# The Brazilian Internet Steering Committee – CGI.br
# *Internet Governance Model in Brazil*

rev. July 2014

**CGI.br** - Brazilian Internet Steering Committee
**NIC.br** – Brazilian Network Information Center
**CETIC.br** – Center of Studies on Information and Communication Technologies

# Brazil

*Facts and figures*

**Population: 195 million**

85% living in urban area

*IBGE PNAD 2011*

**5th largest territory in the world**

*Worldatlas.com 2013*

**GDP/capita: USD11,640**

*Tradingeconomics / The World Bank 2011*

**GDP: USD 2.5 Trillion**

*Tradingeconomics / The World Bank 2011*

**8th largest ccTLD: 3.3 million**

*NIC.br Dez/2013*

**5,565 municipalities**

*IBGE Census 2010*

**81 million Internet users**

*CGI.br, ICT Households Survey 2012*

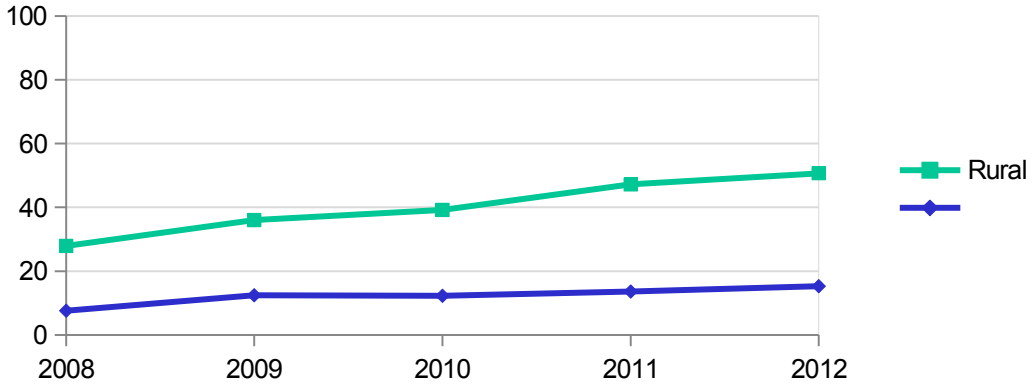
**40% HH with Internet access**

*CGI.br, ICT Households Survey 2012*

# Brazil

*Facts and figures*

## Computer (% Households with computer)



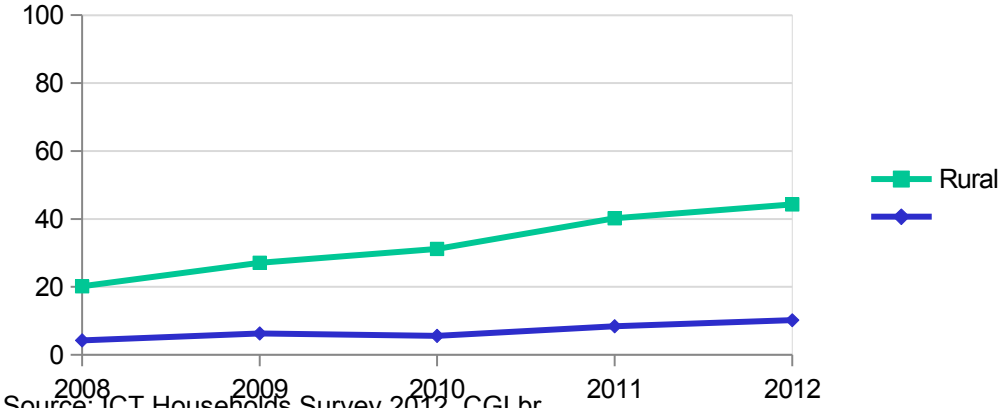

**28.1** Million HH with computer

**24.3** Million HH with Internet

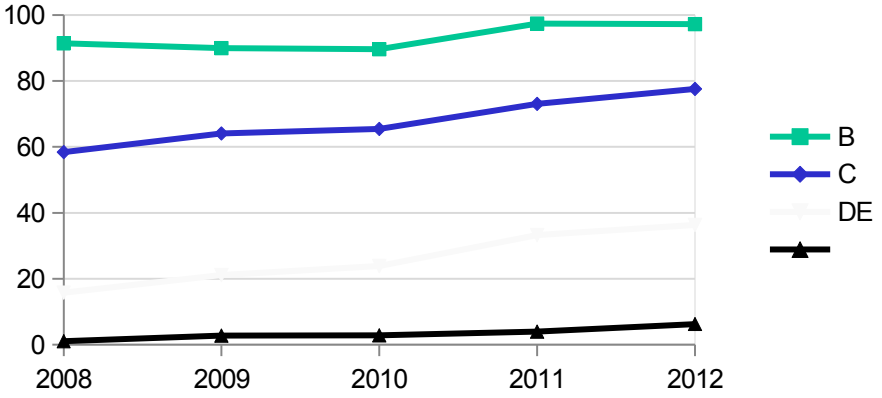
**80.9** Million Internet users (*)

*(*) 10-year-old or older*

## Internet (% Households with Internet access)




## Internet (% Households with access by social class)

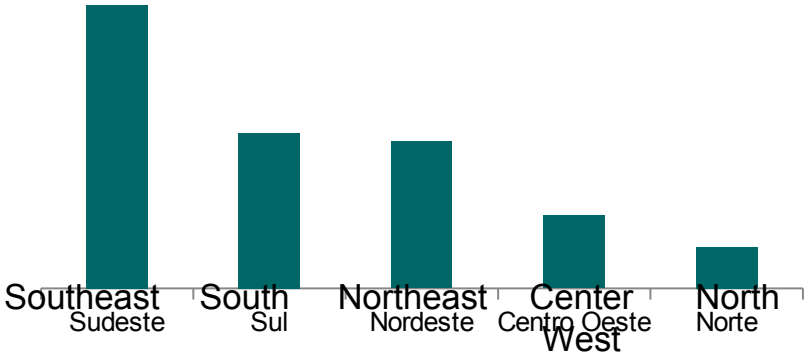



Source: ICT Households Survey 2012, CGI.br

# ISP in Brazil

*Number of Internet Service Providers*

- **Market distribution**: 80% of all connections are provided by 6 large ISPs;
- **Regional disparity**: 43% of all IPSs are located in the Southeast and only 6% in the North region.

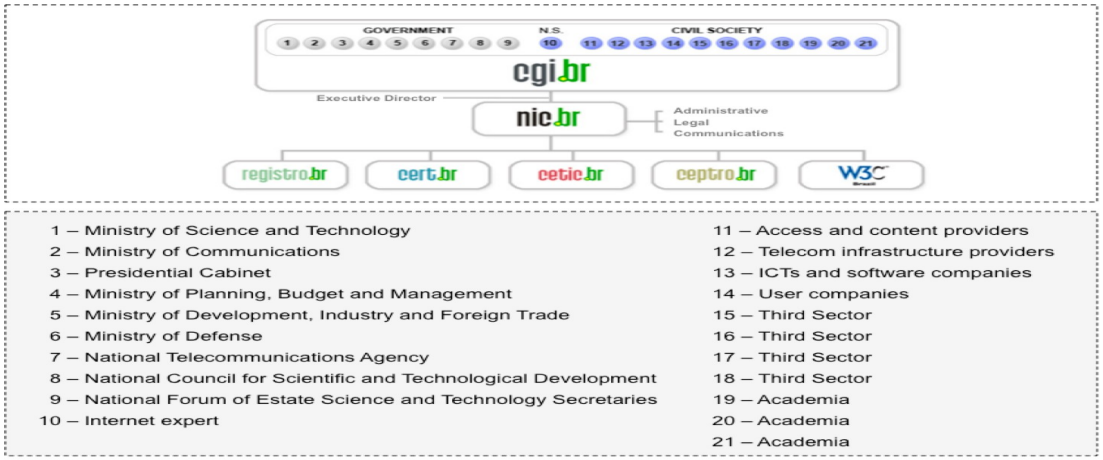



***Total of 1,934 ISPs in Brazil***

Source: ICT Providers Survey 2010, CGI.br

# History of CGI.br

**Brazilian Internet Steering Committee**




1995
|
2003

- 9 representatives from the **government**
- 4 representatives from the **private sector**
- 4 representatives from the **non-profit sector**
- 3 representatives from the **scientific and academic community**

# About CGI.br

Created in 1995, the **Internet Steering Committee in Brazil - CGI.br** coordinates and integrates Internet services in Brazil, promoting technical quality, innovation and dissemination of the use of Internet services:

- Proposes policies and procedures related to the regulation of Internet activities
- Recommends standards for technical and operational procedures
- Establises strategic directives for the use and development of the Internet
- Promotes studies and technical standards for network and Internet security
- Coordinates the allocation of Internet addresses (IPs) and registration of domain names under the ccTLD ".br"
- Promotes specialized research on the use of ICTs
- Collects, organizes and disseminates information on Internet services, including the production of indicators and statistics.

# Milestones in the governance of the Internet in Brazil

- ***OCT 1988*** ➔ First Bitnet Connection
- ***APR 1988*** ➔ Registration of ccTLD ".br"
- ***JAN 1991*** ➔ First Internet TCP/IP Connection
- ***MAY 1991*** ➔ Definition of the Brazilian DNS Structure
- ***JUNE 1992*** ➔ Eco '92 motivates first direct links to the Internet
- ***JAN 1995*** ➔ Start of the Commercial Operation
- ***MAY 1995*** ➔ Creation of the CGI.br (Brazilian Internet Steering Committee)
- ***MAY 1995*** ➔ Norm 4 separates Internet as AVS from telecom regulations
- ***OCT 1997*** ➔ Full Informatization of "Registro.br"
- ***NOV 1997*** ➔ Installation of the First NAP in São Paulo
- ***DEZ 2005*** ➔ Creation of the NIC.br (Brazilian Network Information Center)

As informações contida neste documento são de propriedade intelectual exclusiva do NIC.br / CETIC.br

# Participation in International Foruns

*CGI.br / NIC.br*

- *Internet Corporation for Assigned Names and Numbers (ICANN)*
- *Internet Governance Forum & regional IGF forums*
- *International Telecommunication Union (ITU);*
- *Organisation for Economic Co-operation and Development (OECD);*
- *United Nations Educational, Scientific and Cultural Organization (Unesco);*
- *IETF and other forums and technical organizations*

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# Legal Framework in Brazil

*Law, resolutions and legislation*

Sanctioned on Apr.23, 2014

- The Civil Rights Framework for the Internet
- Privacy and Personal Data
- Information Access Act
- CGI.br's Principles for the Governance and Use of the Internet

Approved by consensus in April/2009

- W3C Open Data Principles

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# Principles for the Governance and Use of the Internet

*CGI.br/Res/2009/03/P*

- ***Freedom, privacy and human rights****: The use of the Internet must be driven by the principles of freedom of expression, individual privacy and the respect for human rights, recognizing them as essential to the preservation of a fair and democratic society.*

- ***Democratic and collaborative governance****: Internet governance must be exercised in a transparent, multilateral and democratic manner, with the participation of the various sectors of society, thereby preserving and encouraging its character as a collective creation.*

- ***Universality****: Internet access must be universal so that it becomes a tool for human and social development, thereby contributing to the formation of an inclusive and nondiscriminatory society, for the benefit of all.*

- ***Diversity****: Cultural diversity must be respected and preserved and its expression must be stimulated, without the imposition of beliefs, customs or values.*

- ***Innovation****: Internet governance must promote the continuous development and widespread dissemination of new technologies and models for access and use.*

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# Principles for the Governance and Use of the Internet

*CGI.br/Res/2009/03/P*

- ***Neutrality of the network****: Filtering or traffic privileges must meet ethical and technical criteria only, excluding any political, commercial, religious and cultural factors or any other form of discrimination or preferential treatment.*

- ***Unaccountability of the network****: All action taken against illicit activity on the network must be aimed at those directly responsible for such activities, and not at the means of access and transport, always upholding the fundamental principles of freedom, privacy and the respect for human rights.*

- ***Functionality, security and stability****: The stability, security and overall functionality of the network must be actively preserved through the adoption of technical measures that are consistent with international standards and encourage the adoption of best practices.*

- ***Standardization and interoperability****: The Internet must be based on open standards that facilitate interoperability and enable all to participate in its development.*

- ***Legal and regulatory environments****: The legal and regulatory environments must preserve the dynamics of the Internet as a space for collaboration.*

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# About NIC.br

**Brazilian Internet Steering Committee**

cgi.br

1995

2005

**Brazilian Network Information Center**

nic.br

registro.br
http://www.registro.br/

cert.br
http://www.cert.br/

cetic.br
http://www.cetic.br/

ceptro.br
http://www.ceptro.br/

W3C Brasil
http://www.w3c.br/

# About NIC.br

The **Brazilian Network Information Centre - NIC.br** is a private, civil, non-profit organization, created to implement **CGI.br**'s decisions.

- Manages the registry and maintenance of domain names under the ccTLD ".br", and allocation of Autonomous System Numbers (ASN), IPv4 and IPv6 addresses;
- Ensures the treatment of and the response to security incidents;
- Develops technological projects to enhance the Brazilian network infrastructure;
- Conducts specialized research, producing and publishing indicators, statistics and strategic information on the development of the Brazilian Internet;
- Conducts studies and recommend procedures, norms and technical and operational standards for the web;
- Provides technical and operational support to LACNIC, Internet Address Registry for Latin America and the Caribbean.

# Sustainability model

**Brazilian Internet Steering Committee**

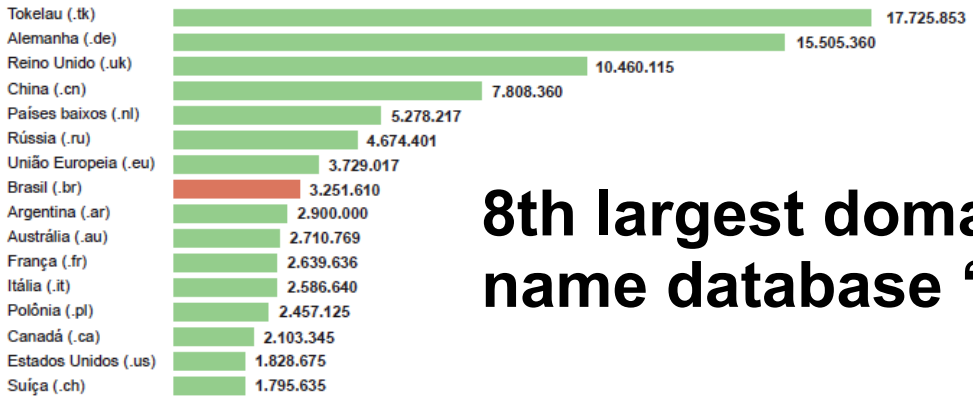
cgi.br

2005

1995

**Brazilian Network Information Center**

nic.br




**8th largest domain name database ".br"**

**REGISTRO.br**

*Brazilian Domain Name Registry Authority*

registro.br

http://www.registro.br/

# REGISTRO.br

*Brazilian Domain Name Registry Authority*

http://www.registro.br/

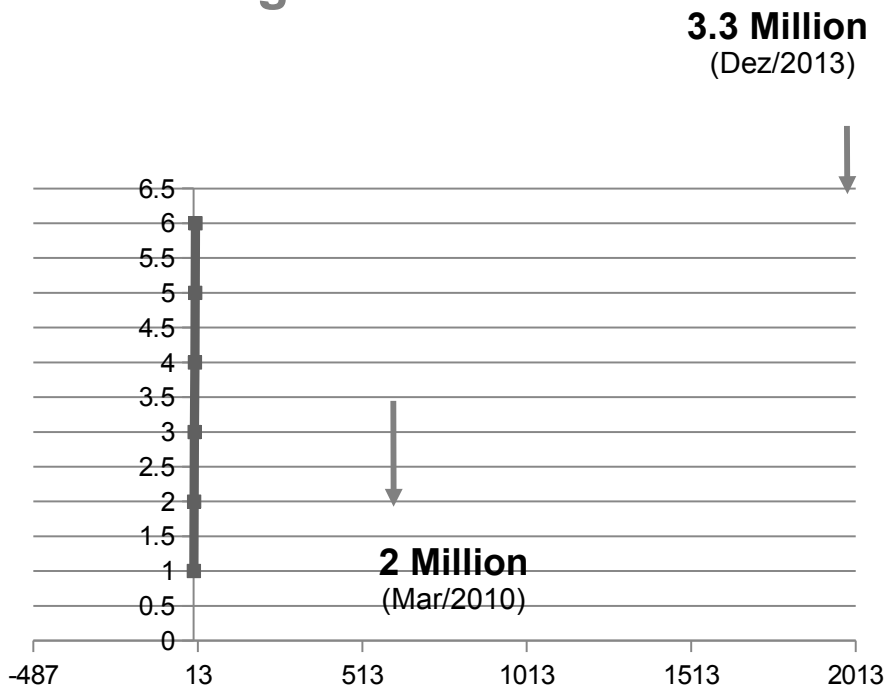
- ***REGISTRO.br*** is responsible for managing the registry and maintenance of domain names under the ccTLD ".br";
- Services and projects:
  - *Operation of Domain names registry;*
  - *Operation of the DNS and DNSSEC services for the ".br" domain;*
  - *Allocation of Autonomous System Numbers (ASN), IPv4 and IPv6 addresses in Brazil;*
  - *Provision of technical and operational support to LACNIC, Internet Address Registry for Latin America and the Caribbean..*

# REGISTRO.br

*Brazilian Domain Name Registry Authority*

registro.br

http://www.registro.br/




## *Country Code Top Level Domain*

| Rank | ccTLD | Domínios | Ref. | Fonte |
|---|---|---|---|---|
| 1 | Tokelau (.tk) | 20.679.586 | dez/13 | http://statdom.ru/global#27:attribute=tk |
| 2 | Alemanha (.de) | 15.589.983 | dez/13 | http://www.denic.de/ |
| 3 | Reino Unido (.uk) | 10.595.948 | dez/13 | http://db.nominet.org.uk/ |
| 4 | China (.cn) | 9.609.571 | dez/13 | http://www1.cnnic.cn/IS/CNym/CNymtjxxcx, |
| 5 | Paises Baixos (.nl) | 5.385.092 | dez/13 | https://www.sidn.nl/ |
| 6 | Rússia (.ru) | 4.913.766 | dez/13 | http://cctld.ru/ |
| 7 | União Européia (.eu) | 3.744.169 | dez/13 | http://www.eurid.eu/ |
| **8** | **Brasil (.br)** | **3.309.240** | **dez/13** | **http://registro.br/estatisticas.html** |
| 9 | Argentina (.ar) | 2.900.000 | dez/13 | http://www.latinoamericann.org/ |
| 10 | Austrália (.au) | 2.754.792 | dez/13 | http://www.auda.org.au/ |
| 11 | França (.fr) | 2.702.620 | dez/13 | http://www.afnic.fr/en/ressources/ |
| 12 | Itália (.it) | 2.630.062 | dez/13 | http://www.nic.it/ |
| 13 | Polônia (.pl) | 2.461.553 | dez/13 | http://www.dns.pl/english/zonestats.html |
| 14 | Canadá (.ca) | 2.167.369 | dez/13 | http://www.cira.ca/ |
| 15 | Estados Unidos (.us) | 1.854.323 | dez/13 | http://www.whois.sc/internet-statistics/ |
| 16 | Suiça (.ch) | 1.831.635 | dez/13 | https://www.nic.ch/reg/cm/wcm-page/ |

## *Generic Top Level Domain*

| Rank | gTLD | Domínios | Ref. | Fonte |
|---|---|---|---|---|
| 1 | .com | 112.215.620 | dez/13 | http://www.whois.sc/internet-statistics/ |
| 2 | .net | 15.224.373 | dez/13 | http://www.whois.sc/internet-statistics/ |
| 3 | .org | 10.397.307 | dez/13 | http://www.whois.sc/internet-statistics/ |
| 4 | .info | 5.927.250 | dez/13 | http://www.whois.sc/internet-statistics/ |
| 5 | .biz | 2.649.154 | dez/13 | http://www.whois.sc/internet-statistics/ |

Source: Registro.br, 2013

# CERT.br

*Brazilian National Computer Emergency Response Team*

cert.br

http://www.cert.br/

- Created in 1997 to act as the national focal point to handle computer security incident reports and to perform activities related to networks connected to the Internet in Brazil.

## CERT.br

### Security Incident Handling

- Reporting
- Support
- Statistics

### Capacity Building and Awareness

- Training courses
- Presentations
- Documents & Reports
- Expert Meetings

### Trend Analysis

- Honeypots
- Spampots
- Honeynet.br

antispam.br

http://www.antispam.br/

- Videos & Guides

# CERT.br

*Brazilian National Computer Emergency Response Team*

cert.br

http://www.cert.br/

- ***CERT.br*** is the Brazilian National Computer Emergency Response Team, maintained by NIC.br;
- Develops analytical projects on Internet attacks' trends, with the goal to better understand the threats in the Brazilian Internet space:
  - ***Distributed Honeypots****: to increase the capacity of incident detection and event correlation;*
  - ***SpamPots****: to obtain details about the abuse of the Internet infrastructure by spammers;*
  - *CERT.br is a Software Engineering Institute Partner and is licensed to deliver in Brazil the following* ***CERT® Program courses****: Overview of Creating and Managing Computer Security Incident Response Teams / Fundamentals of Incident Handling /Advanced Incident Handling for Technical Staff.*

# CETIC.br

*Center for Studies on Information and Communication Technologies*

http://www.cetic.br/

As part of CGI.br's goals, CETIC.br aims to collect and disseminate information on Internet services in Brazil, through the following activities:

- *Conduct nationwide ICT Surveys to produce ICT-related indicators and statistics;*
- *Measure the progress of the use of ICTs in Brazil;*
- *Monitor and assess social-economic impact of ICTs;*
- *Promote the use of ICT indicators by governmental agencies for policymaking and academic research purposes;*
- *Cooperation with international organizations for methodological definitions and ICT indicators harmonization.*
- *Enable cross-national studies comparing Brazil and other countries' data.*

# CETIC.br

*Center for Studies on Information and Communication Technologies*

cetic.br

http://www.cetic.br/

## Projects for Monitoring the Information Society

*International methodological frameworks*

ITU · UNCTAD · OECD · UNESCO (United Nations Educational, Scientific and Cultural Organization) · eurostat

*ICT statistics for better information societies policies*

*Monitoring targets*

world summit on the information society
Geneva 2003 - Tunis 2005

eLAC2015
Construyendo sociedades digitales inclusivas e innovadoras

# Regional Centre of Studies for the Development of the Information Society

**Center for Studies on Information and Communication Technologies**

cetic.br

2005

**Brazilian Network Information Center**

nic.br

CETIC UNESCO (*)
Regional Center of Studies for the Development of the Information Society

**Latin America and Portuguese speaking African countries**

2012

UNESCO
Organização das Nações Unidas para a Educação, a Ciência e a Cultura

cetic.br
Regional Centre of Studies for the Development of the Information Society under the auspices of UNESCO

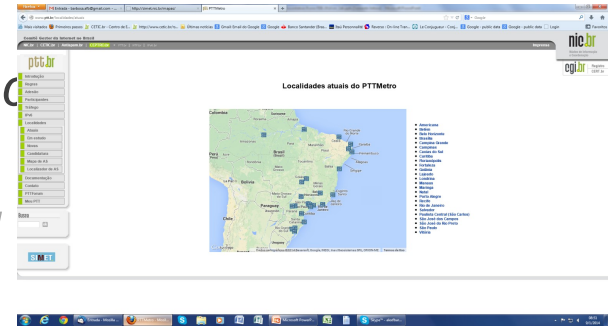
# CEPTRO.br

*Center for Study and Research in Network Technology and Operations*

ceptro.br
Centro de Estudos e Pesquisas em Tecnologia de Redes e Operações
http://www.ceptro.br/

- ***CEPTRO.br*** is responsible for services and projects that aim to improve the quality of Internet services and the Internet infrastructure in Brazil.

- Development of technological projects:
  - *PTT Metro (Brazilian Internet Exchange Points Projec*
  - *IPv6.br (IPv6 dissemination in Brazil)*
  - *NTP.br (Brazilian Legal Time over Internet)*
  - *Zappiens.br*




**25 IXPs in Brazil**

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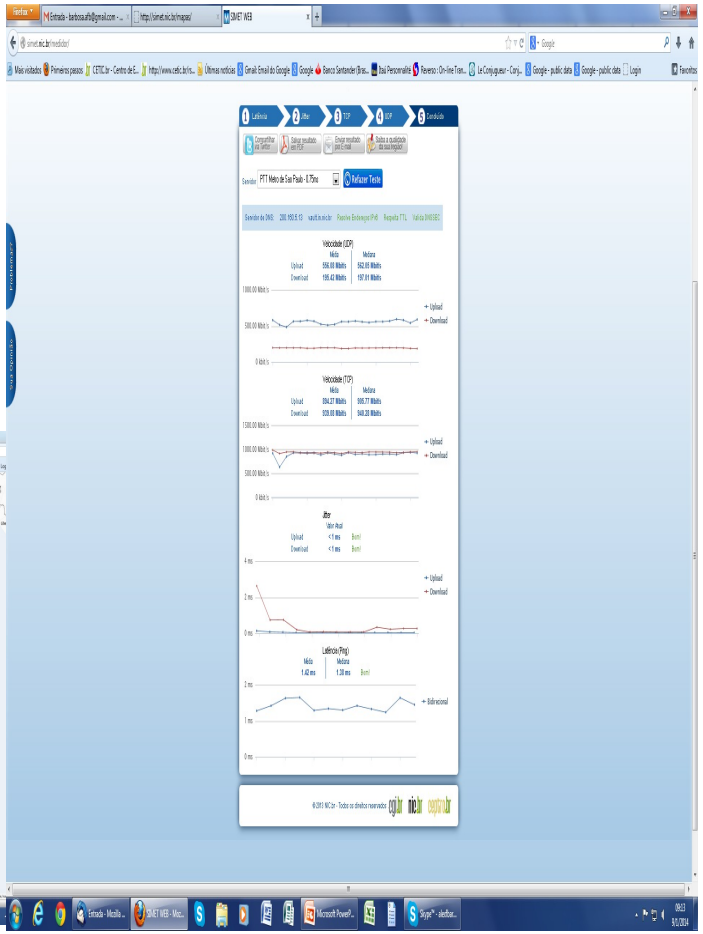
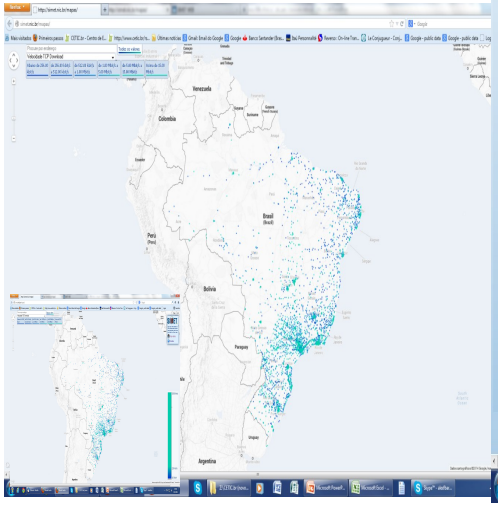
- Development of technological projects:
  - *Internet Quality Measurements*
  - *INOC-DBA*
  - *VoIP Peering*
  - *Web Census Project*





# W3C.br

*The W3C Brazilian Office*

Brasil

http://www.w3c.br/

- The W3C Brazilian Office began its operation in 2007 with the following objectives:
  - *To disseminate the culture of adoption of web standards for the web development;*
  - *To promote and to demonstrate the tools and standards developed by W3C;*
  - *To create a forum of participation of W3C.br members and community interested in Web standards;*
  - *To propose policies and procedures related to the regulation of Internet use;*
  - *To recommend technical standards and operational procedures for the development of the Internet in Brazil.*

# W3C.br

*The W3C Brazilian Office*

Brasil

http://www.w3c.br/

- International consortium that aims to bring the Internet to its full potential through the establishment of standards and guidelines.
  - *HTML, XML, XHTML and CSS standards.*
  - *Open data.*
  - *Web accessibility.*
  - *Open Government Data.*

Vision: ***"One Web, Open to All"***

Mission: ***"Take the Web to its full potential"***

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W3C® Brasil

http://www.w3c.br/

**Developing and using the Open Web Platform in Brazil**

WWW 2013 Rio de Janeiro, Brazil

**22nd International World Wide Web Conference**

13th-17th, May

Web impact
Human communication
Commerce
Sharing knowledge

# Thank You !

www.cgi.br

Carlos Alberto Afonso: ca@cafonso.ca