

# 11<sup>th</sup>ADRI

PROCEEDINGS 11TH ADRI 2017  
INTERNATIONAL MULTIDISCIPLINARY CONFERENCE AND CALL FOR PAPER  
NGANJUK, MARCH 18, 2017

**PROCEEDING**

## **Academic Role in Facing Asean Economic Community (AEC) Global Challenge, Local Act**

**ORGANIZED BY:**





**11<sup>TH</sup> ADRI  
PROCEEDING INTERNATIONAL MULTI DISCIPLINARY AND CALL PAPER  
NGANJUK, MARCH 18, 2017**

**Proceeding 11<sup>th</sup> ADRI 2017  
International Multidisciplinary  
Conference and Call for Paper,  
Nganjuk, March 18, 2017**

**Published by:  
Perkumpulan Ahli & Dosen Republik Indonesia (ADRI)**

**ISBN: 978 - 602 - 60736 - 6 - 2**

---

**i | Theme :  
Academic Role In Facing ASEAN Economic Community  
(AEC) Global Challenge Local Act**



**11<sup>TH</sup> ADRI  
PROCEEDING INTERNATIONAL MULTI DISCIPLINARY AND CALL PAPER  
NGANJUK, MARCH 18, 2017**

# Proceeding 11<sup>th</sup> ADRI 2017 International Multidisciplinary Conference and Call for Paper, Nganjuk, March 18, 2017

**Publisher:**

Perkumpulan Ahli & Dosen Republik Indonesia (ADRI)

**Address:**

Kantor Dewan Pengurus Pusat (DPP) ADRI

Jalan SMA Negeri 14, Cawang RT.01/RW.09

Jakarta Timur 13630

<http://p-adri.or.id>

Email: [jatim@p-adri.or.id](mailto:jatim@p-adri.or.id)

# Proceeding 11<sup>th</sup> ADRI 2017 International Multidisciplinary

---

ii | Theme :

**Academic Role In Facing ASEAN Economic Community  
(AEC) Global Challenge Local Act**



11<sup>TH</sup> ADRI

PROCEEDING INTERNATIONAL MULTI DISCIPLINARY AND CALL PAPER  
NGANJUK, MARCH 18, 2017

# Conference and Call for Paper, Nganjuk, March 18, 2017

x, 194 pages, 28 cm

Copyright Reserved

Copyright @ 2017

ISBN: 978 - 602 - 60736 - 6 -2

**Publisher Manager of Perkumpulan Ahli & Dosen Republik Indonesia (ADRI):**

Drs. Andi Mursidi, M.Si. (STKIP Singkawang, Ketua DPD ADRI Kalimantan Barat).

**Board of Editor:**

Dr. H. Achmad Fathoni Rodli, M.Pd. (Ketua DPP ADRI)

Dr. H. Anton Muhibuddin, SP, MP. (Rektor Universitas Wahab Hasbullah, Jombang)

Dr. Putu Dyatmikawati, S.H., M.Hum. (Universitas Dwijendra, Denpasar, Bali)

Dr. Meithiana Indrasari, ST., MM. (Universitas Dr. Soetomo, Surabaya, Jawa Timur)

Deffi Ayu Puspito Sari, Ph.D. (Universitas Bakri, Jakarta)

**Reviewer:**

Prof. Dr. Supari Muslim, M.Pd. (UNESA, Jawa Timur)

Prof. Peter Newcombe, Ph.D. (University of Queensland Australia).

Prof. Seung Wook Kim. (Korea University, Korea Selatan).

Prof. Dr. Wahid Bin Razzaly (Universiti Tun Hussein Onn Malaysia, Malaysia).

Prof. Datuk H.Dr. Mohd. Dalimin, M.Sc. (UTM, Malaysia).

Prof. Assoc. Dr. I-Hsien Ting. (National University of Kaohsiung, Taiwan).

Prof. Assoc. Hunsu Punapayak. (Chulalongkorn University, Thailand).

Prof. Drs. Toho Cholik Mutohir, MA., Ph.D. (IKIP Mataram, Nusa Tenggara Barat)

Prof. Dr. H. Husain Syam, M.TP. (Universitas Negeri Makassar)

Prof. Dr. drg. Hj. I.A. Brahmasari, Dipl.DHE, MPA, (UNTAG Surabaya, Jawa Timur)

Prof. Dr. R. Partino (Universitas Cendrawasih, Irian Jaya).

Prof. Dr. Endry Boeriswati, M.Pd. (UNJ, Jakarta).

Prof. Dr. Atmazaki, M.Pd. (Universitas Negeri Batam, Sumatra Barat)

Prof. Dr. Drs. Eddy Yunus, ST, MM. (Universitas Dr. Soetomo, Surabaya, Jawa Timur)

**Executive Editor:**

Dr. Abdul Muhid (IAIN Sunan Ampel, Surabaya)

Dr. Sri Wiwoho Mudjanarko (Universitas Narotama, Surabaya)

Ainna Amalia FN. (STAI Miftahul Ula Nglawak Kertosono, Nganjuk)

Dian Eka Indriani (STKIP PGRI Bangkalan)

M. Ikhsan Setiawan (Universitas Narotama, Surabaya)

Sulfikar Sallu (Universitas Maritim Raja Ali Haji, Riau)

Muh. Ilham Baktiar (Universitas Negeri Makassar)

Muh. Barid Nizarudin Wajdi (STAI Miftahul Ula Nglawak Kertosono, Nganjuk)

---

iii | Theme :

**Academic Role In Facing ASEAN Economic Community  
(AEC) Global Challenge Local Act**



**11<sup>TH</sup> ADRI  
PROCEEDING INTERNATIONAL MULTI DISCIPLINARY AND CALL PAPER  
NGANJUK, MARCH 18, 2017**

Soeharto (STKIP Singkawang)

**Layout:**

Muh. Barid Nizarudin Wajdi (STAI Miftahul Ula Nglawak Kertosono, Nganjuk)

**Published by:**

Perkumpulan Ahli & Dosen Republik Indonesia (P-ADRI)

**Publisher Address:**

Kantor Dewan Pengurus Pusat (DPP) ADRI

Jalan SMA Negeri 14, Cawang RT.01/RW.09

Jakarta Timur 13630

<http://p-adri.or.id>

Email: [jatim@p-adri.or.id](mailto:jatim@p-adri.or.id)

---

iv | Theme :

**Academic Role In Facing ASEAN Economic Community  
(AEC) Global Challenge Local Act**



**11<sup>TH</sup> ADRI**

**PROCEEDING INTERNATIONAL MULTI DISCIPLINARY AND CALL PAPER  
NGANJUK, MARCH 18, 2017**

## **PREFACE**

Praise being said to Allah Almighty God for all the grace and guidance that has been given to us all, so the Proceedings of the 11th ADRI 2017 International Multidisciplinary Conference and Call for Papers Nganjuk, March 18, 2017 can be realized. Proceedings contains a number of articles and research papers from lecturers, teachers, students, researchers and / or observer of the development of science and technology.

Proceedings are published in book form only contains abstract, distributed to participants in the form of compact disks (full paper) and published online at:

<http://www.jatim.p-adri.or.id/2017/03/16/proceding-nganjuk-11th/>

Hopefully, these proceedings may give benefit to us all, for the development of science, technology, arts, culture, and sports. In addition, is also expected to be a reference for the nation and state-building efforts so that science and technology become a strong pillar in the face of the ASEAN Economic Community.

Lastly, there is no ivory that is not cracked. We are sorry if there are things that are less pleasing. Thanks you very much.

Nganjuk, March 18, 2017.

Publisher Manager of Perkumpulan Ahli & Dosen Republik Indonesia (ADRI),

**Drs. Andi Mursidi, M.Si.**

---

v | Theme :

**Academic Role In Facing ASEAN Economic Community  
(AEC) Global Challenge Local Act**



# 11<sup>th</sup>ADRI

PROCEEDINGS 11TH ADRI 2017  
INTERNATIONAL MULTIDISCIPLINARY CONFERENCE AND CALL FOR PAPER  
NGANJUK, MARCH 18, 2017

## PROCEEDING

# Academic Role in Facing Asean Economic Community (AEC) Global Challenge, Local Act

ORGANIZED BY:



## Table Of Contents

Title	Page
Application of Criminal Sanctions Against Narcotics Courier in Review Law Number 35 Of 2009 Concerning Narcotics <i>Bastianto Nugroho, M. Roesli, and Sinarianda Kurnia .H</i>	1
Application of Plus Liquid Organic Fertilizer and Leves Truncation Technique on Onion Growth and Yields <i>Sri Purwanti, and Sri Hidayati</i>	4
Quality of Chicken Nugget with Addition of Vegetables as Food Alternative <i>Anita Wulandari, Fathur Rozi, Lilla Puji Lestari, Nurlina, and Mahrus Ali</i>	9
Leadership in Building Organizational Cuture <i>H. Hefniy</i>	12
A Componential Analysis of Hyponymy of the Word Pantsin English <i>Niswatin Nurul Hidayati</i>	17
Packing Local Wisdom in the Vessel Of The Global Economy: A Study of Economic Glocalization <i>Ashlihah, and Hisbulloh Ahlis Munawi</i>	21
The Students Response to Science Learning Model Based Agriculture Waste Recycling in the Creating a Environment Friendly Generation <i>Ervan Johan Wicaksana, Sri Anitah W., Haris Mujiman, and Muhammad Akhyar</i>	24
Impact of Financial Performance and Market Return to Stock Return: Empirical Study in Indonesia Stock Exchange <i>Aminullah Assagaf</i>	28
Effect of Net Income, CSR Disclosure, Corporate Profitability Against Abnormal Return in the Indonesia Stock Exchange <i>Yulinartati, Lely Ana Ferawati Ekaningsih, Norita Citra Yuliarti</i>	42
Causality Associated Cognitive, Cultural Work, Leadership, the Performance Through Discipline and Employees Working in the Secretariat of the City Batam Parliament <i>Chablullah Wibisono</i>	48
The Using Pearson Correlation to Know the Relation Between Magnetism Induction and Electric Current on the Lorentz 's Force <i>Ulul Ilmi</i>	54
The Role of STAI An-Najah Indonesia Mandiri to Build Qualified Human Resources Facing AEC (Asean Economic Community) <i>Triana Rosalina Noor</i>	56
Independent Pupils and Young Entrepreneur (Leadership Type at PP-UW Jombang) <i>Qurrotul Ainiyah</i>	61
Instructional Management of Enterpreneurship Education to fEstablish Students' Enterpreneurship for Employability At Balitar Islamic University: Action Research <i>Supriyono, Hadi Siswanto</i>	67
Total DNA in Cow Abnormal Spermatozoa (An Analysis Of Sperm DNA Abnormalities Due To The Accumulation Of Heavy Metals Cadmium Using Polymorphisms Chain Reaction - Random Amplified DNA Polimorphism / PCRRAPD) <i>Fuad Fitriawana</i>	75



Islamic Branding and Islamic Marketing to Make Successful Market of Madani Community Arivatu Ni'mati Rahmatika	78
Performance Review of Labour's Take Home Pay and Non- inancialcompensation <i>Asmara Indahingwati</i>	85
Supervision satisfaction as Mediator Between Salaries and Satisfaction on the Promotion Affective Commitment PT.UNISEM Employees in Industrial Area Batamindo City Batam <i>Chablullah Wibisono</i>	88
Traditional Role in Improving Market Revenue Region (PAD) in the District Jombang (Study in the Market Trade Citra Niaga Jombang) Sayekti Suindyah D1 <i>Muchtart</i>	94
Academic Role in Facing ASEAN Economic Community (AEC) in Globalization Era <i>Siti Makhmudah</i>	98
PRIVATE NURSING COLLEGE ROLE DEALING with AEC in JOMBANG <i>Khudryah</i>	103
Organizational Culture Base on Total Quality Management in Islamic Educational Institution <i>Akmal Mundiri</i>	108
Algemene Beginselen Van Behoorlijk Bestuur In the Law System of Indonesia M. Zamroni	116
CULTURAL VALUES of THE LEGEND of JOMBANG, EAST JAVA <i>Putut Handoko, and Cahyaningsih Pujimahanani</i>	121
THE UNDERSTANDING of FINANCIAL REPORTING STANDARDS PERCEIVED by COOPERATIVES and MSMES in WEDORO, INDONESIA by USING PHENOMENOLOGICAL APPROACH <i>Dwi Suhartini, Erina Sudaryati, aand Ria Sandra Alimbudiono</i>	125
JURIDICAL REVIEW of SOCIAL and ENVIRONMENTAL RESPONSIBILITY STATUTORY RI NO. 40 ARTICLE 74 of 2007 IN PT. HOLCIM INDONESIA TBK. TUBAN <i>SulistiyaniEkaLestari, RitaNurCahaya, and M. Roesli</i>	132
AUTOMATION OF FISH POND WATER CIRCULATION BY USING ARDUINO UNO- BASED CONTROL SYSTEM <i>DwiCahyono, and VeronikaNugraheni Sri Lestari</i>	137
PROBLEMS of POVERTY and ENVIRONMENTAL DAMAGE IS THE MAIN OBSTACLES in URBAN DEVELOPMENT <i>Bambang Suprijadi</i>	143
IMPLEMENTATION of PUBLIC SERVICES POLICY in SUMBERKEPUH VILLAGE TANJUNGANOM SUB DISTRICT, NGANJUK REGENCY (STUDY ON POVERTY LETTER ISSUANCE FORM VILLAGE UTHORITY/ SKTM) <i>Yenik Pujowati</i>	147
DETECTION OF EARNINGS MANAGEMENT POST CONVERGENCE IFRS : ED PSAK 46 (REV 2010) <i>Achmad Syahfrudin Z and Diyah Probowulan</i>	151
ANNA'S DILEMMA in JODI PICOLULT'S MY SISTER'S KEEPER <i>Anicleta Yuliastuti</i>	157
EMOTION IGNITION IN NARRATIVE WRITING LEARNING IN PRIMARY SCHOOL BASED ON THE PERSPECTIVE OF THE BRAIN FUNCTION BALANCING <i>Ririen wardiani, Sarwiji Suwandi, Andayani, and Budiyo</i>	164
ASEAN Economic Community and a Challenge for Indonesia at the Local Level <i>Husni Thamrin, Kadarudin</i>	168

TWO POINTS INTERPOLATION FOR DECOMPRESSING ON COMPRESSED IMAGE	174
<i>Nur Fadli H., Najiburrahman, Nur Hamid, Miftahul Hasanah</i>	
Characteristic of Static Var Compensator with Simulation Matlab	176
<i>Zainal Abidin and Kemal Farouq Mauladi</i>	

# TWO POINTS INTERPOLATION FOR DECOMPRESSING ON COMPRESSED IMAGE

Nur Fadli H., Najiburrahman, Nur Hamid\*, Miftahul Hasanah

*Sekolah Tinggi Teknologi Nurul Jadid, Probolinggo, Indonesia*

*\*Corresponding author*

*E-mail: hamidelfath@gmail.com*

**Abstract.** The storage problem is one of big problem in digital image. One way for minimizing storage used is compressing method. In other way, there are some problems when compressing method is used, especially for lossy compression method, such as missing point, changing size, etc. In this paper, we propose a simple method for decompressing image. This method utilizes two point known from compressed image to get new image that has a same size with original image. The average mean square error is used for understanding how big the error happens in this method.

Keywords: compression, decompression, interpolation

## I. INTRODUCTION

The size of image is still to be storage problem in computers. The image can be compressed by the lossy image compression method. The lossy image compression method is one of the easiest method for compression. This method erase some pixels of image to get the lower size image. Because of erasing some pixel, it should be difficult to restore the pixel erased.

Any lossy compression technique has to achieve high compression ratios high visual quality of the decompressed image. This has been discussed in. The lossy and lossless image compression technique have been also developed in. The reference. has proposed a simple and fast lossy compression and decompression algorithm for some digital images. Different with, we consider the lossy method from another view. We do not use the interpolation to obtain the gray value in point out of points known. However, we start from linear interpolation.

In this paper, we try to discuss a very simple algorithm for compressing and decompressing images. The compression method is lossy. The decompression method utilize two points known.

## II. PROCEDURE

We initiate with grayscale image. The  $(x, y)$  coordinate contains a gray value  $z$ . The gray level is between 0 to 255. number 0 represents black and the number 255 represents white. Here we divide the method by compression and decompression method.

### A. Compression

We proceed the following procedure to compress the image.

We start by choosing the initial point. The initial point that we use is  $(1,1)$ .

After initiate the initial point, we continue choosing the ratio. Let  $r$  be the ratio. Then we take another pixels whose coordinate is  $(x_1 + r(x_2 - x_1), y_1 + r(y_2 - y_1))$  where  $x_1, y_1$  are integer and  $1 \leq r \leq 1$  and  $1 \leq r \leq 1$  are less or equal size of image.

Let  $m$  and  $n$  be row and column size of the original image, respectively. If  $m$  or  $n$  modulo  $r$  is not equal 1, the points that are not included in the compressed image will be obeyed. So, for example in case row index equals 1, we only consider the points that is column indexed at most  $\lfloor \frac{m}{r} \rfloor$  where  $1 \leq \lfloor \frac{m}{r} \rfloor$  is less than  $r$ .

We give simple example. If we have image

row 1 2 3 4 5 6 7 8 9

and if we use  $r = 3$ , then the compressed image is

row 1 4 7

The last two numbers will not be restored. In other hand, if

row 1 2 3 4 5 6 7 8 9 10

the compressed image is

row 1 4 7 10

and the number 8 and 9 will keep restored.

### B. Decompression

For decompression, we put two points of the compressed image. We use the following steps in next paragraph.

First, we consider the row vector of compressed image. Let  $(x_1, y_1)$  and  $(x_2, y_2)$  be the points that we put. Note that that two points are in same row. Then, for any point  $(x, y)$  between them, we use the equation

$$z = \frac{y - y_1}{y_2 - y_1} (z_2 - z_1) + z_1$$

As in row vector, now we consider column vector. Let  $(x_1, y_1)$  and  $(x_2, y_1)$  be any points in same column. Then, any points  $(x, y_1)$  can be obtained by

$$z = \frac{x - x_1}{x_2 - x_1} (z_2 - z_1) + z_1$$

---

---

### III. RESULT AND DISCUSSION

We try to apply the explained method for the images shown in Figure 1. The original size of the images are shown in Table 1.

TABLE I  
SIZE OF ORIGINAL IMAGES

No.	Image (Figure 1)	Size
1.	(a)	202 Kb
2.	(b)	208 Kb
3.	(c)	1.097 Kb

We show the results of compression of these three images. However, we only show 1 image for decompression.

#### A. Compression Result

By the method mentioned before, we get new images, that is the compressed images, which is shown in Figure 2. The new size of the images are shown in Table 2. On that table, it shown that we can reduce the size of the original images by method proposed. It needs to know that the ratio that we use is 3.

TABLE 2  
SIZE OF COMPRESSED IMAGE

No.	Image (Figure 2)	Size
1.	(a)	41 Kb
2.	(b)	40 Kb
3.	(c)	200 Kb

The significantly reduction of the size shows that we can save the image and use the storage pennywise. So, we can save more many pictures.

#### B. Decompression Result

The decompression result by the method mentioned before can be seen in Figure 3. We only use the image ©. The dimension is 1536x2048. Physically, we will see that there is not obvious different between the original images and the decompression images. However, we can show the error of decompression image by method namely Mean Square Error (MSE). We will use the MSE in the next part of this subsection.

The Figure 3 is the decompression result of the compression image. We note that the ratio is 3. It means that there will be two new points between two points known.

#### C. Error Analysis

We call that the MSN for error estimation. The average mean square error for images of can be defined as

$$MSE = \frac{1}{M \times N} \sum_{i=1}^M \sum_{j=1}^N (f(i,j) - \hat{f}(i,j))^2$$

where  $f(i,j)$  and  $\hat{f}(i,j)$  respectively represent the original and decompressed images. By the MSN defined above, the error is around 1.7921.



(a) Fig 1

(b) fig 2



(c)

Figure 3 The Original Image

### IV. CONCLUSIONS

The compression method proposed can be used for saving the storage. By ratio 3, we can obtain the new image of size around 20% of original image size. The decompression method used also give good result in our opinion. Its error is around 1.7921.

Since we have not compare the compression and decompression used with another method, it is better that in other research we continue to compare the method. Some lossy, near loss, or lessloss method may be able to be alternative method.

### REFERENCES

- [1] V. Caselles, *An Axiomatic Approach to Image Interpolation*, in *IEEE Transactions on Image Processing*, vol. 7, no 3, pp 376-386, March 1998.
- [2] A. K. Jain, *Image data compression: A review*, in *Proceedings Of The IEEE*, Vol.69, No. 3, pp. 349-389, March 1981.
- [3] S. G. Marta Marka and M. Grgic, "Picture quality measures in image compression systems," *Eurocon*, pp. 233-236, 2003.
- [4] L. T. W. Alexander P. Morgan and R. A. Young, "A Gaussian derivative basen version of jpeg for image compression and decompression," in *IEEE Transaction on Image Processing*, vol. 7, no. 9, pp. 1311-1320, September 1998.
- [5] S. Bhooshan and S. Sharma, "Image Compression and Decompression Using Adaptive Interpolation" in *Proceedings of the 8<sup>th</sup> WSEAS International Conference on Signal Processing, Robotics, and Automation*, pp. 154-261, 2013.



