

GoPro “Judge” Video Playback and Judging

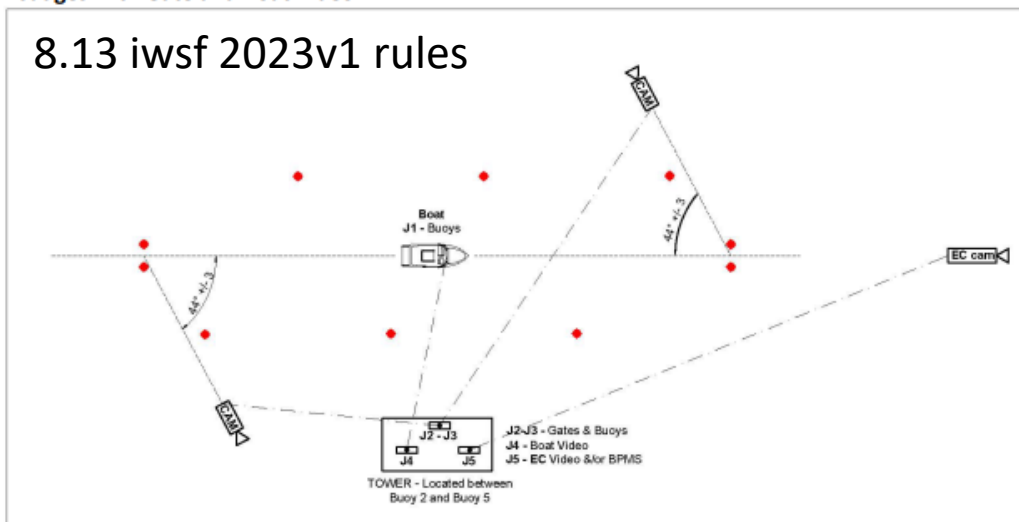
George Canepa

8/22/23

Expectations

- By rule: Observe every pass and flag if there is an issue for further analysis (with chief judge or other judges) even if all other judges agree
- By rule: If the other three judges do not agree, that pass should be reviewed in detail
- Proposed expectation: Every 39+ off pass should get a frame by frame review at every buoy to ensure skier really made the pass (many cases where the skier 'faked it', and almost got away with it)

d) 4 Judges with Gate and Boat Video



When boat video is used, the boat video will be monitored on the tower by another Judge who will advise the Chief Judge if he disagrees with the event Judges decision. In which case the Chief Judge and the review Judge will again review the video file to determine which score is correct.

If they both agree on a score, that will be the given score. If they disagree or agree that the video does not clearly overrule the score given by the Judges, then that score will stand.

If no other Judges are available the Chief Judge may act as boat video review Judge, and if he disagrees with the Event Judge's decision, he will ask the Judges to look at the video and the final score will be decided on by simple majority.

In the case where another Judge or Chief Judge is not available (as stated above), and the boat video is available for immediate playback at the shore Judge's tower, the 2 shore Judges will re-review the boat video to determine the final score when the Boat Judge score was different from the 2 shore Judges, or if they deem it is necessary to decide the final score.

e) 4 Judges with Gate and Boat Video – Exceptional Circumstances

In circumstances where:

- 1) The installation of a tower on the opposite shore is not feasible and
 - 2) A good quality boat video is not available or cannot be transmitted to shore due to technical issues.
- Then if the Boat Judge's score was different from the 2 shore Judges, or if they deem it is necessary to decide the final score, the Chief Judge or designee shall review the recorded video from the boat camera. The Chief Judge and the Homologator must agree on the exception, and the reasons for it must be reported on the Homologation Notice.

Careful trusting what you think you see live

To conclude, eyewitness testimony is very powerful and convincing to jurors, even though it is not particularly reliable. Identification errors occur, and these errors can lead to people being falsely accused and even convicted. Likewise, eyewitness memory can be corrupted by leading questions, misinterpretations of events, conversations with co-witnesses, and their own expectations for what should have happened. People can even come to remember whole events that never occurred.

<https://openpress.usask.ca/introductiontopsychology/chapter/eyewitness-testimony-and-memory-biases/>

Correct call may require a decision based on a 1/30th of a second observation

YOU NEED TO SEE IT IN THE VIDEO

Think about perspective



- Magnifier is centered on the buoy. Camera is on the pylon, in line with rope, a line ~parallel to the rope gives perspective to buoy
- If there is water all around the buoy, and the ski has not crossed the perspective line, or a part of ski is clearly blocked by the buoy, you don't know if the ski is behind the buoy
- In this case there is not enough information to conclude ski is outside the buoy, need to look at the next frame

Think about perspective



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“Linear” /standard GoPro lens

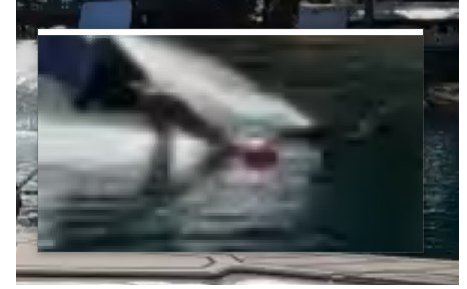
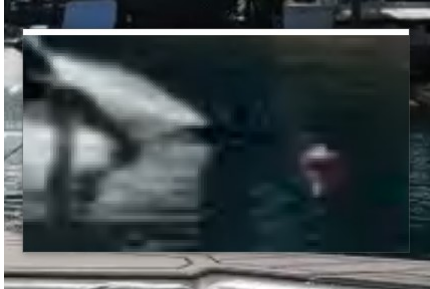


- Straight is not always straight
 - Picture taken with “Disabled” buoys, and Shore reference which are all in line

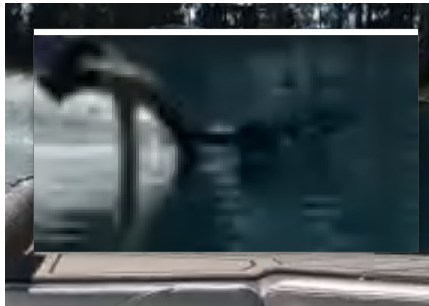
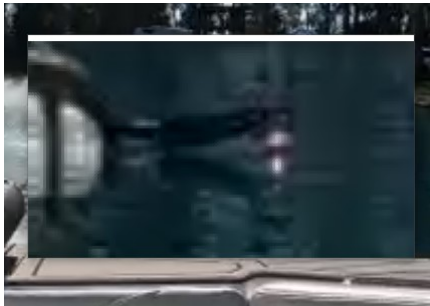
Frames expectation at 60fps

- When turning buoy, ski is moving no faster than 36mph, so 52.8ft/sec, so 10.5”
- If ski is by the buoy, video will provide 2 frames with buoy in front of the ski

Judging with 60fps (4 vs 6 ball 480p)



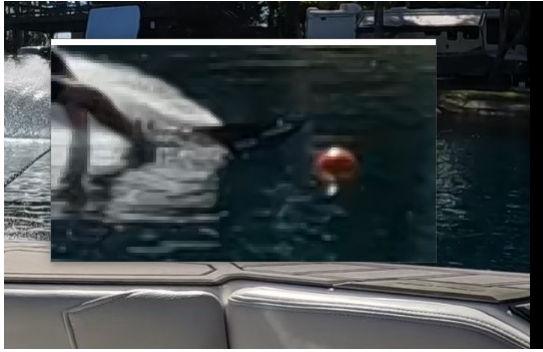
You get 2 frames of buoy in length of ski before the binding (Skier around 4 ball)



You should see a buoy inside the ski, ahead of the binding (skier did not get around 6 ball)
- If you see water behind the buoy, and ski not past it, you don't know if the ski is outside buoy

- Compare “suspect” buoy to one previous one (compare 1 to 3, or 2 to 4) to have a reference with similar lighting
- If lighting is bad, or buoys are hard to see at 480p, request the 1080p file (for immediate download or for review later under 8.13e)

Judging with 60fps (4 vs 6 ball 1080p)



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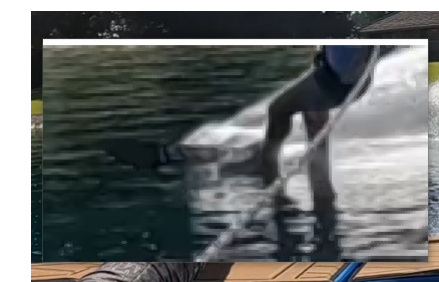
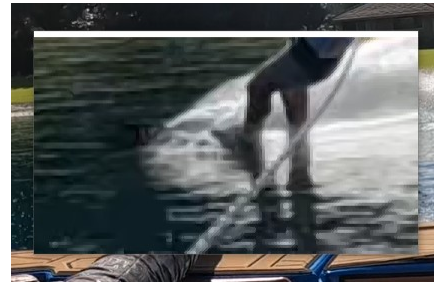
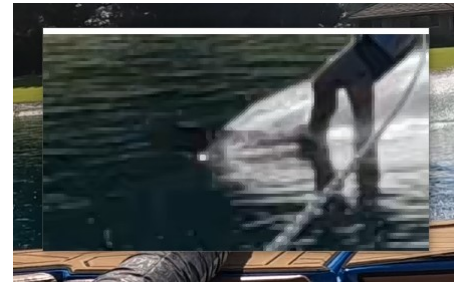
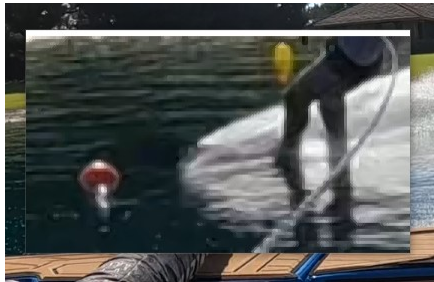
- Compare “suspect” buoy to one previous one (compare 1 to 3, or 2 to 4) to have a reference with similar lighting
- 1080p greatly improved lighting. These are the same pass as the previous page

Judging with 60fps (1 ball vs 3 ball. 720p)



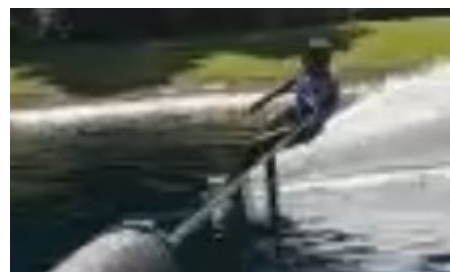
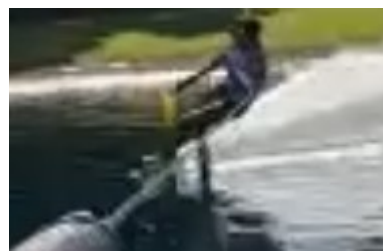
- This one is hard to judge at 480p, as even at 1 ball, buoy is hard to see, but evidence is there.
- At 1080p, 1 ball very clear, used to place the arrows.
- There is no evidence of ski outside buoy at 3 ball, this is definitely a case of where the judge should request the 1080p file

Judging with 60fps (1 ball vs 3 ball. 1080p)



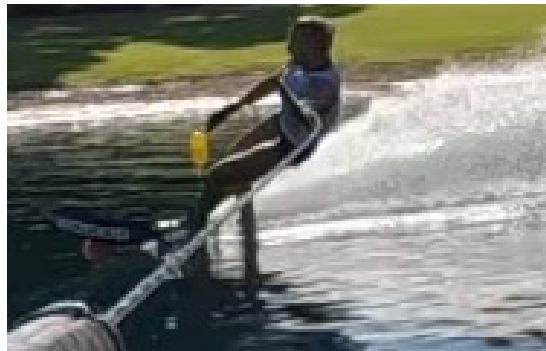
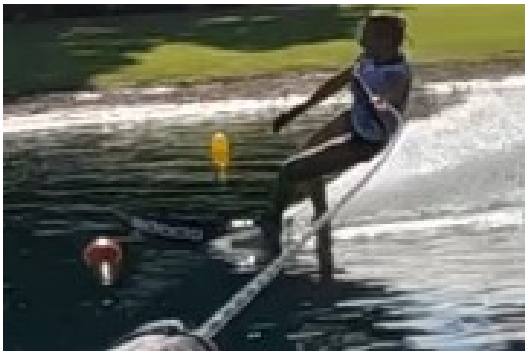
1080p clearly shows a good 1 and a bad 3

#2 Judging with 60fps (1 ball vs 3 ball. 480p)



- This one is also hard to judge at 480p, even at 1 ball, buoy is hard to see
- There is no evidence of ski outside buoy at 3 ball, this is also a case of where the judge should request the 1080p file

#2 Judging with 60fps (1 ball vs 3 ball. 1080p)



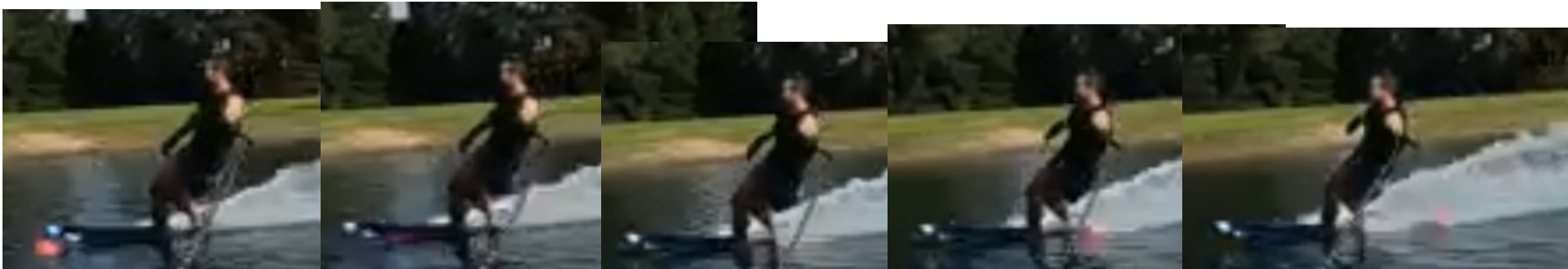
Again, 1080p clearly shows a good 1 and a bad 3

Shadows

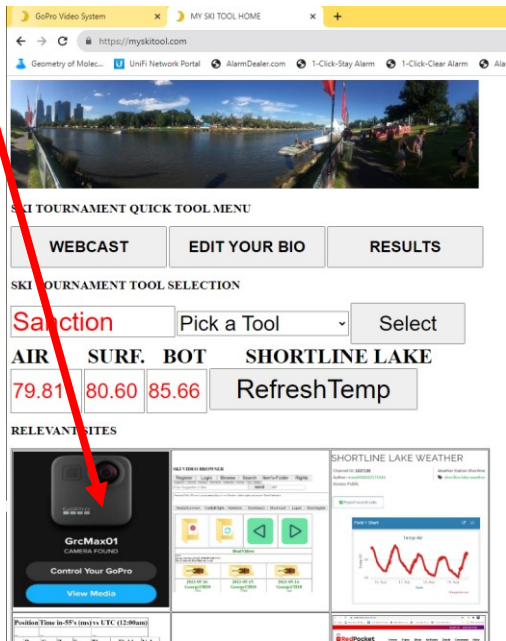
- When the sun is behind the skier in line with the buoy, buoy can get shadowed



- That the buoy reappears (vs getting sunk) is a good indicator that the skier got around it
- Shadowed buoy hard to see on LoRes video, invoke 13e, get the HiRes. It is faint buy the buoy is definitely there



1 Go to <https://myskitool.com/> and click on the GoPro Icon



GOPRO SKI VIDEO SYSTEM

VIEW VIDEO MANAGE LOG SKIER HOME

BackUp(George1H10)

George1H10 Shortline SNPreGateExitToDrog trueB-50T-32.1 2023-08-22(18:23:56)

refreshGP Show Search Show Status

Camera	Date/Time	DateNumber	Filename	Filesize
Video				
MP4 Comment				
Grc1HERO10	GoPro: 2023-08-22 18:07 PM (43)s	1692752827	George1H10101GOPROGL013354.MP4	12260798
CameraCode:[George1H10]Lake:[Shortline]LoadTime:[1692752859980]CameraSet:[N-Wide,S-BOOST]GoProName:[Skier]GoProSpeed:[]GoProRope:[]EwscdName:[]EwscdSpeed:[]EwscdRope:[]GoProRequestMP4:[]GoProSanction:[]GoProFileTypeTarget:[.LRV]GoProFileAge:[]GoProFileSize:[]GoProCommand:[]EwscdEvent:[]				
Grc1HERO10	GoPro: 2023-08-22 17:49 PM (62)s	1692751768	George1H10101GOPROGL013353.MP4	11200352
CameraCode:[George1H10]Lake:[Shortline]LoadTime:[1692751821288]CameraSet:[N-Wide,S-BOOST]GoProName:[Skier]GoProSpeed:[]GoProRope:[]EwscdName:[]EwscdSpeed:[]EwscdRope:[]GoProRequestMP4:[]GoProSanction:[]GoProFileTypeTarget:[.LRV]GoProFileAge:[]GoProFileSize:[]GoProCommand:[]EwscdEvent:[]				
Grc1HERO10	GoPro: 2023-08-22 17:48 PM (70)s	1692751703	George1H10101GOPROGL013352.MP4	17950463
CameraCode:[George1H10]Lake:[Shortline]LoadTime:[1692751703]CameraSet:[N-Wide,S-BOOST]GoProName:[Skier]GoProSpeed:[]GoProRope:[]EwscdName:[]EwscdSpeed:[]EwscdRope:[]GoProRequestMP4:[]GoProSanction:[]GoProFileTypeTarget:[.LRV]GoProFileAge:[]GoProFileSize:[]GoProCommand:[]EwscdEvent:[]				

2 Select Boat (Camera)

Load time is time after boat exited 55's before file was ready to download


Files display. Pass time aligns to "Skier enters course" time

Ideally, scoring 'Pass' information is provided with the file

3 Refresh file list

Review a pass in browser

- Set playback speed
- Go full screen
- Play/Pause video

Camera	Date/Time	DateNumber	Filename	Filesize
Video				UPDATE
MP4	Comment			
Grc1HLEPO10	GoPro: 2023-08-22 18:07 PM (43)s	1692752827 Load(s): (11)	George1!H10101GOPROGL013354.MP4	12260798
				
NoMP4-Request	CameraCode:[George1!H10]Lake:[Shortline]LoadTime: [1692752859980]CameraSet:[N-Wide,S-BOOST]GoProName:[Skier]GoProSpeed: []GoProRope:[]EwscdName:[]EwscdSpeed:[]EwscdRope:[]GoProRequestMP4: []GoProSanction:[]GoProFileTypeTarget:[.LRV]GoProFileAge:[]GoProFileSize: []GoProCommand:[]EwscdEvent:[]			

Playback Controls

Playback Speed



Play/Pause

Full Screen

Review a pass in SMPlayer

The screenshot shows a web browser window with the URL `https://myskitool.com/GoProUser0/GoProControl.html`. The page title is "GOPRO SKI VIDEO SYSTEM". It features several navigation buttons: "VIEW VIDEO", "MANAGE", "LOG SKIER", and "HOME". Below these is a dropdown menu for "BackUp(George1!H10)" and a form with fields for "George1!H10", "Shortline", "SNPreGateExitToDro", "trueB-50T-32.1", and "2023-08-22(18:23:56)". There are also buttons for "refreshGP", "Show Search", and "Show Status".

A "Recent Downloads" window is open, showing three files:

- George1!H10101GOPROGL01333 (11.7 MB • Done)
- George1!H10101GOPROGL013311.mp4 (12.7 MB • 4 hours ago)
- George1!H10101GOPROGL013314.mp4 (12.2 MB • 4 hours ago)

Below the navigation is a video player showing a first-person view of a skier on a snowy slope. A "Download" button is overlaid on the video player. To the right of the video player is a sidebar with buttons: "SCRAP", "UPDATE", "MATCH", "UPLOG", and "COPYv".

Below the video player is a table with the following data:

NoMP4-Request	CameraCode:[George1!H10]Lake:[Shortline]LoadTime:[1692752859980]CameraSet:[N-Wide,S-BOOST]GoProName:[Skier]GoProSpeed:[GoProRope:[EwscdName:[EwscdSpeed:[EwscdRope:[GoProRequestMP4:[GoProSanction:[GoProFileTypeTarget:[.LRV]GoProFileAge:[GoProFileSize:[GoProCommand:[EwscdEvent:[
Grc1HERO10	GoPro: 2023-08-22 17:49 PM (62)s	1692751768 Load(s): (9)	George1!H10101GOPROGL013353.MP4 11200352

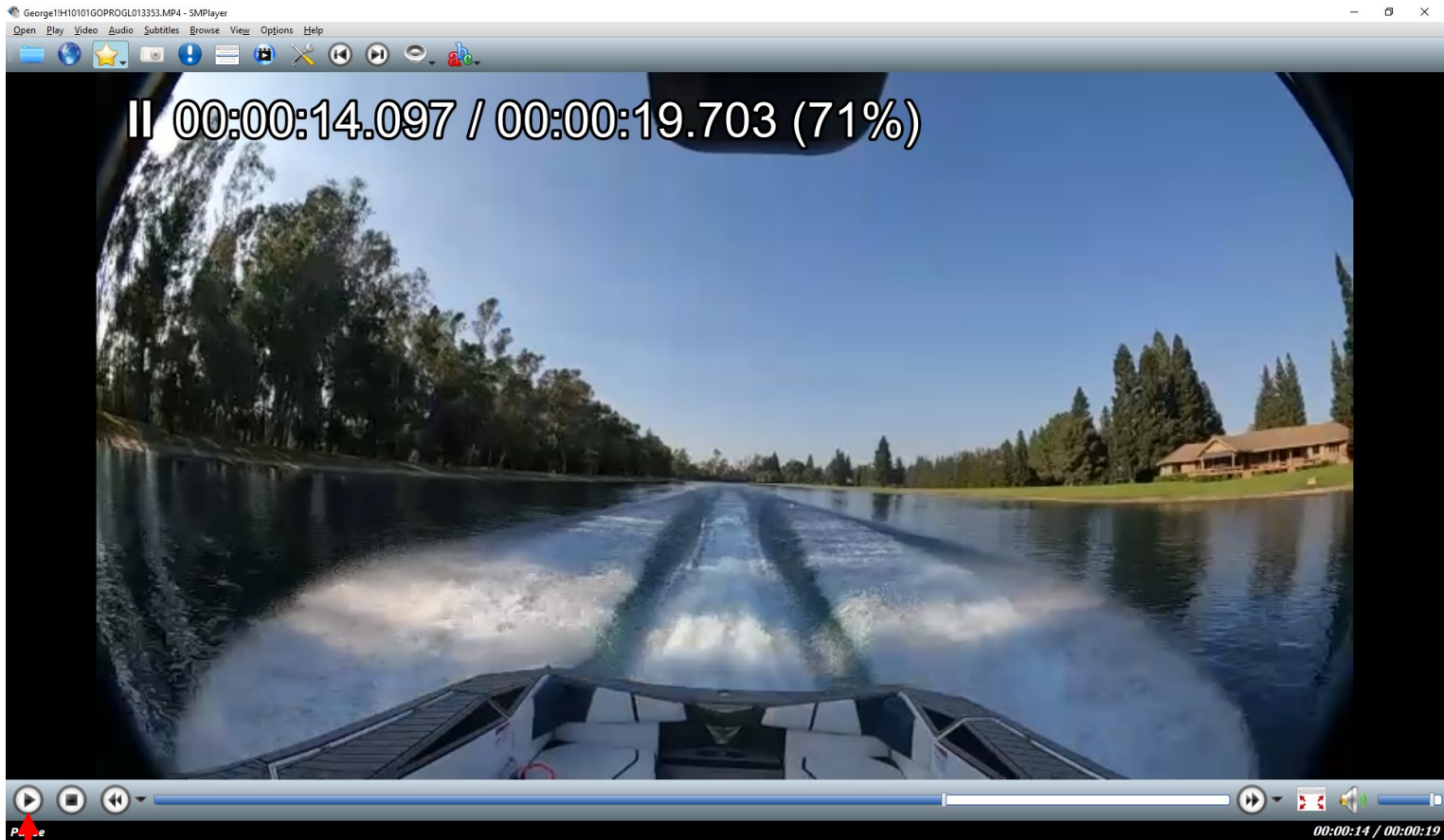
At the bottom left, there is a small icon of a person's face.

Download file (should auto play)

To open downloaded file

Or look for Player Icon

SMPlayer



Play/Pause

Space Bar Plays/Pauses

“,” frame back, “.,” next frame

Can leave SMPlayer open, just return to the WebPage, and “RefreshGP” file list

Request Hi-Res

- (1) Click on request cell, it turns green
- (2) Confirm filename shows by "requestMP4"
- (3) Click on Get HiRes
- (4) Wait 40sec and start clicking on refreshGP
- (5) When HiRes link shows (There is a pending" right before) do a "Save Link As" and file will play after it downloads
- (6) It can take 60 seconds for the file to come (Can keep reviewing the low res in the interim)

GOPRO SKI VIDEO SYSTEM


VIEW VIDEO MANAGE LOG SKIER HOME

NAUT-Bimini(CSR01!!!H10) ▾

CSR01!!!H10 Shortline NSPreGateSlow trueB-84T-30.5M:PTCS 2023-09-01(16:11:57) ChargingFull

RequestedMP4: CSR01!!!H10101GOPROGX012087.MP4

refreshGP Show Search Show Status Get HiRes

Camera	Date/Time	DateNumber	Filename	Filesize
Video				UPDATE
MP4	Comment			
CSR00001	GoPro: 2023-09-01 14:14 PM (22)s	1693605255 Load(s): (1)	CSR01!!!H10101GOPROGL012087.MP4	898229
				COPY^
				SCRAP
				UPDATE
				MATCH
				UPLOG
				COPYv
NoMP4 Request CameraCode:[CSR01!!!H10]Lake:[Shortline]LoadTime:[1693605276010]CameraSet:[N-Narrow,S-BOOST]GoProName:[Skier]GoProSpeed:[]GoProRope:[]EwscdName:[]EwscdSpeed:[]EwscdRope:[]GoProRequestMP4:[]GoProSanction:[]GoProFileTypeTarget:[.LRV]GoProFileAge:[1hrs]GoProFileSize:[>8Meg]GoProCommand:[]EwscdEvent:[]				

