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# The legacy of free software in the Brazilian government



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# Who am I?

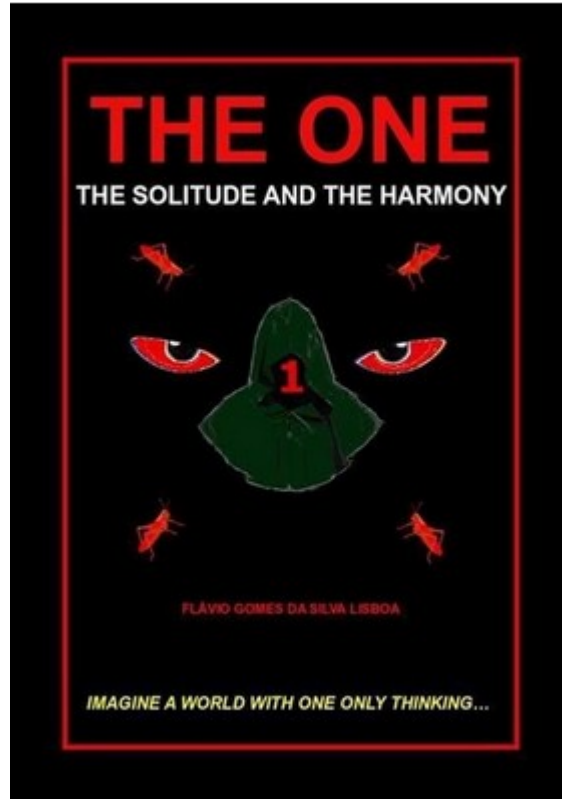


Laminas



FGSL

# Who am I?



IMAGINE A WORLD  
WHERE EVERYONE  
AGREES ON  
EVERYTHING ...

... IS IT A DREAM... OR  
**A NIGHTMARE?**

# PREAMBLE

**This is the result of an wide survey  
about use and production of free  
software in Brazilian  
Government**

# PREAMBLE

**This research is an unfolding of my  
master dissertation:**

*Production of free software by a state-  
owned information technology enterprise: a  
study case on the perspective of social  
technology*

<https://repositorio.utfpr.edu.br/jspui/handle/1/3907>

# Sieve of Stallman

Source code is available?	Does the license restrict the use, run or change of the software?	Is the software free (as in freedom)?
Yes	Yes	No
Yes	No	Yes
No	Yes	No
No	No	No



## Sagui

O SAGUI gerencia todas as estações GNU/Linux.

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# Study Case: Sagui

Sagui is an IT automation *software*, created 8 years before Ansible by a brazilian state-owned IT enterprise.



## Sagui

O SAGUI gerencia todas as estações GNU/Linux.

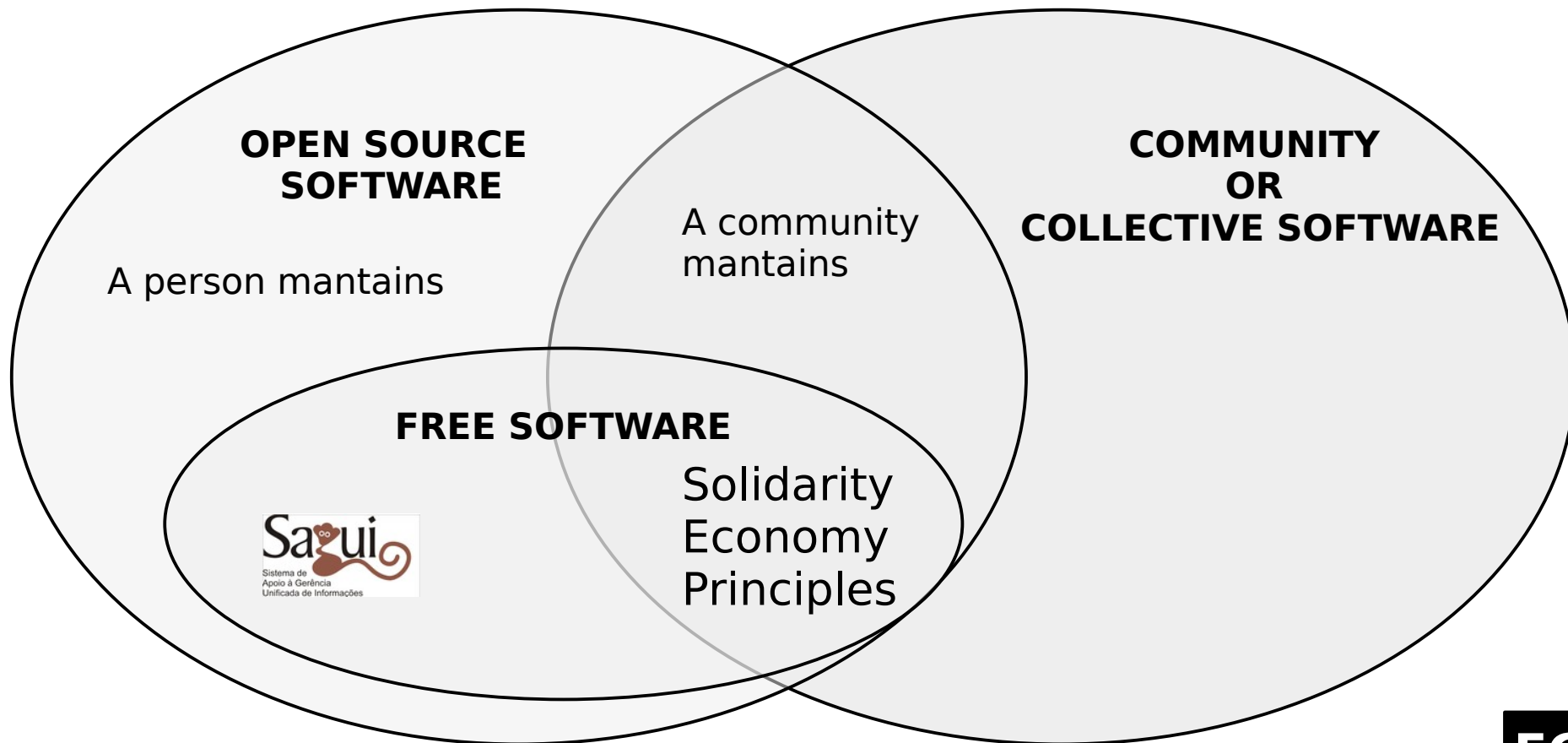
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# Study Case: Sagui

Unfortunately, Sagui did not proper.

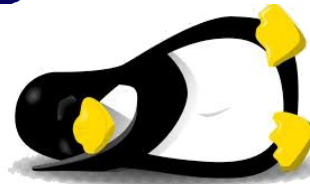


# Why did not Sagui prosper?



# INTRODUCTION

## FREE SOFTWARE IN FEDERAL BRAZILIAN GOVERNMENT



**1999?**

**2016?**

# INTRODUCTION

One of the objectives defined by CISL (Committee for implementing Free Software) was to make free software a standard corporate tool of the federal government. Fact is that support for free software in the Brazilian federal government depended a lot on decrees, which are easily revoked when the head of the executive branch is changed.

In 1999 a bill project was presented to regulate the use of open source programs by the public administration. This bill project was archived in 2019, thus burying the possibility of FLOSS becoming a standard in the government by force of law.

# INTRODUCTION

INTERNET ARCHIVE  
WayBackMachine  
http://www.softwarelivre.gov.br/levantamento/levantamento/levantamento Go AUG SEP MAY  
18 captures  
12 Sep 2010 - 10 Apr 2021  
2009 2010 2011  
About this capture

Software Livre  
no governo do Brasil

# 2010

- Comunidade no governo
- Planejamento CISL 2010
- Documentos Oficiais
- Casos de Sucesso
- Notícias
- Artigos
- Agenda
- Links
- PloneGov-BR
- Mídia
- Palestras Técnicas
- Licenças em software livre
- Levantamento
  - Levantamento Geral
- Contatos do CISL

## Levantamento Geral

### Status de utilização de ferramentas e soluções desenvolvidas em software livre

129 federal institutions

	Correio Eletrônico	Servidores de Internet	Sistemas de Informação	Desktops	Suite de Escritório
<b>Advocacia-Geral da União – AGU</b>	Red	Orange	Green	Red	Red
<b>Agência Nacional de Aviação Civil – ANAC</b>	Red	Red	Red	Red	Red
<b>Agência Nacional de Energia Elétrica – ANEEL</b>	Red	Red	Green	Red	Red
<b>Agência Nacional de Saúde Complementar – ANS</b>	Red	Yellow	Orange	Red	Orange
<b>Agência Nacional de Telecomunicações – ANATEL</b>	Red	Yellow	Red	Red	Red
<b>Agência Nacional de Transportes Terrestres – ANTT</b>	Red	Green	Yellow	Red	Red
<b>Agência Nacional de Vigilância Sanitária – ANVISA</b>	Red	Yellow	Red	Orange	Red
<b>Agência Nacional do Cinema – ANCINE</b>	Red	Green	Green	Red	Red
<b>Agência Nacional do Petróleo, Gás Natural e Biocombustíveis – ANP</b>	Red	Orange	Red	Red	Red
<b>Banco Central do Brasil</b>	Red	Green	Red	Red	Red

Brasília-DF,  
18 a 20 de agosto



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# METHODOLOGY

I request the following information:

- What are the free software used by the [name of institution] and what are they used for?
- Does [name of institution] buy proprietary software even if equivalent free software is available?
- Has [name of institution] developed any free software?



**Requests for information were submitted to 167 Brazilian federal institutions.**

# RESULTS

TABLE I  
THE 10 BIGGEST FLOSS USERS IN THE BRAZILIAN  
GOVERNMENT

<b>Institution</b>	<b>Amount</b>
Serviço Federal de Processamento de Dados	194
Câmara dos Deputados	141
BANCO DO BRASIL	129
Instituto Federal de Educação, Ciência e Tecnologia do Mato Grosso do Sul	121
Instituto Federal de Educação, Ciência e Tecnologia do Triângulo Mineiro	97
Ministério da Economia	88
Agência Nacional do Cinema	79
Universidade Federal de Alfenas	76
Universidade Federal de Minas Gerais	73
Universidade Federal de Santa Maria	67

# RESULTS

TABLE II  
THE 10 BIGGEST FLOSS USERS AMONG THE BRAZILIAN PUBLIC  
UNIVERSITIES

<b>University</b>	<b>Amount</b>
Universidade Federal de Alfnas	76
Universidade Federal de Minas Gerais	73
Universidade Federal de Santa Maria	67
Universidade Federal de Ciências da Saúde de Porto Alegre	64
Universidade Federal de Goiás	60
Universidade Federal do Estado do Rio de Janeiro	47
Universidade Federal do Oeste do Pará	45
Universidade Tecnológica Federal do Paraná	41
Universidade Federal do Oeste da Bahia	39
Universidade Federal de Mato Grosso do Sul	38

# RESULTS

TABLE III  
THE 10 BIGGEST FLOSS USERS AMONG THE BRAZILIAN  
FEDERAL INSTITUTES OF EDUCATION

<b>Federal Institute</b>	<b>Amount</b>
Instituto Federal de Educação, Ciência e Tecnologia do Mato Grosso do Sul	121
Instituto Federal de Educação, Ciência e Tecnologia do Triângulo Mineiro	97
Instituto Federal de Educação, Ciência e Tecnologia do Acre	55
Instituto Federal de Educação, Ciência e Tecnologia de Minas Gerais	47
Instituto Federal de Educação, Ciência e Tecnologia do Mato Grosso	27
Instituto Federal de Educação, Ciência e Tecnologia da Bahia	22
Instituto Federal de Educação, Ciência e Tecnologia do Norte de Minas Gerais	22
Instituto Federal de Educação, Ciência e Tecnologia da Paraíba	21
Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Norte	18
Instituto Federal de Educação, Ciência e Tecnologia do Amazonas	17



# RESULTS

TABLE IV  
THE 10 BIGGEST FLOSS USERS AMONG BRAZILIAN MINISTRIES

<b>Ministry</b>	<b>Amount</b>
Economy	88
Science and Technology	36
Health	29
Regional Development	29
Citizenship	28
Defense	26
Tourism	20
Agriculture	20
Education	18
Mines and Energy	17

# RESULTS

TABLE V

THE 10 BIGGEST FLOSS USERS AMONG STATE-OWNED ENTERPRISES

<b>Enterprise</b>	<b>Amount</b>
Serviço Federal de Processamento de Dados (SERPRO)	194
BANCO DO BRASIL	129
Petróleo Brasileiro S.A.	51
Companhia Nacional de Abastecimento	50
Empresa Brasileira de Pesquisa Agropecuária	40
Empresa de Tecnologia e Informações da Previdência (DATAPREV)	39
Petrobras Transporte S.A	34
BB Tecnologia e Serviços	30
Companhia de Entrepósitos e Armazéns Gerais de São Paulo	15
Empresa Gerencial de Projetos Navais	13

# RESULTS

TABLE VI  
THE FLOSS USERS BY CATEGORY OF GOVERNMENT  
INSTITUTION

<b>Category</b>	<b>Amount</b>
Universities	1341
State-owned enterprises	682
Federal institutes of education	670
Ministries	349
Agencies	296
Legislative power	142
Others	39
Research centers	10
Judicial power	5

# RESULTS

TABLE VII  
THE 10 MOST USED FLOSS IN BRAZILIAN GOVERNMENT

Software	Users
LibreOffice	88
Ubuntu	85
PostgreSQL	77
Apache (HTTP Server)	67
MySQL	67
CentOS	63
Zabbix	62
Debian	58
Mozilla Firefox	43
GitLab	42

# RESULTS

TABLE VIII  
THE 10 MOST USED FLOSS CATEGORIES IN BRAZILIAN  
GOVERNMENT

<b>Category</b>	<b>Users</b>
Operating System	283
Database Management System	227
Web Application Server	221
Integrated Development Environment	165
Monitoring	143
Office Suite	103
Control Version System	96
Content Management	88
Development Framework	81
Project Management	80

# RESULTS

TABLE IX  
THE 10 MOST USED FLOSS OPERATING SYSTEMS IN BRAZILIAN  
GOVERNMENT

<b>Operating System</b>	<b>Users</b>
Ubuntu	85
CentOS	63
Debian	58
Mint	18
Red Hat Linux	13
FreeBSD	12
Oracle Linux	9
Fedora	8
SUSE Linux	8
Linux	4

# RESULTS

TABLE X  
THE 10 MOST FOUND FLOSS LICENSES

<b>License</b>	<b>Softwares</b>
GPL-2.0	783
GPL	520
Apache 2.0	512
GPL-3.0	306
MIT	184
LGPL-3.0	134
LGPL	132
AGPL-3.0	108
PostgreSQL	100
Eclipse	93

# RESULTS

TABLE XI  
POLICIES FOR BUYING PROPRIETARY SOFTWARE

<b>Policy</b>	<b>Answers</b>
Buys proprietary software and don't justify	16 (9.58%)
Justifies the purchase of proprietary software	2 (1.2%)
Did not provide an answer	96 (57.49%)
Purchase depends on technical evaluation	53 (31.74%)



# RESULTS

TABLE XII  
EFFECTIVE FLOSS PRODUCERS IN BRAZILIAN GOVERNMENT

<b>Institution</b>	<b>Amount</b>
Federal Institute of Minas Gerais	13
DATAPREV (Social Assistance)	11
EMBRAPA (Agroresearch)	4
SERPRO (IT company)	4
Chamber of Deputies	3
Agência Nacional de Saúde Suplementar (Agency)	1
BANCO DO BRASIL (Bank)	1
Companhia Nacional de Abastecimento (Food Supply)	1
Federal Senate	1
Ministry of Economy	1
Ministry of Education	1
Ministry of Environment	1

# CONCLUSION

We have discovered from this survey that 755 FLOSS are used by federal government institutions. In addition, 12 of these institutions produced 42 FLOSS that are still available.

Although it has not become a standard, free software is present in Brazilian federal government institutions through the various instances installed over the years.

# FULL PAPER



ANAIS DO CONGRESSO LATINO-AMERICANO DE SOFTWARE LIVRE E TECNOLOGIAS ABERTAS (LATINOWARE)

<https://sol.sbc.org.br/index.php/latinoware/article/view/19899>

OR

<https://doi.org/10.5753/latinoware.2021.19899>



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**THANK YOU**

<https://fgsl.eti.br>