

IMPLEMENTATION OF 3D VIRTUAL POETRY IMAGE BY USING LORENZ EQUATIONS AND OPEN GL PRIMITIVES



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This seminar is a idea of our published Paper

Presented By Mazen Ismaeel Ghareb

Outline

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- ▶ Methodology
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The published paper



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IMPLEMENTATION OF 3D VIRTUAL POETRY IMAGE BY USING LORENZ EQUATIONS AND OPEN GL PRIMITIVES

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Abstract-This There are many books and articles, literary that talk about poetic image for a particular poetry and a certain kind of poetry continued for a specific time, and also there is a poetic experience that talk about the poet's experience in writing poetic text and describes the emotions of the poet experienced by and lived in the writing of this poetic text. There is poetic music are behind the poetic text also expresses the course of events of the text and controls the writing of this poetic text law, and there is also a panel emotional draw by the poem and the painting is possible to be plastic, but Is it possible for this painting that expresses emotions and sensations and writing style the way the poet draw a sketch Three-dimensional?. This paper presents a proposed algorithm for drawing board lattice based on the poetic text written for a particular poetry, and this fee is based on the equations of the Lorenz equations to form a panel with the help of three-dimensional interface is OpenGL open GL Graphical Interface.

Keywords: 3D image processing, Lorenz equations, Open GL techniques

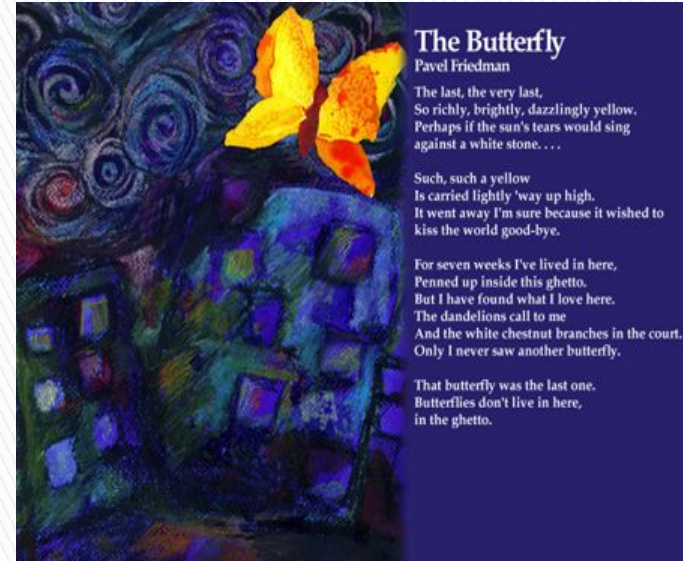
1. INTRODUCTION

In 1963, Lorenz found the first chaotic attractor in a three-dimensional (3D) autonomous system when he studied atmospheric convection . As the first chaotic model, the Lorenz system has become a paradigm of chaos research.

Later, Rossler constructed an even simpler 3D chaotic system. Notably, over the last two decades, chaos in engineering systems, such as nonlinear circuits, has gradually moved from simply being a scientific curiosity to a promising subject with practical significance and applications. It has been noticed that purposefully creating chaos can be a key issue in many technological

Introduction

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Example

Introduction 2

- ▶ but Is it possible for this painting that expresses emotions and sensations and writing style the way the poet draw a sketch Three-dimensional?. This paper presents a proposed algorithm for drawing board lattice based on the poetic text written for a particular poetry, and this fee is based on the equations of the Lorenz equations to form a panel with the help of three-dimensional interface is OpenGL open GL Graphical Interface.

THE GARDEN



A little garden,
Fragrant and full of roses.
The path is narrow
And a little boy walks along it.

A little boy, a sweet boy,
Like that growing blossom.
When the blossom comes to bloom,
The little boy will be no more.

--Franta Bass

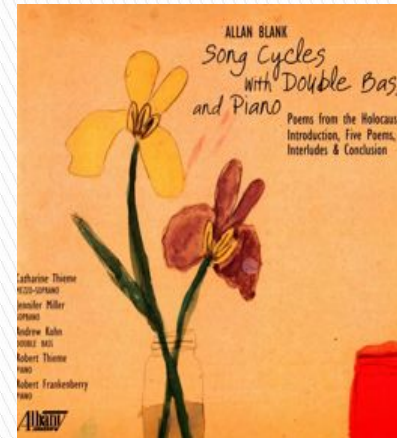
It is possible

Example

Aim and Objective

- ▶ Represent each word and sentence in graphics.

- ▶ .



Future Direction

1. Make it larger Dataset.
2. Understand more about our poem.
3. Write a suitable computer Program.
4. Me and Mr. Saman Project

Methodology 1

IMAGE FEATURE EXTRACTION

3.1 Poetic image

The best poetry is that which discloses itself and departs from the facts declarative inherent in the subject matter in the customs and traditions of the suffering and awareness. The distinction between the art of euphoria that accompanied the suffering and emotional movement is something too hard for the reader may not intellectual culture of art. Note the following text to the Mahmoud Darwich [2]

”كأنك لم تولدي بعد. لم نفترق بعد. لم نَصِرَ عيني
وفوق سطوح الزواجر كل كلام جميل وكل لقاء وداع
وما بيننا غير هذا اللقاء , وما بيننا غير هذا الوداع
”أحبك او لا أحبك

. THE SUGGESTED METHOD AND THE LORENZ EQUATIONS

The Lorenz equations:

$$\dot{x} = s(y - x), \dot{y} = rx - y - xz, \dot{z} = xy - bz \dots\dots\dots$$

Table (1) The Arabic letters with corresponding numerical values.

The letter	ء	ا	ب	ت	ث	ج	ح	خ	د	ذ	ر	ز	
Its numerical value	1	2	3	4	5	6	7	8	9	10	11	12	
The letter	س	ش	ص	ض	ط	ظ	ع	غ	ف	ق	ك	ل	
Its numerical value	13	14	15	16	17	18	19	20	21	22	23	24	
The letter	م	ن	هـ	و	ي	أ	إ	أ	أ	أ	أ	أ	
Its numerical value	25	26	27	28	29	30	31	32	33	34	35	36	37

....., 4=ج, 3=ت, 2=ب, 1=أ, table 1 illustrates the values given to the Arabic alphabetic.

Results

The letter (ج) has a (x^1, y^1, z^1) , and letter (د) is (x^2, y^2, z^2) , Fig.1 illustrates the result of Lorenz for Mahmoud Darwich text

”في الايام الحاضرة
اجد نفسي يابسا
كالسجر الطالع من الكتب
والريح مسائلة عابره
أحارب ... او لا أحارب؟
ليس هذا هو السؤال
”المهم ان تكون حنجرتي قوية.



Fig 1 3D image of Mahmoud Darwich piece if poet as mention above using the suggested method

Results 2

Second poetry implementation as shown below,



Fig. 2 3D image is created for the poetry segment of Mahmoud Darwich [2]

Results 3

Second poetry implementation as shown below,



Fig. 2 3D image is created for the poetry segment of Mahmoud Darwich [2]

”لكي اذكر ان لي سقفا مفقودا
بنبغي ان اجلس في العراء.
ولكيلا انسى نسيم بلادي النقي
بنبغي ان اتنفس المل
ولكي اذكر الغزال السابح في البياض
بنبغي ان اكون معتقلا بالذكريات.
”ولكيلا انسى ان جبالي عالية

Final implementation of part of the poem as shown in Fig.3.



Fig. 3 3 D virtual poetry image of the segment below for the poet Badr Shaker ALSayab.No. The following poetry segment is taken from [3]

CONCLUSION

- ▶ In this research was used the equations of Lorenz in drawing three-dimensional painting of poetry, free texts and by taking advantage of the chaos theory to carry out this work was painted poetic image of the text poetic free in a three-dimensional and is reflective of what was touring in the mind of the poet as those 3D images represented poetic image of each poetic text.
- ▶ Possible future development of this work to include the poetic texts vertical traditional Arabic poetry and also develop the input to include foreign poetry, and also the possible development of the way to include the change in primary transactions to offset Lorenz and note the results as it in this research has been installed transactions to offset Lorenz values and adopt the values installed.

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