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# Ziriguidum in Nursing data: Cofen`s Data Treatment Methodology

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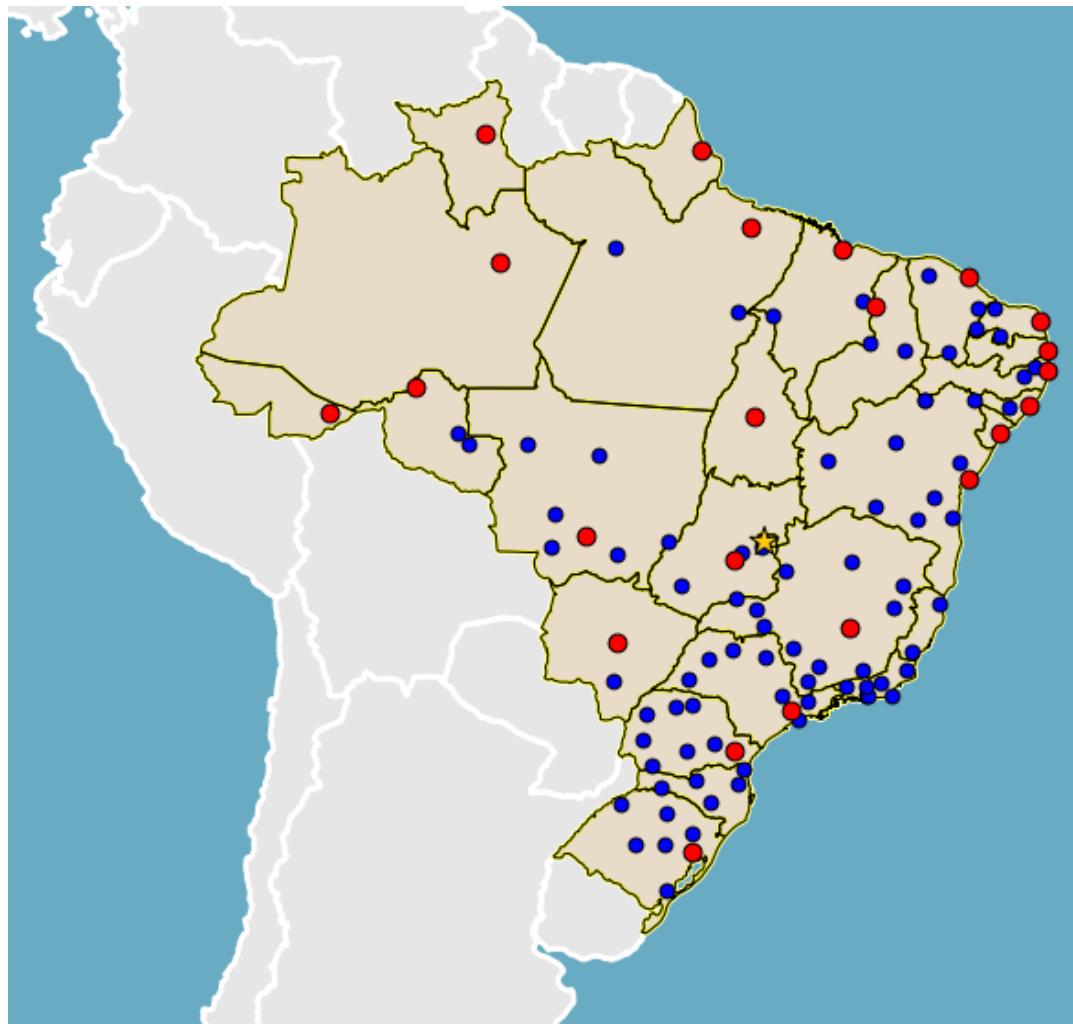
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# Cofen/Regional Nursing Councils System



- ★ Federal Councils
- Regional Councils
- Subsection

Ziriguidum is a Brazilian expression that may be translated as a harmonious sound mixing ending up in samba. In such way, Ziriguidum in Brazilian Nursing database is the integrated and harmonious use of several free softwares and institutional databases that allow knowledge extraction to be applied in the management and creation of public policies applicable to Brazilian nursing.

In order to develop such new knowledge, PostgreSQL with PostGIS, Pentaho BI Suite and I3Geo systems were employed. The appliance of such softwares on survey data resulted in tables, graphics, thematic cartograms and describing texts duly incorporated to the “Analysis Report on professional nurse inscription of 2011”.

The data was originated from the Federal Council of Nursing, 27 Regional Nursing Councils, as well as the Brazilian Institute for Geography and Statistics (IBGE), Brazilian Internal Revenue Secretary, Health Ministry and Education Ministry.

## 27 Regional Nursing Councils



### Coren:

- Register data of nursing professionals for the National Nursing Database.

## Treasury Ministry



### SRF:

- Internal Revenue: annual updating of Nursing professional's contact data.

## Cofen:

- Cofen integrates data received from different institutes and send them back to Corens with updated contact data.

## Planning Ministry



### IBGE:

- Cartographic code.
- Geographic representation of macro regions, states and countries.
- Data from 2010 census.

## Education Ministry



### INEP:

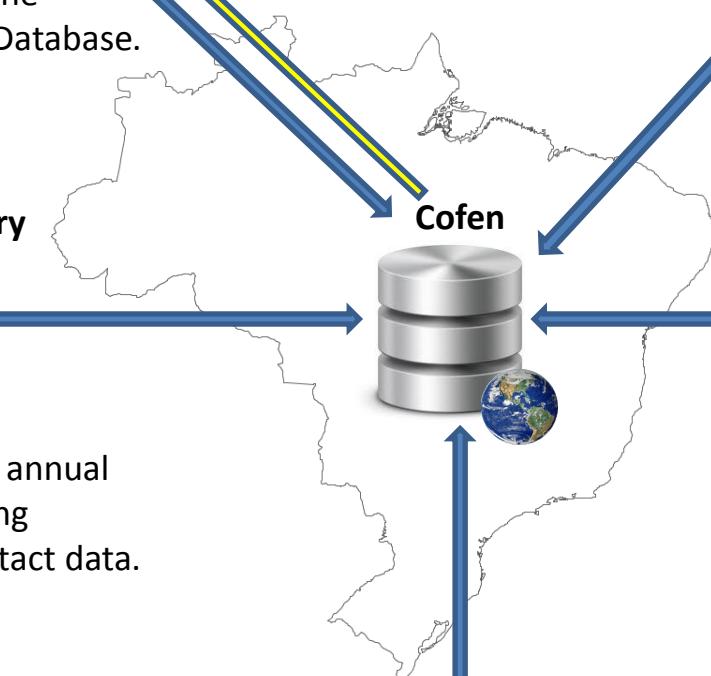
- Graduate Studies institutions (IES).
- Number of nursing courses.
- Number of places in the courses.
- Location of the institutes.

## Health Ministry



### DATASUS:

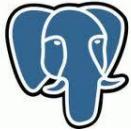
- Health Establishments National Register.
- Places where Nursing professional work.





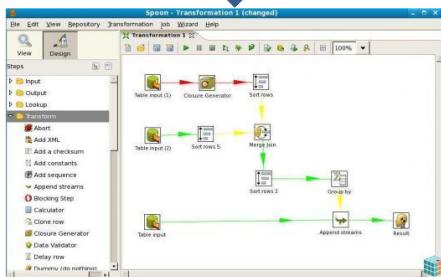
## Coren's data

PostgreSQL



## Geographic Data Base

Pentaho BI Suite



## Data Warehouse



## I3Geo

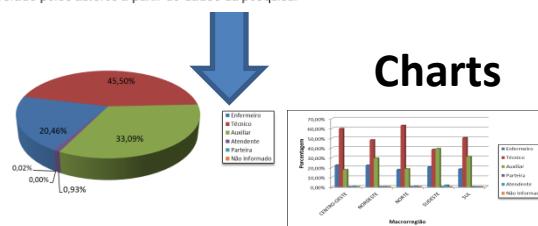


## Tables

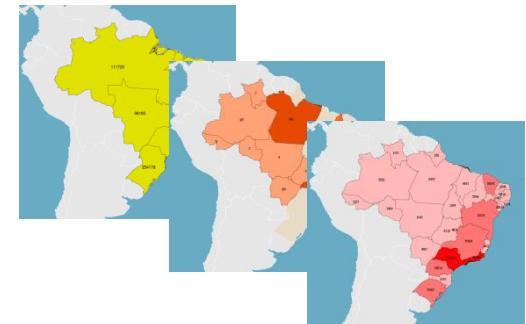
Tabela 2 – Inscrições de profissionais de Enfermagem por categoria no Brasil, em 2011.

Categoria Profissional	Quantidade de inscrições	%
Enfermeiro	314.127	20,46%
Técnico de Enfermagem	698.697	45,50%
Auxiliar de Enfermagem	508.182	33,09%
Atendente de Enfermagem	14.275	0,93%
Parteira	2	0,0001%
Não Informado	285	0,02%
<b>Total</b>	<b>1.535.568</b>	<b>100,00%</b>

Fonte: Elaborado pelos autores a partir de dados da pesquisa.

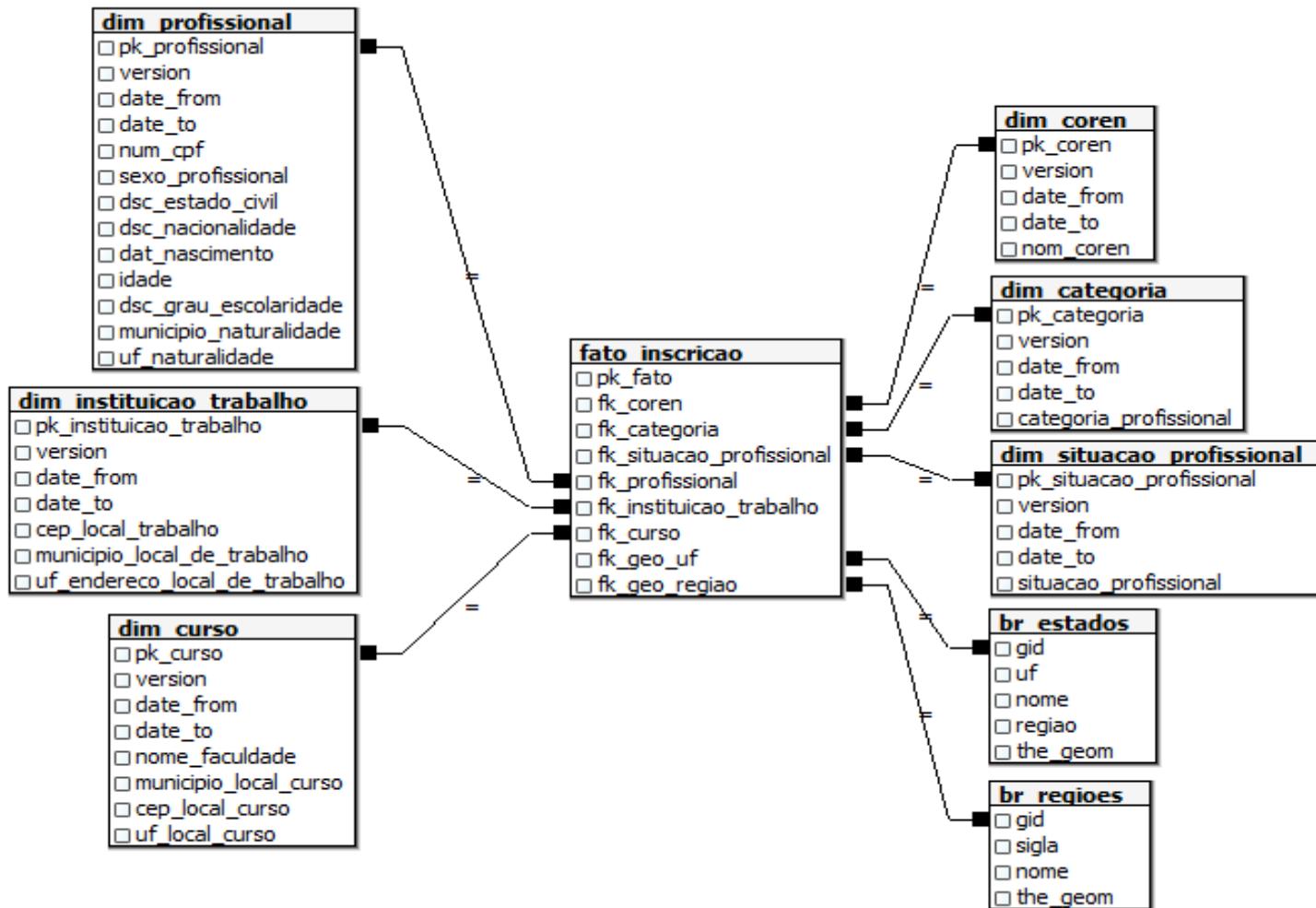


## Thematic cartograms

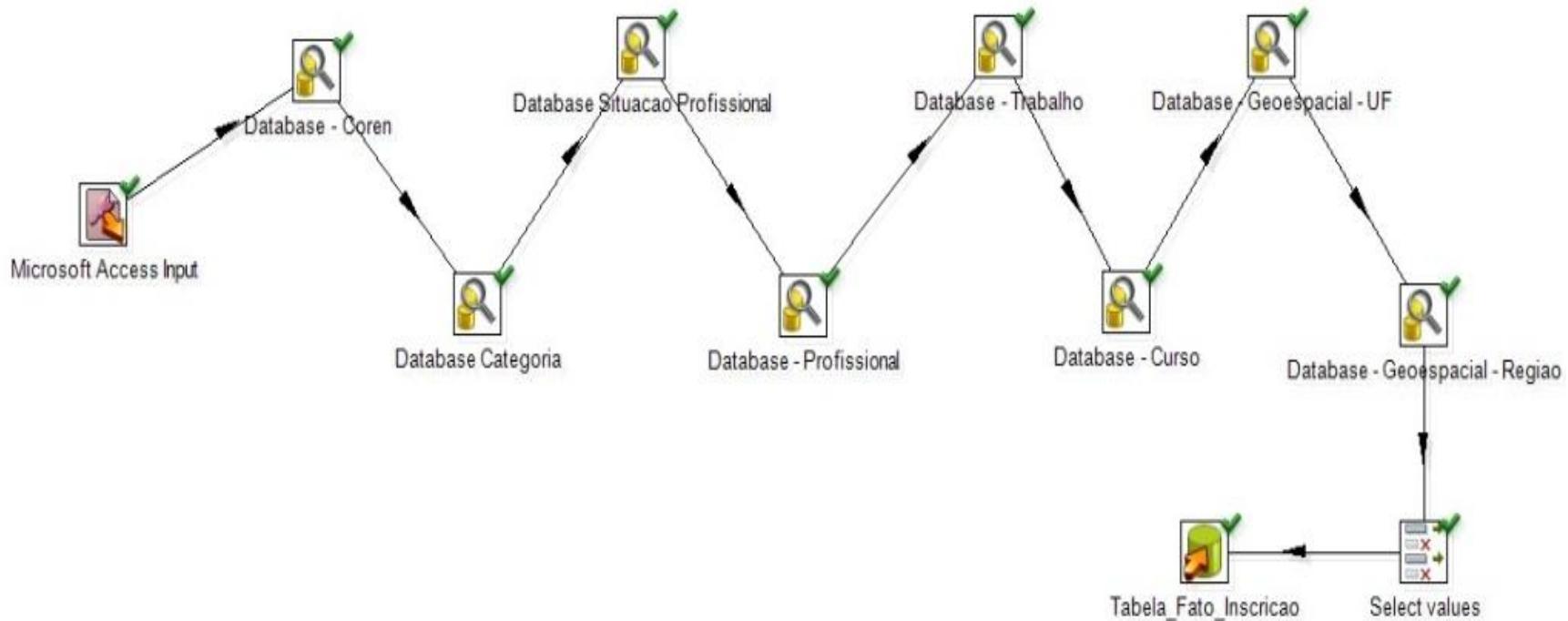


## Charts

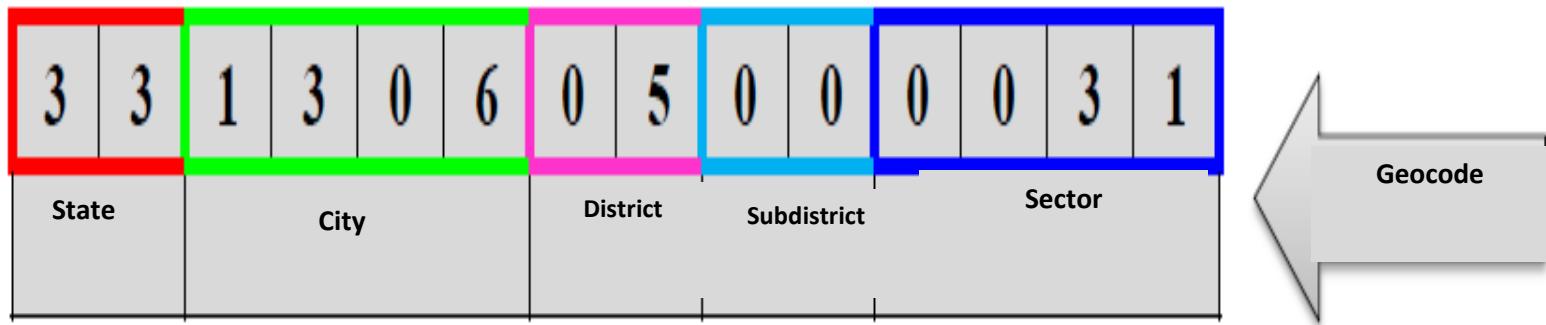
# Nursing Data Warehouse created with Pentaho BI Suite on SGBD PostgreSQL with PostGIS.



Once the data basis ready and loaded, now we must go for the Data Warehouse (DW) of Nursing. For this task we used the Pentaho BI Suite to integrate various data bases.



Thematic charts production employed shapesfiles produced by IBGE, which were transformed in a geographical databank at PostgreSQL and PostGIS. Geocode field was used as a chart primary-key, which identifies spacial objects represented on a chart or map.



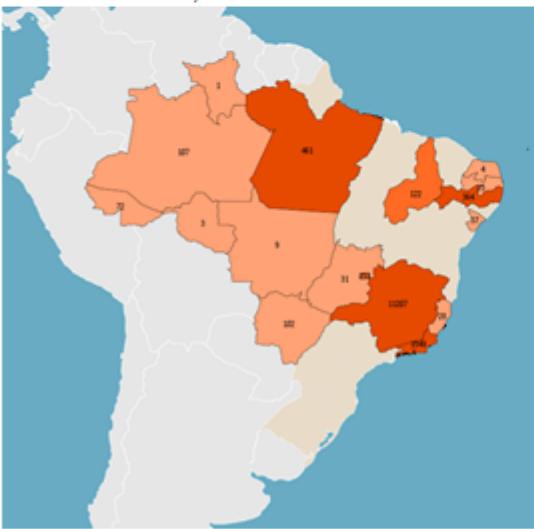
Another field employed is **the\_geom** that stores the binary code in order to design the chart or map of a geographical information system, and is named geocoding. Such field stores the geographical object which will be represented for spatial analysis.



Cartogram 2 – Total professional nursing inscriptions in macro-regions, in 2011.  
Source: COFEN, 2012.



Cartogram 3 – Total of professional nursing inscriptions in Brazilians countries, in 2011.  
Source: COFEN, 2012.



Cartogram 4 – Total of midwife in Brazilians countries, in 2011.  
Source: COFEN, 2012.

“The best way to predict  
the future is to invent  
it.”

ISAACSON, Walter. **Steve Jobs: A biografia.** São Paulo: Companhia Das Letras, 2011.

The future is built on  
knowledge and clarity of  
where we want to go.

# Obrigado!

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