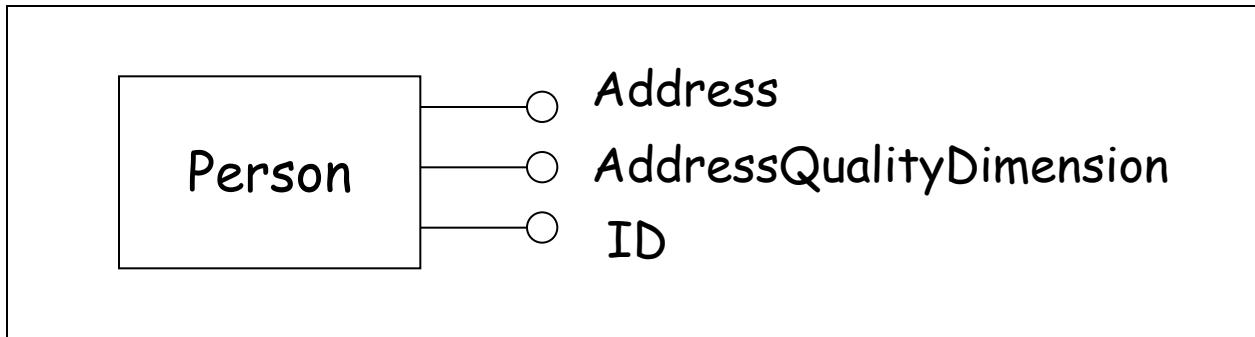


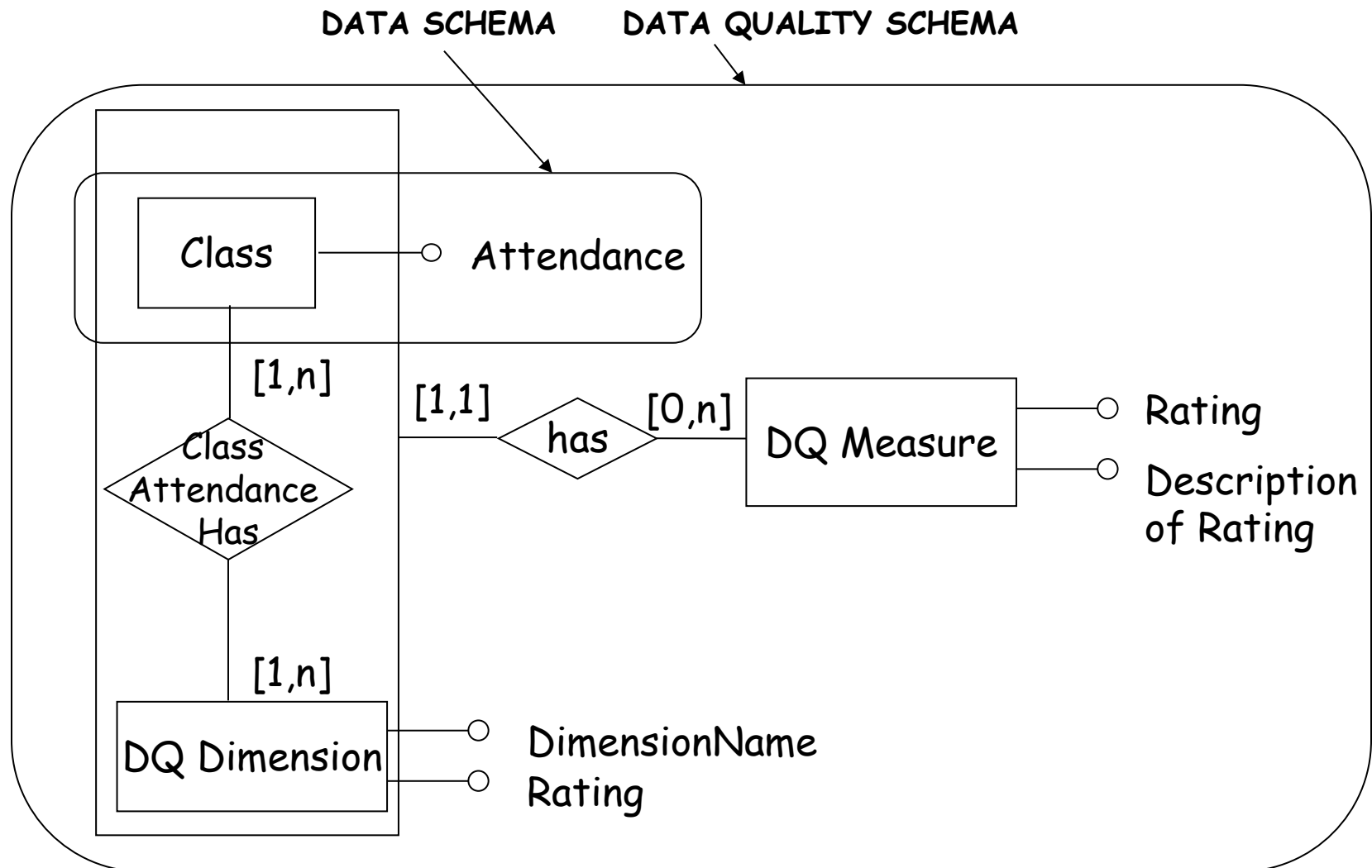
C. Batini & M. Scannapieco
Data and Information Quality Book
Figures

Chapter 6: Models for Information Quality

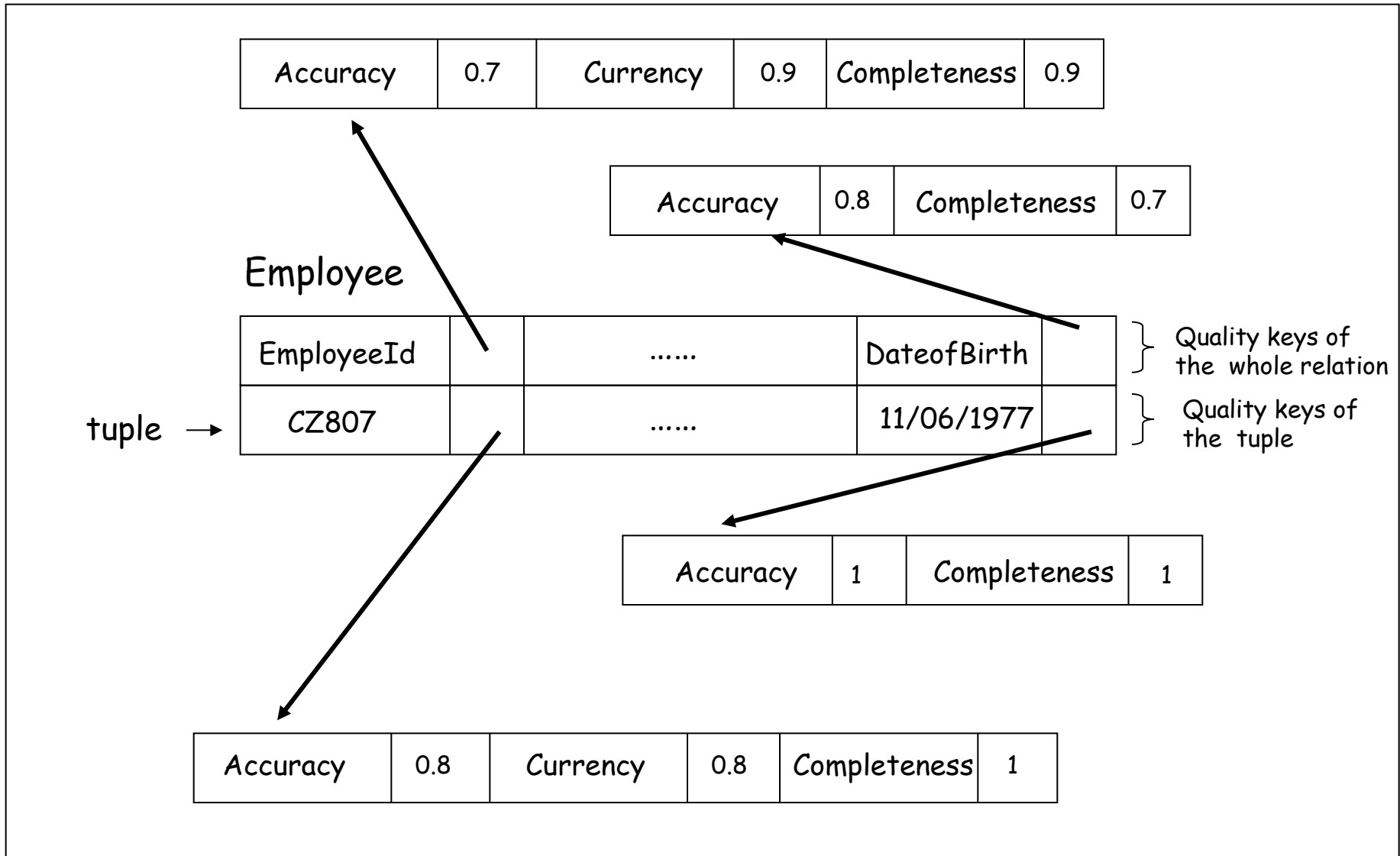
A first example of quality dimension represented in the Entity Relationship Model



An example of Data Quality Schema as proposed in [595]



An extension of the relational model



Two Client relations and a mapping relation

Client1

Id	Description
071 [ann ₁]	Cded [ann ₂]
358 [ann ₃]	Hlmn [ann ₄]
176 [ann ₅]	Stee [ann ₆]

Client2

Id	Last Name
E3T [ann ₇]	Nugamba [ann ₈]
G7N [ann ₉]	Mutu [ann ₁₀]

MappingRelation

Id	Client1Id	Client2Id
1 [ann ₁₁]	071 [ann ₁₂]	E3T [ann ₁₃]
2 [ann ₁₄]	358 [ann ₁₅]	G7N [ann ₁₆]

The output of two queries

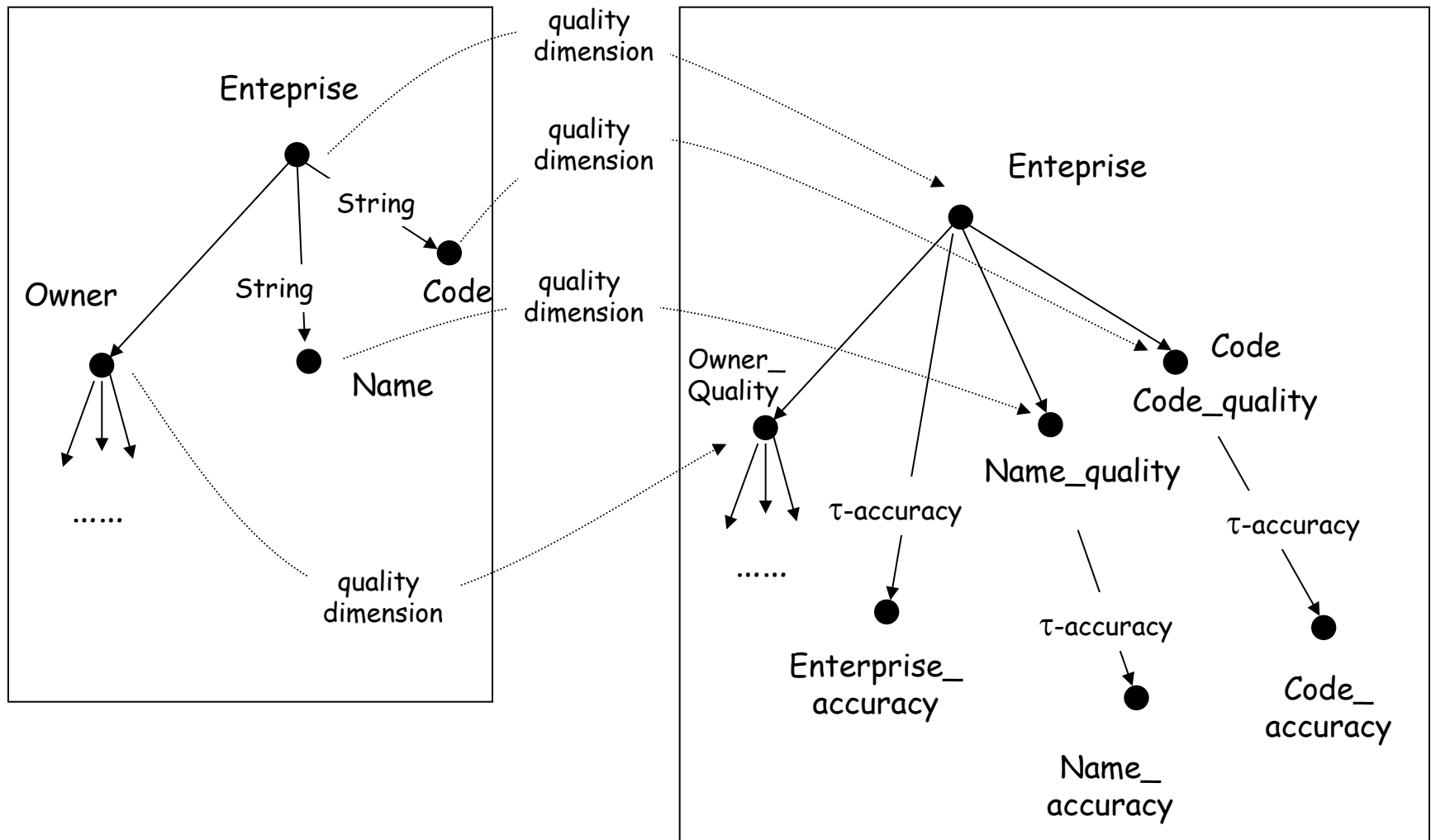
Output of Q2

Id	Last Name
E3T [ann ₇]	Nugamba [ann ₈]
E3T [ann ₉]	Muto [ann ₁₀]

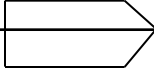
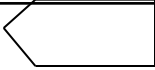
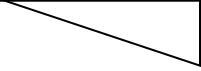
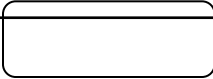


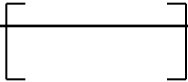

Output of Q3

Id	Last Name
E3T [ann ₁₃]	Nugamba [ann ₈]
E3T [ann ₁₆]	Muto [ann ₁₀]

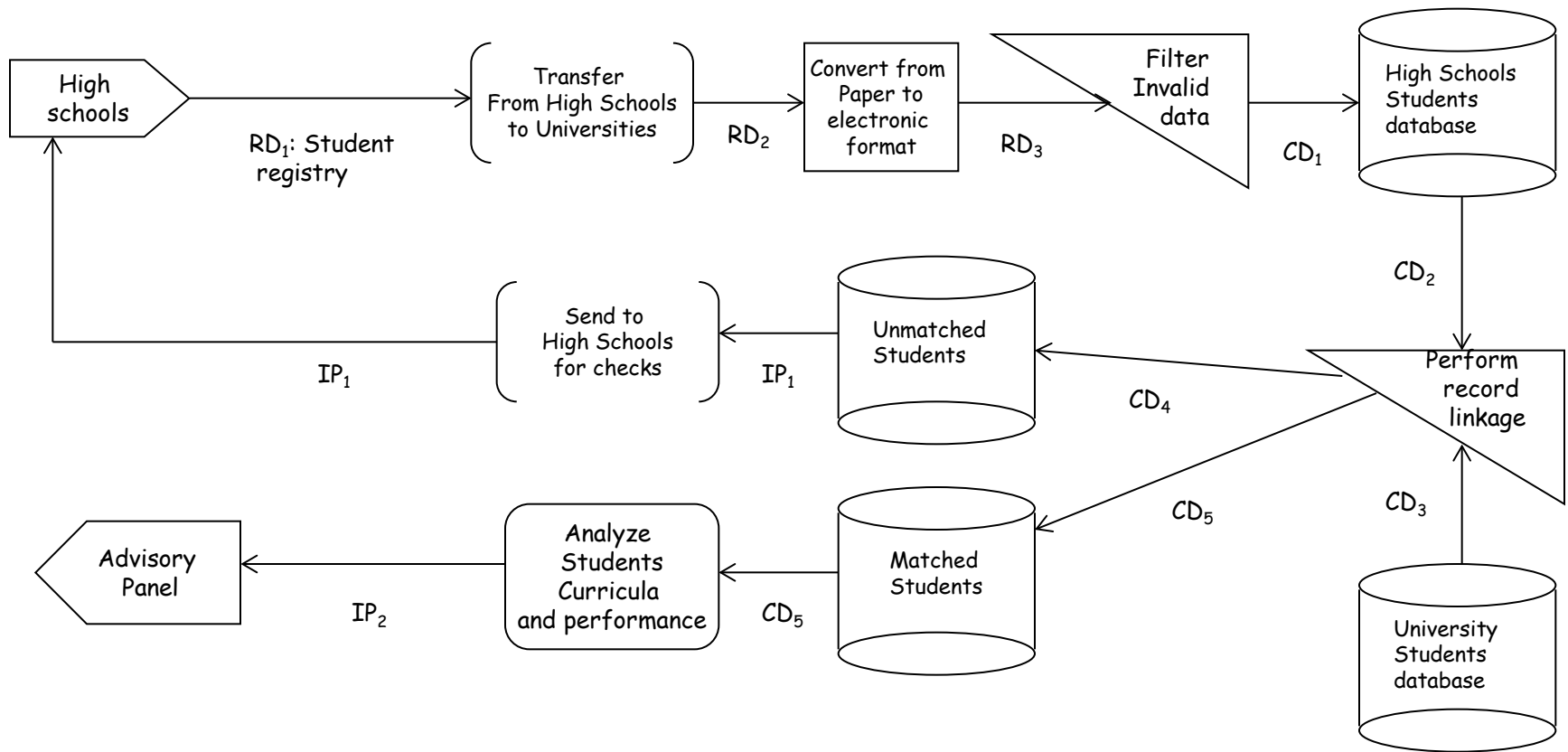
Example of D^2Q quality schema



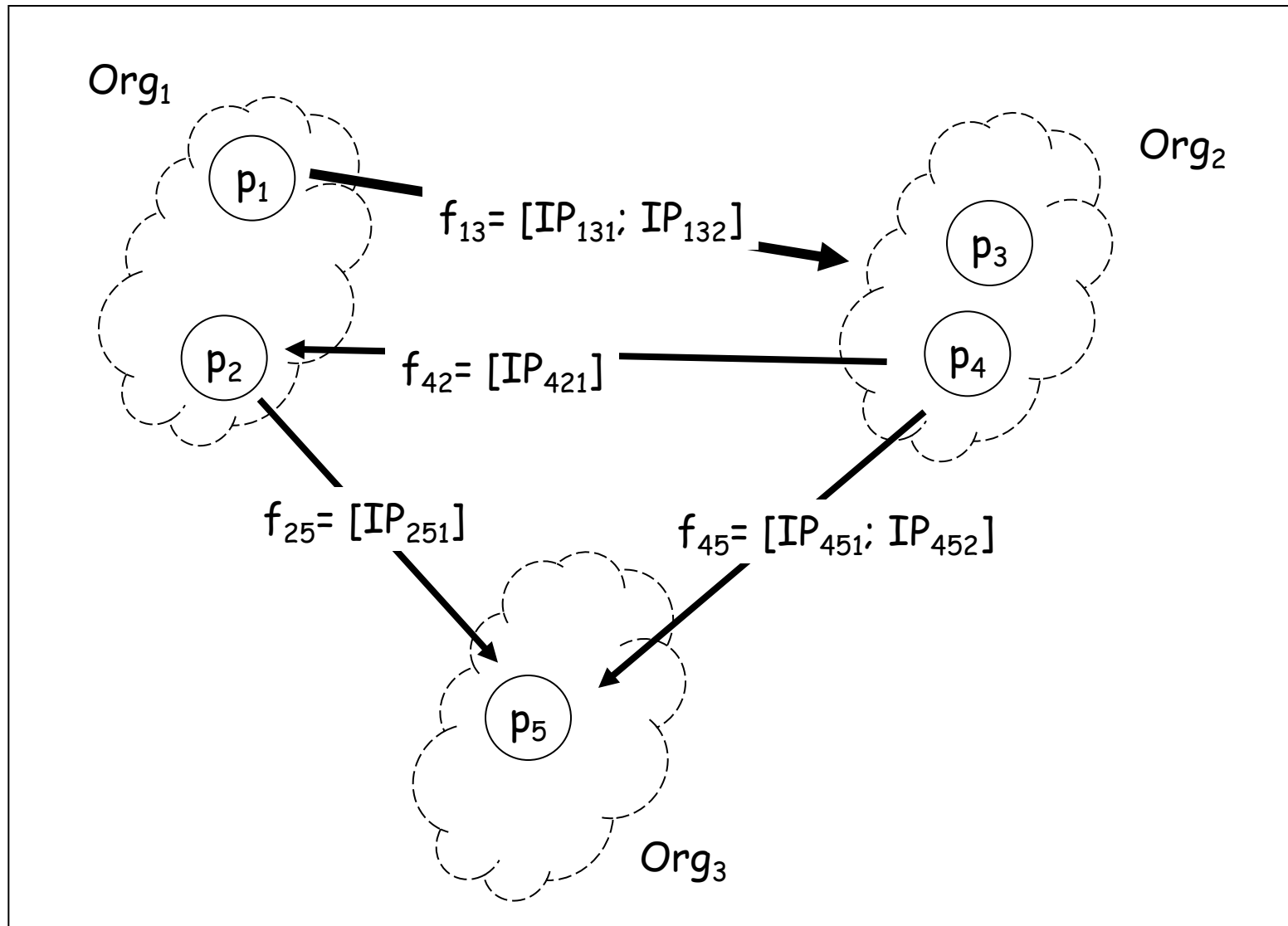
IP-MAP construct blocks

Concept name	Symbol	Description
Source (raw input data)		Represents the source of each raw (input) data that must be available in order to produce the information product expected by the customer
Customer (output)		Represents the consumer of the information product. The consumer specifies the data elements that constitute the "finished" information products.
Data quality		Represents the checks for information quality on those data items that are essential in producing a "defect-free" information product.
Processing		Represents any calculations involving some or all of the raw input data items or component data items required to ultimately produce the information block.
Data Storage		It is any data item in a database.
Decision		It is used to describe the different decision conditions to be evaluated and the corresponding procedures for handling the incoming data items, based on the evaluation.
Business Boundary		Specifies the movement of the information product across departmental or organization boundaries.
Information system boundary		Reflects the changes to the raw data items or component data items as they move from one information system to another type of information system. These system changes could be inter or intra business units.

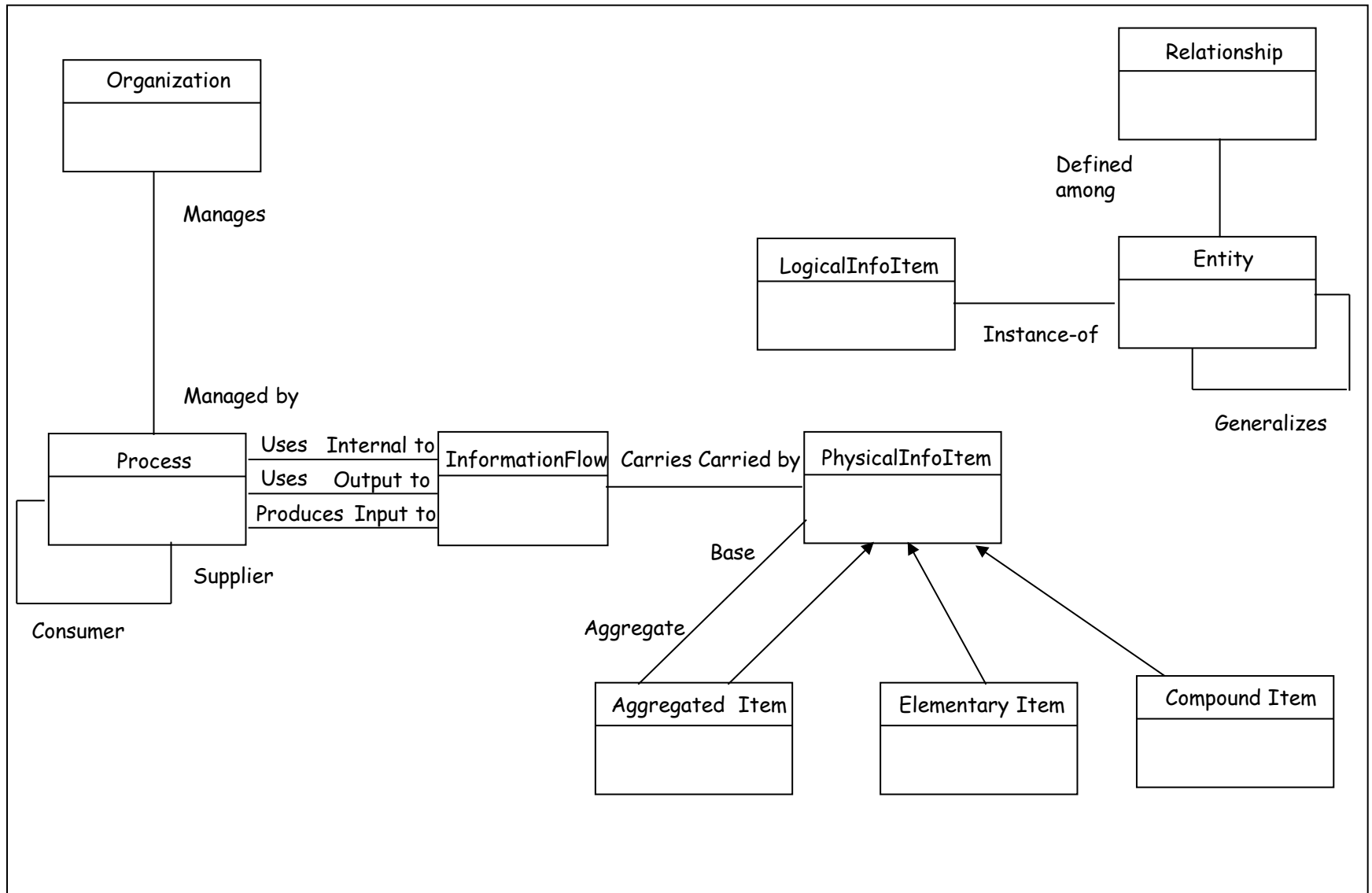
An example of IP-MAP



Organizations, processes, and information flows in a Cooperative Information System



Data, process, and organization schema



Star schema of the data quality cube

