

Question 1: Image Extraction at Best Quality

Qn.1A, if you used the supplied replay software:

please save and submit your results using the filename:
'Q1A_ReplayDescribed_YOURINITIALS' or

Please specify (i) the investigation method used to a) examine the video sequence and b) extract and examine the frame, and (ii) all steps executed. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

- 1) Use SiraView to open the video and determine the original frame size
- 2) Use IMPRESS DTG v7.0 (desktop grabber) functionality to
 - a. prepare a region on the desktop with this same frame size
 - b. resize the player to match this prepared region
 - c. take a snapshot

Qn.1A, if you used another method:

Please save and submit your results using the filename:
'Q1A_OtherMethod_YOURINITIALS'

Please specify (i) the investigation method used to a) examine the video sequence and b) extract and examine the frame, (ii) all tools used, and (iii) all steps executed. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

Use any space you need

Qn.1B, if you used the supplied replay software:

Please save and submit your results using the file name:
'Q1B_ReplayDescribed_YOURINITIALS'

Please specify (i) the investigation method used to a) examine the video sequence and b) extract and examine the frame, and (ii) all steps executed. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

- 1) Use SiraView to open the video and determine the original frame size
- 2) Use IMPRESS DTG v7.0 (desktop grabber) functionality to
 - a. prepare a region on the desktop with this same frame size
 - b. resize the player to match this prepared region
 - c. take a snapshot

Qn.1B, if you used another method:

Please save and submit your results using the filename
'Q1B_OtherMethod_YOURINITIALS'

Please specify (i) the investigation method used to a) examine the video sequence and b) extract and examine the frame, (ii) all tools used, and (iii) all steps executed. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

Use any space you need

Qn.1C

Frame Size of source file recording used in Qn.1A				Frame Size of source file recording used in Qn.1B			
720	x	576	pixels	720	x	576	pixels

What are your conclusions about the raw, encoded quality of the provided video frame/sequence in Q1A and Q1B?

The players cannot be forced to display on 100% scaling.
Maybe none of the window scalings are in fact 100%.
The players are therefore of bad quality (in software terms).
Therefore you cannot draw conclusions on the quality of the raw video sequence by looking at the player display results.

Question 2: Super-Resolution from supplied sequence of 249 .bmp files

Qn.2A

Please select your best result, i.e.: a single best quality super-resolution image:

Please save and submit your results using filename: "Q2A_SuperRes_YOURINITIALS"

1. How have you ingested the material into your enhancement system and super-resolution software tools?

Please detail all steps of any conversion performed including all software tools and settings used. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

Convert the directory with bmp files into an uncompressed avi using IMPRESS v7.0 "directory grabber" function

2. Please specify all software tools and all Enhancement Filters used (in order) and specific parameter settings; e.g. Super-Resolution Filter (Method? Zoom factor? Number of Iterations? Interpolation?.....)

Using the IMPRESS v7.0 SuperResolution function

1. Based on a trial run, select frame 67 as reference image
 2. Estimate the (sub-pixel) shift for the first 200 frames wrt the reference ("registration")
 3. Zoom factor = 3.0
 4. Weighted interpolation
 5. #Iterations = 3
3. Did you select a "region of interest" for directing the super-resolution tool? If so please specify co-ordinates of the region (if used) in the format given by the tool.

Sorry, not recorded. Rectangle with some space around the plate

4. Did you select any specific frames or image? If so, please provide details of range of frames or specific frames you used.

reference frame SuperRes0066.bmp, used first 200 frames for registration/calculation

5. Please provide any other information that would be needed so that others would be able to repeat and reproduce your work.

Use any space you need

Qn.2B

Please select your best result, i.e.: a single best quality super-resolution image:
Please save and submit your results using filename: "Q2B_SuperRes_YOURINITIALS"

1. How have you ingested the material into your enhancement system and super-resolution software tools?
Please detail all steps of any conversion performed including all software tools and settings used. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

Use IMPRESS DTG v7.0 to capture the video from the Player display.
For each plate make a cropped video for easier processing

2. Which of the 5 number plates have you concentrated your efforts on (1=closest number plate, ..., 5=most distant) and how did you decide on selecting this number plate?

Selected no. plate: 1, 2, 3, 4, and 5; Procedure identical for all plates!

Decision reached how:

3. Please specify all software tools and all enhancement filters used (in order) and specific parameter settings; e.g. Super-Resolution Filter (Method? Zoom factor? Number of Iterations? Interpolation?.....)

Using the IMPRESS v7.0 SuperResolution function
For all plates:

1. First frame as reference
2. First 200 frames for registration and interpolation
3. Zoom factor = 3.0
4. Weighted interpolation
5. #Iterations = 3

4. Did you select a "region of interest" for directing the super-resolution tool? If so please specify co-ordinates of the region (if used) in the format given by the tool.

Region with some space around the plate

5. Did you select any specific frames or image? If so, please provide details of range of frames or specific frames you used.

Max 200 (selected by the tool)

6. Please provide any other information that would be needed so that others would be able to repeat and reproduce your work.

Use any space you need

Qn2B. (continued): optional:

As indicated on the Collaborative Exercise webpage you may choose to submit multiple results. If this is the case then please specify how you obtained your results by replicating the previous 6 points for each Procedure/toolset used and/or each possible license plate you focussed on.

For example:

Please save and submit your results using filename:

'Q2B_SuperRes_Procedure1_PlateAll_YOURINITIALS' to indicate the best enhancement result you obtained for all plates using the Procedure1 you will describe using a cut-paste repetition of the 6 previous subquestions above, etc.

and/or

Please save and submit your results using filename:

File name: 'Q2B_SuperRes_Procedure2_Plate1_YOURINITIALS' to indicate the best enhancement result you obtained for Plate 1 using the Procedure2 you will describe using a cut-paste repetition of the 6 previous subquestions above, etc.

and/or

Please save and submit your results using filename:

File name: 'Q2B_SuperRes_Procedure2_Plate2_YOURINITIALS' to indicate the best enhancement result you obtained for Plate 2 using the Procedure2 you will describe using a cut-paste repetition of the 6 previous subquestions above, etc.

etc.

Qn.2C (optional)

Please select your best result, i.e.: a single best quality super-resolution image:
please save and submit your results using filename: "Q2C_SuperRes_YOURINITIALS"

1. How have you ingested the material into your enhancement system and super-resolution software tools?
Please detail all steps of any conversion performed including all software tools and settings used. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

Use IMPRESS DTG v7.0 to capture the video from the Player display.
For each plate make a cropped video for easier processing

2. Which of the 5 number plates have you concentrated your efforts on (1=closest number plate, ..., 5=most distant) and how did you decide on selecting this number plate?

Selected no. plate: 1, 2, 3, 4, and 5; Procedure identical for all plates!

Decision reached how:

3. Please specify all software tools and all enhancement filters used (in order) and specific parameter settings; e.g. Super-Resolution Filter (Method? Zoom factor? Number of Iterations? Interpolation?.....)

Using the IMPRESS v7.0 SuperResolution function
For all plates

1. First frame as reference
2. First 200 frames for registration and interpolation
3. Zoom factor = 3.0
4. Weighted interpolation
5. #Iterations = 3

4. Did you select a "region of interest" for directing the super-resolution tool? If so please specify co-ordinates of the region (if used) in the format given by the tool.

Region with some space around the plate

5. Did you select any specific frames or image? If so, please provide details of range of frames or specific frames you used.

Max 200 (selected by the tool)

6. Please provide any other information that would be needed so that others would be able to repeat and reproduce your work.

Use any space you need

Qn2C. (continued): optional:

As indicated on the Collaborative Exercise webpage you may choose to submit multiple results. If this is the case then please specify how you obtained your results by replicating the previous 6 points for each Procedure/toolset used and/or each possible license plate you focussed on.

For example:

Please save and submit your results using filename:

'Q2C_SuperRes_Procedure1_PlateAll_YOURINITIALS' to indicate the best enhancement result you obtained for all plates using the Procedure1 you will describe using a cut-paste repetition of the 6 previous subquestions above, etc.

and/or

Please save and submit your results using filename:

File name: 'Q2C_SuperRes_Procedure2_Plate1_YOURINITIALS' to indicate the best enhancement result you obtained for Plate 1 using the Procedure2 you will describe using a cut-paste repetition of the 6 previous subquestions above, etc.

and/or

Please save and submit your results using filename:

File name: 'Q2C_SuperRes_Procedure2_Plate2_YOURINITIALS' to indicate the best enhancement result you obtained for Plate 2 using the Procedure2 you will describe using a cut-paste repetition of the 6 previous subquestions above, etc.

etc.

Question 3: Focal deblur test

Please specify (i) all software tools or processing steps, (ii) all enhancement filters used (in order) and (iii) all specific parameter settings. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

**This sample does not seem to be representative for CCTV problems.
It looks like this is not a pure misfocus issue, but a combination of misfocus and motion blur.**

125 cm chart:

Please save and submit your results using filename: 'Q3_125cm_YOURINITIALS' or 'Q3_125cm_LineNUMBER_YOURINITIALS'

No result submitted

75 cm, 4th line:

Please save and submit your results using filename: 'Q3_75cm_Line4_YOURINITIALS'

Using IMPRESS v7.0, filter InverseFFT

Parameters: Source=Planar, Blur=10.4, Angle=-84.7, Threshold=43

Submitted

75 cm, 5th line:

Please save and submit your results using filename: Q3_75cm_Line5_YOURINITIALS'

No result submitted

any other results: optional:

Please save and submit your results using filenames:
'Q3_DISTANCEcm_LineNUMBER_YOURINITIALS'

No result submitted

Question 4: Motion deblur test

Qn.4A:

Please specify (i) all software tools or processing steps, (ii) all enhancement filters used (in order) and (iii) all specific parameter settings. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

If you wish to provide results for different regions of interest in the image, please specify their coordinates and/or indicate the region in a small thumbnail, and use the filenames: "Q4A_RegionNUMBER_YOURINITIALS".

Region NUMBER: coordinates and/or thumbnail:

[left,top,right,bottom] in original image

Q4A_Region1_ID15 : [1618,1394,2013,1602]

Q4A_Region2_ID15 : [351,1450,164,1613]

Q4A_Region3_ID15 : [80,815,314,933]

Q4A_Region4_ID15 : [1285,561,1546,695]

Q4A_Region5_ID15 : [1538,998,1769,1137]

Q4A_Region6_ID15 : [1096,664,1355,805]

Using the IMPRESS v7.0 InverseFFT function,
Parameters:

- Source=Planar
- B=Blur, A=Angle, T=Threshold for each of the regions:

Q4A_Region1_ID15 : B=32.7 A= 1.9 T=60

Q4A_Region2_ID15 : B=24.3 A=-7.7 T=60

Q4A_Region3_ID15 : B=36.4 A=-5.7 T=60

Q4A_Region4_ID15 : B=30.0 A=-4.0 T=60

Q4A_Region5_ID15 : B=29.8 A= 0.3 T=59

Q4A_Region6_ID15 : B=30.6 A=-2.2 T=40

Qn.4B:

Please specify (i) all software tools or processing steps, (ii) all enhancement filters used (in order) and (iii) all specific parameter settings. The information you provide should have sufficient detail so that anyone could independently reproduce your results.

If you wish to provide results for different regions of interest in the image, please specify their coordinates and/or indicate the region in a small thumbnail, and use the filenames: "Q4A_RegionNUMBER_YOURINITIALS".

Region NUMBER: coordinates and/or thumbnail:

No results submitted