

Video Recovery and Enhancement

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Abstract-Today is the world of digitization. Everything in the world is digitized. So, the video also plays an important part. Now-a-days many false videos are created or some of the part of the original video is damaged. Video recovery and enhancement provide a way to repair the damaged parts in the video. This is done by completing Motion and Frame.

Index Terms – Digitization, Frame, Motion ,Video.

I. INTRODUCTION

In today's speedy life there is new trend of converting vintage videos into digital formats. However as these videos are too aged, after the conversion into digital format there quality decreases and may also contain unstable or damaged parts. Video recovery and enhancement, is challenging technique to repair the damaged contents form video and bring some improvement to it quality.

To deal with this problem many researches have already been done to repair images through image inpainting technique. However initial researches state that only small amount of regions were repaired. Then more powerful methods/techniques were developed to repair images that can recover larger damaged areas. Now the attention is towards repairing the videos. Videos can also contain some or other damaged contents. The goal is to repair these damaged parts from the videos and improve their quality. This is done by dividing a video into number of frames and applying image inpainting techniques on each individual frame. But maintaining the continuity is the most important part of video and applying image recovery methods did not maintained its continuity. So, to overcome this problem the video should be divided into layers mainly background and foreground and methods should be applied respective.

II. PROPOSED ALGORITHM

1. Browse & input Video:
In this step, we are browse our video from source file.
2. Normalize the intensity to average of video:
Here, we are normalize video intensity.
3. Damage area selection process:
We are selecting the damage area of image.
4. Motion Map Construction:
 - i. Local and global motion Estimation:
 - ii. Damage layer & motion mapping:
5. Motion Achievement:
 - i. Patch Searching:
Here, we are searching a nearest neighbor patch to paste in damaged area.
 - ii. Missing motion completion:
Here, we are also complete a motion completion.

6. Frame Completion:
 - i. Patch pasting.
Here, we are pasting a patch which is searched in last step.
 - ii. Frame Adjustment:
Here, we are adjusting a frames which contains a complete motion.
7. Video Output:
So here we got our repaired video.

III. IMPLEMENTATION

Consider a video is given input. At the first stage, the video is first checked for any damaged parts. If present then the video is divided in number of frames. After analysing total number of frames, damaged frames are separated. Performing masking operation on damaged frames means highlighting damaged areas of the frames. By using the nearest neighbour method best matched result is found by comparing with other frames. Patches are found and are pasted on damaged regions. Thus after repairing video is rebuilt and output is acquired.

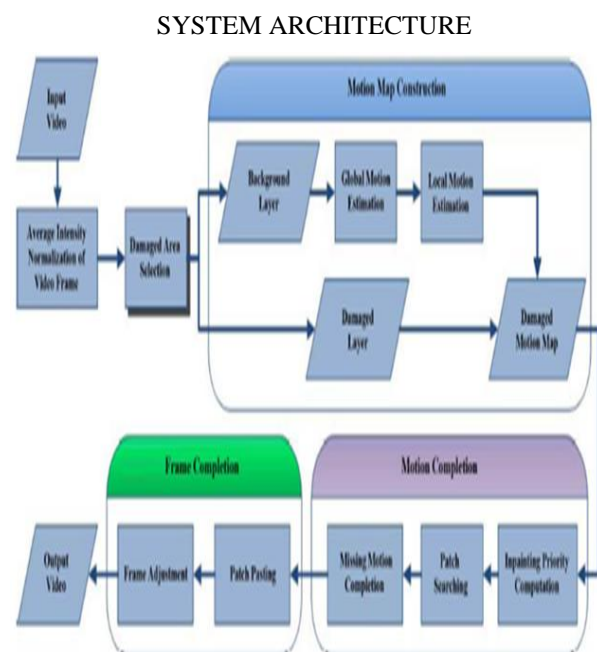


Fig.System Architecture.

IV. CONCLUSION

In this paper, we implemented algorithm for video recovery. The paper is based on inpainting algorithm .The algorithm contains video, which is further divided into frames .We successfully performed frame completion by completing the background and foreground layers. Further we also used motion completion. In motion completion, missing motions from foreground are completed .For repairing damaged area we used Nearest- Neighbour algorithm for best matched result.

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Once all damaged frames are recovered then video is rebuilt.

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