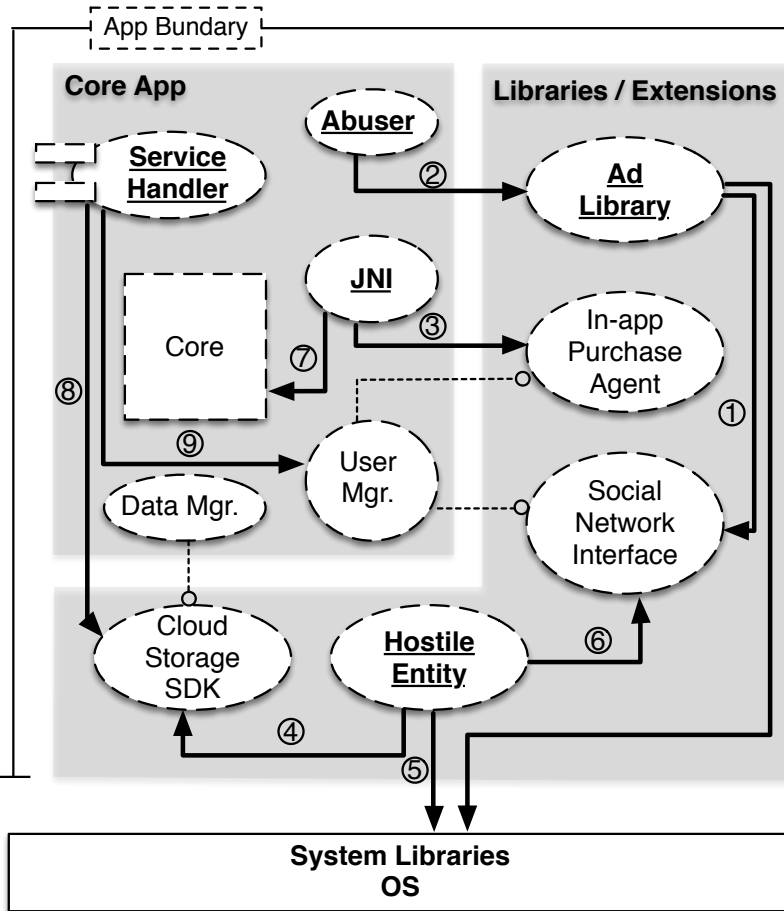


# STRUCT: Secure and Trustworthy Compartments in Mobile Applications



## Milestones:

- **Year 1:** Built “CASE”, an app rewriting-based system for enforcing comprehensive security policies at the module level. (MobiSys)
- **Year 2:** Designed and developed “Shreds”, a new OS abstraction and support for in-process/app memory protection. (S&P)

## Scientific Impact:

- The first compartment-level security policy enforcement approach without requiring OS modifications
- A new OS-based security concept and prototype that enable compartment-level memory protection

## Challenges:

- Understanding the emerging app internal threats
- Establishing fine-grained security principals and enforcing complete mediation among them
- Creating new system programming primitives and OS support for compartmentalization
- Optimizing performance

## Broader Impact:

- The project led to the creation of a new course, mobile security, at Stony Brook
- The tools built as part of this project will be shared with the broader community.