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Review Paper on Image Processing in Distributed Environment

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Abstract - In distributed image processing framework consist of analysing the performance through distributed control. It is also includes data association and dynamic data control. In this paper various distributed environments are discussed and shows how distributed image processing algorithms work by using dynamic data for a particular application.

Keywords: Distributed Image processing, data association.

I. INTRODUCTION

Image processing refers to digital image processing.The producing the input image in the place is referred to as imaging. A digital image consists of metric and topological, edge is used to image analysis and crack edge is used to creating the structure between pixels. This type of analysis shows the intensity varies in the small neighbourhood of pixel Boundary of a region is another important concept in image analysis. The border is a global related to the region but edges consist of local property of an image function. Image analysis algorithms analyse a particular storage bin in an operational memory and its local neighbourhood. Then computer sees the image through a keyhole. The high level processing is based on knowledge and planning. This process consists to imitate human cognition ability to make decisions according to the information contained in the image. The quality can be used to assess the degree of degradation. The image quality depends on two purposes subjective and objective.

- Subjective used in television technology
- Objective quantitative methods measuring image [7] quality are more interesting for our purposes.

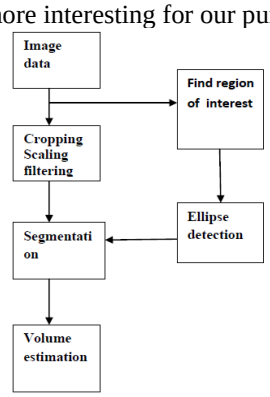

Figure1. Image processing flow

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The measures of image similarity are important since they are used in assisting retrieval from image database. Real image are often degraded by some random errors called noise. This can be occur during image capture, transmission the image contents.[7] Human color perception adds a subjective layer on top of underlying objectives physical properties wavelength of electromagnetic radiation. In an image object will be transferred between client and server application [6]. The image processing operations [2] manager is responsible for storing the graphs of image analysis from source image to results. Each node of graph is an operation named in the processing unit. The IPOM and PUD collaborate for the mapping between the operator defined in a macro and the processing unit which should executed remotely. PUD is responsible for registering the available processing units, including the operators they can process.

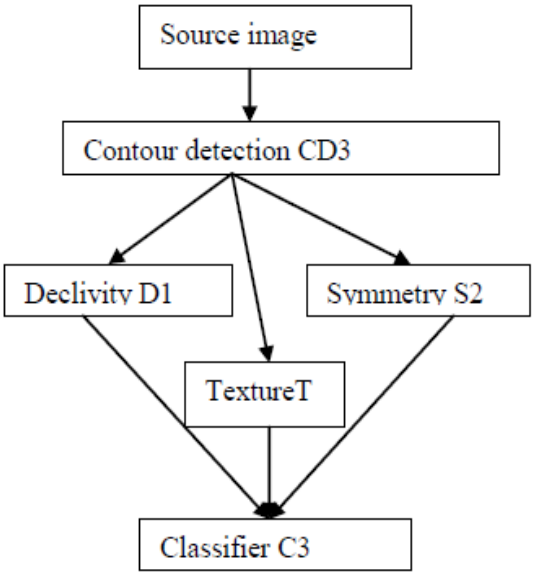

Figure2. Imaging graph sample (an operation) [2]

A series of images of an obliquely mounted steel ruler, covering a range of depth, were digitized using a binocular stereoscopic microscope, a video camera and an 8 bit video frame grabber. A set of images is made by focusing so that each image contains an in-focus [5] region and the series of images covers the desired depth range. Image data are the right candidate to exploit data parallelism because they are inherently divisible in nature. The [6] processor performs computationally on the respective portions by utilizing the additionally supplied data.

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The computational and communication time intervals as opposed to exact start and finish time instants at these processors. The timing stages on master process consist of distribution phase. The time performance using PSSD is far superior to that obtained using EQS. The distributed and aggregation is a process [8] that needs protocols and standardizations Distributed.

Architecture is under development in order to aggregate image archives educational institute repositories. The image segmentation software has the capability to generate information from a set of images. This information could constitute a new vocabulary that can be interfaced [5] with the text database. The distributed image archive will need a specific search agent able to retrieve image by image. The distributed architecture guarantees IPR management and reduces the general costs.

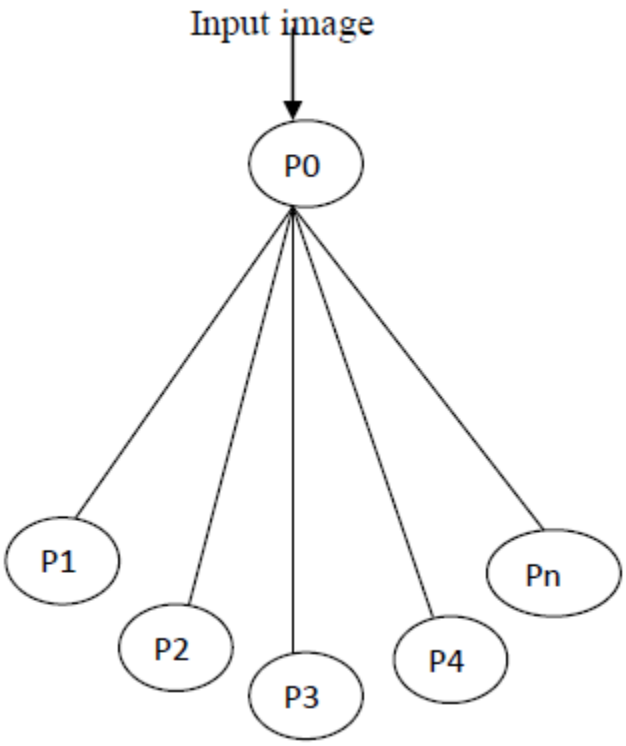

Figure3. [6] A single level tree network.

Review on different Distributed Image Processing techniques.

X.L. Li, B. Veeravalli, and C. C. Ko describes in their research on a network of workstations using parallel virtual machine communication library and process a very large volume of image data on a network workstations. The edge detection using sobal operator as an application to demonstrate the [6] performance of the strategy proposed by divisible load theory, and the experimental results and performance analysis using different image sizes, kernel sizes, and number of workstations which verifies the feasibility of DLT in practical application.

Joel Guillod, Philippe Schmid-Saugeon describes in their research An open internet platform to distributed image processing applied to dermoscopy. This system will allow for an international collaborative work in the fight against the malignant melanoma by offering a conceptual and technical platform of teledermoscopy. [2] Users are required to a web browser and connect to Url/address which simplifies the maintenance process.

A.Tchernykh, A.Cristobal-salas,V.Kober, and I.A.Ovseevich are describe in their research Partial evolution techniques to reduce communication [1] costs of distributed image processing. Partial evolution is an automatic program transformation which allows partial execution of a program by pre-computing parts of the program that depends on known input parameters setting. D-IS ,I-structures are used.

A.Fakhri A Nasir discussed in the study of image processing in agriculture application under high performance computing environment, this study provides basic understanding of parallel and distributed image processing for agriculture.[8]

Conclusion

The image processing require large amount of processing power. In the distributed environment where network latency significantly affects the power of execution the particular operations. There is need some security algorithms in distributed image processing in client server architecture. In the proposed work jpeg encoder and jpeg decoder will added for high performance with security in this architecture.

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