HISPORTOS DATABASES

– INFORMATICS OPTIONS, VIRTUALITIES AND LIMITS

Gabriel David[1]

Presentation
- Goal
- Functional requirements
- Non-functional requirements
- Data model
- Two misunderstandings
- Update interface
- Querying models
- Improvements foreseen

Goal
- Organize in a database the data collected by historians in archives and in the bibliography so that it:
- Becomes the project repository
- Supports researchers in further analysis and interpretation under several perspectives
- Can be made available to a wider community
- Characteristics
- Subject unity
- Extensive previous work of concept clarification and categorization
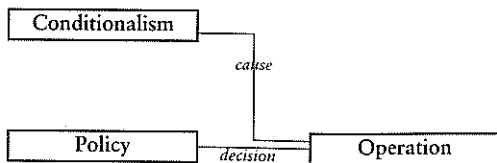- Including maps

Functional requirements
- Record collected data and its relationships
- Preserve the main concepts and categories
- Enable easy retrieval of complex data along arbitrary approaches
- Enable hypothesis test through correlation
- Differentiate users for updating, complex querying or simple browsing
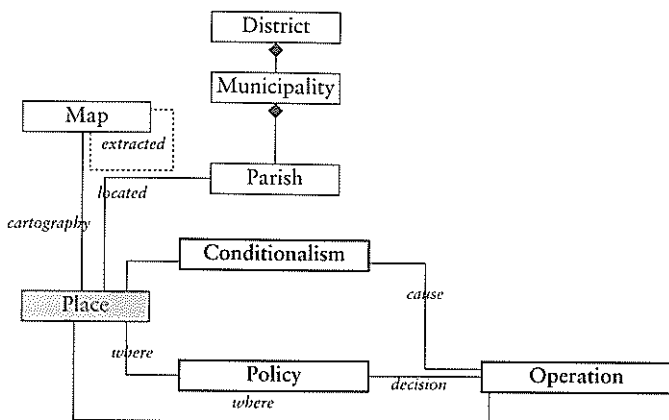- Support evolution towards multimedia product

Non-functional requirements
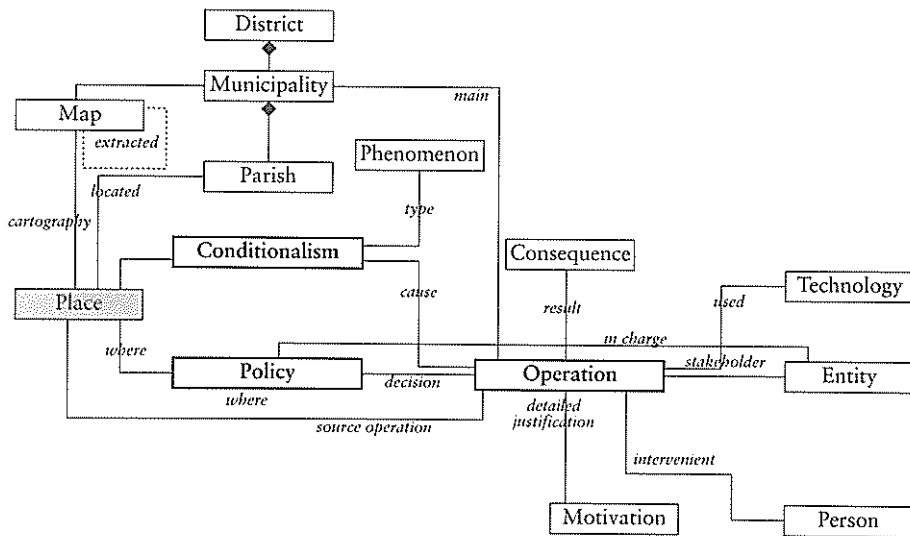- In order to maximize portability, a cheap and common DBMS should be used, namely MS Access

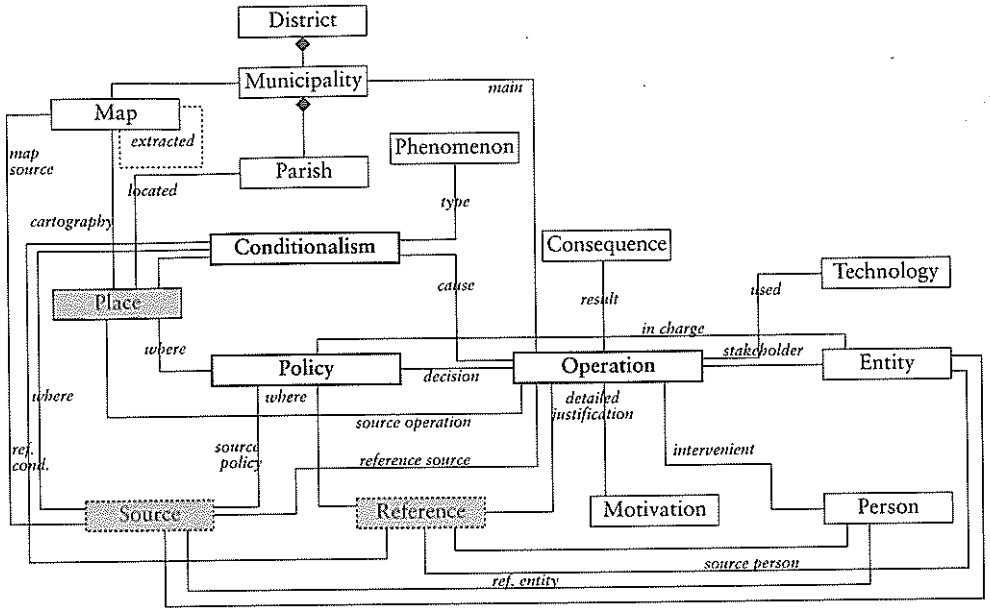1 University of Porto. Faculty of Engineering

Conditionalism

cause

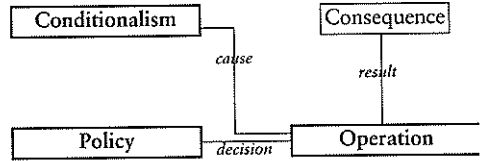Policy — *decision* — Operation

Data model – main concepts

District
Municipality
Map
extracted
located
Parish
cartography
Conditionalism
cause
Place
where
Policy — *decision* — Operation
where

Data model – with place

District
Municipality
main
Map
extracted
Parish
Phenomenon
located
cartography
type
Conditionalism
Consequence
cause
Technology
result
used
Place
in charge
where
Policy — *decision* — Operation — *stakeholder* — Entity
where
detailed
justification
source operation
intervenient
Motivation
Person
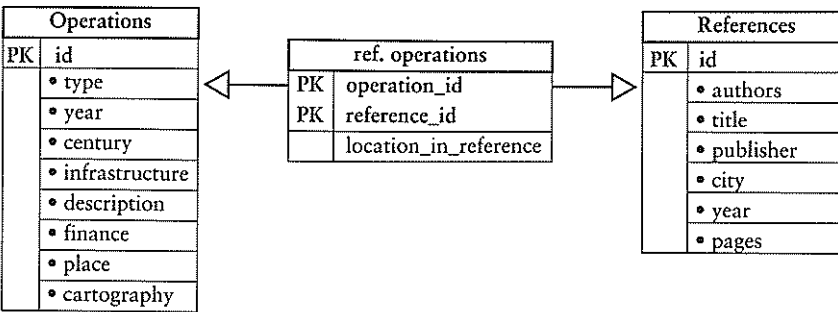
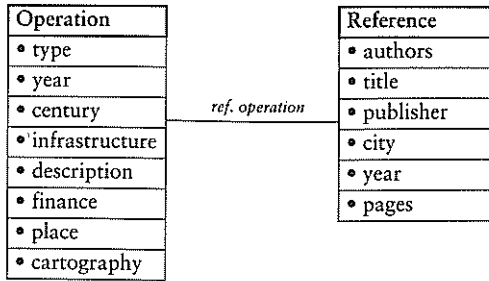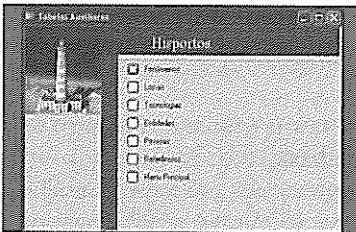## Data model – complete main

Data model – sources and references
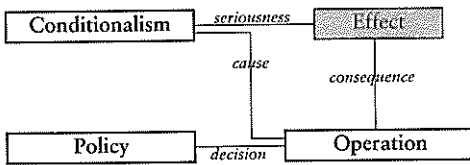
Two misunderstandings – Effects
The struggle between structured data and free-text

Operation
• type
• year
• century
•'infrastructure
• description
• finance
• place
• cartography

ref. operation

Reference
• authors
• title
• publisher
• city
• year
• pages

Operations	
PK	id
	• type
	• year
	• century
	• infrastructure
	• description
	• finance
	• place
	• cartography

ref. operations	
PK	operation_id
PK	reference_id
	location_in_reference

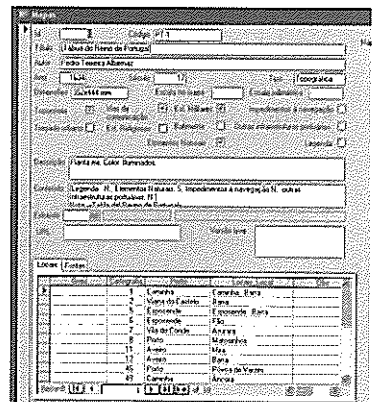| References	
PK	id
	• authors
	• title
	• publisher
	• city
	• year
	• pages

Two misunderstandings – References
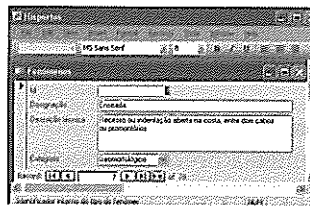
Update interface – parameter tables
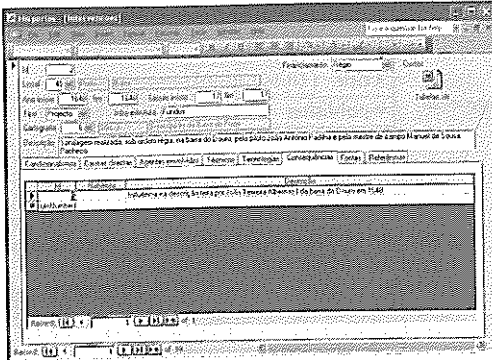References to parameter tables: must be pre-
viously updated
Except for references and sources, which may
be locally updated

Update interface - master-detail
Master-(multiple) detail approach
Systematic

Complex master-detail - Operations

Querying models
- Form based
- Mimic the update interface, not updateable, with filtering options
- Canned queries, more complex queries
- SQL based
- Full querying power
- Requires programming knowledge
- Navigation
- Web-like
- Browsing, multiple links
- General public
- Full text indexing
- Blind search
- Must be combined with navigation

Improvements foreseen
- Develop a multimedia product around the database
- Nice design
- Both forms, navigation, and full text search
- SQL for knowledgeable users (with metadata)
- Further define significant canned queries
- Prepare a Web version to ensure easy dissemination
- Offer the DB to groups conducting similar studies

Conclusion
- The project could have benefited itself from the DB
- Planning the data repository should have gone along with the first tasks instead of being seen as a last step deliverable.:::