Improve Supervised Watershed

Revision: 2 INTERNAL

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Abstract:

Supervised watershed in BoofCV appears to be of limited use and doesn't segment the image as expected. The reason for this is currently unknown and might involve just a simple fix or maybe a more complex algorithmic change.

Completion Criteria:

- See **Bounties** page for general rules/conditions
- Demonstrate similar behavior to OpenCV's implementation
 - See this discussion for the details
- Identify reason for undesirable behavior and document the fix
- Create example showing its use

Comments:

This is an open ended problem and is intentionally a bit vague. The code in BoofCV should identify the book/paper that it's based on so that's a good starting point. First read those articles, look through BoofCV's code see if it is actually implementing the algorithm as described correctly. If everything looks good take a look at OpenCV's documentation and see if it cites a different source and you might also need to go through it's source code.

• See class <u>WatershedVincentSoille1991</u>

It's entirely possible that both implementations are "correct" just optimized for different applications. In that case a flag will need to be added so that you can switch between the two different modes of operation.

Discuss in the BoofCV message board your progress and ideas for improvement.