

EURIPIDES Forum 2010 in Paris

September 30th – October 1st, 2010 in Paris

SEAMOVES

Sensor Enabling Autonomous Motion
By Optimized Visual Environment Sensing

Rationale

Navigation of small unmanned vehicles equipped with bulky laser scanners or visual sensors, demands computationally intensive algorithms. A key to the development of autonomous systems market (cars, care or assistant robots, security agents ...) is the availability of compact, low cost smart sensors for navigation.

Objectives

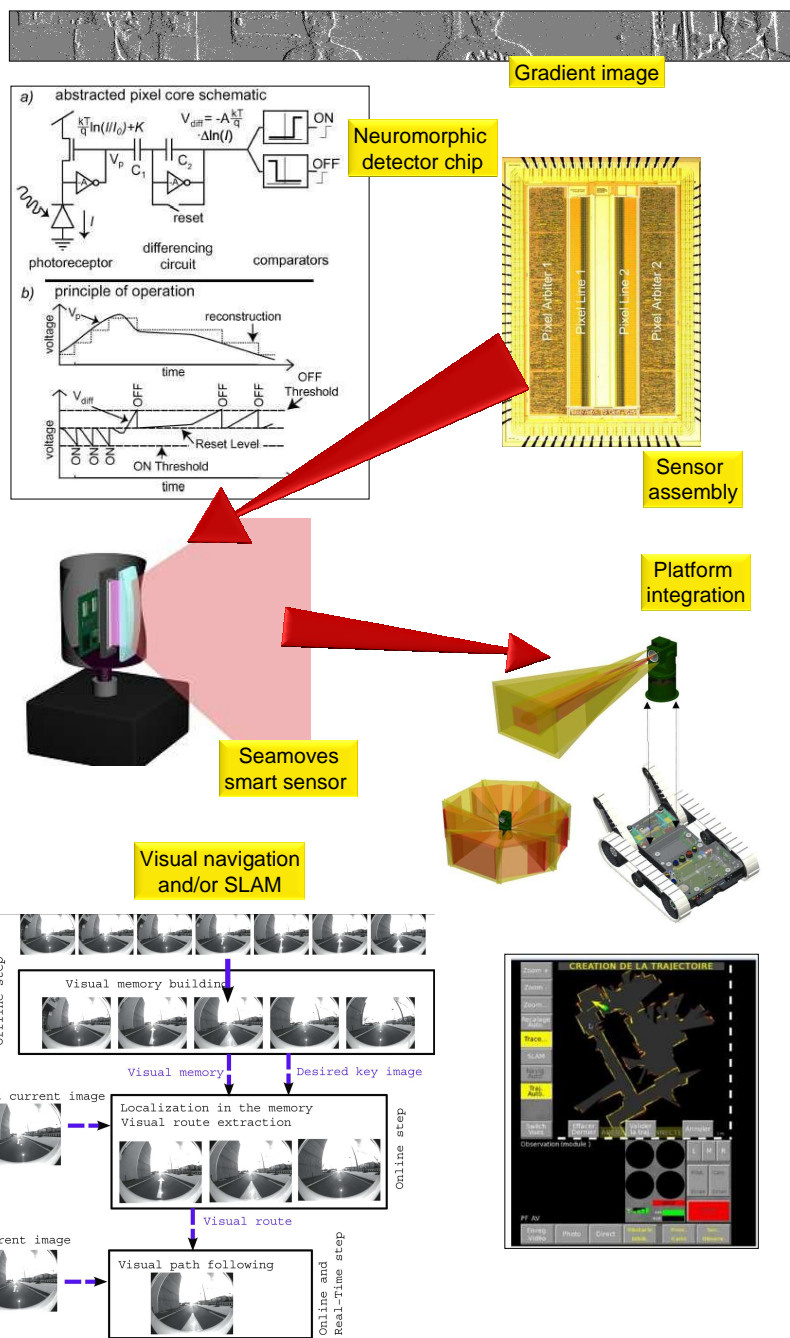
- Develop an innovative smart sensor for autonomous visual navigation
- Based on a neuromorphic vision chip
- 360° fast panoramic scanning
- Embed low-level processing, and intelligent navigation functions

Technical challenges

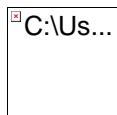
- Optimize the linear detector : resolution, sensitivity, pixel rate
- Re-visit the processing for this innovative, event driven imager
- Develop a small-size, low consumption scanning system
- Optimize the processing architecture

Assessment

- The functionality and performances will be tested on various robotic platforms
- The system will also be evaluated for security applications on stationary and non-stationary platforms.



THALES



Université Blaise Pascal

