A Study on Mobile Communication system using Stillness Image

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Abstract: *We applied digital image processing about BitMap file structure in this research and studied about digital communication system. Digital record saving devices can express 'High' and 'Low' as all data. Only, digital technique that two expression methods is used into several expenditures. People and communication that are far away by development of digital technology became smooth. We wished to make communication system taking advantage of digi-tech. This system was made for communication with disabled and normal person specially. To communication method that we are studied such BitMap file handling image communication system. The goal of this contribution is to present the overview of basic algorithms for image processing using BitMap.*

Keywords: *Image Process;Communication System; BitMap; Mobile Communication system*

1. Introduction

In Korea, mobile TV subscribers to Satellite Digital Mobile Broadcasting (S-DMB) and Terrestrial Digital Mobile Broadcasting (T-DMB) services are already reaching two million. I expect that mobile TV service will be the next big thing in the industry and will be a basic multimedia feature for high-end mobile phones by next year. For front, development of digital devices may be studied continuously. In this way, application about digital technology is utilized from life whole.

For the digital processing purposes, the image is stored as a digital raster containing picture elements. Image processing is discipline of technology focused in processing raster images (BitMaps) on a computer. Several types of algorithms are used to achieve required changes in images. For image processing, images are treated as 2-dimensional signal, so theory of signal processing is often used. This approach is used in communication image filtering.

2. Main discourse

Another result of digital technology application is internet justly. Internet is spelled as Internet or INTERNET to distinguish from the internet, the abbreviation of the internet work, meaning a set of network connecting among communication networks.

It has been growing from LANs connecting small sized communication networks to the global-sized set. WWW is a system of Internet servers that support specially formatted documents. The documents are formatted in a markup language called HTML (HyperText Markup Language) that supports links to other documents, as well as graphics, audio, and video files. This means you can jump from one document to another simply by clicking on hot spots. Not all Internet servers are part of the World Wide Web. There are several applications called Web browsers that make it easy to access the World Wide Web; Two of the most popular being Netscape Navigator and Microsoft's Internet Explorer.

We disabled person and normal person reasonably so that communication is available digital camera use. Also, did to graft together internet technology for smooth communication. Camera is established to Mobile phone of almost kinds of machine by development of digital technology. Mobile phone sales are doing constant increase every year. Most of the people have Mobile phone that camera is established. Mobile phone's function is developing from day to day, but it is difficult that permit all function that want by limited size. Therefore, function of communication system must do to play service through internet. System abstract degree that present in this research is same with Figure 1.
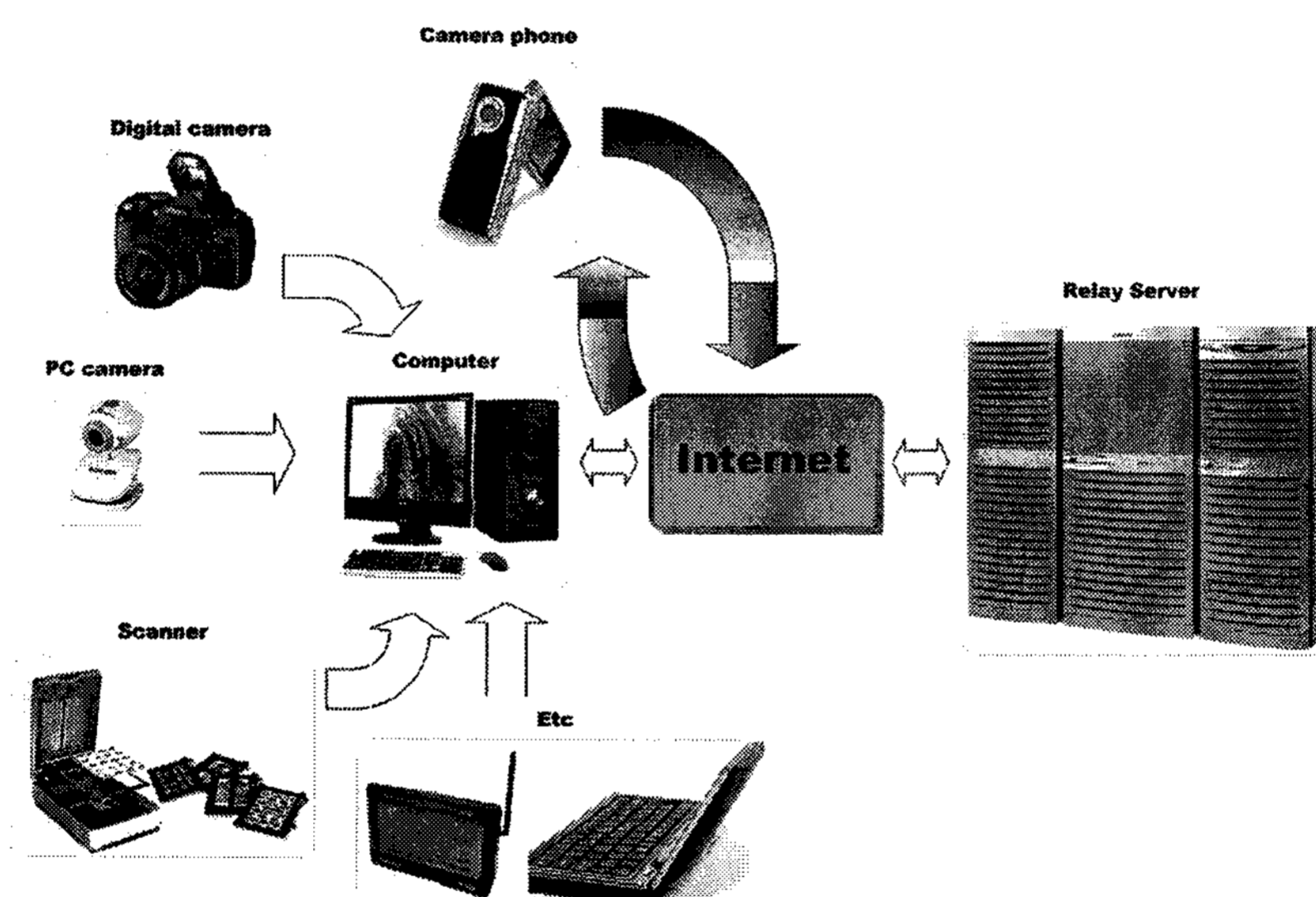
Figure 1. System schematic diagram in this paper

If a user sends a digital image by relay server for analysis using digital devices, send to place that relay server is necessary translating reflex. Digital devices can use enough that mobile camera phone, digital camera, PC camera, digital reflex such as scanner. The relay server analyzes entered digital data, and return result. In the case of disabled person, communication method is various. In this paper, we selected SIGN language among communication method preferentially. In the case of sign language, communication between each other consists by hand action. First, when do communication each other using embroidered picture, check hand movement and analyze meaning in relay server. We made simple hand movement some to sample to search whether this system is possible. We used a BitMap format file that is radish damage compression. After make hand action to digital data, change to a BitMap format file. Algorithm that handle BitMap image in relay server described to figure 2.

The results of this work are embodied in public-domain C++, object oriented toolkit, called VISPack. For the digital processing purposes, the image is stored as a digital raster containing picture elements. Several types of algorithms are used to achieve required changes in images. For image processing, images are treated as 2-dimensional signal, so theory of signal processing is often used.
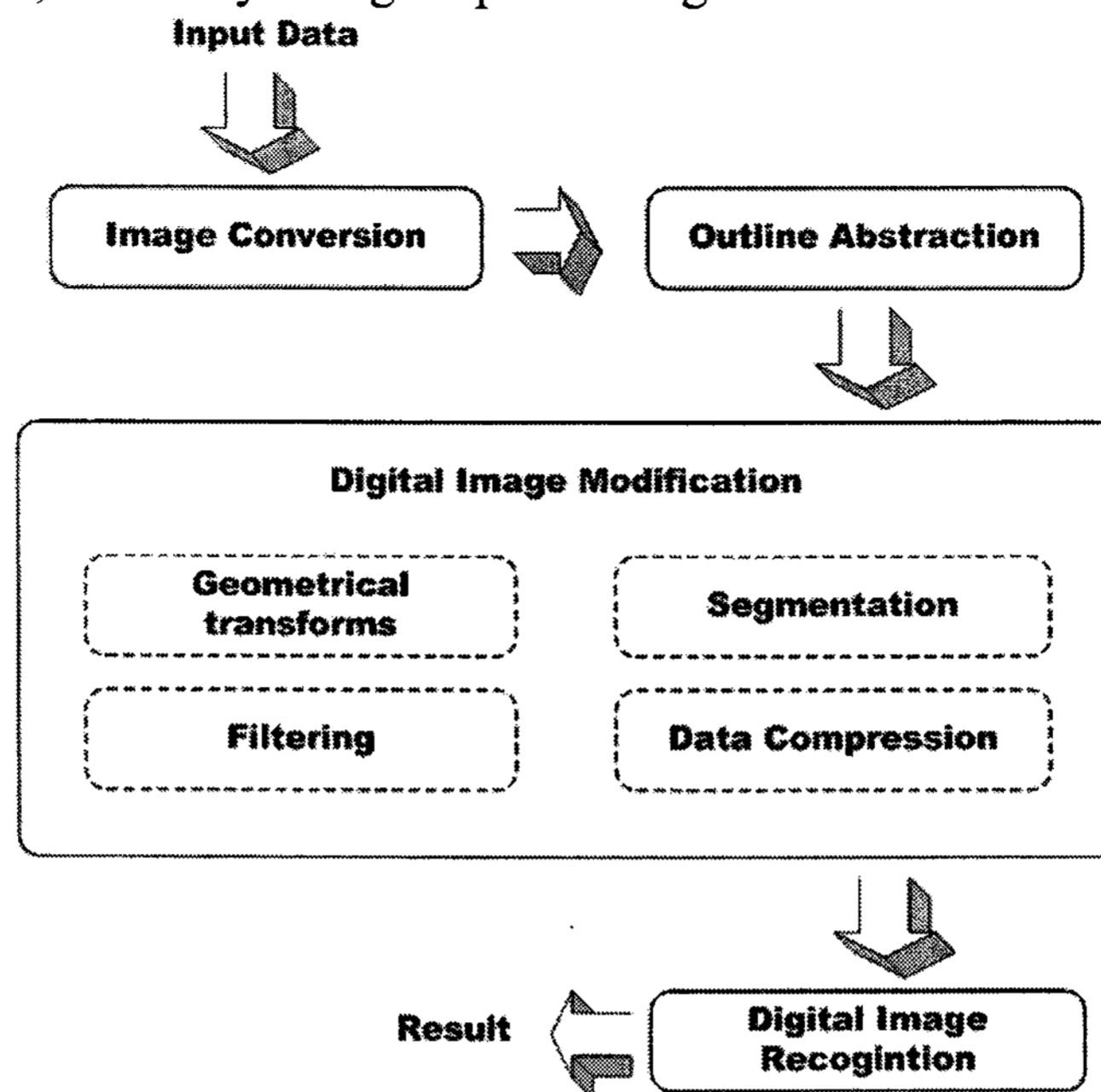

Figure 2. BitMap Image Processing

3. Experimental Result and Conclusion

We use the picture of hand image to be test image. The performance is evaluated by the following.

1. The abstraction of image outline,

2. Image outline area calculation,

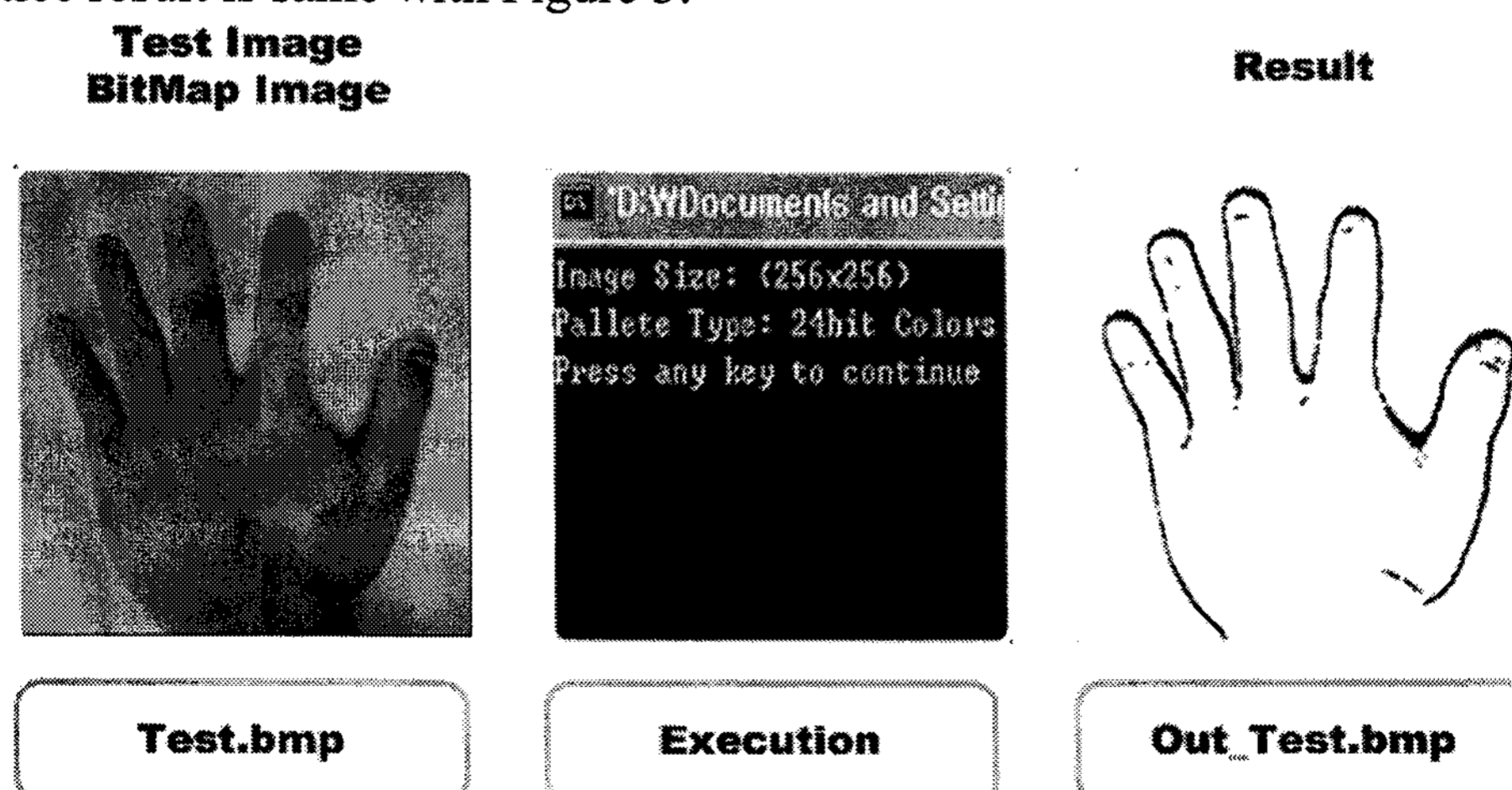**3.** Result data matching calculated area.
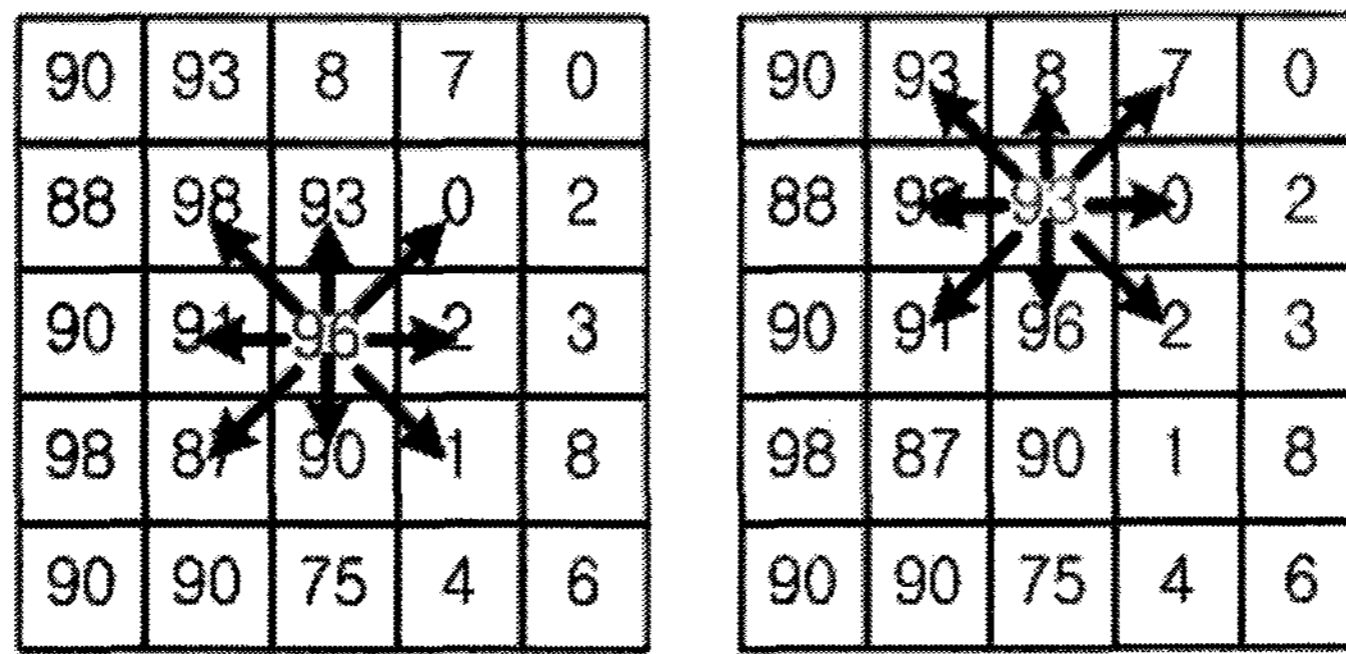
Practice result is same with Figure 3.

Figure 3. Result of Image Processing

90	93	8	7	0
88	98	93	0	2
90	94	96	2	3
98	87	90	1	8
90	90	75	4	6

90	93	8	7	0
88	98	93	0	2
90	91	96	2	3
98	87	90	1	8
90	90	75	4	6

Figure 4.   Algorithm of vector

Figure 4 expresses algorithm about direction vector. Coordinate is moved to part that move pixel and check about 8 directions and difference of value is big. Display discontinuity point (standpoint that focal ratio of pixel changes suddenly) of pixel brightness by characteristic that express vigilance (for example, object and background) of area in Edge reflex. Edge, there are many applications that use detection, is used for various special effects. Edge output of detector can be added originally with reflex to emphasize edge. Area calculation used Monte Carlo method. Figure 5 expresses algorithm that calculate 2-dimensional area.
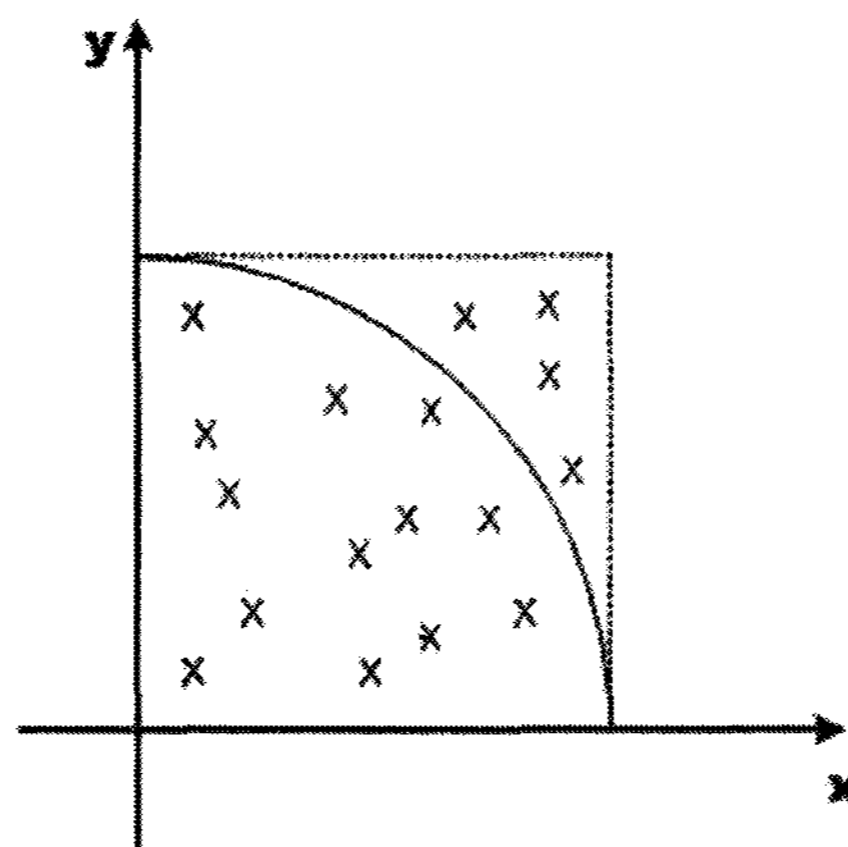
Figure 5.   Algorithm of Monte Carlo method

We distinguish 2-dimensional area each other according to each area size and mapping translated data. We applied to system using basic some promised sign. In this paper, we studied about communication system that use internet relay server to hydrate using digital image. Could get good result in case of image which outer wall division is easy although incidental and value were instantiated about digital image which division is difficult. Hereafter through research about digital image, communication of disabled person and storing in secrecy lover is considered that became base that can be possible.

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