

Games2learn Lab Presents The Dance Tool

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Jasmine Jackson
CRA-W DMP Summer 2008
Mentor: Dr. Tiffany Barnes
Graduate Supervisor: Evie Powell



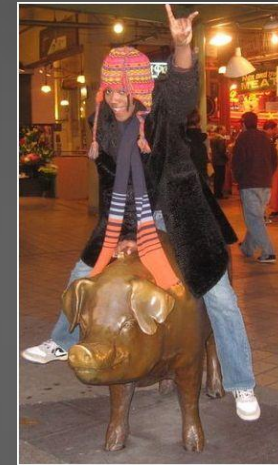
Introduction



Hanan Alnizami
UI Programmer
“Sweeet!”



Jasmine Jackson
3-D programmer
“Let me think!”



Evie Powell
Project Supervisor
“Indeed!”

Related Work

Culturally Situated Design Tools: Dr. Ron Eglash

Culturally Situated Design Tools:
TEACHING MATH THROUGH CULTURE

Many cultural designs are based on mathematical principles. This software will help students learn standards-based mathematics as they simulate the original artifacts, and develop their own creations.

African	African American	Youth Subculture	Native American	Latino
African overview: fractal geometry	Cornrow Curves: transformational geometry	Graffiti Grapher: Cartesian and polar coordinates	Virtual Bead Loom: Cartesian coordinates	Pre-Columbian Pyramids: symmetry, pre-algebra
Mangbetu design: transformational geometry		BreakDancer: Rotation and sine function	Alaskan Basket Weaver: Cartesian coordinates	Rhythm Wheels: fractions, LCM
Hexastrip weaving: buckyballs			Navajo Rug Weaver: Cartesian coordinates	
			SimShoBan: geometry	
			Yupik Star Navigator: counting, modular math	
			Yupik Parka Patterns: transformational geometry	

For the teacher: [Standards-based lesson plans, evaluations, and other teaching materials](#)

For STARS: [handouts and evaluations](#)

Virtual Breakdancer - Windows Internet Explorer

http://www.ccd.rpi.edu/Eglash/csdt/subcult/brdance/index.html

Virtual Breakdancer (requires java 6 plugin)

BREAKDANCER HOME

CULTURE

1. The Dance
2. A Non-Violent Alternative
3. A Counter-Cultural Dance
4. Breakdancing in the Mainstream
5. Relations to Technology
6. The Moves
7. References

TUTORIAL

1. Rotation in the Human Body
2. Software Tutorial
 - a. Menu
 - b. Buttons
 - c. Joints
 - d. Animation
 - e. Rotate and Translate
 - f. 3D View

SOFTWARE

TEACHING MATERIALS


ACKNOWLEDGEMENTS

CSDT HOME

Introduction

Breakdancing originated in the late 1970s, and is one of the four pillars of hip-hop, along with rapping, DJing, and graffiti.

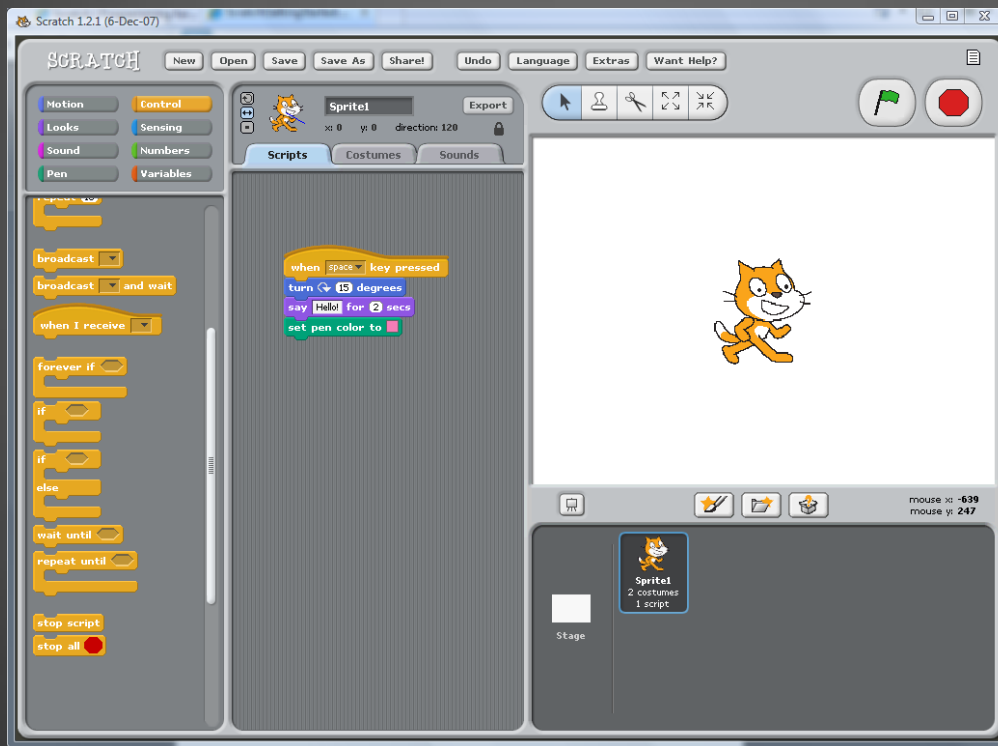
On this site, you will learn all about hip hop breaking, and using our Virtual Breakdancer software, you will create your animated dance.



At right: FRESH breakdancing competition in Manchester, August, 2005

<http://www.rpi.edu/~eglash/csdt.html>

Related Work (continued)



<http://scratch.mit.edu/>

Motivation

- Ages Targeted: middle-high schools
- Learning fundamental programming concepts
- 3-Dimensional graphics
- Manipulate behavior

Dance Tool Mock Up

- Date proposed: October 2007
- Date created: March 2008
- Designer: Eve Powell



The Dance Tool



Command Panel



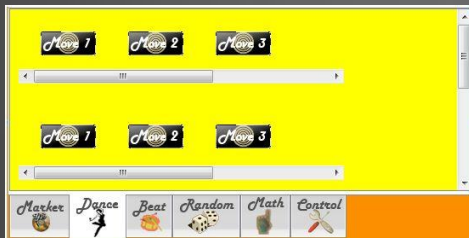
Variable Name:
Variable Type: char
Variable Value:
Create

Marker Dance Beat Random Math Control



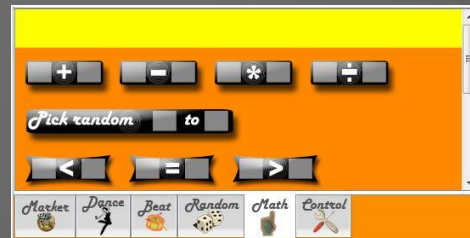
Pick a random
Integer Boolean Float

Marker Dance Beat Random Math Control



Notes 1 Notes 2 Notes 3

Marker Dance Beat Random Math Control



+ - * ÷

Pick random **to**

< = >

Marker Dance Beat Random Math Control



32nd Note 16th Note 8th Note 1/4 Note 1/2 Note Whole Note

Marker Dance Beat Random Math Control



if { else { for { is { while {

Marker Dance Beat Random Math Control

Applet

Variable Name:

Variable Type:

Variable Value:

Create

Clear **Clear All**

- Marker**
- Dance**
- Beat**
- Random**
- Math**
- Control**

Choose:

- Characters**
- Dance**
- Stage**

Maya **Max**

- New**
- Open**
- Save**
- Publish**

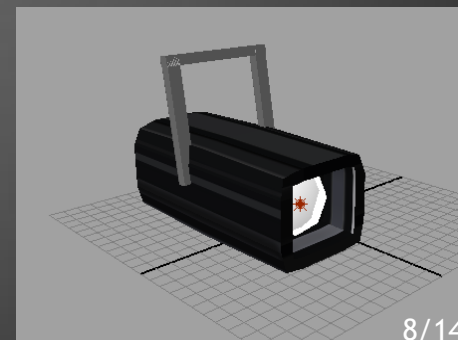
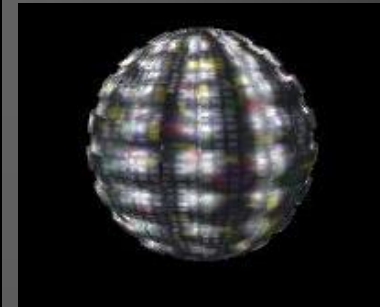


Timeline



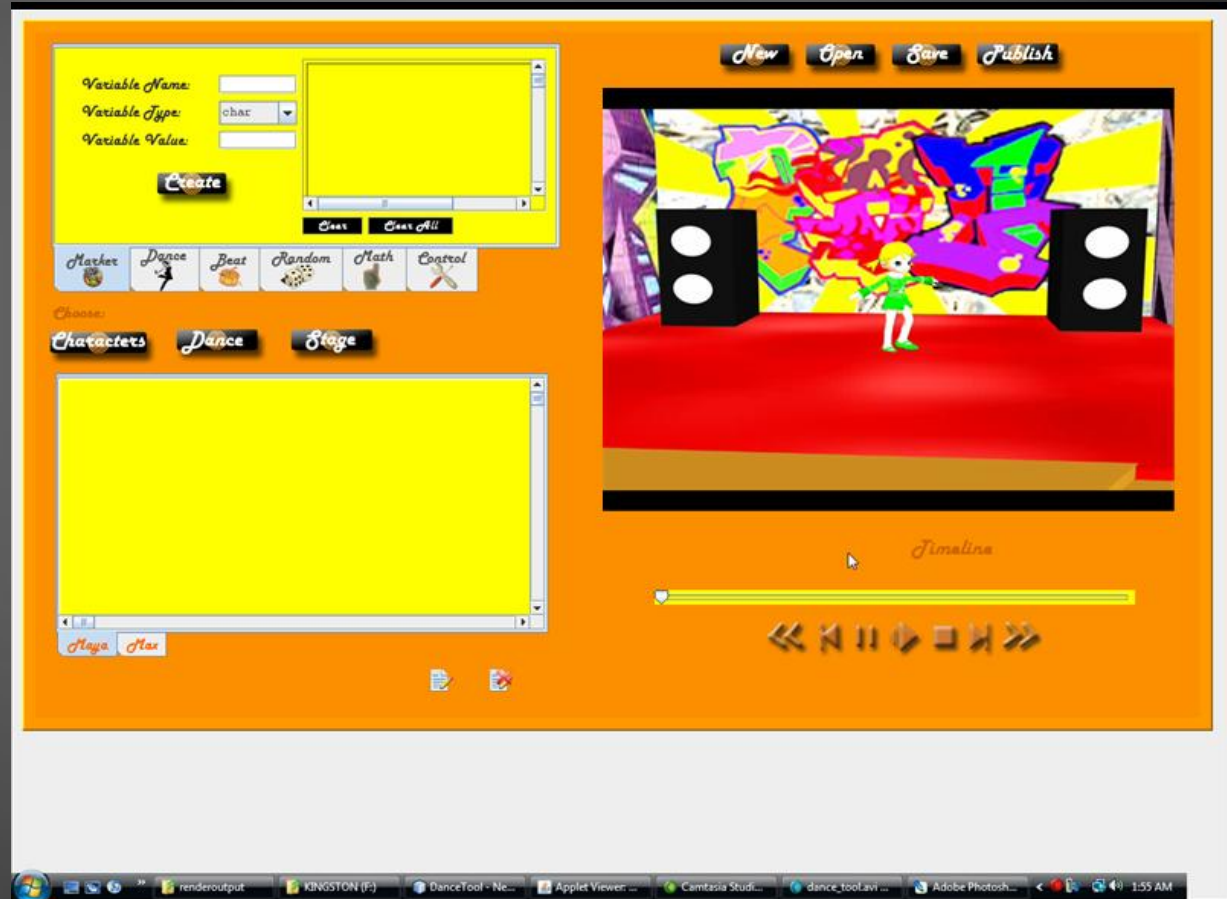
Applet started.

The Environment



Future Work

- Character Design
- Functionality
- Prototype and testing



What was learned



- NetBeans IDE 6.1
- Java Programming
- Autodesk Maya 8.5
- Research



- NetBeans IDE 6.1
- Java Programming
- Research

Credits and Acknowledgments

- CRA-W Distributed Mentor Project

- Dr. Tiffany Barnes

- Eve Powell

- Su Hyung Cho

- Game Lab

- NetBeans IDE 6.1

- Autodesk Maya 8.5

- Adobe Photoshop CS3

- Adobe Illustrator CS3

- TechSmith SnagIt 9

- www.Google.com

Questions or comments?

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