Modern computing systems abstract memory access typically to a very narrow interface.

- Characteristics only visible by “punching holes” in the wall that separates Software and Hardware.
- Even more challenging with new emerging memory technologies.

Need to Actively Negotiate...

...Over an Extended Interface...

...by Considering Abstract Behavioral Characteristics

Add an Instance for Negotiation between Hardware and Software → Memory Diplomat

Example

Application

Hardware

Memory Diplomat

Joint project of the DAES group and the DBIS group at TU Dortmund University.

- Memory Diplomat is our vision of a modernized memory interface that is able to take characteristics from hardware and application into account.
- Memory Diplomat is intended to be easily extendable, enabling an easy integration into other projects within the priority program.

Intended Track

- The plan is to “shape” the Memory Diplomat incrementally, covering the following topics over the next three years:
  - Memory Lifetime
  - Access Sequences
  - Hybrid Memory Systems
  - Unreliability
  - In-Memory Computing