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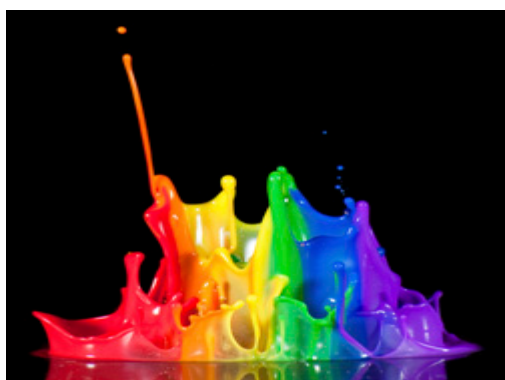


# Task Specific Description of Visual Color Information

## Results in Brief

### Using colour information for object recognition

Object recognition algorithms traditionally rely on luminescence information without taking into account colour. EU-funded researchers made important advances to automated colour description for specific classes of objects that could find widespread commercial application.



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Teaching computers to perform ‘human’ tasks has become a common theme in an era of increased automation and a quest to reduce potential human errors in a variety of processes. Automated colour recognition has important use in fields as diverse as robotics, gaming and photo editing.

In order to develop new methods combining colour and shape information into algorithms for object recognition, EU-funded researchers initiated the ‘Task specific description of visual color information’ (TS-VICI) project.

Scientists sought to develop an automatic adaptation colour description combining photometric invariants (features repeatable with respect to changes in lighting) with discriminative power (distinctness, or the usefulness of a feature for classification purposes).

In addition, researchers suggested adaptations to the colour descriptor incorporating task-specific or class-specific information for higher performance – for example, colour descriptors help identify colour-invariant objects such as flamingos but do not add value to recognition of colour-variant objects such as cars.

Overall, results suggested that the use of colour to guide shape description outperformed existing methods using a combination of colour and shape information.

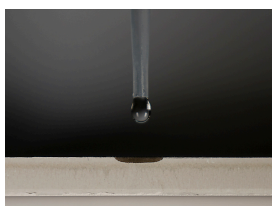
Off-shoots of the project outcomes included research on physically realistic recolouring of objects such as required by photo editing, publicity and gaming applications.

The TS-VICI project made valuable enhancements to theories and algorithms associated with automated image analysis and object recognition valuable to robotics, computer vision and photo editing with important potential for commercial exploitation.

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## Project Information

### TS-VICI

Grant agreement ID: 224737

Project closed

#### Start date

12 June 2008

#### End date

11 June 2011

#### Funded under

Specific programme "People" implementing the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007 to 2013)

#### Total cost

€ 45 000,00

#### EU contribution

€ 45 000,00

#### Coordinated by

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