

South Florida/Caribbean Network

National Park Service
Inventory and Monitoring Division



Standard Operating Procedure CR10

Video and Image Transfer and Capture—Version 2.1

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Summary

Upon returning from the field and completion of recording on a SD card, the card needs to be logged in, over-write protected, and files need to be transferred from the card to the server or workstation. Adjacent non-overlapping images are captured and run through an Adobe Photoshop script for dotting. This SOP describes the process for capturing the images.

Revision Log

Revision Date	Author	Changes Made	Reason for Change	New Version #
2015	Jeff Miller	Detailed SOP written with current technology and software used.	Only minor changes occurred before this date based upon technology. Tied to I & M 2.0 version of protocol.	2.0
2020	Jeff Miller Judd Patterson	SOP name changed from 10 to CR10. Updated to reflect using SD cards for media storage instead of digital tape. Cataloging is no longer needed. Added steps to use VLC to play video. Removed instructions for Adobe Premiere and Blu-ray disks. Added steps to transfer images from iPad to computer.	Renamed according to regional guidance. Reflect changes to updated video camera and media storage. Reflect change in available software. Reflect changes to updated photography equipment.	2.1

Transfer the video to computer/servers

As the video files are written to a SD card, the movies can be played from the card or from their location on the server:

X:\SFCN\Vital_Signs\Marine_Benthic_communities\CoralMonitoring\videos

Data management will archive videos off-server to the external Synology network attached storage device (i.e., \\inpsfcn18800nas\SFCN_Synology\SFCN_VitalSigns_CoralMonitoring\video\) for long-term storage (See SOP CR22 *File Storage and Archiving—Version 2.1* (SFCN 2025a)).

Capture individual images for dotting using VLC

Objective

Play the HD Video in VLC and capture individual still images, saving/exporting them to a file on your hard drive. The analyst should seek a two-monitor workspace where the VLC player window is run on the primary monitor, and Windows Explorer file structure is displayed on the secondary monitor. Within that Explorer window in the secondary monitor, the image on the screen should display 1: location of the captured images (relatively small proportion of the screen), 2: the name of the image being captured (relatively small proportion of the screen), and c: the preview of the image being capture (largest possible view on that screen; Figure 1). This procedure is based on using the Windows 10 Operating System; some settings may change without notice due to operating system upgrades.

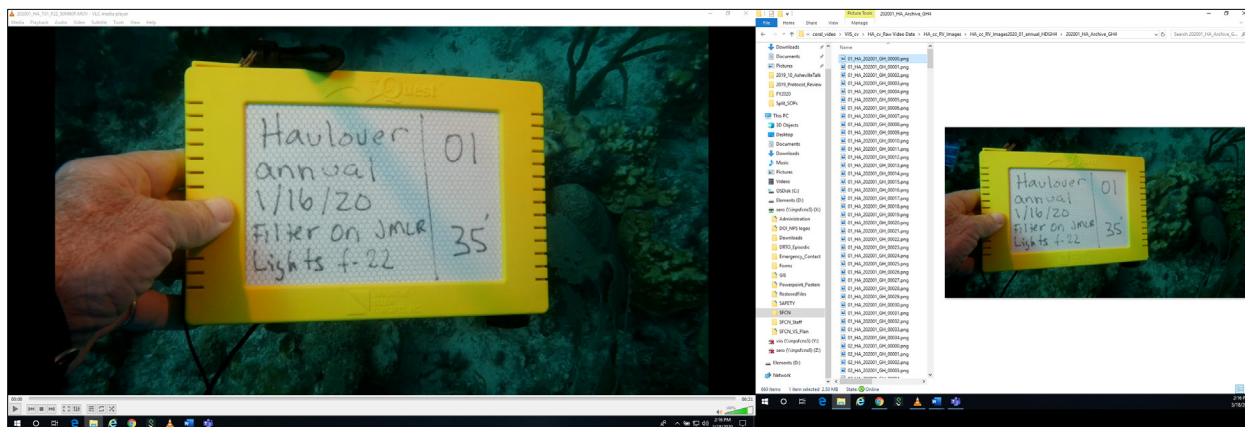


Figure 1. Screen capture of two-monitor workspace. VLC movie player is shown on primary monitor. Windows Explorer file structure shown in three panels on secondary monitor.

Procedures

A transect is made up of (a) Introduction, (b) Transect, and (c) Swimback. These are usually filmed in five minutes. It can take up to 10 minutes to capture, name, and save the video of a transect.

1. Open Windows Explorer on the secondary monitor.

2. Browse to the location where you are going to save/export the still images (e.g.: in the site folders within the “coral_video/images” folder).
3. Under drop-down menu “View” select “Details.”
4. On the upper right of the Windows Explorer screen, under the Search bar space panel, click the icon for “Show the preview pane.”
5. Adjust the sizes of the three columns/panes open in the secondary monitor such that the image storage location and the name of the image occupy approximately one-third of the total window space. The preview pane should occupy two-thirds of the screen, allowing for depiction of features within the captured image. This will assist in the accurate capture of images from the video playing the VLC movie on the primary monitor.
6. Open VLC, Tools, Preferences (keys Ctrl+P) and select the Video header.
 - a. Check the Video snapshots for an accurate directory location.
 - b. Enter the prefix (name) for the images you are going to capture.
 - i. Naming Convention: ##_YZ_YYYYMM_GH_XX.bmp.
 - ii. ## = two digits for transect number: 01, 02, ...20.
 - iii. YZ – two letter site abbreviation (or three letter, WSG, BKN).
 - iv. YYYYMM – four digits for year, two digits for month.
 - v. GH – Denotes the brand of camera used
 - vi. Place an “underscore ()” after the GH so there is an underscore in the name prior to the numerical sequence that is generated.
 - vii. XX – sequential frame number. 00 is the captured image of the slate.
 - c. Keep a check in the box for sequential numbering.
 - d. Format: choose **png** from the dropdown list.
 - e. Choose SAVE from the bottom of the Preferences dialog box.
7. Open and play the video to capture and number the slate describing the transect information.
 - a. Select Media, Open File (Ctrl + O). Browse to the location of the video.
 - b. Play the video until the slate describing the transect is on the screen; then press the spacebar or the pause button on the VLC window.

- c. Press Shift-s, to take a “snapshot” or capture the image of the screen. By default, it will be stored in the directory location you set in the preferences in Step 6a above. It will be named with the prefix you defined above followed by the number 00001.
 - d. Go into MS explorer and change the slate image name to end in the number 00000. This will allow the first non-slate image that is captured and analyzed to be named image 00001.
 - e. Close VLC. It is necessary to do this so the sequential counter re-sets and the next image that you capture will be named with the prefix you defined (and saved) followed by the number 00001.
 - f. Open VLC. It isn’t necessary to change the prefix until you work on another transect. You are now ready to capture the adjacent non-overlapping images along the entire transect. The first frame capture is taken when the Origin Pin (or 0m on transect tape) is at the bottom of the screen. Continue capturing adjacent, non-overlapping images until the 10m mark.
8. If at any time in the capture process, you need to delete an image and recapture another, the naming sequence needs to be reset. To do this:
 - a. Look at the time code to the left of the progress bar on the VLC window. That will tell you how far along in the video you are, so it will be easy to go back to that location.
 - b. Close VLC.
 - c. In MS explorer, browse to the image you need to delete, select the image file and press delete.
 - d. Reopen VLC playing the video you are capturing. Put the mouse cursor along the progress bar and you will see the time code of your mouse cursor as it moves along the progress bar. Go to the time code where you left off prior to closing VLC.
 - e. Begin the capture process again. By closing VLC in step b, and deleting the image, you’ve removed the errant file name and sequential number. When reopening VLC, it will default to the next available number in the naming sequence, thus continuing the non-interrupted, accurate file naming and numbering process necessary for accurate data analysis and synchronization with data entry into the IRMA data portal.
9. When using VLC there are “hot keys” that can assist with playing and moving the video. They can be found in the Preferences (Ctrl + P), HotKeys header. A few are listed below.
 - a. Take a video snapshot = Shift = s
 - b. Pause the video = spacebar; hitting pause again, plays the video.

- c. Advance one frame = e
- d. Very short backwards jump = Shift Left
- e. Very short forward jump = Shift Right
- f. Short backwards jump = Alt left
- g. Short forwards jump = Alt right
- h. Medium backwards jump = Ctrl left
- i. Medium forwards jump = Ctrl right

Transferring Images from iPad to a Computer

Objective

The iPad in the iDive is used for data collection (see SOP *CR24 iPad Preparation, Data Entry, and Download—Version 1.0* (SFCN 2025b)). The camera feature can also be used as a normal camera to document observations or memorialize events during the work. The following steps describe how to transfer the images from the iPad to an office computer.

Procedures

1. Connect the iPad to the PC with the lightning-USB (charge) cable.
2. If needed, unlock your iPad using your passcode.
3. If you see a prompt on the iPad asking whether you “Trust this Computer”, tap **Trust** or **Allow**.
4. On the computer, select the Photos application from the “start” button (lower left Windows 10 icon). This will open the Photos app.
5. Click the Import icon located in the upper right corner of the Photos app. If you see a prompt to browse to a file location or connect to a USB device, select the USB. This will open a pop-up window and display images.
6. Select the photos you want to import. When you’re done, tap Continue.
7. A dialog box will open allowing you to choose where to save the photos. There is also an option to delete the imported photos from the iPad after importing.
8. Click Import.
9. The images are imported to the VI/FL server:
X:\SFCN\Vital_Signs\Marine_benthic_communities\CoralMonitoring\images

Literature Cited

South Florida/Caribbean Network (SFCN). 2025a. File Storage and Archiving—Version 2.1. South Florida/Caribbean Network Standard Operating Procedure NPS/SFCN/SOP—CR22. South Florida/Caribbean Network, Palmetto Bay, Florida. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2309557> (last accessed April 2025).

South Florida/Caribbean Network (SFCN). 2025b. iPad Preparation, Data Entry, and Download—Version 1.0. South Florida/Caribbean Network Standard Operating Procedure NPS/SFCN/SOP—CR24. South Florida/Caribbean Network, Palmetto Bay, Florida. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2309559> (last accessed April 2025).