960x728 (**4:3**) resolution (binning) for BW videos - Note that the full field is visible

  ■
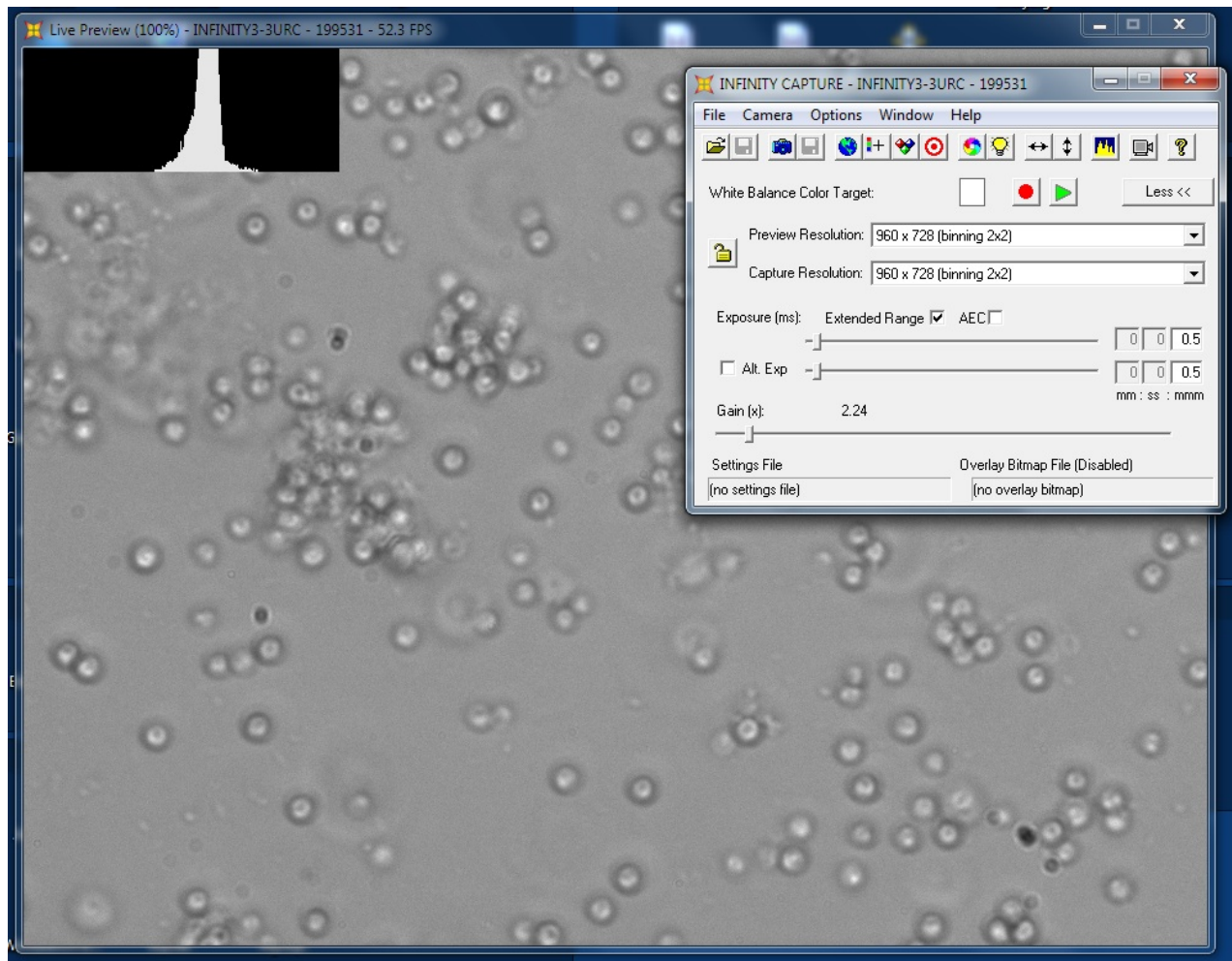
6    ▪ Modify the AVI setups
     ▪ Launch acquisition (usually only 10-20 sec at a time)



Acquisition with Video de Luxe

Acquisition with Video de Luxe
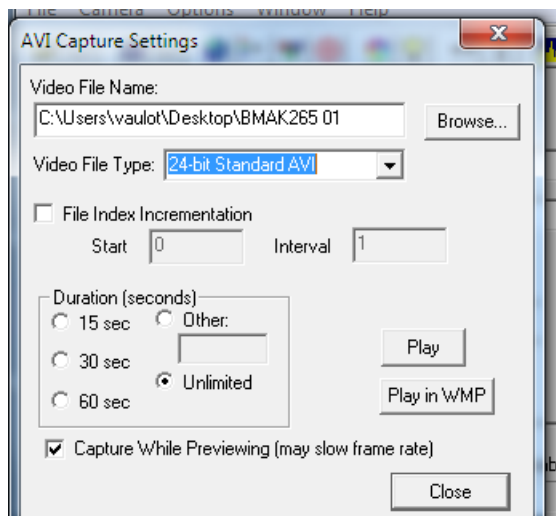
7
- Need to buy the software (40 euros only)
- Advantage : Much smaller files and the software allow to finalize the films

8
- Setup the resolution in Image Capture
- Shut donw Image Capture
- Launch Video de Luxe
- Select in menu : Video Recording (Enregistrement video)
- Slect the USB Camera - DShow (see next step)

9
- Infinity X - Full resolution **1920x1080** (16:9)
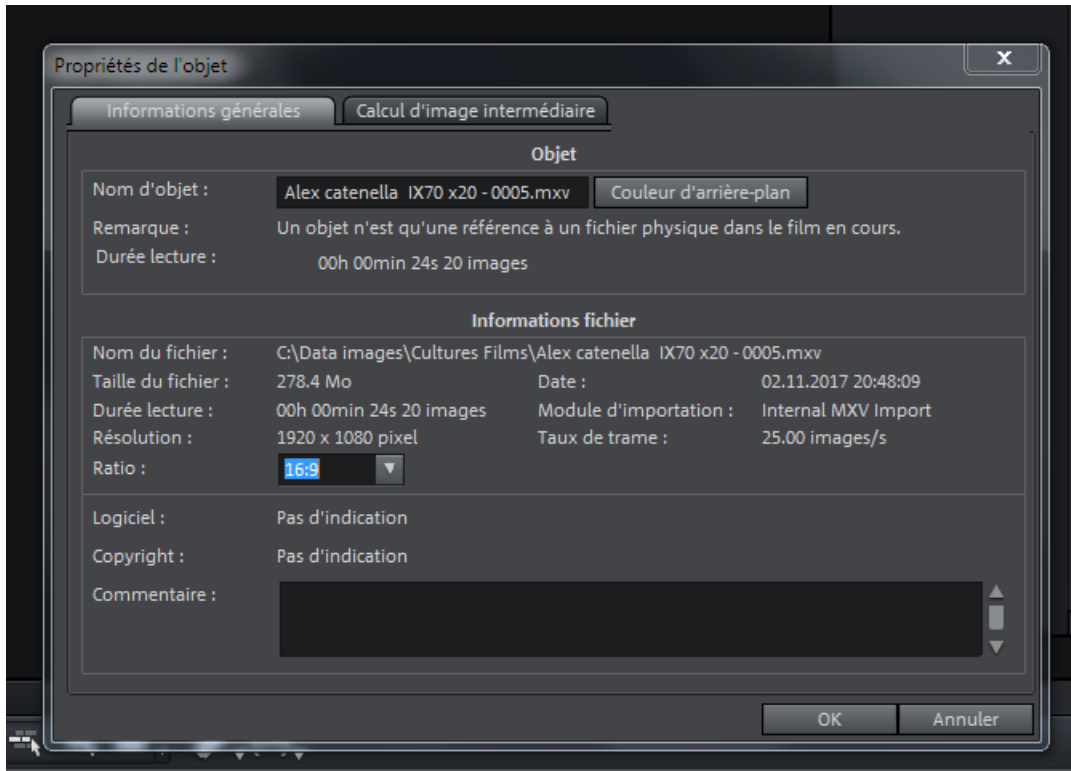


10
- **1280x720** (16:9) for selecting only center of camera field

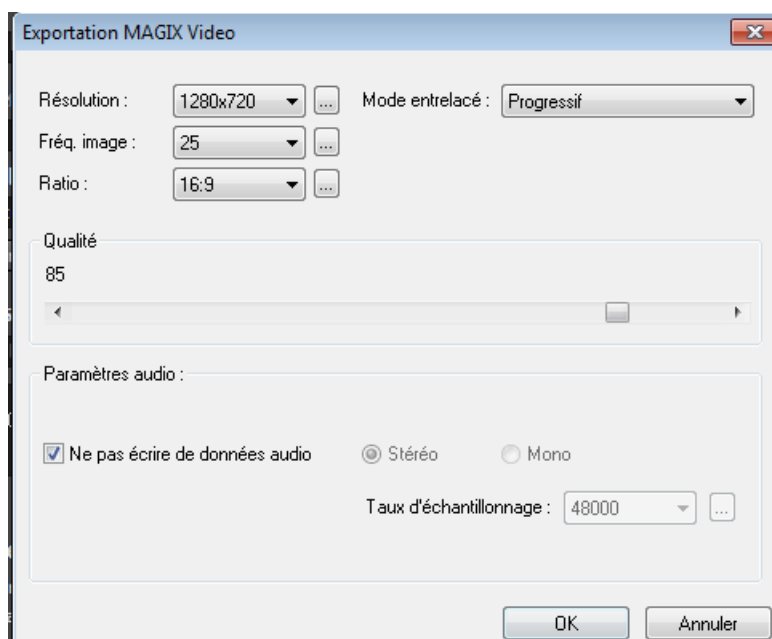**Enregistrement vidéo**

**1  Pilote vidéo :**
Lt USB 3.0 Camera (USB - DShow)

**Entrée :**
− +

**Pilote audio :**
Aucun enregistrement

**2  Enregistrer fichier vidéo :**
Alex catenatum  IX70 x20 - 0007

**Enregistrer dans le dossier suivant :**
C:\Data images\Cultures Films

Édition après l'enregistrement...

**3  Qualité d'enregistrement :**
MXV: qualité HDTV          Configuration...

MXV Export:
Video: 1280x720; 25.00 Frames/s

Plus...

**4  Commande de l'enregistrement :**
Enregistrement programmé :                 Enregistrement :
☐ Actif   Démarrage :  20:45:01
☐ Limite de temps :        min.

Instantané !

Réglage...
G :  ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬  -60 dB
D :  ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬  -60 dB
Attention : le niveau audio est trop faible (niveau max. < -20 dB)

**Informations d'enregistrement :**
Durée d'enregistrement :  0hr: 0min: 45sec        Aperçu :
Espace disponible sur le disque dur :  31.821 MB
Charge moyenne du disque dur :  0 %                ☑ Vidéo
Enregistrement audio :  0 MB
Capture vidéo :  234 MB                            ☐ Audio
Frames :  1.342 / 0 saut d'ima.        UC : 36.4 %

OK        Annuler

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**11**  Set up configuration as follows (item 3 in previous step)
- **Infinity X** - Resolution 1280 x720
- **Infinity 3-6UR** - Resolution 1024x768 (4:3)
- Ratio 16:9



**Exportation MAGIX Video**

Résolution :  1280x720  ...        Mode entrelacé :  Progressif
Fréq. image :  25  ...
Ratio :  16:9  ...

Qualité
85

Paramètres audio :

☑ Ne pas écrire de données audio    ◉ Stéréo    ○ Mono
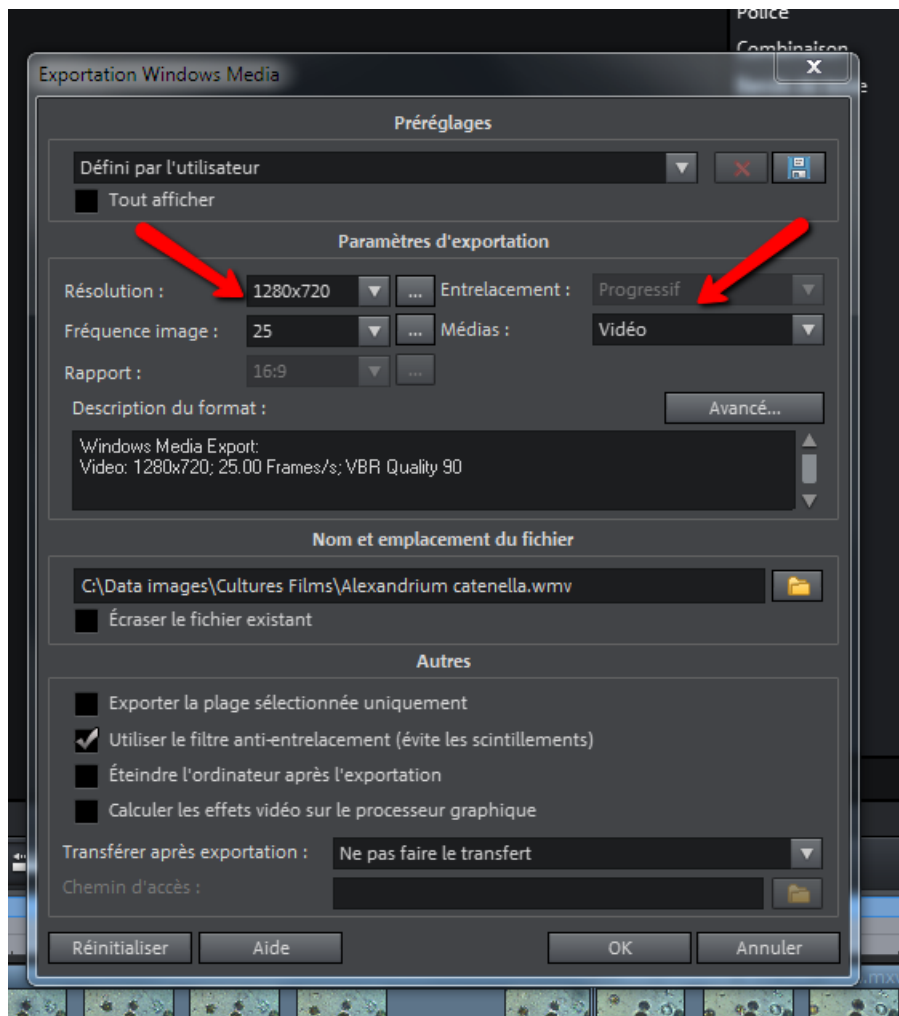
Taux d'échantillonnage :  48000  ...

OK        Annuler

12
- Create a new movie
- Select the parts you want to add
- Cut the scenes
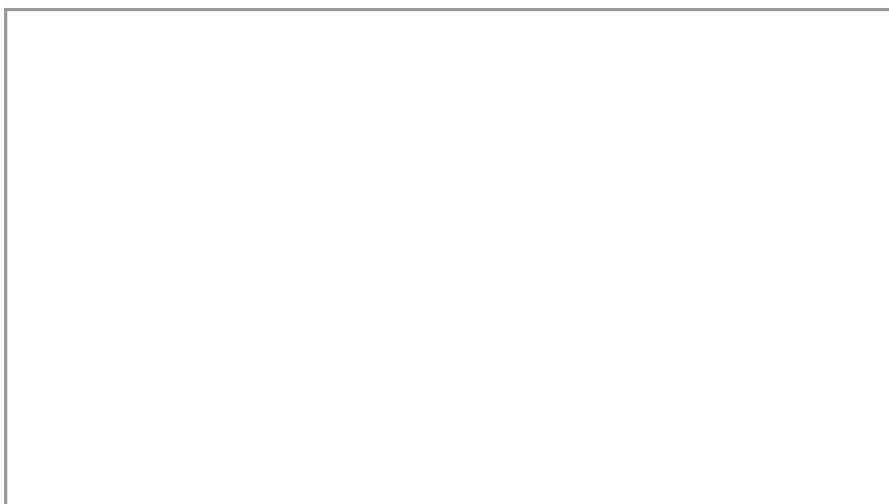- Optimum duration is 20-30 sec max



13
- Add titles and logos



14
- Export to wmv format (Windows Movie - this is the most compact format without loss of resolution)
- Choose a format with same aspect ratio than original
- Do not add sound unless you want to add music
- For 16:9 : 640 x 360 or 1280 x 720
- For 4:3 : 640 x480

Upload to YouTube

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