A “Graphic Assembling Script” language

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GAS is an imperative language, focusing on multiple image processing.

- Simple - easy to use, error tolerable, scripting
- Image as primitive - image as the basic element to generate complex images
- Portable - able to be use in any device supporting java virtual machine
- Extendible - allow user to define new image processing functions and packages
- Powerful - provide enough functions for basic use
ImageMatrix beatles = new ImageMatrix(); //Read the image
Image imageset[] = new Image[4];
int i;
Color colorset[4] = {#yellow, #blue, #green, #red};
for (i = 0; i < 4; i++) { //Image Operation
    imageset[i] = new Image(filename[i]);
    imageset[i].paint(colorset[i]);
}
beatles.fill(imageset, #square); //Group it together
beatles.show(600,600); //Show!
**TYPE CONSTRUCT**

- Basic types - int, float, boolean, String, etc. Same as in JAVA
- Image - Primitive of the language, blur, sharpen, resize, threshold, etc.
- Image Region - Easy to access region, share the same functions
- Image Matrix - Image alignment design, Add, Adjust, Fill, Show, etc.
IMAGE MATRIX EX.
OTHER FEATURES

- Pixel - Access to the image pixel
- Kernel - User-defined convolution filter
- Color - Format: {R, G, B, ALPHA}
- Control Structure - While, For, If, Break, Continue, Return
GAS ARCHITECTURE
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**Development Environment and Support Tools**

- Development Environment - JAVA SDK v6
- Operating Systems - Windows + Linux + MacOS
- Lexical Analyzer + Syntax Analyzer - JFlex + BYacc/J
- Version control - Subversion + Google Code
- Documents sharing - Google Docs
- IDE - Netbeans + Eclipse
- White Box Test & Black Box Test - Each Module is tested itself by different use cases, e.g. Inter-Code Gen (Node Info to Inter-Code); Back-End (Inter-Code to Results)

- Unit Test - FE & BE

- Check & Modify bugs (e.g grammar)
WHAT WE LEARNED

- Group Project - Regular Meeting, Keep Communicating
- In-depth understanding of PLT knowledge, tools
Thank you.

GAS