Frequently asked questions (FAQs) about using Image Apprentice
Plugin Development Kit (PDK)

Advanced Digital Imaging Solutions Laboratory

Image
Apprentice

The C/C++ based Image Processing Learner's Toolkit

ADISL

Imaging Solutions

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OK

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Plugin Development Kit (PDK)

Q: What exactly is Image Apprentice Plugin Development Kit?
A: Image Apprentice is a C/C++ based Image Processing Learner's Toolkit. It allows you to run your self-written Image Processing algorithms. The Plugin Development Kit (PDK) has a skeleton source code that you can fill up with your own processing algorithms without worrying about Graphical User-Interface Programming.

Q: If I write the algorithms, what would Image Apprentice do?
A: Smart! Image Apprentice removes all the hassles that an 'apprentice' faces while learning Digital Image Processing fundamentals. It can open/save Jpeg (.jpg) and Bitmap (.bmp) image files within its framework for you. It manages the windows, menus, image file handling, decoding of jpeg/bmp files etc. Essentially it handles all the issues that an apprentice finds difficult in the initial stages. Later it supplies the image array to your plugin that you code yourself using a basic C/C++ syntax knowledge. Once compiled, you can run the plugin at the click of a menu button. The results can be immediately seen on the operand image.

Q: Does this mean I learn Image Processing as well as improve my C/C++ skills when I work with Image Apprentice?
A: Yes!

Q: Whoa! How do I do all this?
A: Simple! If you know basic syntax of C or C++ languages, you can start writing your own code immediately. Just fill up the skeleton code as instructed in one of the following FAQs.

Q: What are the compilers required for compiling/building this C/C++ code?
A: You need Microsoft Visual C++ version 6.0 installed on your machine. The PDK comes in the form of a project that you open in VC++ 6.0 and can begin immediately with writing your own algorithms.

Q: Though my Institute/College has VC++, I have never used it. I know only C and/or C++. Can I use the PDK?
A: That's the best part of Image Apprentice! All you need to know is C/C++. The PDK has a skeleton code ready that you have to fill using normal Programming-101 course's C/C++ syntax. Of course if you are real good at C/C++ you can write your own classes and functions as per your need.

Q: How much time does it take to write my first plugin?
A: The sample Invert_Color plugin can be written in 2 minutes, *flat*. Any resemblance with a particular Noodle brand is purely coincidental! Invert_Colors inverts the color of an image i.e. dark shades become light and light shades become dark. Here is the source code:

```
void CProcessor::InvertColors(BYTE *buffer, int width,
                                   int height, int bytesPerPixel)
{
       for(int i=0; i < width*bytesPerPixel*height; i++)
       {
              buffer[i] = 255 – buffer[i];
       }
}
```

Of course, the complexity of source code depends from processing to processing.

Q: Can you tutor me about using the Image Apprentice PDK?
A: Sure! Just go through the tutorial '*A 5 step guide to build Image Apprentice Plugins*'.