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Toponymy on Rio de Janeiro State, Brazil: From Historical to Actual Maps – Research`s State of Art

Paulo Márcio Leal de Menezes
Manoel Fernandes
Kairo Silva Santos
Tainá Laeta
Juliana Rambaldi

Federal University of Rio de Janeiro
University of Brasil
Geography Department

GeoCart
Laboratory of Cartography

Summary

- Introduction
- Considerations on Rio de Janeiro Territory
- The General language
- Toponymic Extraction Methodology
- Rio de Janeiro Geographical Names Database
- Conclusions

1 - Introduction

This work intends to present the state of art of the research project on the historical and current toponymy of Rio de Janeiro State, Brazil, developed in the Laboratory of Cartography, Geography Department, Federal University of Rio de Janeiro.

Main Objective

Study and research of the Historical and current Toponymy of Rio de Janeiro State, Brazil.

Secondary Objectives

Study of the territorial evolution from the origins to its consolidation and influence on toponymy;

Study of the toponymy and its evolution on a historical, geographical, cultural, linguistics and anthropological approach;

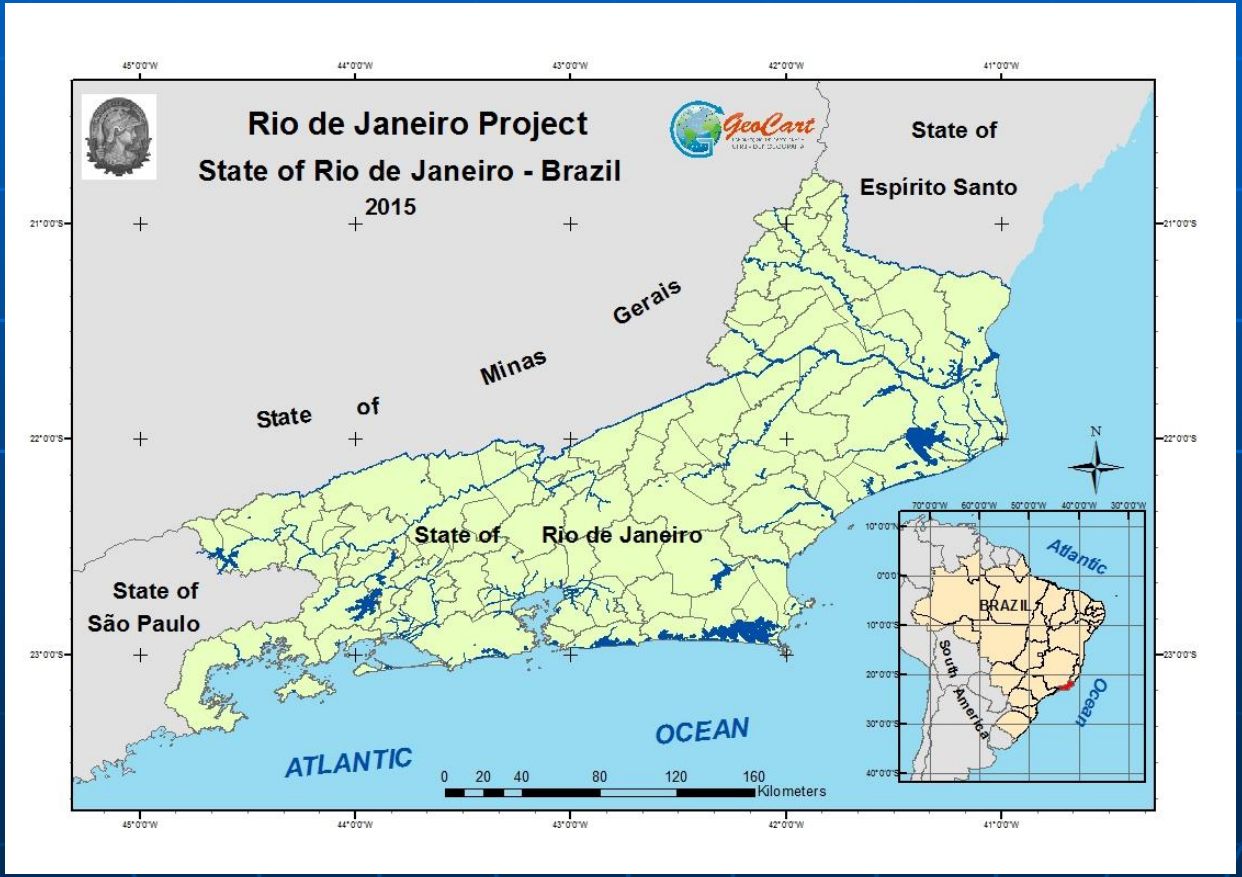
Development of a Tophononymyc Database;

Create questions and conclusions about the research;

2 - Considerations on Rio de Janeiro Territory

Rio de Janeiro is one of the 23 states of the Federative Republic of Brazil

The History of Rio de Janeiro Toponymy began earlier, in 1501, during the first exploratory expedition, led by Gaspar de Lemos, with Amerigo Vespucio's participation.



The first nomination occurred on January 1st 1502, when the expedition arrived at the current Guanabara Bay – ***Rio de Janeiro*** – the first toponym.

Indigenous toponyms will be present only after the effective beginning of the colonization, started from 1530.

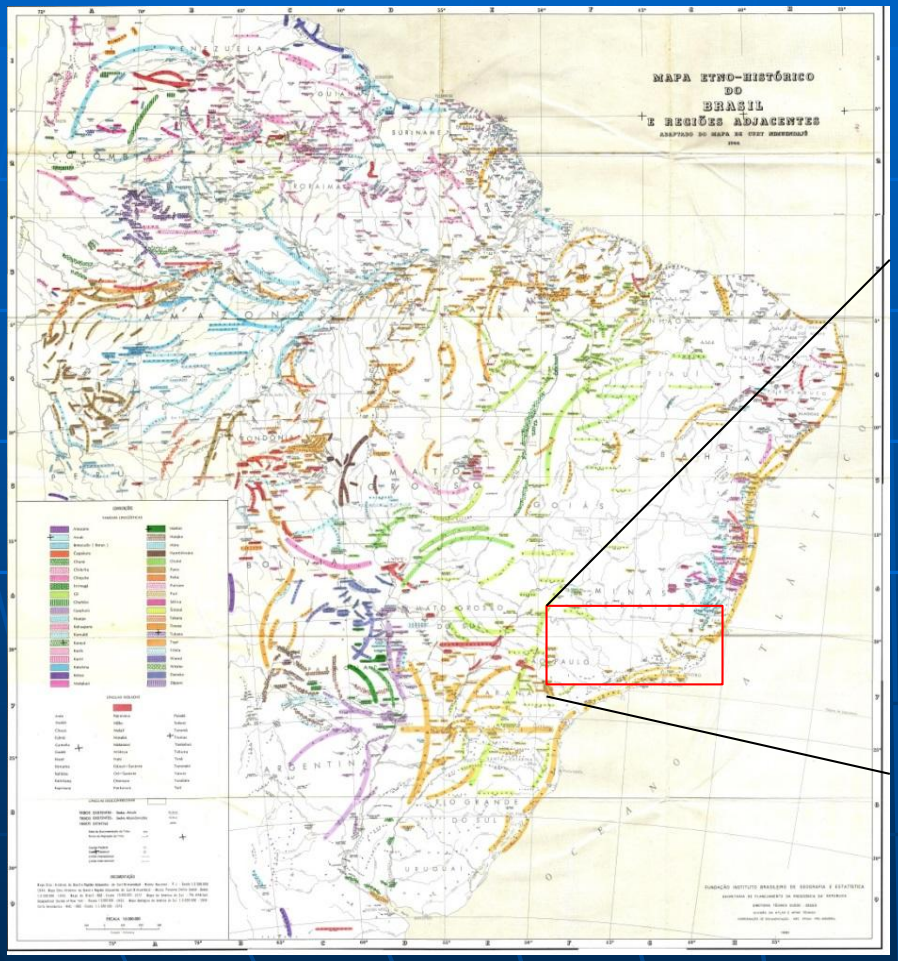
To understand how was developed the toponymy evolution in Brazil and more specifically in Rio de Janeiro State and the influence of the indigenous languages in the Brazilian place names refer to a survey immediately after the discovery by the Portugueses.

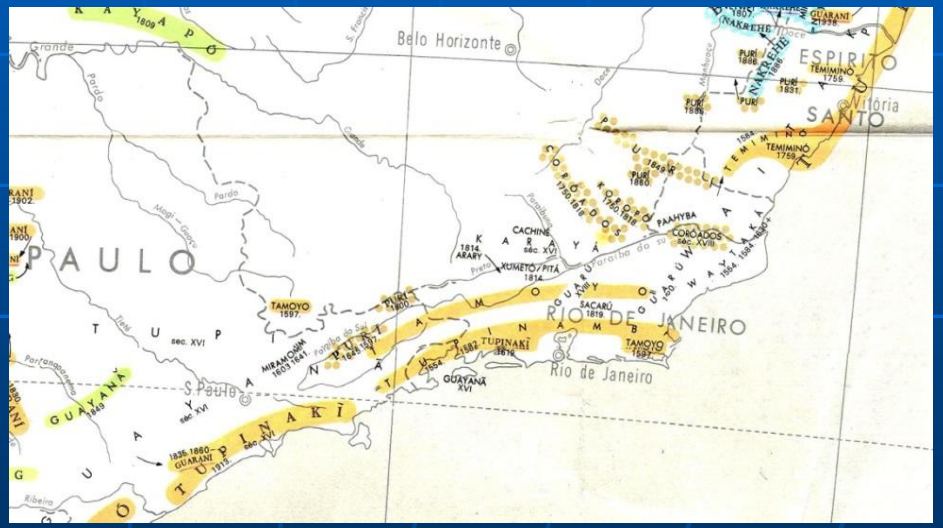
The Brazil of 1500 presented itself as an immense territory, where the linguistic structure was of full *multilingualism*, where there were approximately 1175 spoken languages, none of them was associated to any kind of writing.

There was a relative linguistic unity along the coast, where were established the *Tupi* group, belonging to the Tupi-Guarani family.

Rio de Janeiro

It´s not easy to define who were the indigenous in the State.
There was only spoken languages, therefore no written documents.
Several grammars were created along the time.

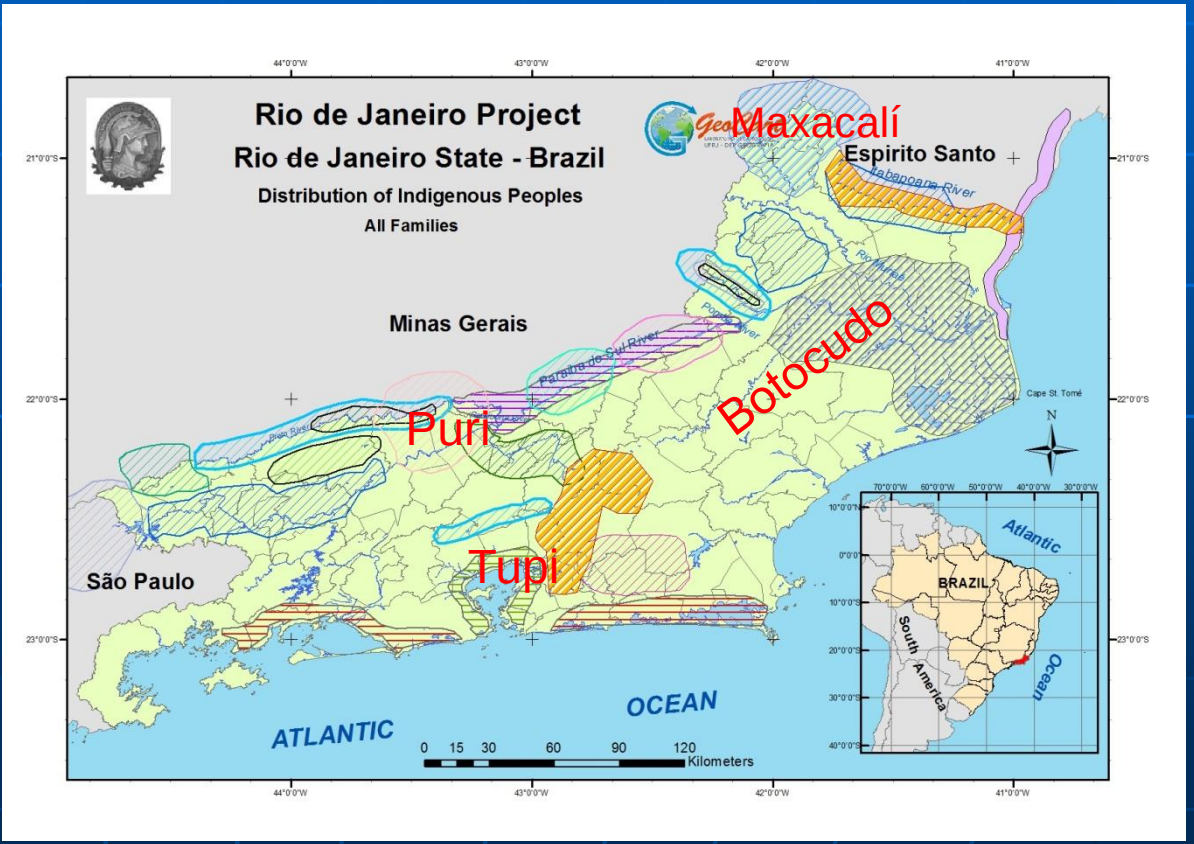




Curt Nimuendajú Ethnic Map - 1944

The indigenous languages in Rio de Janeiro State were classified by *Curt Nimuendajú* in 20 different idioms formed by 4 families and 1 group unclassified.

I – TUPI FAMILY or tupi-guarani
II – PURI FAMILY
III. BOTOCUDO FAMÍILY
IV. MAXAKALÍ or MASHAKALÍ FAMILY



3 – The General Language

The existing native linguistic homogeneity allowed the Jesuit priests catechists, to create a grammar and consequently a general language, which would provide support not only for them, but also for learning and communication by the settlers.

By the early eighteenth century, the proportion between the two spoken languages in the colony was at least three to one, from the Tupi to the Portuguese.

The toponymy during 16th and 17th centuries was strongly influenced by the religious aspect and by the native language.

In the mid-eighteenth century two important factors have a great influence on Brazilian toponymic evolution:

the prohibition of Brasílica language in 1757 and
the expulsion of the Jesuits in 1759.

Expansion of the Portuguese language throughout the Brazilian territory, establishing in the linguistic and toponymyc level, the Portuguese hegemony in the colony.

Hunting, fishing, subsistence farming, use of flora as medicinal element, and the nomination focused to the description of landscape elements, through a geomorphological, hydrographic and descriptive approach, will be aggregated across all inherited linguistic contributions of these groups.

However the original language influenced strongly on Brazilian Toponymy, specially over city names, hydrography, massives, mountains, beachs and others.

4 – Toponymic Extraction Methodology

Historical Cartography (Centuries: 16th, 17th, 18th, 19th, early 20th), Paper maps

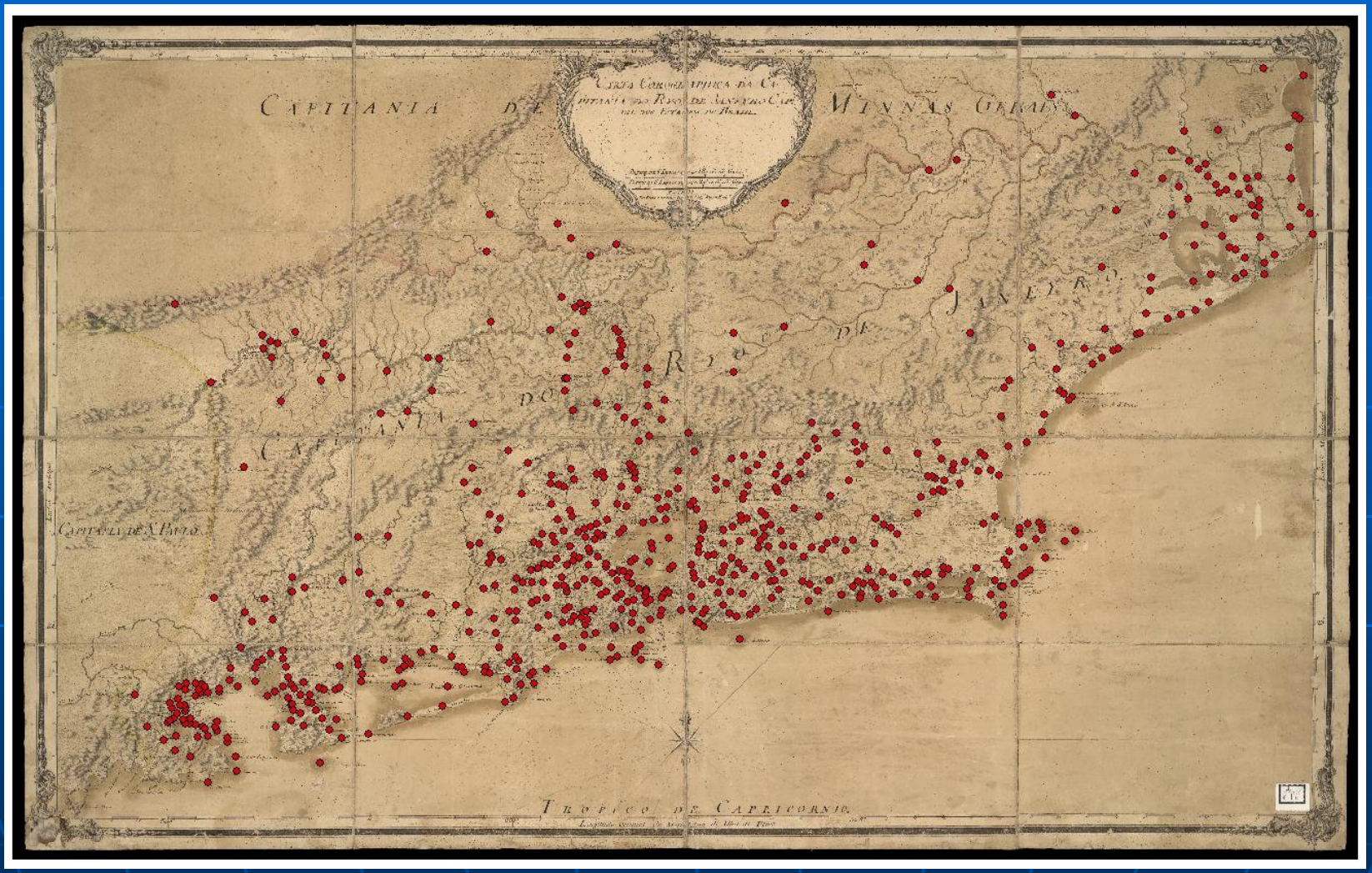
- Use of scanned image at least 600 dpi or more, tif format;
  Creating preliminar table with folowing fields:

Id	Name	Feature	Class	POINT_X	POINT_Y
0	Ilha dos Porcos	Ilha		495,38915802200	-3615,50352106000
0	Ilha das Couves	Ilha		638,03707257100	-3624,44874296000
0	Rio Picinquaba	Rio		741,01187828400	-3527,90986260000

- Toponymy/ symbol identification and point vectorization;
- Copy to table manually: Name, Feature and Class;
- Software puts automatically the X and Y map coordinates;
- Adding table fields Language and Toponymyc Motivation;
- Georeferencing – φ and λ

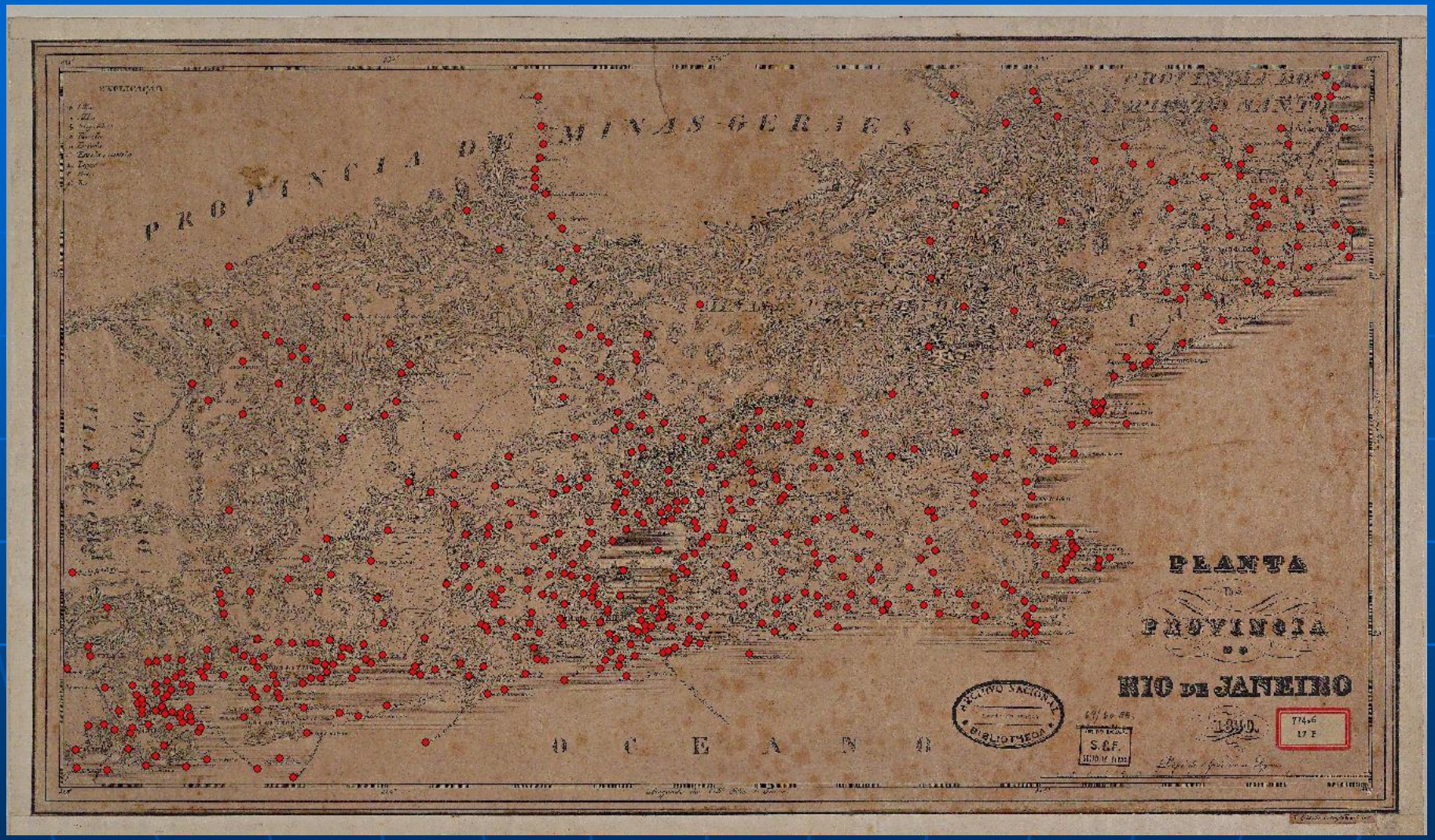
- Intensive use of scholarships for the development of the manual tasks!

Examples Historical Maps:



Carta Chorographica da Capitania do Rio de Janeiro - Roscio – 1777

Extracted Toponymy: 669



Map of Rio de Janeiro Province – 1830

Extracted Toponymy: 570

Maps from 20th Century (late)

- Same previous methodology used for some maps (until 1990);
- OCR use in some maps;
- Use of the Theasurus for some maps (milionth scale maps);

- Vectorized Maps:
  - Extracting Table for each feature;
  - Toponymy/ symbol identification and point vectorization;
- All fields, except Language and Toponymyc Motivation are automatically on table.

Extracted Toponymy – Small Scales

Nr	Maps	Aprox Scale	Extracted Toponymy
1	Luis Teixeira - 1534	none	50
2	Capaci - 1732	1:400.000	157
3	Roscio - 1777	1:400.000	669
4	RJ - 1830	1:400.000	570
5	RJ - 1858	1:200.000	2787
6	RJ - 1892	1:400.000	934
7	RJ - 1922	1:400.000	1787
8	RJ - 1953	1:400.000	3284
9	RJ - 1975	1:400.000	3853
10	RJ - 1922	1:1.000.000	365
11	RJ - 1964	1:1.000.000	638
12	RJ - 2008	1:1.000.000	722
13	RJ - 2011	1:1.000.000	599

Larger Scales

Map Scales

- Federal Systematic Surveying in 1: 50.000 scale:
  - 52 sheets covering the whole state and boarders;
  - Digitized maps in .dgn files.

- Municipality Maps:
  - Old Analog maps in scales varying from 1:2.000 to 1:20.000;
  - New digital maps .dwg files and similar scales.

Toponymy on maps is selective

Regarding Topographic and cadaster maps, how large is the map scale, greater will be the number of place names on it.

Toponym extraction 1/1 scale
Santa Maria Madalena Municipality

5 - Rio de Janeiro Geographical Names Database

- To contain all toponymy on maps;

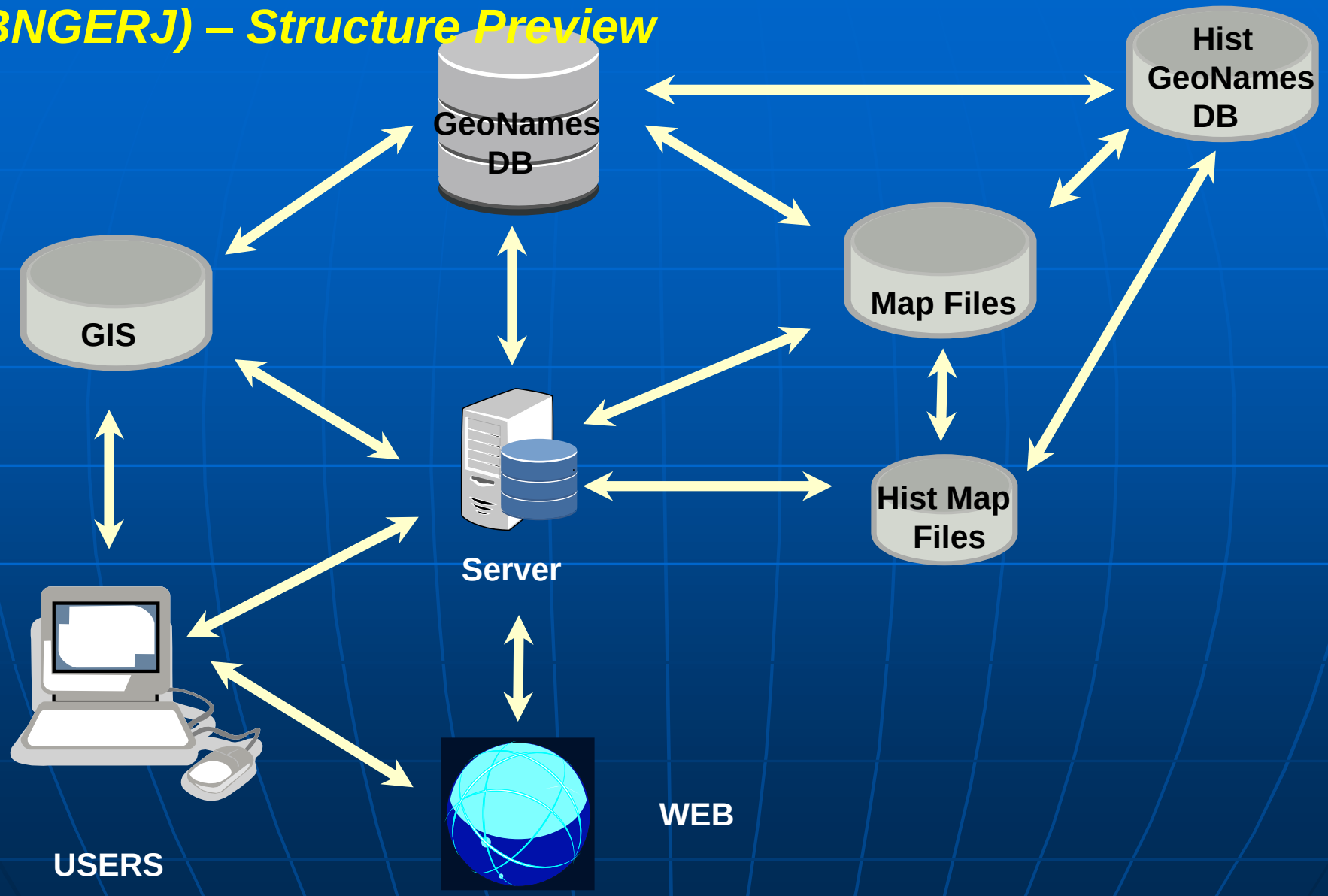
- To identify each toponym and its geographical, linguistic, motivation, cultural, historical, structure and aspectsi;

- Separation by geographical feature:
  - Hydrographical Elements: beaches, rivers, lakes, capes, bays, etc;
  - Orography: Mountains, hills, picks, etc;
  - Urban nuclei: Cities, towns, villages, small settlements, churches, etc;
  - Land Use: farms, mills, lodges, commerce, etc;
  - Paths: roads, stops, trails, stations;
  - INDE infrastructure (Brazilian Spatial Data Infrastructure)

- Georeferencing evaluation: coordinates, map projection, geodetic system and positioning;

- Spatial-time comparison, orthographical changes, spatial changes, name changing over time and same space;

Rio de Janeiro Geographical Database (BNGERJ) – Structure Preview



6 – Conclusions

The research is in development.

Until the end of next year, it will be included the toponymy of the 1:50.000 scale mapping of Rio de Janeiro;

The space-time database will allow entries through toponymy, date and spatial reference on the State;

The research team included in this year two linguistic specialists in indigenous language, and one anthropologist.

The database will be developed jointly IBGE, the Brazilian Institute of Geography and Statistics.

- Extracted toponymym:

  Only geographical features: 53830;
  With street names: 124853.

- Not considering yet Metropolitan Region (Rio de Janeiro and Satellite cities). 12 main cities, 38 villages.

- Expected toponymy to be extracted: around 250.000.

Thank You for your attention!

Obrigado!