

Motivation

- Move objects with airflows
- Contactless manipulation
- No gripping force
- No stroke force
- No limitation to object's material

Objectives

- Modular and Self-Reconfigurable
- Attachment of Blocks
- Flexible Shapes
- Scalable and Extendable Surface
- Self-Reconfigurable
- Fault Tolerance

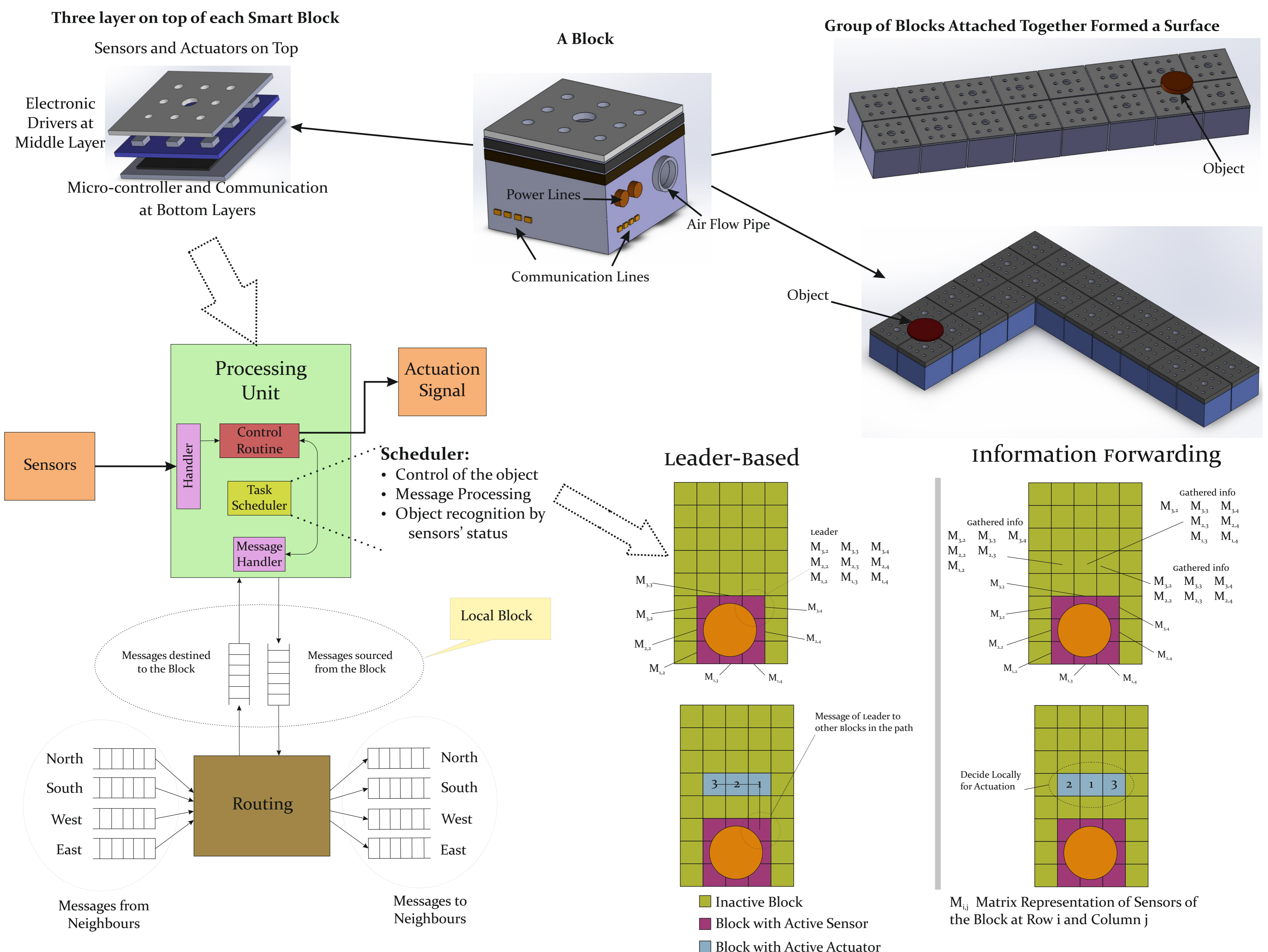
Simulator

- High Level
- Discrete-Event
- Abstract Network Infrastructure by Message Passing

Verification of Simulator

- Use SmartSurface for verification
- Aerodynamic rules

Smart Block Architecture



Results and Conclusion

- Construct a big surface by attachment of multiple blocks
- Movement of the Object over surface
- Control Object in Trajectory (1-Dimensional in current article)
- Different strategies for object recognition and control

Acknowledgement

This work was supported by the Smart Blocks under the number ANR-2011-BS03-005

