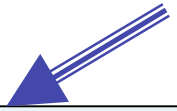
Do we have the right abstractions?

Correspondences (weak semantics)

Constraints (formal semantics)

- Ontology axioms
- (SO) tgds
- sound ($\subseteq$), complete ($\supseteq$), exact (=) constraints



Integration

Query/Update Rewriting

Peer Sharing

Query/Update Coordination or Propagation

Exchange

Generate code or transformation programs

Correspondences

- Is there a better abstraction than lines?
  - Data examples?
  - Other visual metaphors?
  - Other ideas?
- Should lines be between full schemas or between “concepts”

Constraints/Mappings

- Is the lack of a common specification language an impediment for:
  - tool development, tool sharing, and benchmarking?
- Extend declarative constraint specifications with
  - ETL operators
  - Process specification (mapping behavior)
  - Process/flow model for mappings (algebra for mappings)
  - To map ontologies to schemas to queries, etc?
- What other standard metadata is necessary?
  - Schema (Model) algebra
  - Mapping albegra

Integration to Exchange

- Is there an architecture in which materialization vs. virtualization is an optimization decision (not a design or tool selection decision)?
- Is materialization vs. virtualization even the right split?