The 2010 Brazilian Census: contemporary developments in census-taking and imputs for the revision of the P&R r.2

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Outline

- Introduction
- The 2010 Census in figures
- Innovations
- ICT model in the 2010 Census
- Handheld devices in data collection: advantages
- Handheld devices in data collection: challenges
- Imputs for the revision of the P&R
Introduction

**IBGE** (Brazilian Institute of Geography and Statistics)

**Federal Government** institution in Brazil responsible for producing, analyzing and disseminating statistical information (demographic, economic and social), as well as geodetic, cartographic, geographic information and that related to natural resources and to the environment

**Coordinator of the Statistical System**

Optimization of resources and maximization of quality in meeting the growing demand
Introduction

República Federativa do Brasil

Population in 2010: 190 million
  Men: 93 million
  Women: 97 million

Area: 8,5 million km²

Density of population: 22.48 inhab/km²

Forrest area: 61% of the territory
The 2010 Census in figures

<table>
<thead>
<tr>
<th>UNIVERSE TO BE ENUMERATED:</th>
<th>the whole Brazilian territory</th>
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<tbody>
<tr>
<td>MUNICIPALITIES:</td>
<td>5,565</td>
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<tr>
<td>HOUSING UNITS:</td>
<td>67.5 million</td>
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<tr>
<td>ENUMERATION AREAS:</td>
<td>314,018 enumeration areas</td>
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<td>HIRED AND TRAINED PERSONNEL:</td>
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<td>• more than one million persons enrolled in the selective process</td>
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<td>• about 230 thousand hired (for collection, supervision and administrative support)</td>
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<td>TECHNOLOGY:</td>
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<td>• 220 thousand handheld computers equipped with GPS receivers</td>
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<td>• 8,700 laptops</td>
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<td>• broadband communication system</td>
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<td>CENSUS OPERATING UNITS:</td>
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<td>• 27 state units</td>
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<td>• 222 Areas</td>
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<td>• 1,281 Sub-area Coordinating Departments</td>
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<td>• about 7 thousand digitized data collection units</td>
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Innovations

- Census mapping was changed from analog to digital.
- Use of GPS to reference buildings and other physical elements.
- National address file encompassing all Brazilian municipalities.
- Integration of cartography and address file.
- Handheld devices for data collection and supervision.
- Internet data collection.
ICT model in the 2010 Census
Handheld devices in data collection: advantages

- Immediate quality control at the moment of data entry.
- Filling in of all compulsory items.
- Control of data filling by automatic jumps.
- Direct data transfer to central system.
- Allow identifying the location of the units surveyed (GPS).
- Help automatic coding.
- Reduce burden in printing and transportation of questionnaires.
- Reduce cost of data capture.
- Controlling sample fraction

Over all improved quality
Handheld devices in data collection: challenges

• Increase need of qualified enumerators and change their profile.

• Add in the content of training.

• Dependent on internet connection.

• High cost to be used only in a census.

• Become obsolete rapidly.
Imputs for the revision of the P&R

1) Proposed content for new item (Part three, VIII, 5 - Use of technology in the enumeration):

“5. Use of technology in the enumeration
   Types: internet, handheld devices, others (?)
   Considerations on band, browser, size and weight of device etc.
   Design of questionnaire (size and color of font, use of scrolls etc)
   Use of “instructions” and “help”
   Data entry rules
   Coding
   Controls and data integrity
   Data transfer”
Impots for the revision of the P&R (cont)

2) **Revise content in chapter III** to consider handheld device option in:
   - Leaving quarters and household listing: paragraph 1.176
   - Questionnaire preparation: paragraphs 1.181 - 1.182 - 1.189 - 1.191
   - Census tests: paragraph 1.196
   - Plans for data processing: paragraph 1.203
   - Staff recruitment and training: paragraphs 1.211 - 1.212
   - Data processing: paragraphs 1.293 – 1.297 – 1.298 – 1.303

3) **Consider revising other chapters**
Thank you!

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