



Spotlight - Imagix 4D by S.Goetzinger- Verifysoft Technology

- **Machines understand codes... but the brain is better with images.**

Teaser

Ever had the feeling “What am I coding here?” or “What did my colleague code here?”. We all work with keywords, algorithms and the like, to please machines, which will do some work for us. But grasping code at a glance, especially the interconnections is hard, bothersome, and nothing our brain is made for. Day by Day we interact with images, recognize faces. So why should we force ourselves to be worse than we could by restricting our perception of code to source code? How about a tool, that could make your code more visual?

Control flow visualization

The most basic of our Imagix 4D’s visualisations is its controlflow graph. See at a glance the complexity of your code. What are the possible branches? Are there switch statements? Where do we have an end? Maybe a break or a return which might not be clearly visible in the code? All these things are revealed by this simple flowchart, which is generated from your sources. Several Highlighting options make it easy, to identify possible reads of not initialized variables. If you are already a Testwell CTC++ user, just import existing coverage reports of your code, to get a clear picture, which branches have already been covered by your test cases? The parts of your code, which have not been visited, are highlighted red, whereas your other parts remain in their normal color.

Architecture visualization

Software gets more and more complex. This is the reason why you should never lose the bigger picture. Imagix 4D offers the opportunity, to visualize your architecture, seeing dependencies and the structure of your software, without restraining your possibilities to customize these views for a better understanding.

Source code analysis

- Task flow checks (Concurrency Analysis)
- Function calls by pointer
- Variable dependency checks
- Find similar functions (reduce redundancy)
- Find stray mallocs in your C++ projects

Metrics

Imagix 4D supports several software metrics, like McCabe, Halstead, Maintainability Index, Code Coverage and Mental Effort to identify hot spots in your code easily, by using these measures as a colored indicator on your graphical visualizations.

Delta Analysis

Most critical sections of the code are the sections, which have been changed since the last version or the last release. To see, where much of the code has changed, you could use Imagix 4D's delta analysis. Errors are to be found in changed sections, and you could see them with this analysis.

Automated Documentation

Document your software, without the need of special annotation. Imagix 4D generates clearly understandable reports. Besides listing which arguments and return types you have used, it is also documented, which functions it depends on, as well which functions are depending on it.

...more information: http://www.verifysoft.com/en_imagix4d.html