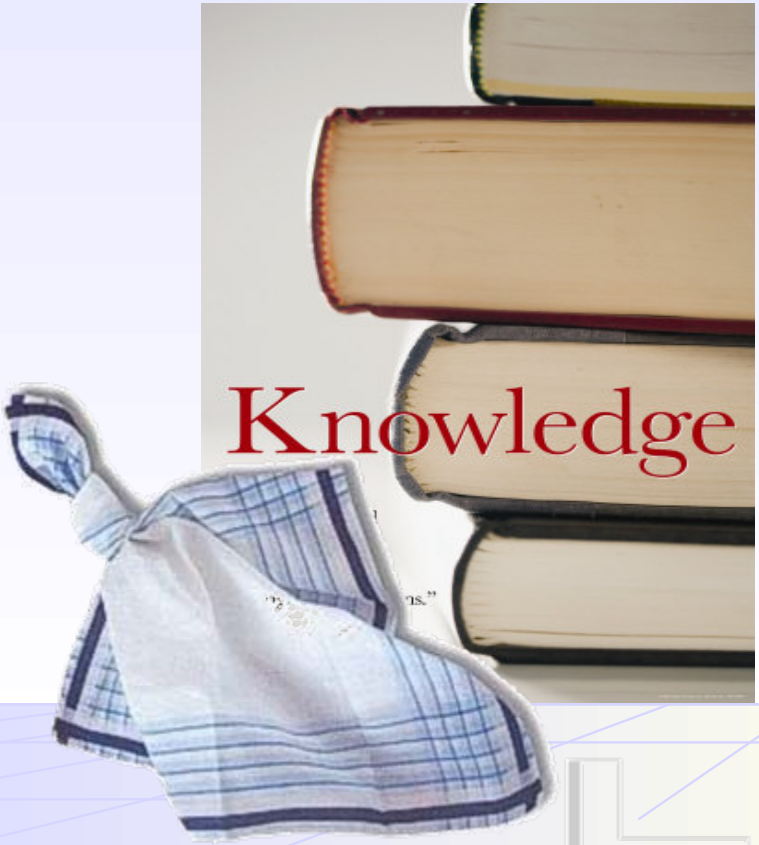
Attention modulation using short- and long-term knowledge



6th International Conference on Computer Vision Systems 2008

Sven Rebhan,
Florian Röhrbein, Julian Eggert, Edgar Körner

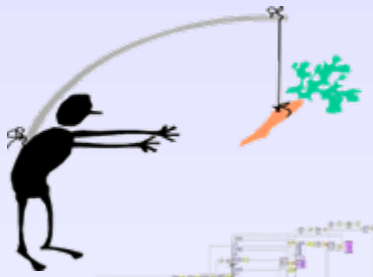
30 August 2008

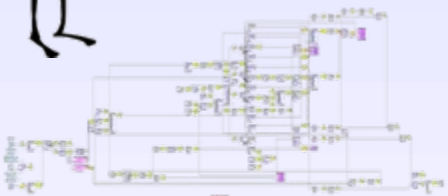
Honda Research Institute Europe GmbH
D-63073 Offenbach/Main, Germany

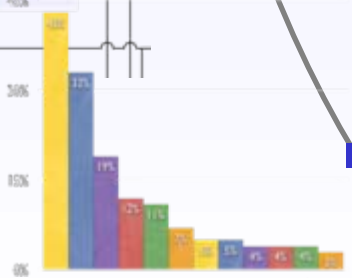
www.honda-ri.de

HONDA
The Power of Dreams

Outline

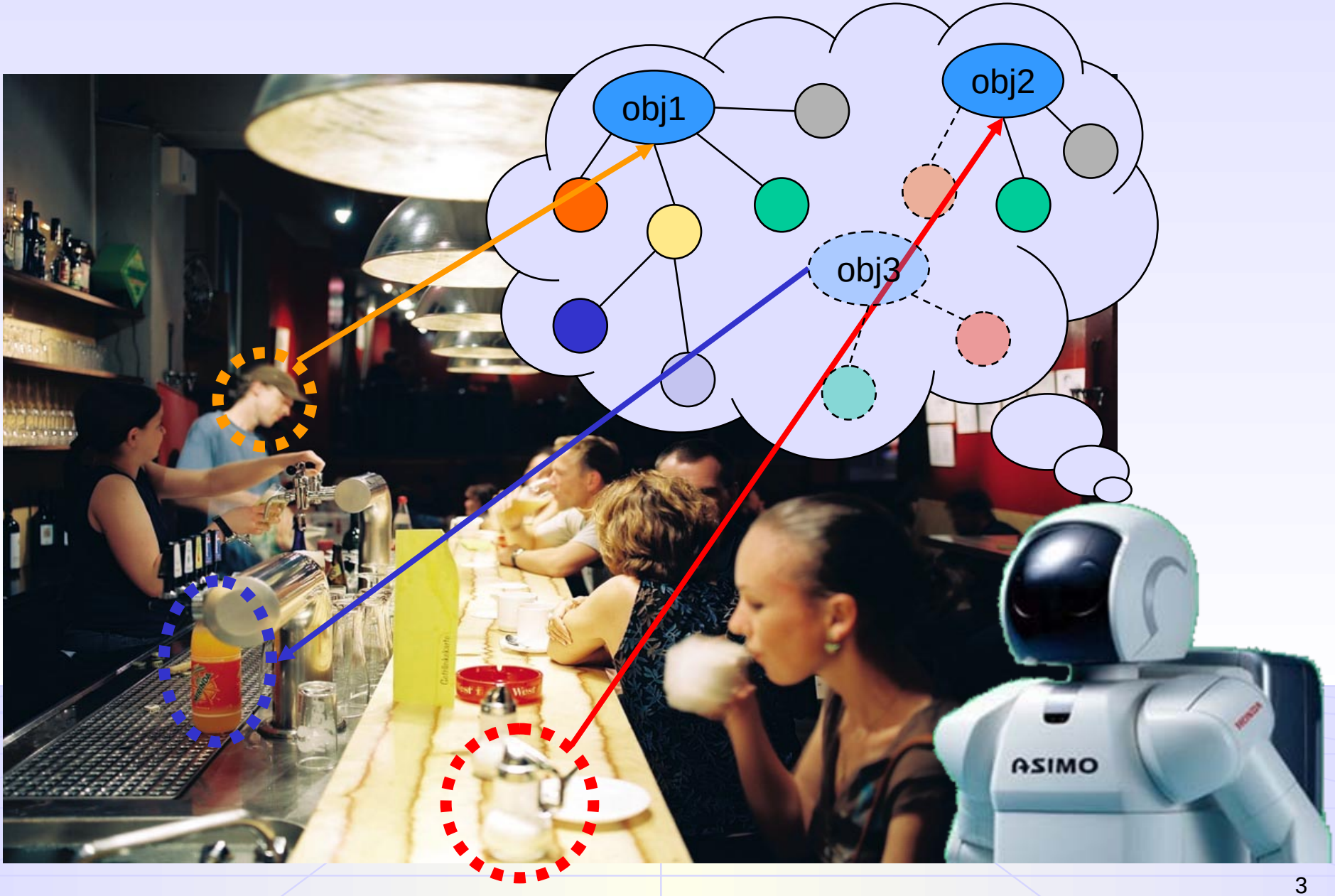




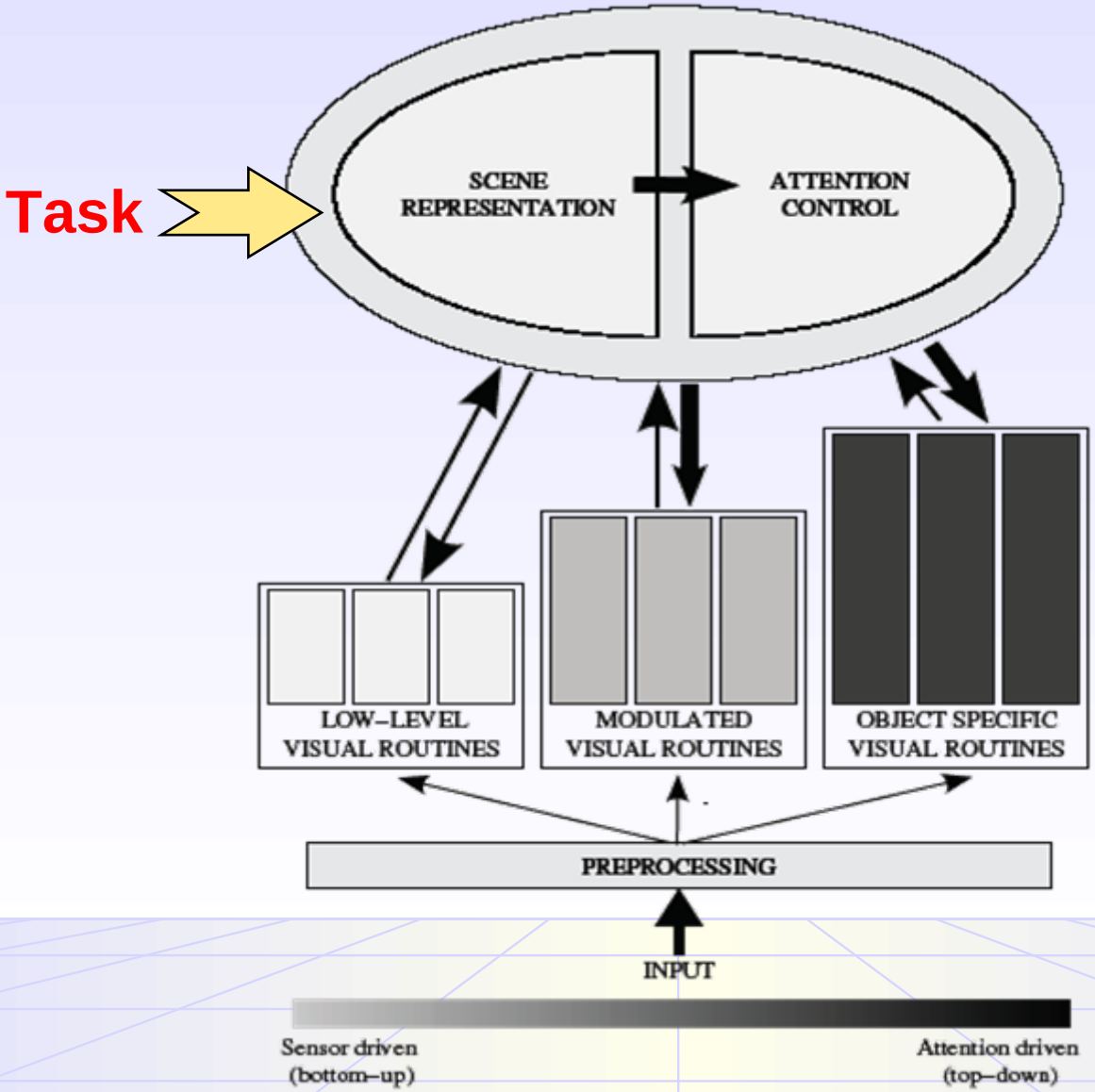


- Motivation & Goal
- System architecture
- Components
- Results
- Summary

Motivation & Goal - Introduction



Motivation & Goal - Architecture



Eggert, Rebhan & Körner: First steps towards an intentional vision system, ICVS 2007

Motivation & Goal - Involved topics

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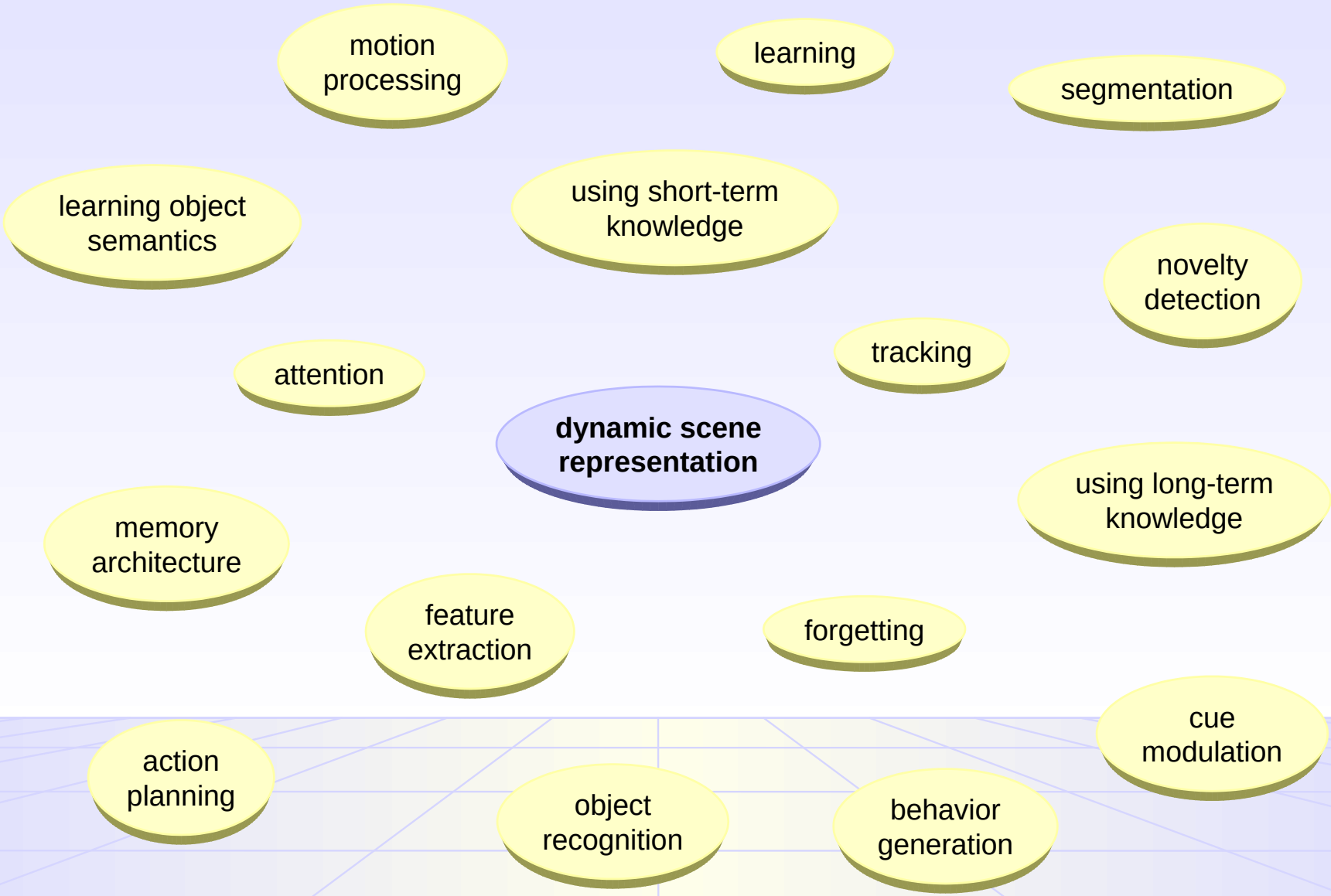

System architecture

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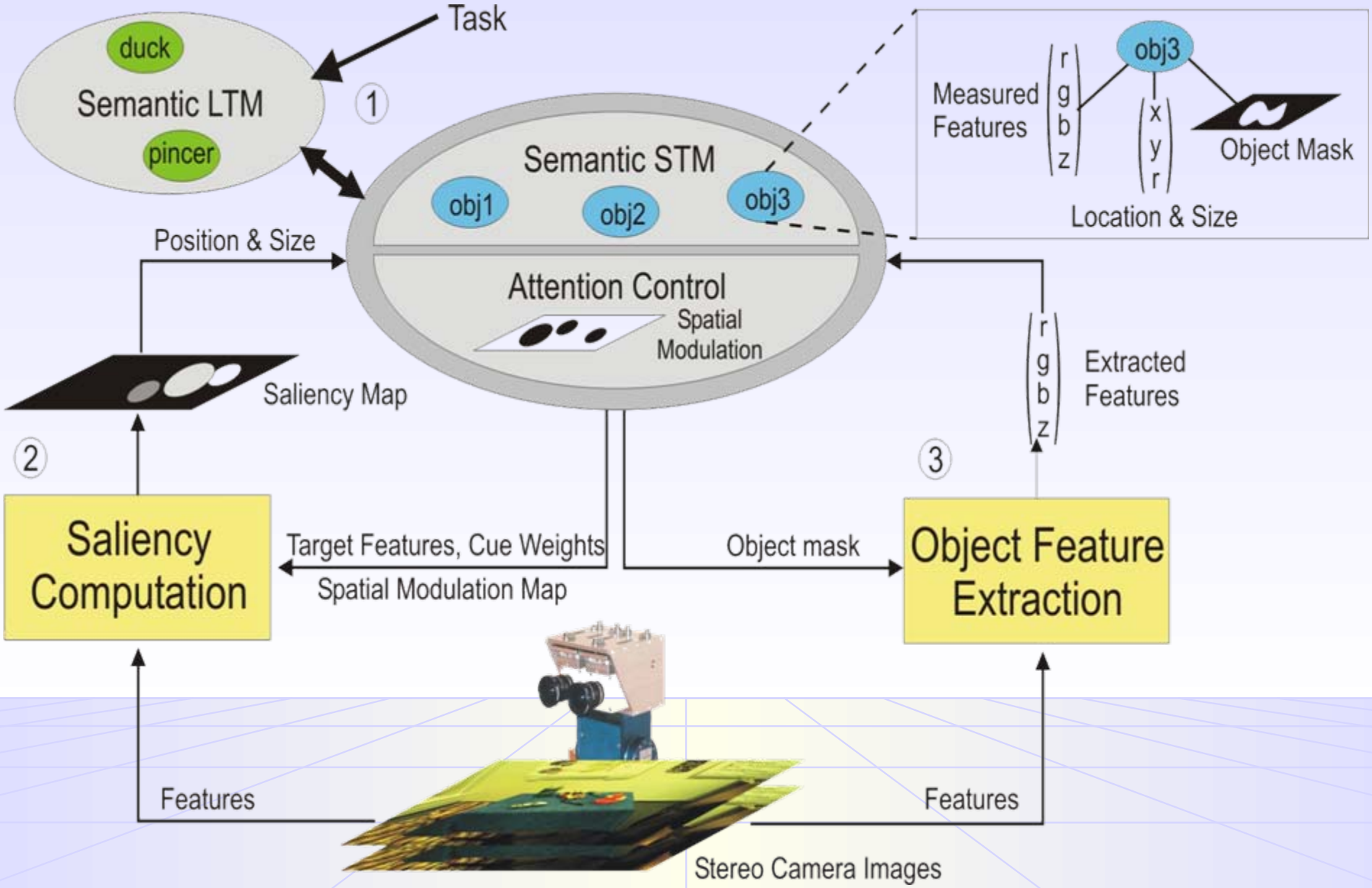
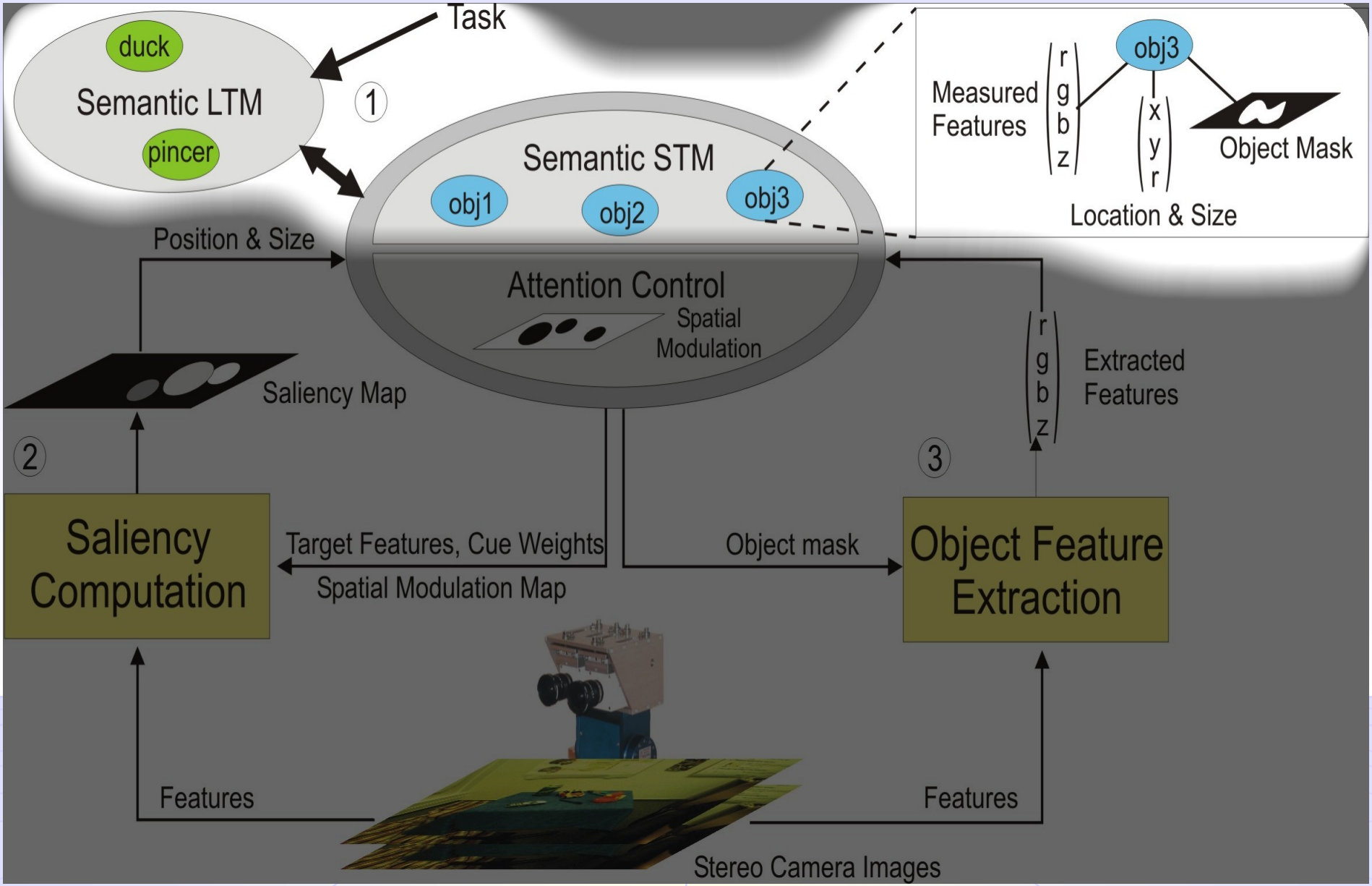
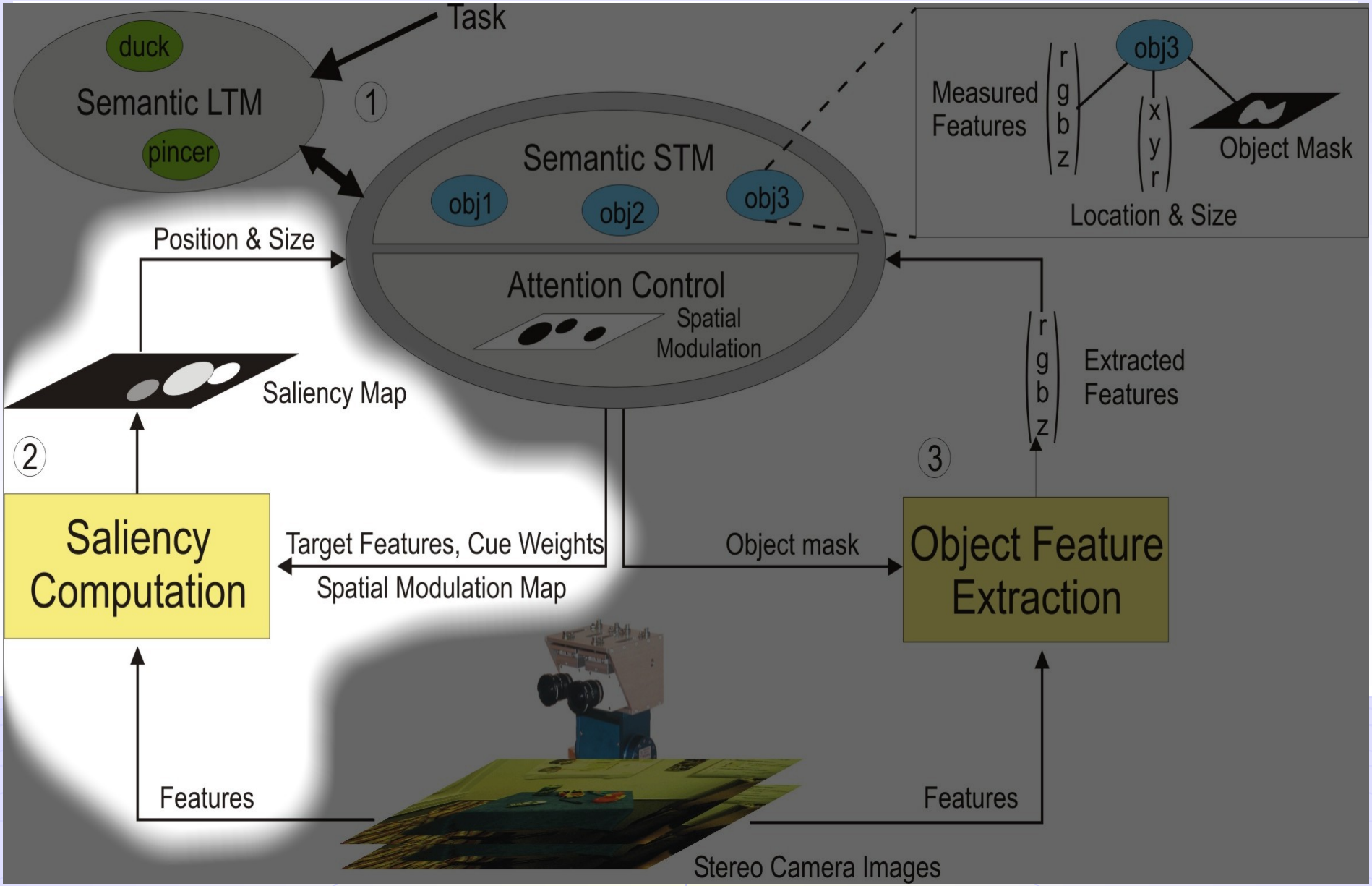


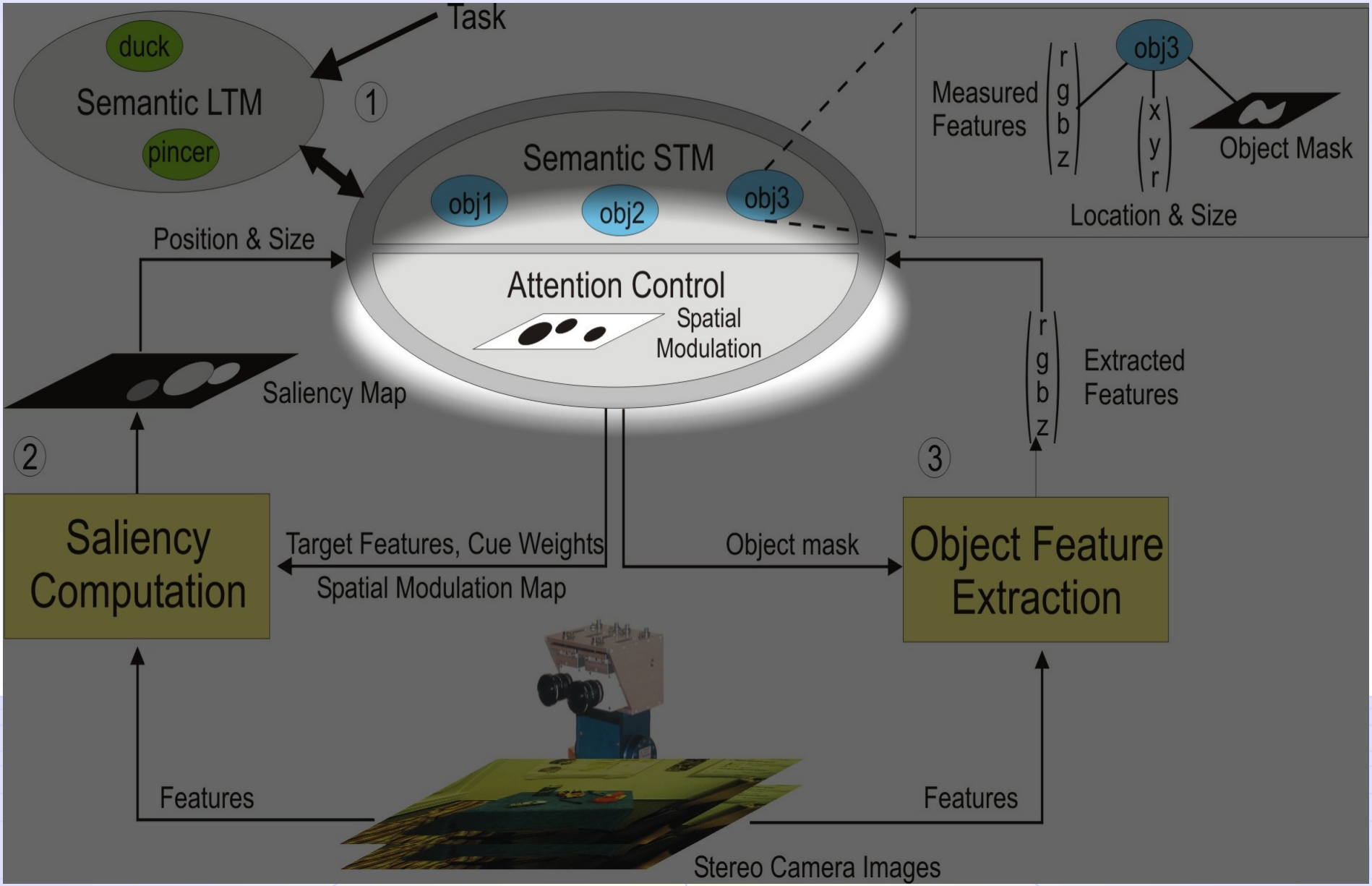
Components - Semantic memory



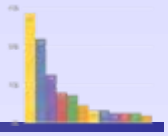
Components - Saliency



Components - Attention control



Results - System implementation



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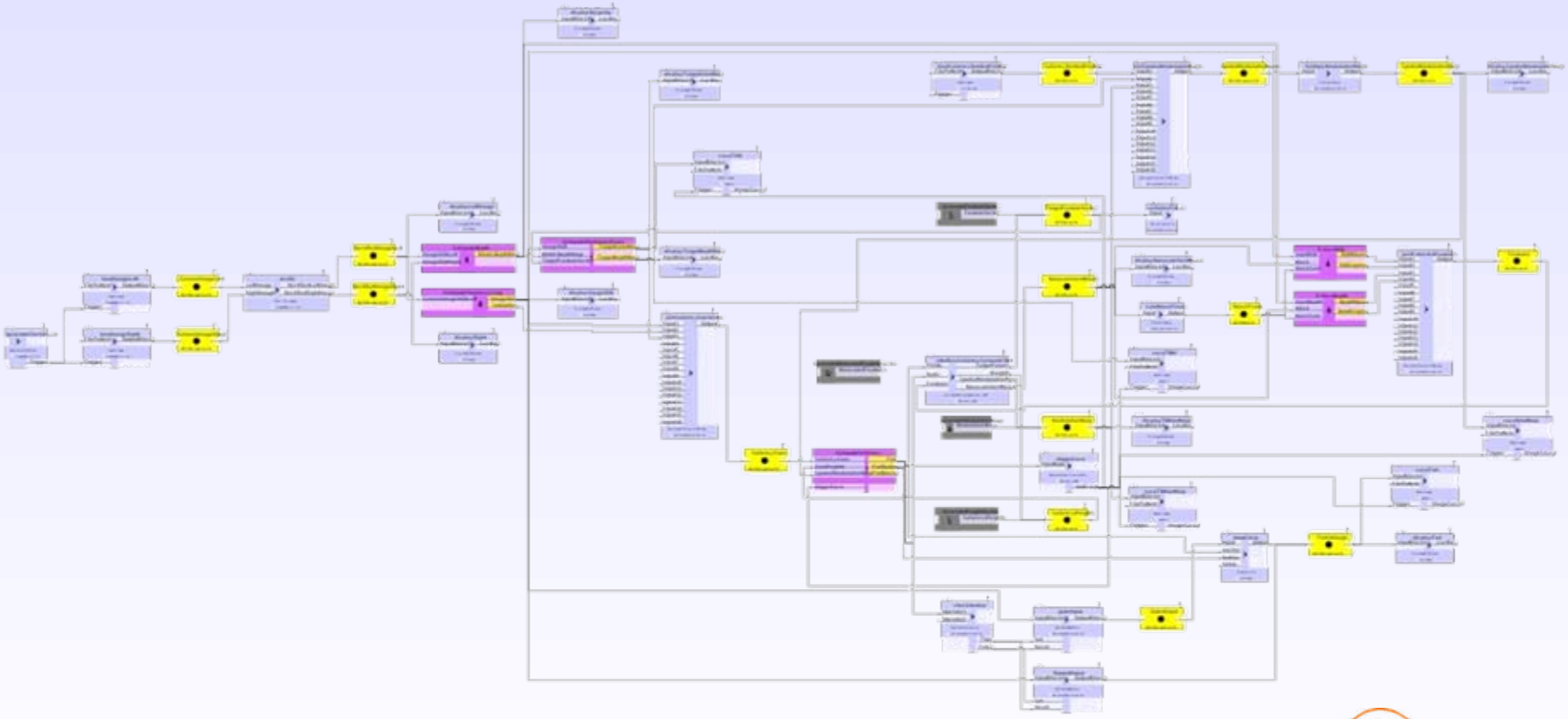
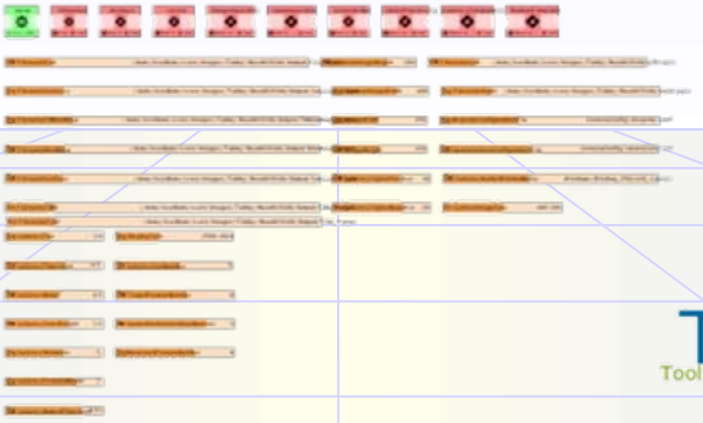
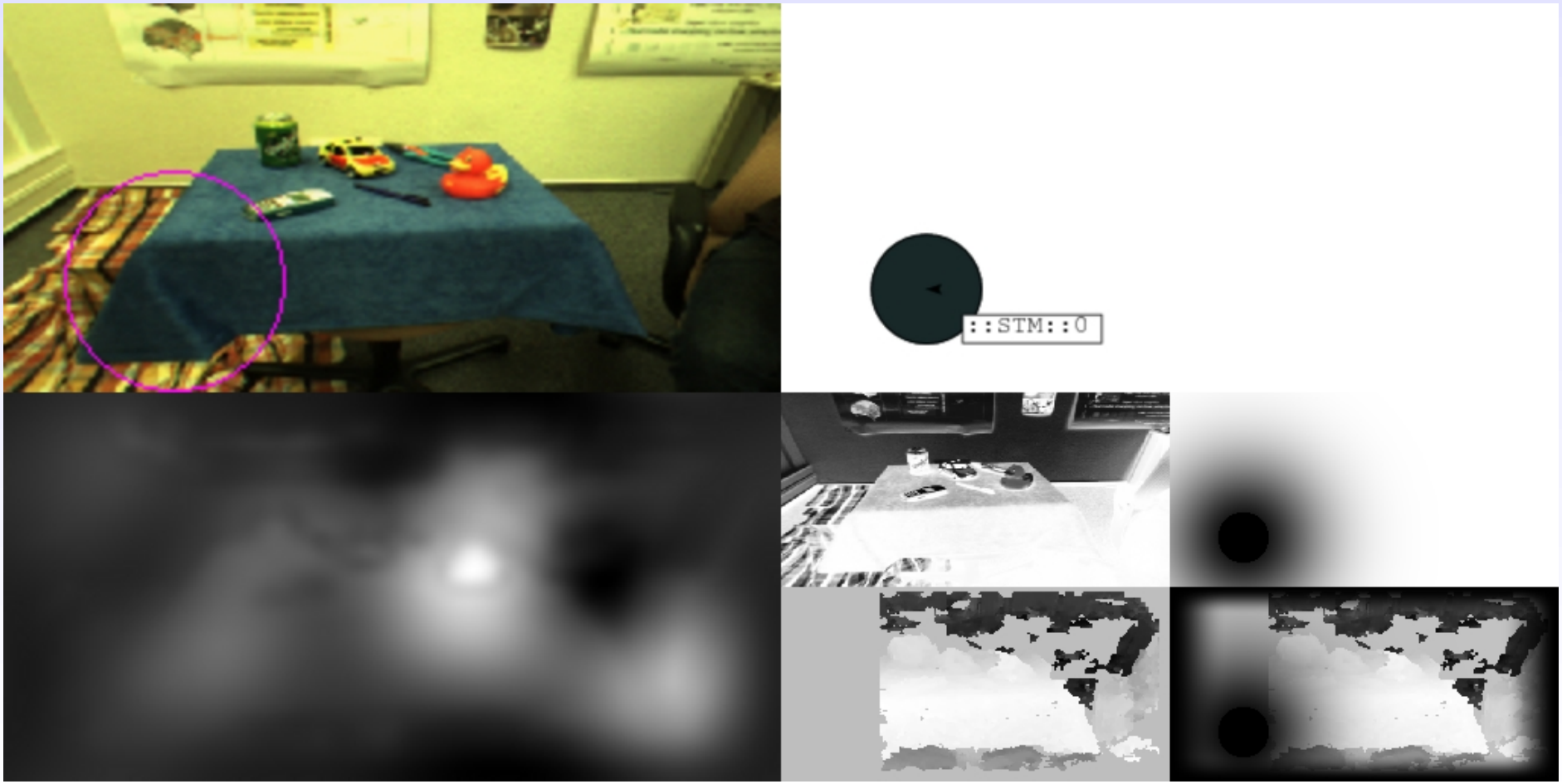




ToolBOS
Tools for Brain Operating System

Results - Video



Summary

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It's possible to:

- "fill" the scene representation in a task-specific and sequential manner
- find familiar objects using a modulated saliency map
- speed up the visual search by using the system's short-term memory
- update visual object properties over time by using the top-down modulated saliency map

Thank you
for
your attention!