FORMING ATTRIBUTE SPACE FOR CLASSIFY IMAGE TASK Utkin A.S

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Classification is one of the main tasks of multimedia image processing. Semantic classification of visual patterns stands out various classification types for importance and difficulty. Semantic analysis is the top of hierarchy procedure image processing.

Semantic images classification based on forming methods of primary informational system. Well-formed attributes plays an important role. Main request on that stage is to provide admissible invariance to topological transformation and high performance in getting primary information. Primary attributes presents in highly dimension space and have considerable differences in levels of information. Those conditions prevent from using them in classification task. Construction of secondary informational indications concentrated on remedial action.

Segmentations provides dividing image to consisting areas and objects and also begins formation of secondary informational indications. The detailed elaboration degree of segmentation could essentially affect on their self-descriptiveness. Developed segmentation mechanism takes into account detail degree which is enough for forming attributes necessary for solving task of semantic classification. The accent of the secondary characters is that they have a



Figure 1. "Dirt road" image segmentation.

physical meaning, logical reflect the information that a person uses in semantic analysis of the image. The meaning of informational level defines degree of belief composite to indication and using after that calculate to membership functions to semantic pattern.

On the figure 1 you

could find an example of "Dirt road" image segmentation. Each segment is labeled by point marker. The color of the marker corresponds to the segment, to which it pertains. As you could see from the example developed algorithm has not much differences from segmentation that person could do analyzing image.